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PACIFIC GAS AND ELECTRIC COMPANY

2013-2014 ENERGY EFFICIENCY PORTFOLIO

PREPARED TESTIMONY

PACIFIC GAS AND ELECTRIC COMPANY
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CHAPTER 1
EXECUTIVE SUMMARY

A. Introduction

Pacific Gas and Electric Company (PG&E) presents its proposals for its 2013-2014 Energy Efficiency Portfolio in compliance with the *Decision Providing Guidance On 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education, and Outreach*, Decision 12-05-015 (the Decision) issued by the California Public Utilities Commission (Commission or CPUC) on May 18, 2012. PG&E's testimony follows the organization and content guidance provided by the Energy Division (Staff) on May 24, 2012.[1]

PG&E's total request for its 2013-2014 Energy Efficiency Portfolio budget is $859.5 million over two years, or an annual average of $429.7 million; and a budget for 2013-2014 Demand Response Program Integrated Demand-Side Management (IDSM) activities of $6.5 million for an annual average of $3.3 million. PG&E's Energy Efficiency Portfolio budget request is a $16.3 million decrease compared to the annual average authorized budget approved for the 2010-2012 Energy Efficiency Portfolio cycle[2] and a $2.9 million decrease compared to the annual authorized Demand Response IDSM budget approved for 2012.[3,4] PG&E's portfolio is cost effective with a Total Resource Cost (TRC) ratio of 1.25 and PG&E expects to meet the energy savings goals in the Decision for the investor-owned utility (IOU) Programs and Codes and Standards (C&S) Advocacy.

Below PG&E first summarizes the significant successes of California's energy efficiency programs and then describes how PG&E proposes to change its portfolio to continue to help meet the state's aggressive energy efficiency goals for 2013 and beyond.

B. The Investor-Owned Utilities' Energy Efficiency Programs Have Achieved Significant Cost-Effective Energy Savings in Furtherance of State Policies

Due to this Commission's leadership, and the IOUs'[5] successful execution of a multitude of energy efficiency programs aimed at reaching all customer segments in its varied customer base, California has maintained and solidified its position as a nationwide leader in energy efficiency. Since 1990, California has saved over

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1 PG&E endeavored to comply with the suggested page lengths for each chapter of testimony suggested by Staff in its outline, however, due to the requirements in the Decision, PG&E's required support for its application could not be limited to the page lengths suggested by Staff. Pursuant to an email from Administrative Law Judge Fitch, dated May 29, 2012, PG&E understands the page limits are guidelines and not strict limits.

2 D.09-09-047.

3 D.12-04-045.

4 The decrease is in part due to the removal of statewide Marketing, Education and Outreach (ME&O) funding from the energy efficiency portfolio. Pursuant to the Decision (Ordering Paragraph (OP) 117), statewide ME&O funding will be requested through a separate application to be filed August 3, 2012.

5 IOUs refer collectively to PG&E, Southern California Edison (SCE), San Diego Gas & Electric Company and Southern California Gas Company.

60,000 gigawatt hours (GWh) of energy through efficiency and conservation.[6] The 2007 Integrated Energy Policy Report (IEPR) estimates these efforts have allowed the state to avoid constructing 15 large power plants.[7] The CEC discussed the State's achievements in its 2011 IEPR:

> In the last three decades, California's policies, programs, and efficiency standards for buildings and appliances have contributed to keeping California's per capita electricity consumption relatively constant while use in the rest of the United States has increased 40 percent. The Energy Commission staff estimates that standards have also saved customers $66 billion in electricity and natural gas costs (in 2010 dollars) since 1975.[8]

Since the adoption of the first Energy Action Plan in 2003, energy efficiency and demand response have been at the top of the Energy Action Plan Loading Order, and the state has implemented several policies to require the purchase of energy efficiency resources before supply-side generation resources. The state re-affirmed its preference for cost-effective energy efficiency in the Energy Action Plan II, which lists, as one of its 15 Key Actions, a requirement that all cost-effective energy efficiency resources be "integrated into utilities' resource plans on an equal basis with supply-side resource options."[9] California again stepped up its ambitious energy efficiency goals in 2006 through the adoption of Assembly Bill 32, the Global Warming Solutions Act, which includes as a goal, the reduction of greenhouse gas (GHG) emissions to 1990 levels by 2020. Achieving this greenhouse gas reduction goal unquestionably requires a strong commitment to energy efficiency by the IOUs. The Commission issued the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan)[10] in 2008, which set ambitious efficiency goals for California, including achieving Zero Net Energy (ZNE) new construction in the residential sector by 2020 and the commercial sector by 2030.[11]

The state has repeatedly ranked at the top of national assessments of energy efficiency performance. The American Council for an Energy Efficient Economy (ACEEE) annually benchmarks states' progress and provides a roadmap for states to advance energy efficiency in the residential, commercial, industrial, and transportation sectors. ACEEE ranked California first in its annual energy efficiency scorecards for four of the last five years based on a comprehensive assessment of policy and programs that improve energy efficiency in homes, businesses, industry and the transportation sectors.[12]

During the current portfolio period, PG&E has continued its successful administration of energy efficiency programs. In 2010, PG&E achieved 180 percent of

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6 California Energy Commission (CEC), *California Energy Demand 2012-2022 Final Forecast,* p. 6 (May 2012).

7 CEC, 2007 Integrated Energy Policy Report (IEPR), adopted December 5, 2007. CEC-100-2007-008-CMF.

8 2011 IEPR, p. 8 (CEC-100-2011-001-CMF).

9 Energy Action Plan II, pp. 3-4, Key Action 1.

10 D.08-09-040.

11 Strategic Plan, pp. 6, 9-40.

12 ACEEE, *The 2011 State Energy Efficiency Scorecard,* October 2011 (Report No. E115), pp. iii-vii. Massachusetts overtook California due to its continued implementation of the 2008 Green Communities Act.

its energy savings (gross annual kilowatt-hour) goal, 139 percent of its demand reduction (gross summer peak kilowatt) goal, and 115 percent of its gas savings (gross annual therms).[13] In 2011, PG&E achieved 147 percent of its energy savings goal, 115 percent of its demand reduction goal and 205 percent of its gas savings goal.[14]

The IOUs' varied energy efficiency portfolios have also created significant job opportunities in clean energy efficiency for thousands of Californians. The Strategic Plan identifies investment in human capital through a trained and fully engaged workforce as a crucial component in reaching California's Clean Energy Goals.[15] An analysis by University of California Berkeley of the state's overall energy efficiency efforts (including codes and standards) found that California's energy efficiency investments from 1972 to 2006 provided a cumulative total of about $56 billion in savings and created about 1.5 million full-time equivalent jobs with a payroll of $45 billion.[16] The IOUs' portfolios will continue to create jobs in California through their energy efficiency programs, with particular emphasis on adding jobs through Workforce Education and Training (WE&T) and C&S Program efforts.

C. PG&E's 2013-2014 Proposals Will Continue to Help the State Reach and Exceed Its Ambitious Energy Efficiency Goals by Exploring Untapped Opportunities

As significant as the state's achievements have been, California cannot rest on its past energy efficiency accomplishments. PG&E recognizes that changes in the portfolio are needed to continue this upward trend, meet new challenges, and attain the Strategic Plans goals. PG&E's 2013-2014 portfolio, consistent with the Commission's guidance, will explore new opportunities to reach energy efficiency goals and achieve deeper energy savings. PG&E's proposals will simplify and reduce the number of subprograms to align its programs with customer segments and to better focus on ensuring that all customer segments are offered appropriate efficient products through channels that can best serve them. PG&E proposes to increase its budget for government partnerships by approximately 10 percent, after discussing the options and opportunities with its local government partners to enhance collaboration and better leverage our joint ability to reach shared constituents with effective energy efficiency outreach and rebates. PG&E's new financing programs will help residential, and small and medium business (SMB) customers obtain financing for energy efficiency improvements. PG&E supports the state's "big bold" strategies including the ZNE goals by 2020 for new residential construction and 2030 for new commercial construction.[17] PG&E proposes to consolidate its ZNE pilot into its residential, commercial and Emerging Technology (ET) programs to focus efforts on these goals within the market sectors.

The following is a diagram of PG&E's simplified 2013-2014 Energy Efficiency Portfolio. As shown below, Third-Party Programs and Institutional, Local and Regional Government Partners are mapped to the customer segments they serve, better enabling PG&E to identify and fill any gaps in delivery of products and services to these customers.

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13 PG&E, *2011 Energy Efficiency Programs Annual Report*, May 2012, Table 1, p. 1-1.

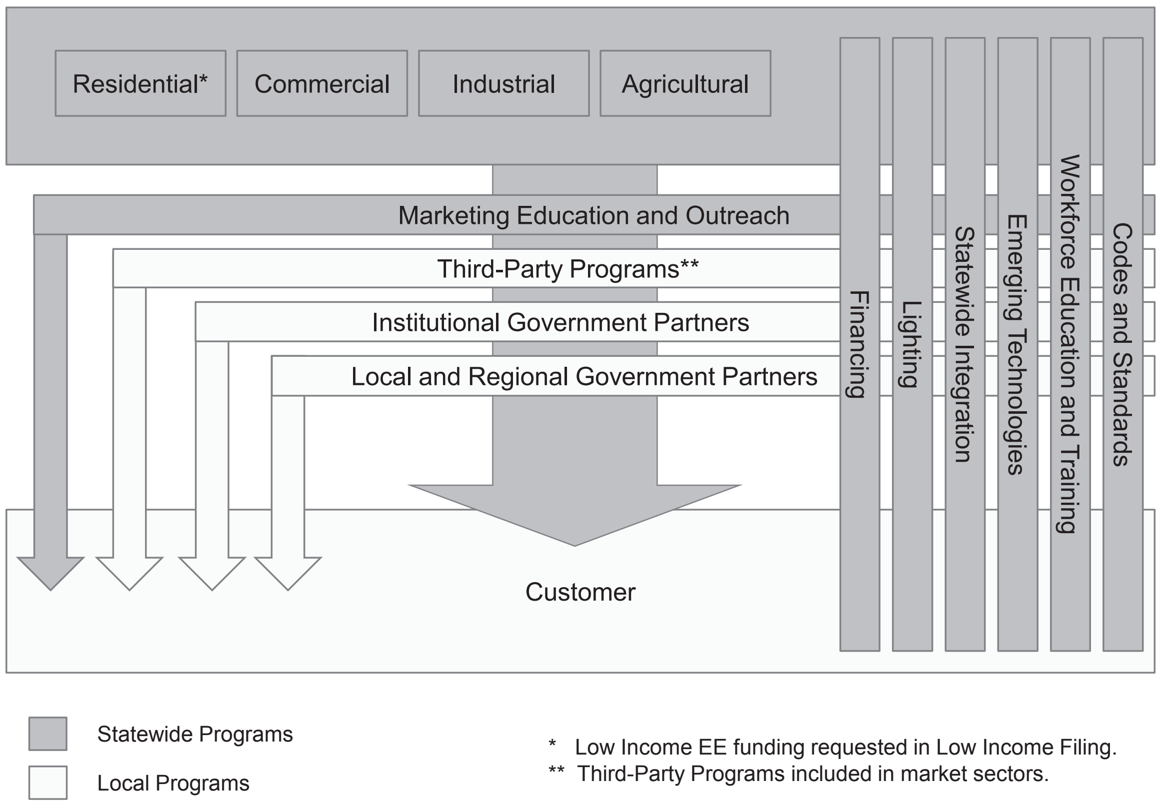
14 PG&E, *2011 Energy Efficiency Programs Annual Report*, May 2012, p. 3, Table 1, p. 1-1.

15 Strategic Plan, p. 74.

16 Roland-Holst, *Energy Efficiency, Innovation, and Job Creation in California,* UC Berkeley, pp. 4, 27-28 (October 2008).

17 Strategic Plan, p. 6.

FIGURE 1-1
PACIFIC GAS AND ELECTRIC COMPANY
PROPOSED 2013-2014 ENERGY EFFICIENCY PROGRAMS



PG&E's 2013-2014 statewide and local programs are discussed below. See Appendix C – Program Implementation Plans and Addendums for more details.

1. Residential – The Statewide Residential Program[18] offers specific and comprehensive energy solutions within the residential market. PG&E proposes to increase its focus on the Whole Home Upgrade Program (WHUP), previously known as Energy Upgrade California. This program will seek to achieve deeper energy savings in the residential market to support the Strategic Plan ZNE goals[19] and promote market transformation. The Residential Program will continue to use a variety of tools to engage customers and help them understand and manage their energy use, including home energy reports, audit tools, and on-line support. It will offer rebates to manufacturers, distributors, retailers and customers to develop, offer and install energy efficient equipment, including heating, ventilation and air conditioning (HVAC) equipment, appliances, and electronics (plug load). In addition, the program will provide tailored solutions to multi-family and new construction markets.

2. Commercial – The Statewide Commercial Program will continue to offer customers a variety of products and services from early-stage design assistance to financial

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18 D.09-09-047, p. 7, refers to the statewide residential energy efficiency subprograms as the California Statewide Subprograms for Residential Energy Efficiency (CalSPREE).

19 Strategic Plan, p. 9.

support for implementation of efficient design and technologies The Commercial Program serves various customer sub-segments including, commercial office buildings; general retail, big box retail, and supermarkets; governmental, municipal, and large institutional facilities; hospitals, assisted living facilities, skilled nursing facilities, and medical specialty facilities; lodging, resort, hotel facilities, restaurants, and food services; and schools, colleges, universities and campus housing. In 2013-2014, PG&E will increase its focus on reaching underserved SMB customers by providing targeted offerings for these customers. The program will concentrate on motivating owners and tenants to make energy efficiency investments that overcome the split-incentive barrier in multi-tenant buildings. In addition, the program will focus on achieving deeper energy savings through a variety of methods, including increasing customer opportunities to understand their usage and build their motivation to plan and execute actions to manage it.

3. Industrial – The Statewide Industrial Program includes strategies to promote integrated energy management solutions for industrial customers. This program targets four customer types: industrial manufacturing; oil and gas extraction and refining; water supply, water treatment and wastewater treatment; and high technology. PG&E proposes to continue its successful approaches from the 2010-2012 cycle with enhancements. The program will add some measures for smaller industrial customers and go after deeper energy savings in processes related to water pumping, distribution and disposal.

4. Agriculture – The Statewide Agriculture Program provides integrated services to the agricultural and food processing industries. The program is tailored to serve food processors, wineries, dairies, greenhouses and refrigerated warehouses. The Agricultural Program continues its successful approaches from the 2010-2012 cycle. PG&E will provide additional measures that are appropriate for smaller agricultural customers and that save energy in processes related to water pumping, distribution and disposal.

5. Codes and Standards – The Statewide C&S Program will continue to support the goals of the Strategic Plan by advocating for adoption of appropriate comprehensive codes and standards and facilitating increased code compliance and enforcement. The C&S Program is not only integral to each of the other energy efficiency programs, but also to the Strategic Plan's goal to transform the energy efficiency market. For 2013-2014, PG&E is continuing existing subprograms and introducing a new compliance improvement subprogram to target local governments responsible for compliance with C&S requirements. The Commission has established specific goals to be achieved through C&S Advocacy in the 2013-2014 portfolio cycle.

6. Workforce Education and Training – The Statewide WE&T Program supports the Strategic Plan's vision of a trained workforce able to do the work necessary to achieve energy efficiency market transformation. PG&E's proposals include a revision of this program to respond to the California WE&T Needs Assessment[20] completed by the Commission during the 2010-2012 cycle. In 2013, WE&T will modify the Centergies and Connections subprograms, curricula, and delivery

20 *California Workforce, Education and Training Needs Assessment for Energy Efficiency, Distributed Generation and Demand Response*, prepared by the Donald Vial Center on Employment in the Green Economy, Institute for Research on Labor and Employment, U.C. Berkeley, 2011. Available at: http://irle.berkeley.edu/vial/publications/WET_Part1.pdf.

methods to incorporate feedback and guidance from the Needs Assessment, the process evaluation, and the Decision. The program will develop curriculum with a sector strategy approach to coordinate with relevant market and education sector stakeholders to facilitate education, training and workforce development. The WE&T Program also supports PG&E's training centers that offer extensive energy-related training to the public and industry.

7. <u>Emerging Technologies</u> – The Statewide ET Program supports the goals of the Strategic Plan by evaluating new and/or promising technologies, showcasing these technologies, and then facilitating the entry of such technologies to market and adoption by customers. The ET Program performs technology development support, technology assessments, and technology introduction support. In 2013-2014, the ET Program will continue to focus on deploying new technologies and broaden collaborative efforts with industry experts.

8. <u>Demand-Side Management Coordination and Integration</u> – PG&E incorporated its local demand-side management (DSM) coordination and integration program activities into comprehensive integrated offerings to customers through the market sector-focused statewide programs. In 2013-2014, the Statewide DSM Coordination and Integration Program will focus on internal coordination of marketing approaches and collateral; education and training of sales personnel; coordination of tools necessary to support integrated offerings; and the IDSM Task Force.

9. <u>Marketing Education and Outreach</u> – PG&E's local ME&O activities account for 5 percent of the 2013-2014 Energy Efficiency Portfolio budget proposal and will build upon previous local ME&O successes and customer engagement to drive ongoing energy efficiency participation, increase the number of energy efficiency measures per customer, and drive further and deeper customer retrofits (i.e., calculated measures and WHUP) and engagement. PG&E intends to market complementary products to customers already participating in energy efficiency or other PG&E programs and services, and educate a broader audience of PG&E customers about financing opportunities as another means of promoting deeper retrofits. PG&E's Statewide ME&O Program proposal will be submitted in a separate application in August 2012 pursuant to the Decision and will address the development of a statewide brand and marketing campaign.

10. <u>Lighting Program</u> – The Statewide Lighting Program is a new program comprised of the deemed and calculated lighting measures from the statewide programs. PG&E proposes to transition from providing incentives for retailers to supply basic compact fluorescent light replacement lamps and instead emphasize more advanced lighting technologies through a variety of channels.

11. <u>Financing Program</u> – The Statewide Financing Program will be significantly expanded during this portfolio period. PG&E's total financing request, to comply with the requirement in the Decision to fund $200 million in financing statewide, is $73 million for 2013-2014. PG&E proposes to increase funding of the On-Bill Financing (OBF) Program to $38 million and make other changes to the OBF program needed for statewide consistency. PG&E proposes to provide support for third-party loan programs formerly funded through the American Recovery and Reinvestment Act (ARRA) stimulus funds that provide energy efficiency loans to residential customers. PG&E also proposes to fund new statewide loan programs

and credit enhancements during 2013-2014 consistent with the Decision. While PG&E proposes pilots to comply with the directives in the Decision, the budgets for the new financing pilots should be established, in consultation with the statewide financing consultant, based on the ultimate design and timetable for the rollout of these new financing pilots.

12. Government Partnerships – PG&E proposes to continue all existing government partnerships from the 2010-2012 program cycle and significantly expand Government Partnership Programs to better support local and regional efforts. In 2013-2014, PG&E's Institutional, Local, and Regional Government Partnerships will continue to deliver comprehensive, cost-effective programs that achieve deep retrofits while supporting and reinforcing the long-term climate action planning strategies of local governments. PG&E intends to expand the scope of current partnership programs with complementary offerings focused on achieving deeper energy efficiency savings on a local and regional level. Partnerships may include elements such as local marketing, outreach, and education, comprehensive direct install elements, audits and technical assistance, C&S support, and a whole home approach for moderate income customers. PG&E proposes to increase the total budget by $6.7 million per year, which represents a 10 percent increase over the 2010-2012 annual budget.

13. Third-Party Programs – PG&E relies on third-party program implementers as an extremely effective channel to deliver energy efficiency savings in specific customer markets.[21] The restructuring of the energy efficiency portfolio to map third-party partners into the customer segments they serve will support PG&E's efforts to assure effective coverage of each customer segment by partners with specific expertise. PG&E proposes allocating a minimum of 20 percent, or $176 million of its portfolio budget, for contracts implemented by third parties. PG&E plans to continue successful third-party implemented programs from 2010-2012, with adjustments as needed to reflect changing technologies; as well as competitively solicit new third parties to support coverage of all customer segments. As described in Chapter 3, the new program solicitation will be held after the Commission issues a decision on PG&E's application.

D. PG&E's Portfolio Is Designed to Exceed Energy Savings Goals in 2013-2014

PG&E's proposed portfolio is based on the energy savings targets in the Decision. To achieve these targets, PG&E will offer a suite of energy efficiency rebates, incentives, services and tools to targeted customers through multiple delivery channels. These channels include utility program staff, government partnerships, and a variety of third parties including trade professionals, retailers, distributors, manufacturers, and designated Third-Party Programs. Through this approach, PG&E will create a balanced portfolio to deliver cost-effective savings to every one of its key customer segments. Table 1-1 below indicates PG&E's targets and PG&E's forecast of its ability to meet or exceed the targets.

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21 PG&E's third-party programs serve residential, commercial, industrial and agricultural customers and support workforce education and training efforts.

TABLE 1-1
PACIFIC GAS AND ELECTRIC COMPANY
PROPOSED 2013-2014 ELECTRIC AND GAS ENERGY SAVINGS

Line No.	2013-2014 Electric and Gas Goals	Minimum Required by CPUC		Actual Proposed by PG&E	
		2013	2014	2013	2014
1	Annual Electricity Savings (GWh/Yr.)				
2	IOU Program Targets	599	593	782	808
3	C&S Advocacy	276	262	276	262
4	Annual Peak Savings (MW)				
5	IOU Program Targets	114	100	136	141
6	C&S Advocacy	36	38	36	38
7	Annual Natural Gas Savings With Interactive Effects (MMth/Yr.)				
8	IOU Program Targets	21.0	20.3	25.7	26.6
9	C&S Advocacy	1.1	1.6	1.1	1.6

Note: The Decision adopted IOU Program Targets on a gross basis and C&S Advocacy targets on a net basis.

Figures 1-2, 1-3 and 1-4 summarize the projected first-year energy savings, demand reduction and gas savings by market sector for PG&E's proposed 2013-2014 Portfolio.

FIGURE 1-2
PACIFIC GAS AND ELECTRIC COMPANY
PROJECTED ENERGY SAVINGS (GIGAWATT-HOURS (GWH)) BY MARKET SEGMENT

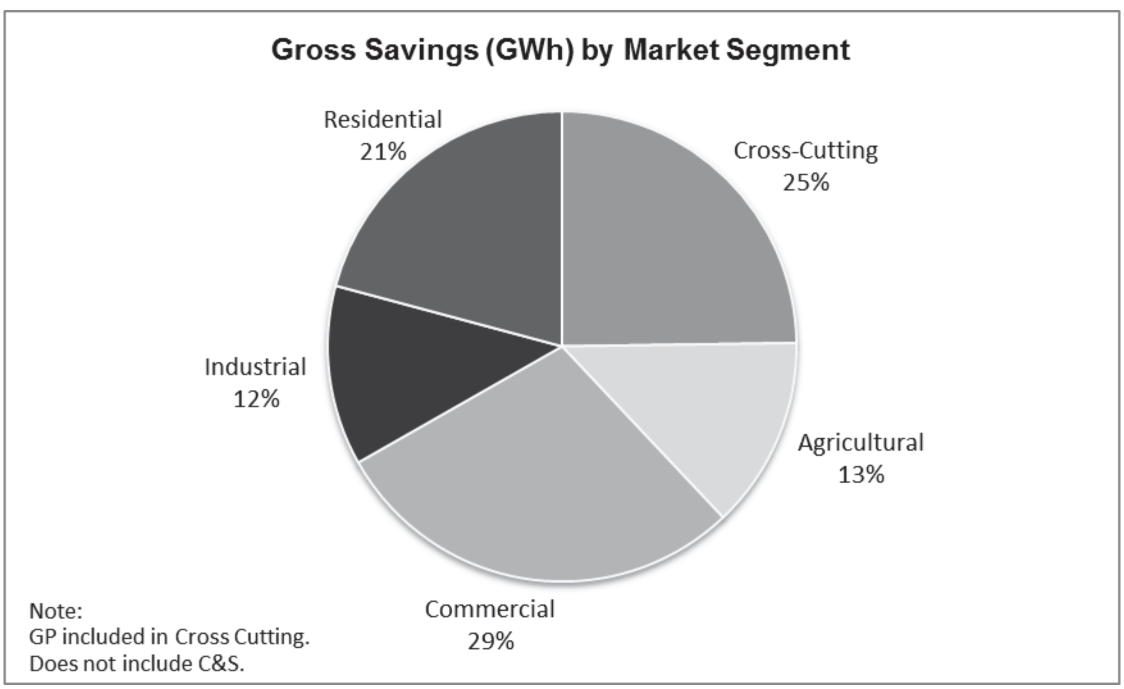


FIGURE 1-3
PACIFIC GAS AND ELECTRIC COMPANY
PROJECTED DEMAND (MEGAWATT (MW)) REDUCTION BY MARKET SEGMENT

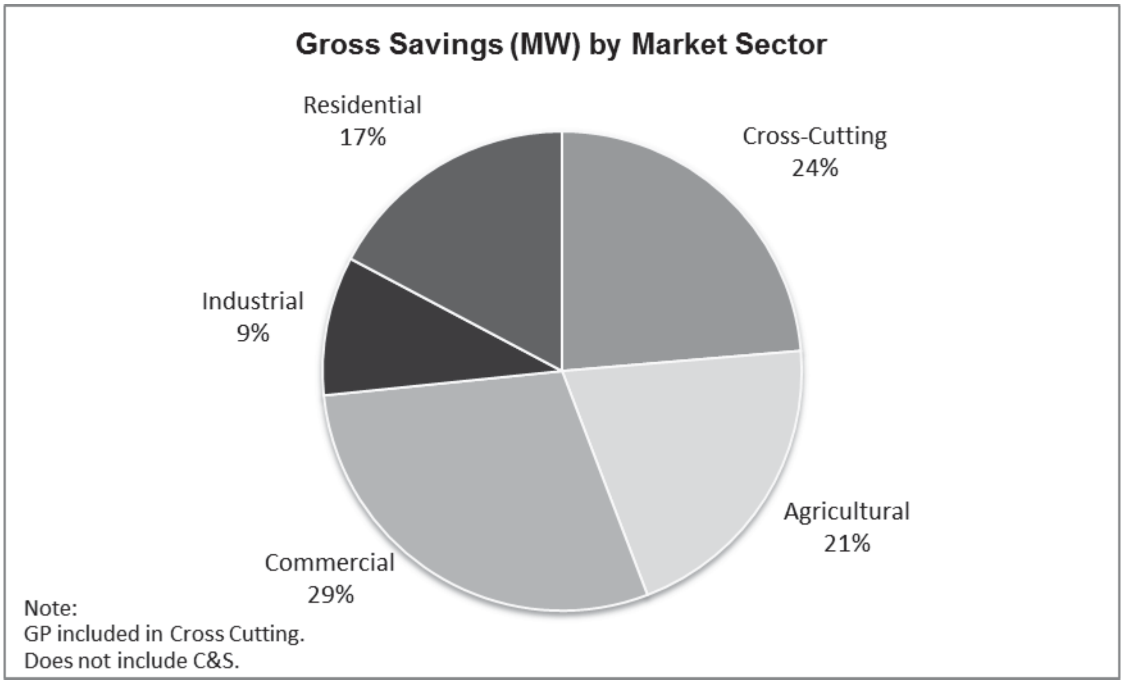
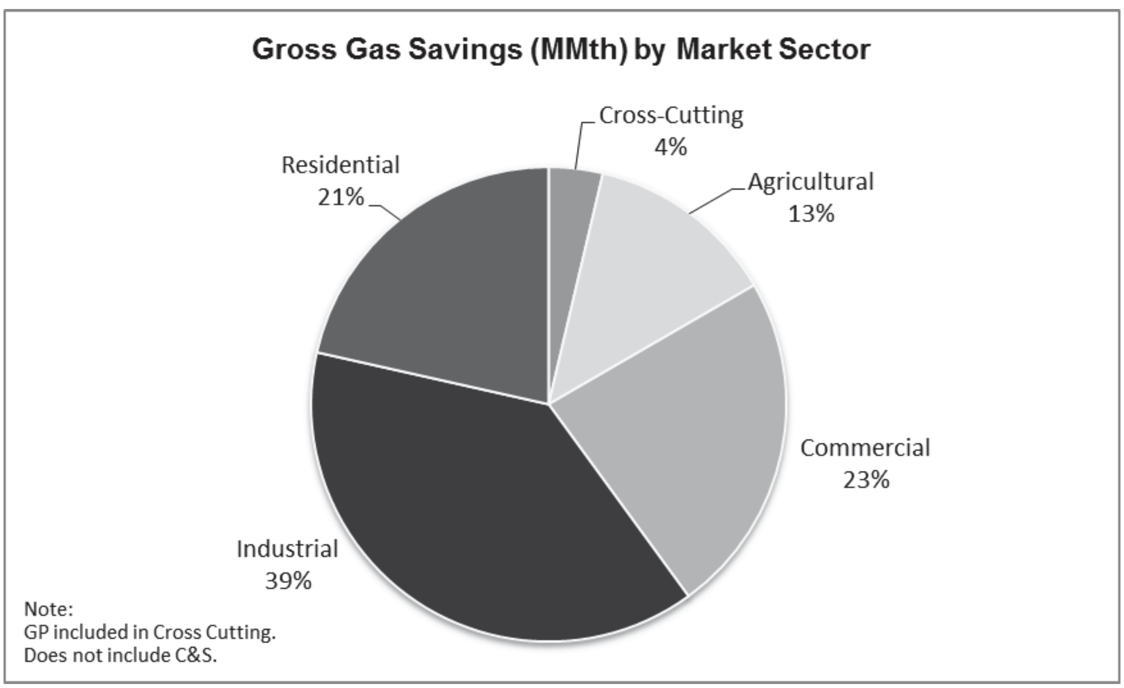
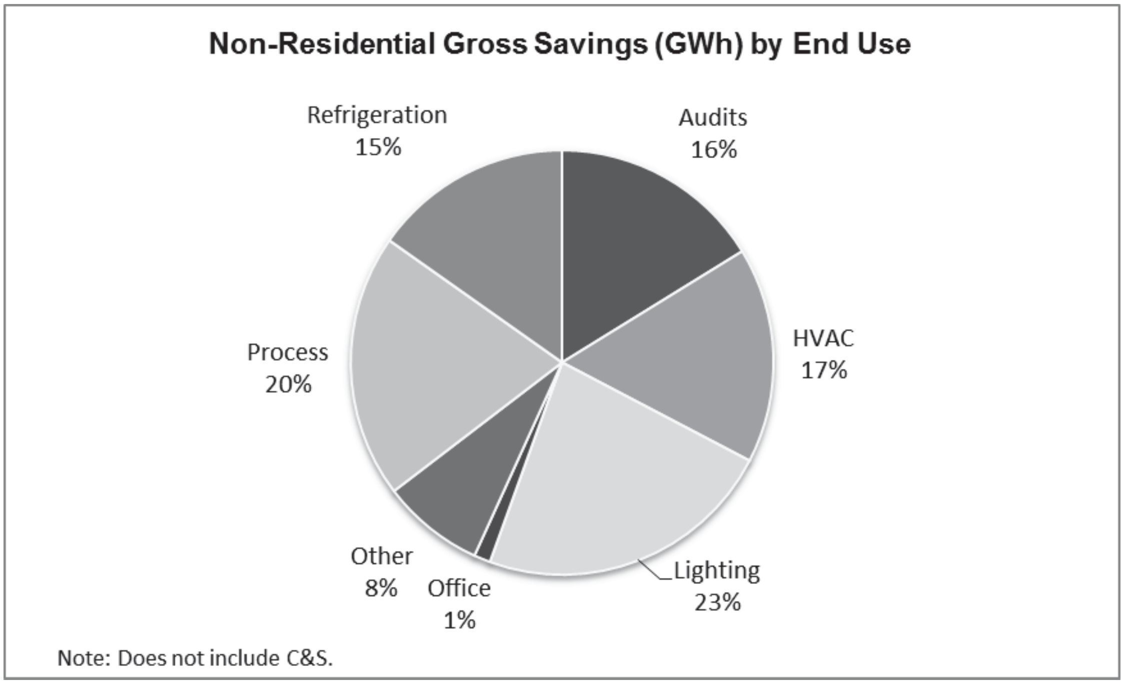


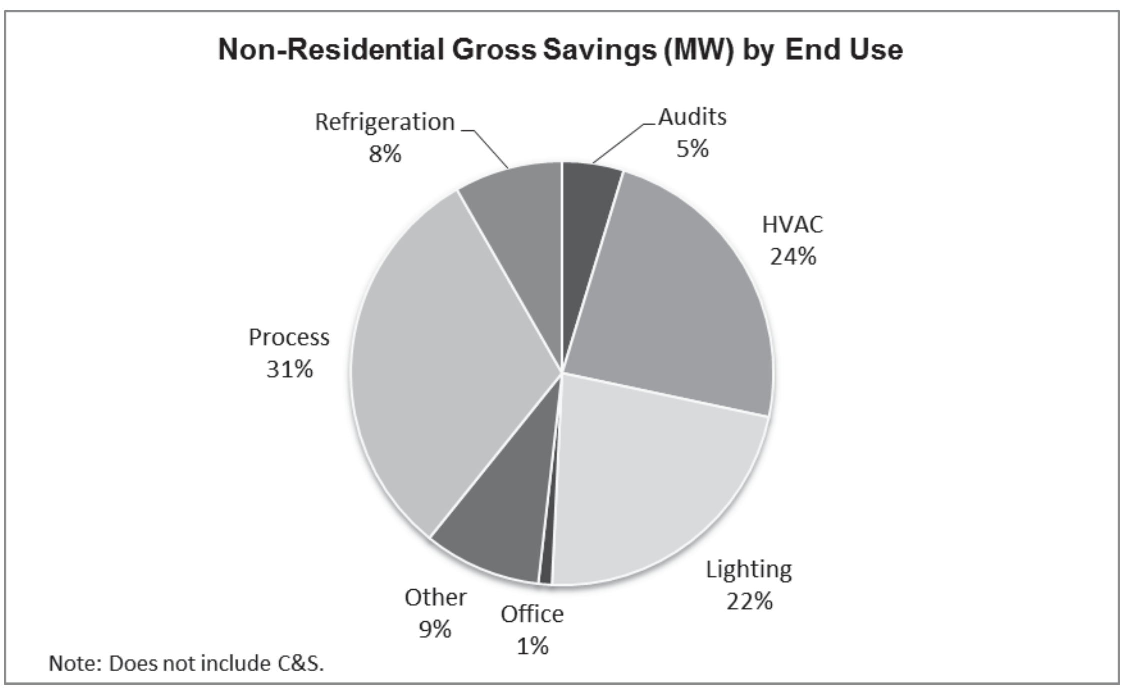
FIGURE 1-4
PACIFIC GAS AND ELECTRIC COMPANY
PROJECTED GAS SAVINGS (MILLIONS OF THERMS (MMTH)) BY MARKET SEGMENT



Figures 1-5 and 1-6 summarize the projected energy savings, demand reduction and gas savings by end-use for the non-residential and residential market sectors for PG&E's proposed portfolio. The gross gas savings by end-use are presented in bar charts to accurately reflect the negative therm impact of gas end-use due to Database for Energy Efficient Resources (DEER) interactive effects.

FIGURE 1-5
PACIFIC GAS AND ELECTRIC COMPANY
PROJECTED NONRESIDENTIAL ENERGY SAVINGS BY END-USE





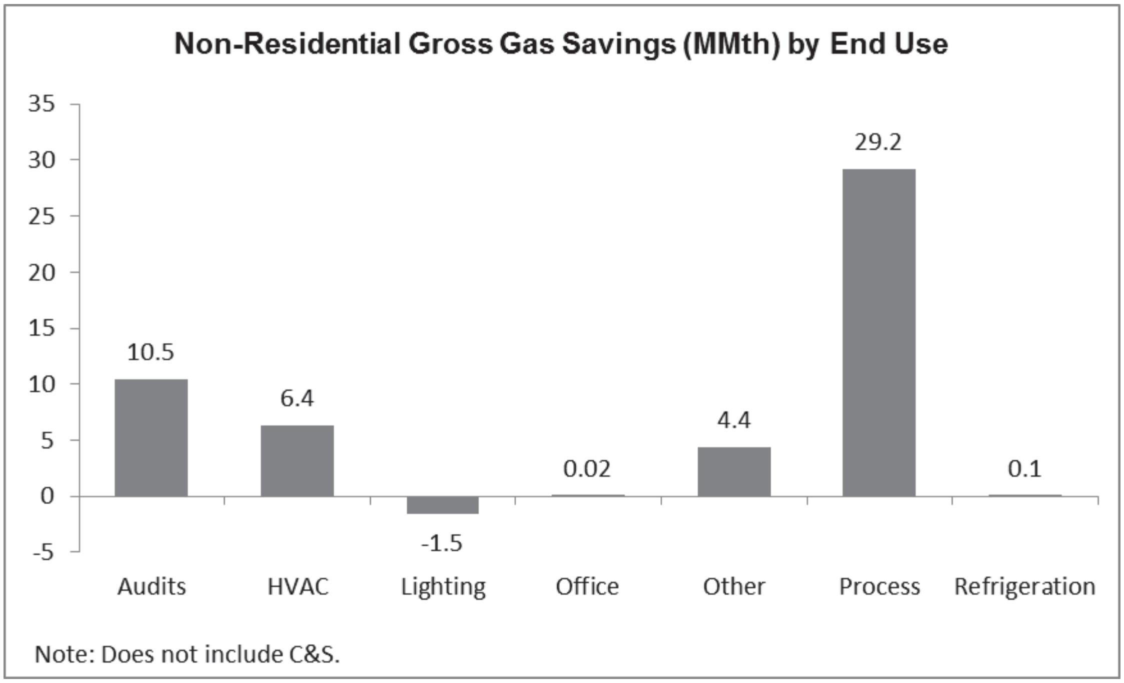
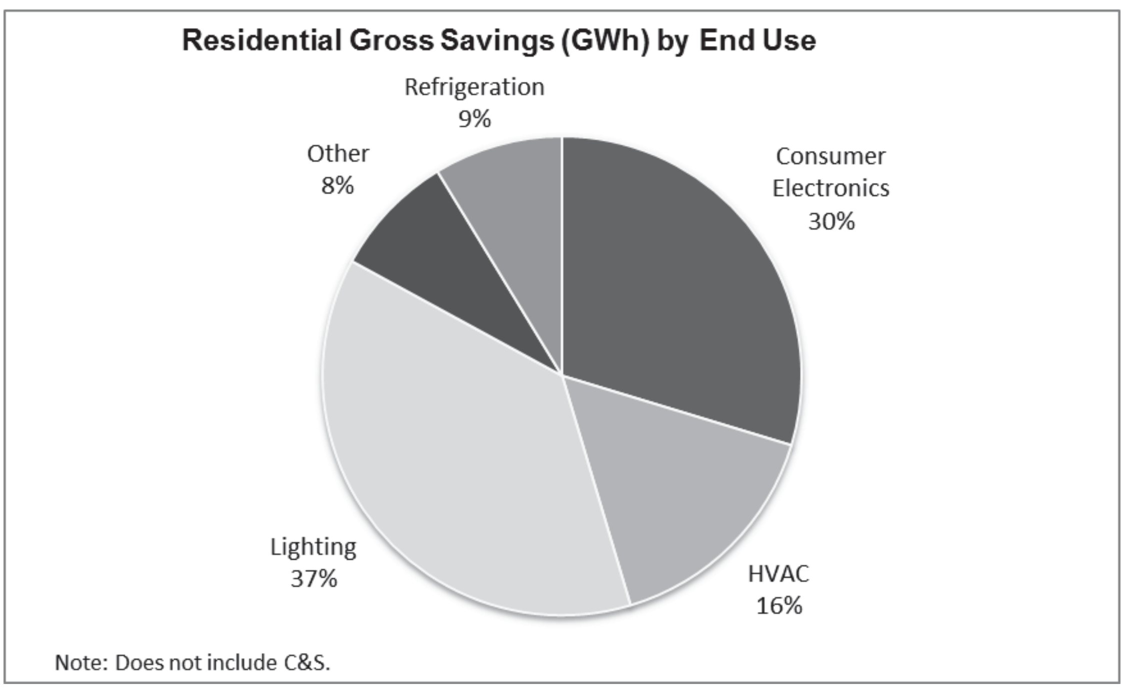
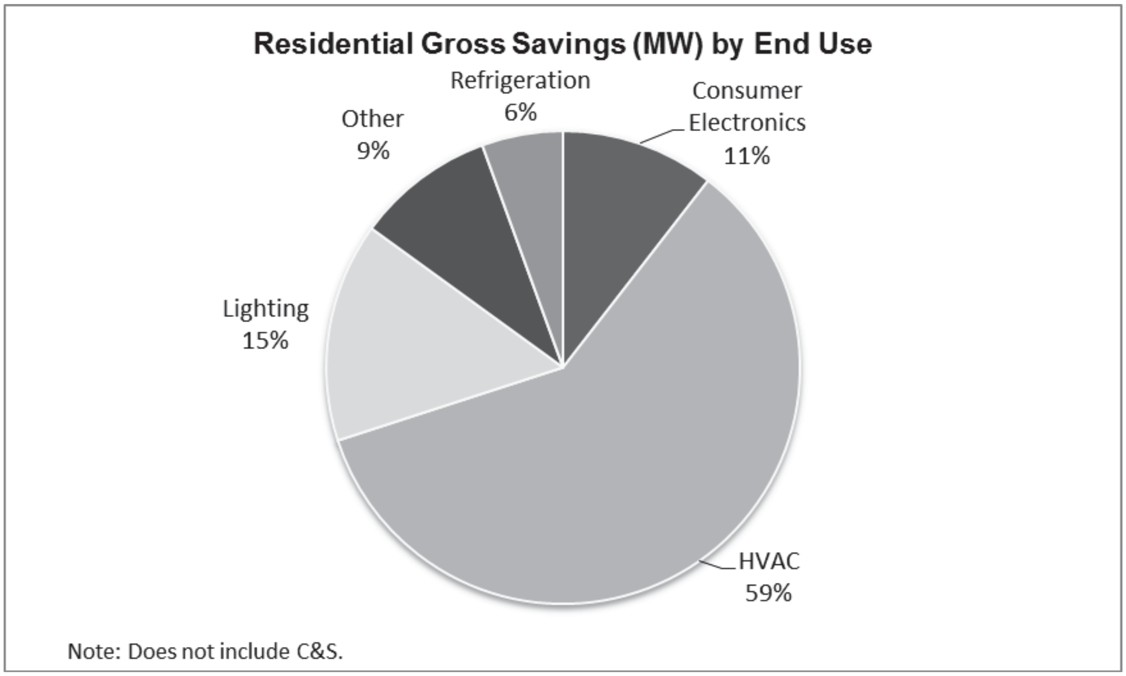
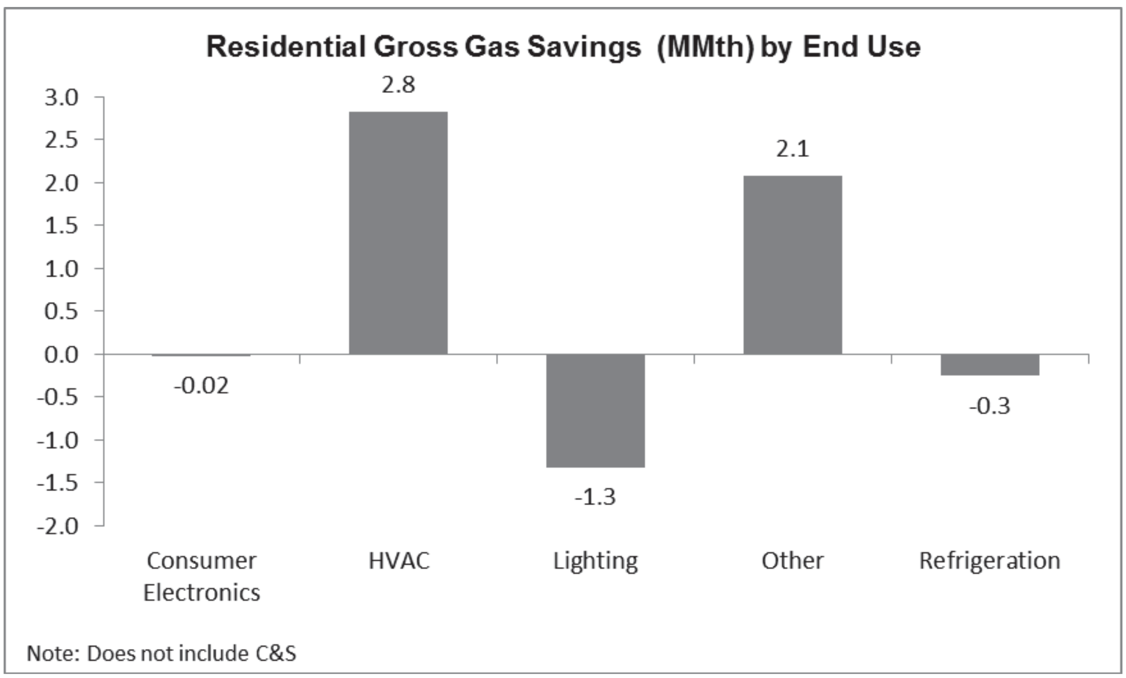


FIGURE 1-6
PACIFIC GAS AND ELECTRIC COMPANY
PROJECTED RESIDENTIAL ENERGY SAVINGS BY END-USE







E. PG&E's Proposed Portfolio is Cost Effective

PG&E conducted a cost-effectiveness analysis of its portfolio pursuant to the California Standard Practice Manual.[22] In compliance with the Decision, PG&E used the Energy and Environmental Economics, Inc. (E3) calculator, which includes the new avoided cost updates the Staff provided to the Rulemaking 09-11-014 service list on June 25, 2012 to calculate the portfolio's forecasted cost-effectiveness. PG&E presents its prospective showing of cost effectiveness for its 2013-2014 Energy Efficiency

22 http://www.energy.ca.gov/greenbuilding/documents/background/07-J_CPUC_STANDARD_PRACTICE_MANUAL.PDF

Portfolio with and without spillover.[23] As indicated in Table 1-2 below, PG&E's portfolio is cost-effective under both the TRC and the Program Administrator Cost (PAC) tests. Additional details on the 2013-2014 portfolio cost-effectiveness calculations are presented in Appendix A, Portfolio Cost-Effectiveness Analysis.

TABLE 1-2
PACIFIC GAS AND ELECTRIC COMPANY
2013-2014 PORTFOLIO COST EFFECTIVENESS

Line No.	Portfolio Cost Effectiveness	TRC	PAC
1	Proposed Portfolio Without Spillover Estimates	1.25	1.82
2	Proposed Portfolio With Spillover Estimates	1.30	2.04

F. PG&E's Budget Proposal is Reasonable and Should Be Approved

The total 2013-2014 Energy Efficiency Portfolio funding request, including Evaluation, Measurement and Verification (EM&V), is $859.5 million, or an annual average of $429.7 million, which is a decrease of approximately 3.6 percent per year from PG&E's approved 2010-2012 Energy Efficiency Portfolio budget.[24] PG&E also requests, as directed in Decision 12-04-045, an additional $6.5 million, or an annual average of $3.3 million, to fund the IDSM activities historically requested through the Demand Response Program application. PG&E's funding request is reasonable, cost effective, meets the Commission's energy savings goals for 2013-2014, and complies with the directives in the Decision. The budget breakdown by program is presented below in Table 1-3.

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[23] Spillover has been defined as reductions in energy consumption and/or demand in a utility's service area caused by the presence of the DSM Program, beyond program-related gross or net savings of participants. The IOUs' spillover analysis is contained in Appendix A.2 – Portfolio Cost Effectiveness Evaluation, Attachment 1.

[24] This reduction is due in part to the Decision's requirement (OP 117) to file a separate application for statewide marketing, education and outreach.

TABLE 1-3
PACIFIC GAS AND ELECTRIC COMPANY
2013-2014 ENERGY EFFICIENCY PORTFOLIO
AND DEMAND RESPONSE IDSM REQUEST

Line No.	Program/Cost Element	Requested 2013-2014 Budget
1	Residential(a)	$132,605,474
2	Commercial(a)	$224,678,331
3	Industrial(a)	$101,547,289
4	Agricultural(a)	$55,862,567
5	Lighting	$41,880,691
6	C&S	$12,762,470
7	ET	$12,312,940
8	Workforce Education and Training(a)	$27,827,060
9	Statewide DSM Coordination and Integration	$1,630,899
10	Financing	$73,000,000
11	Government Partnerships	$140,910,724
12	Evaluation, Measurement and Verification	$34,437,754
13	Total Budget Request for Energy Efficiency Portfolio	$859,456,198
14	Total Budget Request for Demand Response IDSM	$6,528,000

(a) Budget includes third-party programs as shown in Appendix D – Budget and Savings Placemat Tables.

PG&E proposes an increase in funding over the previous program cycles for the following:

- Increased support for programs and initiatives that promote deeper, longer lasting savings for both residential and non-residential customers.
- Expansion of current efforts underway to help SMB customers manage their energy use.
- Increased support for measures that promote water and energy savings for agricultural and industrial customers
- Expansion of local and regional government partnerships to include more comprehensive energy efficiency solutions for residential and business customer needs.
- Introduction of new financing program offerings, expanding OBF and funding for successful third-party programs previously financed with ARRA funds.

PG&E's administrative budget is 7.8 percent of the total, under the 10 percent cap approved for the IOUs' administrative budgets in Decision 09-09-047. The EM&V is capped at 4 percent of the total portfolio budget as required by the Decision.

G. PG&E's Alternative Proposals Further the Commission's Goals, Would Improve Customer Satisfaction, and Should Be Approved

PG&E's alternative proposals complement the Commission's directions in the Decision, with modifications that will: (1) improve the customer experience, (2) expand and enhance deeper retrofit and energy savings opportunities, and (3) increase program efficiency as compared with both the primary 2013-2014 Energy Efficiency Portfolio proposals and the current portfolio.

Approval of PG&E's alternative proposals will promote the state's and Commission's aggressive and essential goals of market transformation and cost-effective resource procurement for the deployment of energy efficiency products and services. The proposals are discussed in detail in Chapter 1A. Many of these proposals are supported by the other IOUs and other parties who regularly participate in the Commission's energy efficiency proceedings. Each of the alternative proposals is summarized below.

1. Enhance Customer Experience in Commercial, Industrial and Agricultural Custom Projects

PG&E, joined by the Natural Resources Defense Council, the National Association of Energy Services Companies, the California Energy Efficiency Industry Council, Onsite Energy, as well as the other IOUs (collectively "Joint Parties") propose to modify the custom review process to improve the customer's experience by offering a more predictable and expedited project approval process. The current custom review process is time consuming and uncertain, causing some customers to either not participate or abandon potentially cost effective projects. The Joint Parties propose to separate the review and project approval process for large and small projects to allow customers to proceed with projects in a timely fashion, yet allow the IOUs and the Staff to continue the EM&V process after the installation. The Joint Parties also make several specific proposals to allow the process to proceed more efficiently, significantly reduce the approval period, and eliminate conditional approvals, all with the goal to provide the customer with sufficient certainty to complete the energy efficiency portion of its project.

2. Improve Opportunities for Increased Participation in the WHUP

The IOUs also propose measures to improve the WHUP, formerly known as Energy Upgrade California).

First, the IOUs propose to hire a Market Transformation (MT) Consultant to help the IOUs incorporate MT best practices into the program design, implementation, and evaluation of the WHUP. The MT Consultant will help the IOUs to improve planning and measurement and address potential modifications to the cost-effectiveness assumptions.

Second, the IOUs also propose additional stakeholder participation, including program advisory groups and a non-market participant review group to confidentially discuss key issues outside of the filing process.

In addition, PG&E and SCE propose an immediate update to the TRC cost effectiveness methodology for the WHUP. The problems associated with the cost-effectiveness analysis for the WHUP are well known and were discussed at Commission workshops on June 28 and 29. The cost-effectiveness analysis for WHUP includes only the incremental energy-efficiency benefits of a project. However, the TRC analysis includes the full program costs, whether or not all of such costs are attributable to the incremental energy efficiency investment. This mismatch caused by including only incremental benefits but full costs reduces the TRC results. Resolution of this issue through the workshop process will be too late for this proceeding. PG&E and SCE propose a means to address this issue for the current proceeding. PG&E and SCE propose to omit the construction labor costs attributable to a project from the participant costs included in the TRC analysis because the labor costs would have been incurred irrespective of the incremental energy efficiency benefits of the project. With this revision, the TRC results for WHUP are significantly improved and may support increasing the funding requested in this application proposed for WHUP through fund shifting to further encourage deeper retrofits in the residential housing market, consistent with Commission policy.

3. Increase Program Efficiency by Adopting a More Streamlined Method for Developing *Ex-Ante* Values for New Measures

PG&E and SCE propose a streamlined and effective methodology for developing *ex-ante* values for new measures. The proposed process would include a schedule for Staff's review and comment upon relevant information, use of latest available data in workpapers, and other revisions that would reduce disputes regarding the review of new measures. These revisions include: (1) use of best available data for low impact measures, (2) use of interim values for high impact measures developed by the Staff and IOUs; (3) collaboration among the Staff and the IOUs to develop studies where data is scarce, and (4) use of interim workpaper values until studies are completed. The IOUs also propose to freeze for the 2013-2014 program cycle: (1) *ex-ante* values (absent code changes); (2) workpaper values that have been approved by the Staff; and (3) values in the DEER (absent code changes). Any corrections to errors or omissions to frozen DEER values would be mutually agreed-upon by the Staff and the IOUs. These changes are necessary to reduce the waiting time for the approval of new measures and provide more certainty about the energy savings values that will be obtained during the portfolio cycle.

4. Increase Use of Competitive Solicitations for Statewide Marketing

The Decision requires the IOUs to hire the California Center for Sustainable Energy (CCSE) as a statewide marketing coordinator.[25] PG&E agrees with Commissioner Simon that while CCSE may be a very capable organization, the marketing contract should have been awarded through a competitive solicitation.[26] While PG&E, in accordance with the Decision, will contract with CCSE for 2012, the 2013-2014 contract should be awarded on a competitive basis so that the ratepayers receive the best services and value. The Commission should consider an open solicitation process for 2013-2014 to enable the IOUs to jointly select the highest quality, lowest cost implementers and determine appropriate funding levels.

5. New Financing Programs Should Be Piloted During 2013-2014

The Commission's emphasis on energy efficiency financing to reduce barriers to energy efficiency upgrades is laudable and should continue on a trial basis during 2013 and 2014. However, there is still much uncertainty about many important program design issues, and the consultant that the Decision requires has not yet had

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25 Decision, pp. 303-305.

26 See Concurrence of Commissioner Timothy Alan Simon on D.12-05-015, p. 3. "I am deeply concerned, however, that the CCSE contract, itself, was awarded without competitive solicitation and, believe the CCSE contract should have been won via competitive bid."

the opportunity to begin the necessary program design and implementation work. PG&E proposes to revise the timetable for the development of the pilots and transition to full programs to allow sufficient time for the new pilots to be designed and executed, and the results analyzed and reviewed in workshops. After this work is completed, the IOUs should then prepare proposals for full-scale programs to be implemented beginning in 2015. The pilot approach mandated by the Decision is sensible; however, the timetable is too aggressive. New large-scale financing programs should not be required until evaluation of the results of the pilots is complete in order to benefit from lessons learned in the pilots.

H. PG&E's Fund Shifting Proposals Are Reasonable and Should Be Approved

In Decision 09-09-047, the Commission adopted fund-shifting rules to provide the IOUs with flexibility in managing their energy efficiency portfolios over the program cycle. In the Assigned Commissioner Mark J. Ferron's *Ruling Clarifying Fund Shifting Rules and Reporting Requirements* (December 22, 2011) (Fund Shifting Assigned Commissioner Ruling), Commissioner Ferron updated the Energy Efficiency Policy Manual 4.0 to reflect the fund shifting rules adopted in Decision 09-09-047. Commissioner Ferron also clarified the fund shifting categories for statewide and local programs. PG&E proposes to retain the existing fund shifting rules from the current cycle for the 2013-2014 program cycle with limited modifications. PG&E proposes to eliminate Third-Party Programs as a stand-alone fund shifting category by integrating the third-party offerings into the statewide programs that are defined by customer segment. This proposal is reasonable and should be adopted because it will align the fund shifting categories with the program groupings in this Application. In addition, the requirement that 20 percent of the budget be allocated to third parties already ensures a minimum funding level for third parties making the fund shifting limit unnecessary.

I. PG&E's Rate Recovery Proposals Are Reasonable and Should Be Approved

PG&E requests approval of a total energy efficiency and demand response IDSM revenue requirement of $873.8 million to be recovered in gas and electric rates for the two-year portfolio cycle. PG&E requests that the revenue requirement adopted in this proceeding be made effective January 1, 2013. PG&E also requests that the Commission: (1) authorize PG&E to recover in rates the 2013-2014 revenue requirements, excluding a reduction for any unspent, uncommitted funds until the uncertainty around the sweep of gas energy efficiency funds, as addressed in Decision 11-10-014, is resolved; (2) approve the allocation of expenditures and authorized funding between gas and electric customers based on net benefits of PG&E's proposed portfolio of 84 percent electric and 16 percent gas; and (3) extend the balancing account treatment for recording the electric portion of energy efficiency expenditures, adopted in Decision 11-12-038, beyond 2012.

J. The Commission Should Issue an Interim Funding Decision No Later Than October 1, 2012, to Continue Existing Rate Levels in 2013, Pending a Final Decision in This Proceeding

PG&E requests an interim funding decision by October 1, 2012 to create clarity in establishing rates effective January 1, 2013. Decision 09-09-047 provides authority for energy efficiency programs to continue to operate into 2013 at the average 2012 expenditure level if there is no funding decision before the end of a the portfolio cycle.[27] However, that decision does not clearly specify the authorized amounts that PG&E can recover in rates effective January 1, 2013, through its Annual Electric True-Up (AET) and Gas Public Purpose Program (PPP) Surcharge advice letters.[28] If PG&E were to include in 2013 rates the 2012 expenditure level, it would increase rates in 2013 above the average 2010-2012 level that is currently recovered in rates, and above PG&E's request in this proceeding. PG&E does not desire an unnecessary rate increase.

PG&E requests that the Commission issue an interim funding decision no later than October 1, 2012, to clarify that rate components for gas and electric energy efficiency can remain unchanged for 2012 when PG&E files its AET and Gas PPP surcharge advice letter. Any difference between the energy efficiency funding recovered in 2013 rates and amounts adopted in the final decision would be subject to balancing account adjustment and true-up in rates. The Commission should authorize 2013 funding at a level consistent with the 2012 rate components to avoid a rate increase for the electric procurement component and a potential reduction of the 2013 gas PPP surcharge to zero.[29]

K. Summary of PG&E's Requests

PG&E requests that the Commission issue a decision approving PG&E's application, including the following requests:

- Adopt PG&E's total request for its 2013-2014 Energy Efficiency Portfolio budget of $859.5 million over two years, or an annual average of $429.7 million; and a budget for 2013-2014 Demand Response IDSM activities of $6.5 million, or an annual average of $3.3 million. PG&E's request is a $16.3 million decrease compared to the annual average authorized energy efficiency budget approved for the 2010-2012 Energy Efficiency Portfolio cycle[30] and a $2.9 million decrease compared to the amount of the Demand Response Program IDSM budget authorized for 2012.[31]
- Adopt PG&E's portfolio of statewide and local energy efficiency program offerings, revised consistent with the Decision.
- Adopt PG&E's proposals to simplify and reduce the number of subprograms to align its programs with customer segments.
- Adopt PG&E's new statewide Financing Program that supports third-party residential loan programs formerly funded through the ARRA stimulus, increases PG&E's revolving loan pool for OBF for non-residential customers by $38 million and sets aside $31 million to fund new statewide loan programs and credit enhancements to be further developed over the 2013-2014 cycle with assistance from the statewide financing consultant.

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27 D.09-09-047, p. 312, OP 45.

28 PG&E will file its 2013 Annual Electric True-Up advice letter by September 1, 2012, pursuant to Resolution E-4432, and its 2013 Gas PPP Surcharge advice letter by October 31, 2012, pursuant to D.04-08-010.

29 D.04-08-010, p. 7.

30 D.09-09-047.

31 D.12-04-045.

- Adopt PG&E's proposal to continue all of its existing government partnerships from the 2010-2012 program cycle and significantly expand the government partnership programs to reach new areas based on local community feedback.
- Adopt PG&E proposal to allocate a minimum of 20 percent, or $176 million of its two-year portfolio budget to continue successful third-party implemented programs from 2010-2012, and competitively solicit new program implementers once the Commission approves PG&E's portfolio application.
- Adopt PG&E's proposal to eliminate Third-Party Programs as a stand-alone fund shifting category by integrating the Third-Party Program into the Statewide Programs in order to align the fund shifting categories with the Staff guidance on program groupings.
- Approve PG&E's EM&V budget request of 4 percent of the amount of the portfolio, with the current split of responsibilities between the Staff and IOUs.
- Adopt a total revenue requirement of $873.8 million to be recovered in rates.
- Adopt the allocation of energy efficiency expenditures and authorized budgets between gas and electric customers based on PG&E's forecasted net benefits for the 2013-2014 Energy Efficiency Portfolio of 84 percent electric and 16 percent gas.
- Adopt PG&E's request to extend balancing account treatment for recording the electric portion of energy efficiency expenditures adopted in Decision 11-12-038 beyond 2012.
- Issue an interim decision no later than October 1, 2012, to continue existing rate levels for all energy efficiency programs in 2013, pending a final decision in this proceeding.

L. Organization of Remaining Testimony

The remainder of PG&E's testimony is organized as follows:

- **Chapter 1A – PG&E's Proposed Alternatives:** This chapter describes PG&E proposals, developed in collaboration with other interested parties, that if adopted will improve the customers' experience with custom energy efficiency projects, increase customer participation in WHUP, and streamline the introduction of new energy savings measures.
- **Chapter 2 – Portfolio Reflects Guidance:** This chapter describes how PG&E has amended its programs and revised its portfolio to comply with the Decision.
- **Chapter 3 – Proposed Portfolio Fulfills Energy Efficiency Goals**: This chapter provides a concise summary of PG&E's programs and subprograms for which it seeks approval in this proceeding.
- **Chapter 4 – Proposed Funding Request is Reasonable:** This chapter supports PG&E's proposed 2013-2014 energy efficiency portfolio budget and modification of the existing fund shifting rules.
- **Chapter 5 – Proposed Evaluation Plan and Budget:** This chapter includes PG&E's EM&V budget and plans to work with Staff to develop the 2013-2014 EM&V plan.

- **Chapter 6 – Proposed Revenue Requirements and Cost Recovery:** This chapter presents PG&E's request to recover the authorized funding in rates, the rate impacts and request for 2013 bridge funding.
- **Chapter 7 – Witness Qualifications:** This section includes the qualifications for each of PG&E's five witnesses who are sponsoring testimony in this proceeding.

M. Conclusion

PG&E's testimony proposes a portfolio that implements the changes that were directed by the Commission in the Decision on May 18, 2012. Within the limited time frame allowed by the Decision, PG&E has developed a cost effective portfolio, supported in Appendix A – Portfolio Cost-Effectiveness Analysis, Appendix D – Budget and Savings Placemat Tables and Appendix E – 2013-2014 Energy Efficiency Portfolio Tables. PG&E has significantly streamlined and reduced its workpapers for non-DEER measures from 800 to 151 as supported in Appendix B – Workpapers. PG&E, with the other IOUs have created and revised ten statewide Program Implementation Plans (PIP) and PIP addendums for the 2013-2014 Energy Efficiency Portfolios that are included in Appendix C – Program Implementation Plans and Addendums. PG&E has also updated its third-party and government partnership program PIPs as shown in Appendix C. The Decision included 300 directives in its ordering paragraphs and other discussion to which PG&E has complied with its Application and testimony, as summarized in Appendix G – Table of Compliance. Further supporting information is provided in Appendix F – Additional Information, including an assessment of its local government partnership programs.

PG&E's testimony includes a cost-effective budget that will allow it to meet and in some cases exceed the goals in the Decision. PG&E's proposed portfolio is also aligned with the state's energy policies.

PG&E respectfully requests the Commission approve PG&E's Application for its 2013-2014 Energy Efficiency Portfolio.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 1A

PG&E'S PROPOSED ALTERNATIVES

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A. Overview

Pacific Gas and Electric Company's (PG&E) testimony proposes a 2013-2014 Energy Efficiency Portfolio that fully complies with Decision 12-05-015 (the Decision). In this chapter, PG&E proposes additional changes to programs and processes to further improve the implementation of the portfolio. Consistent with the Decision,[1] this chapter describes PG&E's "alternative" proposals to improve its 2013-2014 Energy Efficiency Portfolio. These proposed modifications, if approved, would: (1) improve the customer experience; (2) expand and enhance deeper retrofit and energy savings opportunities; and (3) increase program efficiency as compared with both the primary portfolio proposals and the existing portfolio. Key improvements to the portfolio include:

- Improve the customer experience by making modest changes to the custom review process.
- Expand and enhance deeper retrofit and energy savings opportunities by leveraging Market Transformation (MT) best practices, facilitating stakeholder participation, and modifying cost-effectiveness methodology for the Whole Home Upgrade Program (WHUP).
- Increase program efficiency by improving specific functional elements.

B. Enhance Customer Experience

In Decision 11-07-030 Attachment B, the California Public Utilities Commission (CPUC or Commission) established a process by which *ex-ante* energy savings estimates from custom measures and projects (hereafter, the "Custom Program") are reviewed. The Custom Program is an increasingly important source of energy savings and hence any improvement in the customer experience is likely to encourage existing customers to seek additional opportunities for deeper energy savings and may encourage additional non-participants to engage in energy efficiency projects. Each of the proposals below is intended to improve predictability for the customer with the explicit goal of making it easier to develop and implement energy saving projects. These proposals were developed jointly by the investor-owned utilities (IOU)[2] and other interested parties. While the descriptions may vary slightly for PG&E's testimony, the content of these Custom Program proposals are intended to be consistent among the IOUs.

The IOUs and a collective of non-utility interested parties including the Natural Resources Defense Council (NRDC), the National Association of Energy Service Companies, the California Energy Efficiency Industry Council, and Onsite Energy (hereafter, the "Joint Parties") propose enhancements to the Custom Program, primarily to improve the customer experience. The Joint Parties' collaborative discussions on these proposals could serve as a model to use collective efforts to discuss energy

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[1] D.12-05-015, OP 171.

[2] IOU parties include PG&E, Southern California Edison Company (SCE), San Diego Gas & Electric Company, and the Southern California Gas Company.

efficiency programs and proposed improvements prior to the submission of future testimony to improve the quality of proposals and increase administrative efficiency.

Attached to this chapter is a redlined version of the Custom Project Review Process[3] (Attachment 1 – Redlined Attachment B – Customer Project Review Process) that the Joint Parties respectfully request the Commission adopt for the Custom Program. The remainder of this section will summarize the proposed changes in Redlined Attachment B, and the associated rationale and benefits of the recommendations.

Custom measures and projects are energy efficiency efforts where the customer's financial incentive and the *ex-ante* energy savings are determined through a site-specific analysis of the customer's existing and proposed equipment. An agreement is made with the customer to pay the financial incentive upon the completion and verification of the installation. Since custom measures and projects each have unique characteristics, parameters that determine estimated energy savings are more variable and less predictable without a site-specific analysis than the more common deemed measures for which savings parameters can be predetermined.

The Joint Parties focused on improvements to the Custom Program because customer experience and participation is a critical element of the program's success. Custom Program projects produce some of the largest energy savings in the IOUs' portfolios and, as such, they are critical to meeting the statewide energy efficiency savings goals.

Due to the significant energy savings achieved through this program, the Custom Program is highly valued by utility customers. In general, Custom Program projects provide an opportunity for businesses to replace existing commercial and industrial processes and/or equipment to increase energy efficiency, resulting in energy—and ultimately cost savings. In particular, many Custom Program projects are specifically designed to retire older, less efficient equipment earlier than would otherwise occur without custom incentives. The rebates and incentives are necessary to encourage the customer to change its current business model for equipment replacement (which often amounts to using old, inefficient equipment indefinitely), leading to overall energy reductions and utility bill savings that over time result in a net cost benefit to ratepayers. Improvements to the Custom Program that specifically target the customer's experience and decision-making process are key to improving the Custom Program.

One of the most important aspects of working with customers on custom projects is timeliness and planning predictability. The Joint Parties identified certain adjustments to the Custom Program process that will accommodate appropriate review of projects without impeding the customer's ability to proceed with energy efficiency projects in a timely fashion. The Joint Parties' observations, based on almost a year of implementing projects with the current review process, are that the timing of the current process is uncertain and this uncertainty negatively impacts customers' ability to plan for and execute custom projects. The adjustments described herein and in the Redlined Attachment B are intended to enhance the Customer Program and should be approved. The changes also propose standardized timelines for the Commission to review projects to support customer needs for a defined timeline.

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3 Attachment B to D.11-07-030.

1. Proposal – Annual Evaluation Plan

The Joint Parties propose to amend Attachment B so the review process is conducted according to an annual "Evaluation Plan" developed by stakeholders that outlines areas of concentration for the year's work (e.g., technologies, types of customers, and industries to be reviewed). The plan would clarify documentation requirements and discovery expectations for the project being reviewed, including early retirement parameters, incremental costs, baseline considerations, and data collection expectations. These defined expectations are expected to improve responsiveness, and ultimately, the timeliness of project disposition with maximum customer convenience.

Mapping out project review guidelines will improve customer understanding of the process and help set reasonable expectations and enhance administrative efficiencies. In addition, specifying the criteria for projects selected for review will allow all parties to focus on the parameters, projects, and technologies that the Commission views as most important. The Joint Parties note that a similar approach is used successfully in New York for custom and deemed measures.

2. Proposal – Pre-Installation/Concurrent Reviews

The Joint Parties also suggest modifications to the Custom Project Review Process that would provide a greater degree of certainty for customers regarding the pre-installation review process. The pre-installation review process allows the Commission's Energy Division staff (Staff) to review projects prior to implementation in order to validate baseline usage and set expected energy savings values. The Joint Parties propose to have different review processes apply to large projects than would apply to small projects. This will focus attention of the reviewers on the larger projects, while allowing for faster turnaround on smaller projects.

For Commercial projects above 500 megawatt-hours (MWh) or 250 Million Therms (MMth), and Industrial projects above 1 MMth, the Joint Parties propose using the existing review process and limiting discovery by Staff to two rounds in order to provide customers a determination within twenty business days after receiving the requested information. These modifications will continue to allow for sufficient Commission review of selected projects, and also provide a clear timeline for the customer to receive a project disposition.

Second, for Commercial projects selected for review below 500 MWh or 250 MMth and Industrial projects below 1 MMth, the Joint Parties propose that comments resulting from such reviews be applicable prospectively, with explicitly directed comments applied to future project calculations, to ensure that smaller, high-quantity, lower-impact projects do not experience the 5-6 week delay associated with the current process. Any comments provided in this manner would also apply to Commercial projects above the 500 MWh and 250 MMth and Industrial projects above 1 MMth in size that are in parallel review by the Staff.

3. Proposal – Conditional Approvals

The Joint Parties propose to eliminate conditional approvals that require post-installation Evaluation, Measurement and Verification (EM&V), as these may deter customers from executing energy efficiency upgrade agreements. The typical customer agreement has a target rebate based on project plans reviewed by the

IOUs. The customer can then determine whether to move forward with the project given the predicted costs, energy savings, and rebate. A conditional approval cannot provide a target rebate or energy savings and this often deters customers from participating in programs to upgrade their facilities. The Joint Parties also propose that written post-installation dispositions would be required to state whether the project is acceptable or if future similar projects should be updated as indicated, allowing IOUs and program implementers to adjust programs as necessary. This is consistent with other proposed enhancements and would increase the clarity of project evaluations.

4. Proposal – Post-Installation Review

The post-installation review occurs after the project installation is completed to verify that equipment is properly installed and operating as projected. In the interest of increasing the level of certainty for customers who are making these installations, the Joint Parties propose that the specific site verification only include confirmation that the equipment is properly installed and operating as projected, and not change the evaluation methodology after the fact. If the post-installation review does, in fact, result in greater or lower savings than the estimated *ex-ante* values, the utility would incorporate these changes into the calculations of savings and incentives for future agreements on similar projects. This prospective approach is consistent with the Commission's *ex-ante* approach to other parts of the evaluation methodology.

5. Proposal – Baseline Setting Process and EM&V

The calculation of custom project savings would be significantly improved by adopting a standardized baseline of energy usage (baseline) measurement protocol, and scheduling periodic EM&V studies to validate or change existing baselines. Approval of a baseline measurement protocol would allow all program implementers to use a clearly defined starting point from which to measure energy savings and provide a more transparent and seamless customer experience.

The chart in Redlined Attachment B, Appendix 1, titled "Custom Project Decision Tree," is proposed as an alternative to the baseline determination flow chart, and is summarized below:

- For early retirement or retrofits, the baseline should be the existing site-specific condition with savings annualized for the equivalent useful life, unless explicit policy or information otherwise dictates.
- For early retirement projects with more than one year remaining useful life, a dual baseline would apply. The existing site specific conditions would apply for the remaining useful life, and the appropriate code or industry standard practice would apply for the balance of the equipment life.
- For applications identified as replace-on-burnout, natural turnover, or new construction, a code requirement or industry standard practice baseline would apply for the life of the equipment. Industry standard practice is defined as an accepted/approved EM&V study for the specific industry or application. In the absence of such a study, the baseline defaults to the existing equipment.

The proposal includes conducting periodic EM&V studies to determine if custom measure baselines should be modified. Any changes would be applied prospectively. To guide appropriate practices, the costs of any EM&V analysis of a project that would not otherwise be required to undergo an evaluation shall not exceed ten percent of the rebate.

Each of these recommendations is intended to streamline the process of establishing a baseline so that projects may move forward in a timely manner and with certainty for the customer. The EM&V activities would inform the savings calculations for future projects, while not altering the assumed conditions by which a customer has agreed to undertake the installation, enabling the program to implement projects reliably for customers, and realize improvements on a going forward basis.

6. Proposal – Dispute Resolution

The Joint Parties propose a neutral dispute resolution process to further assure that the customer experience is not negatively affected by processing complications. The IOU and Staff reviewer would split the difference in the estimated *ex-ante* value if it is within ±20 percent. For instances where the recommendation exceeds ±20 percent of the utility estimated *ex-ante* value, an independent third party not associated with the project shall be contracted to determine the outcome.
This dispute resolution proposal would apply to disagreements with small projects on a prospective basis, or with large projects' *ex-ante* values.

7. Conclusion

The Joint Parties propose the above noted enhancements to the Custom Program in order to improve the customer experience and to further encourage customer participation to achieve a deeper level of realized savings. The proposals represent the collective efforts of a number of parties with the common interest of supporting the success of the Custom Program, and who believe a collaborative approach may improve the quality of proposals and increase administrative efficiency. In the event the Commission does not find this proposal acceptable in its entirety, the Joint Parties request consideration of the each provision on its individual merits, rather than dismissing the proposal in whole. A redlined version of Attachment B from Decision 11-07-030 is included in Attachment 1.

C. Improve Opportunity for Deeper Retrofits

1. Joint Proposal[4]

The Commission has set forth important policy goals for energy efficiency. In support of the Commission's goals and policy directive to achieve deeper savings, the IOUs recommend the following alternative to demonstrate a new approach to achieving the highest level of energy benefits and cost efficiencies possible by piloting a MT approach to designing, developing, implementing, evaluating, and improving programs, focused on the Whole Home Upgrade Program (WHUP, formerly known as Energy Upgrade California). In particular, this alternative approach will:

- Encourage longer-lived savings;

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[4] The proposal in this section is offered by the four IOUs. The proposal has been developed in close collaboration with Division of Ratepayer Advocates (DRA) and NRDC. However given the tight timeline, which did not allow for their full management review, they will provide their response to these proposals in their responses to the IOUs' applications.

- Be developed and carried out in a collaborative manner; and
- Lay a foundation for the 2015 energy efficiency portfolio cycle.

Most energy efficiency experts believe that whole-house and whole-building efforts are important "next-generation" energy efficiency programs, and the proposals below are intended to identify improvements to the program, the cost effectiveness calculations, and the evaluation processes. Given the importance of this program, this new collaborative model can offer diverse viewpoints for improvements that will be incorporated to improve customer program participation.

a. Employ Market Transformation Best Practices

The IOUs have a long history of running successful MT programs and seek to incorporate best practices from other jurisdictions to further their MT goals. Therefore, the IOUs propose to competitively solicit and hire a consultant with deep MT experience to offer guidance on MT program design, implementation, and evaluation. The consultant could provide the IOUs best practices from other MT efforts, including natural gas MT efforts, from around the country and offer insights into how MT programs can best be used in the whole building retrofit market. Incorporating best practices has proven to be a successful element of past collaborative stakeholder efforts.

b. Improve Market Transformation Planning and Measurement

The MT consultant will also assist in the IOUs' efforts to improve the WHUP measurement and evaluation. The IOUs will work with the MT consultant and other stakeholders, and leverage the best practices from other regions, to design a new process to assess progress and measure success of the WHUP. This process will describe the program from inception through implementation (including evaluation), and will address such issues as baseline measurement, setting targets and milestones, and appropriate MT indicators. The use of an outside consultant to help with this process is consistent with the direction given in the Decision to focus "evaluation and research to provide regular feedback" for program and portfolio improvements (p. 15).

c. Modify Cost-Effectiveness Assumptions

The Commission is well aware of the challenges with the current cost-effectiveness methodology and has already initiated stakeholder workshops to further address this issue. In an effort to demonstrate how modification to the cost-effectiveness assumptions would improve the program offering and illustrate ways to more accurately account for the benefits of efficiency, the IOUs propose to test various modifications. For example, building on the expertise of the hired MT consultant, the IOUs propose to explore adjusting various inputs such as:

- Market spillover benefits;
- Non-energy costs and benefits;
- Discount rate that values long-term savings;
- Measure cost.

The experience from this effort will provide additional input to the Commission for future planning improvements for 2015 and beyond.

d. Provide for Advisory Stakeholder Participation

In order to ensure a collaborative, transparent, and effective process, the IOUs propose setting a strategic system of short-term and ongoing working groups with clear objectives, roles and responsibilities, and processes for integrating information into the record, if necessary. The two proposed groups as outlined below build on existing or previous approaches employed by the Commission and offer the opportunity to re-establish a more constructive approach to resolving issues outside of the formal proceeding filings.

First, there are a number of components to the WHUP that could be improved by ideas from industry experts, program implementers, and the hired MT consultant, and the IOUs propose creating a stakeholder group of industry participants to mine these ideas. Second, when key policy issues arise, a second proposed group will provide a small, confidential forum where non-financially interested stakeholders can have open conversation about the issues and identify ways to resolve differences. The IOUs propose creating the following groups:

1) Program Advisory Groups (PAG) to engage a larger stakeholder group for discussion of specific program improvements. These PAGs would include market and non-market actors, non-party experts (similar to the initial strategic planning meetings), and non-CA energy efficiency experts. The advisory groups could also incorporate other existing groups such as the Strategic Plan working groups (e.g., HVAC Committee) and existing sector-specific groups (e.g., CA Commissioning Collaborative).

2) A non-market participant review group to enable candid discussion and feedback about the programs, logic models, delivery approaches, and challenges. This collaborative, small, and confidential working group of non-financially interested members will serve in an advisory capacity to the IOUs with the aim of building consensus and addressing key issues in advance of filings.

While these groups are advisory in nature, the intent of these groups is to provide an opportunity to build on collaboration and to resolve outstanding issues whenever possible.

2. Improve Cost Effectiveness for the Whole Home Upgrade Program[5]

In addition to the above joint process recommendations, PG&E and SCE propose an immediate update to the Total Resource Cost (TRC) cost effectiveness analysis for the WHUP. The current TRC calculation includes costs of both energy and non-energy expenditures, but includes only energy-related benefits. Many costs of a home retrofit are incurred even if no energy efficiency upgrades are undertaken and hence should reasonably be excluded from the cost/benefit calculation. Construction labor is the most prominent example—labor costs are incurred to remodel structures whether they are made more energy efficient or not. Including labor costs as a participant cost in the TRC analysis of WHUP projects unfairly

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5 This recommendation is by PG&E and SCE only and has not been vetted or fully discussed with Division of Ratepayer Advocates (DRA) and NRDC. This proposal should not be construed to be a joint proposal with Section B above.

burdens the program with costs that are not incremental to the energy efficiency upgrades. Removing labor cost from participant costs will more accurately reflect the incremental cost of energy efficiency in WHUP projects and better align the costs and benefits of these projects. The Staff recently issued a report that discusses the problem of including costs attributable to the non-energy benefits of an energy efficiency project in the TRC test:

> In addition it has been recognized that it is important to only count the energy efficiency *incremental* costs to upgrade to higher efficiency models of the products the customer would have purchased without the program intervention in the TRC. Some states include "all costs regardless of who pays," and include all the costs of the equipment upgrade. This practice results in the inclusion of costs that are not affiliated with the energy efficiency decision. *Similarly, labor costs should include only those costs, if any, associated with installing the more energy efficient version of a product* (Hall 2012).[6]

If the Commission approves PG&E's and SCE's proposal to exclude labor costs from the participant costs when calculating the TRC for WHUP, PG&E and SCE may shift funds to the WHUP, if program participation can be increased. A more accurate calculation of measure costs will increase program TRC results and allow the IOUs to pursue the "high" customer participation scenario described the Residential Program Implementation Plan (PIP) in Appendix C – Program Implementation Plans and Addendums.

D. Increase Program Efficiency

SCE and PG&E propose a more streamlined and effective methodology for developing *ex-ante* values for new measures to ensure that new technologies can be efficiently added to the program during the course of the 2013-2014 cycle. As stated in the Decision,[7] the Commission supports the policy of holding energy savings assumptions constant throughout a program cycle. While the Commission and IOUs are aligned on this policy at a high level, PG&E and SCE believe that there are a number of practical changes that are required to align this policy in practice to mitigate delays, facilitate the introduction of emerging technology measures, streamline the review process, and eliminate confusion as to what is considered "frozen."

In addition, the Decision[8] includes a new directive that builds a foundation to improve the review and quantification of new emerging technology measures.

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[6] CPUC, *Addressing Non-Energy Benefits in the Cost-Effectiveness Framework* (2012), p. 6 (emphasis added); see also Amann, *Valuation of Non-Energy Benefits to Determine Cost-Effectiveness of Whole-House Retrofits Programs: A Literature Review*, ACEEE Report No. A061 (May 2006), p. 13 (discounting participant costs to reflect the true cost of energy benefits by the percentage that reflect the non-energy benefit value could provide a useful short-term solution to addressing the value of non-energy benefits in the TRC calculation); Knight, Lutzenhiser, and Lutzenhiser, *Why Comprehensive Residential Energy Efficiency Retrofits are Undervalued,* ACEEE Report No. 726 (Summer 2006), p. 8 ("If all the homeowner's perceived NEBs are to be excluded in assessing comprehensive home retrofit program costs vs. benefits, then *only the energy cost savings-related fraction of the participant's costs should be included.")* (emphasis in the original).

[7] Decision, p. 329.

[8] Decision, OP 144.

While PG&E and SCE support this direction, further definition around this process is needed to avoid the "measure stagnation" that occurred in the 2010-2012 program cycle that hindered the adoption of new emerging technology measures. The proposed changes will improve the adoption and deployment of valuable new energy efficiency measures and help attain the Commission's goal of deeper retrofits. SCE and PG&E propose to maintain the same level of due diligence, reasonableness, and transparency sought by the Commission in the Decision, but would streamline the process to address key issues. PG&E and SCE propose to maintain the existing process with the following modifications:

- Staff is required to review and provide the disposition of workpapers within 20 business days after receiving all relevant information. Workpapers without a Staff disposition by that date will be deemed approved as submitted.
- Workpapers will use latest available data for supporting the claims. PG&E and SCE strongly urge to CPUC to further clarify Ordering Paragraph 144, to encompass the following:
  - New projected low impact measures would be adopted with proposed IOU values based on the best available data if no Database for Energy Efficient Resources (DEER) values exist.
  - Staff and IOUs will work together to develop studies where existing data is limited, including data from pilots.
  - Studies initiated for future prospective workpaper updates will be funded as part of the general EM&V planning and allocation process.
  - Interim workpaper values will be used until studies are complete and the new data are incorporated into the estimates. These new values will be used for future claims on a prospective basis.
- Requirements for all *ex-ante* values (e.g. effective useful life (EUL), Net to Gross (NTG), installation rates) in place at the time of the 2013-2014 application will be frozen for the entire program cycle, except where updated for enacted code changes.
- Workpaper values will be frozen upon approval by Staff. Any subsequent changes to existing values will be subject to the Staff phase II review process if they substantially change the approach utilized for the calculations.
- Existing approved workpaper values and approaches will not be "thawed" for re- review unless explicitly requested by the IOUs; IOUs will be able to resubmit workpapers to add similar measures or other measure permutations utilizing approved methodologies without unfreezing the existing measures.
- DEER 2011 Version 4.1 will be frozen for the duration of the program cycle, as of June 1, 2012, except where updated for enacted code changes. This applies to the features of related tools or documentation related to DEER, that impact *ex-ante* savings values (as opposed to functionality or clarification which can be updated over time). The following versions shall be frozen:
  - DEER 2011 Update report and appendices (except A) dated November 8, 2011
  - DEER 2011 Appendix A dated May 16, 2012
  - 2011 DEER database – Version 4.01 dated May 16, 2012

  – NTG tables dated May 23, 2012 (note that adjustments for spill over will be frozen later)
  – Heating, ventilation and air conditioning (HVAC) interactive effects tables dated May 23, 2012
  – Load shapes tables dated May 16, 2012
  – Remote *Ex-Ante* Database Interface (READI) tool version 0.99.7 dated May 25, 2012
  – Cost values and comments dated June 2, 2008
  – EUL/Remaining Useful Life (RUL) values dated October 10, 2008
  – EUL/RUL summary documentation posted April 2008

- All other NTG values will default to 1.0.
- The DEER *ex-ante* freeze applies to existing measures. New measures or derivations can be added during the program cycle to deal with new technologies, code changes, and/or new measure permutations that are developed during this period. These new additions will not be required to apply retroactively to existing approved IOU workpapers.
- Any errors and omissions to the frozen DEER, DEER tools/documentation and or IOU approved workpapers will be updated if only mutually accepted by the IOUs and Staff. Only prospective changes to existing *ex-ante* values would be required in these cases.

E. Other Suggested Improvements

The IOUs propose two additional improvements to the 2013-2014 Portfolio.

- <u>Marketing, Education, and Outreach Program</u> – The IOUs continue to endorse a competitive solicitation for a vendor to assist the IOUs with statewide Marketing, Education, and Outreach (ME&O).
- <u>Financing Program</u> – The IOUs support the use of third party financial resources to expand energy efficiency programs, but propose a more measured pilot period and a lower budget for the pilots given that full scale roll-out will be after 2014.

1. Statewide ME&O

The Decision includes direction on statewide ME&O, notably directing the IOUs to file a statewide ME&O application for multiple demand-side management programs[9] and for PG&E to contract with the California Center for Sustainable Energy (CCSE) for statewide ME&O implementation.[10] The IOUs will propose a design of the statewide ME&O program in their August 3, 2012 ME&O Applications.[11] PG&E is in discussions with CCSE for work to begin in 2012. However, the IOUs believe that the most experienced and cost-effective

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9 Decision, OP 117.

10 Decision, OP 123.

11 Local ME&O activities continue to be an important component of energy efficiency programs and are addressed at a high level in Chapter 3 of this Testimony, and in further detail within each applicable program implementation plan in Appendix C of this Testimony.

implementer for ME&O initiatives should be selected for 2013-2014 through a competitive solicitation, in a transparent basis, to ensure that California's ratepayers get the best value and all potential implementers are treated fairly through a standard procurement process.

This approach does not entail removing the single IOU as utility coordinator and contractual agent on behalf of all the IOUs (per the Commission's direction),[12] nor does it preclude—or disadvantage in any way—CCSE from competitively bidding to provide statewide ME&O services. The IOUs encourage the Commission to consider a competitive solicitation for statewide ME&O for the 2013-2014 Portfolio and urge the Commission to provide an interim decision on this matter in order to allow the IOU marketing teams to begin the solicitation in 2012.

2. Finance

The Decision requires the IOUs to propose a statewide budget of $200 million[13] for various financing programs, and directs the IOUs hire an "expert consultant" to research, design, and develop four new financing pilots. These pilots are to be proposed for public comment by September 30, 2012 and would be implemented in early 2013. This alternative proposal suggests that the new financing pilots be conducted for a reasonable period of time to allow sufficient time to gain a full understanding of the customer and market impacts before full-scale deployment. The Decision acknowledges that: "In addition, due to the complexity of the legal, policy, and practical issues surrounding design of financing options in various markets, it seems prudent to design an approach where financing programs and budgets can ramp up over time based on practical experience and market participation by various customer segments."[14] PG&E suggests the Commission adopt an alternative, more measured plan, where pilot activities would be phased-in over 2013 and 2014 with an appropriately reduced budget. A full-scale deployment would be proposed in the IOUs' energy efficiency portfolio applications for 2015 and beyond.

PG&E proposes to begin with the expert consultant's work and allow the pilots to proceed over a sufficient period of time to gauge their success and analyze the results before developing a larger program. The results of the pilots would be presented as part of one or more workshops beginning as early as fourth quarter 2012, with the entire 2013-2014 time period devoted to planning, executing and analyzing the financing pilots. These results would then be given sufficient vetting before the IOUs propose larger programs for 2015 and beyond. As part of that process, budgets and goals would be adopted. Issues to be addressed and better understood in this process would be:

a) The ratepayer and shareholder risks of On-Bill Repayment (OBR), including direct costs, liabilities, and impact on "uncollectibles";[15]

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12 Decision, OP 122.

13 The net after budgeting for On-Bill Financing (OBF) consistent with the Decision's requirements is roughly $80-100 million for the new pilots.

14 Decision, p. 105.

15 The impacts to uncollectibles of such an OBR structure were not considered in the recent filings before the Commission.

b) The value of options with various risk management strategies (e.g., bill neutrality);

c) The full costs and implications of modifying billing systems for OBR;

d) The implications of disconnecting service where a third-party charge is involved, including for non-residential customers;

e) How to implement an OBR-based non-residential program to ensure the significant investment the utilities have already made in both OBF and line-item billing is fully taken advantage of (and to ensure that any resulting overlap of OBR and OBF does not create an unnecessarily complicated financing offering);

f) The implications of a provision for *pro rata* allocation of partial payments. This implies that the Commission is authorizing the IOUs to disconnect non-residential customers for a third-party charge;

g) The quality assurance and customer satisfaction implications of utilizing ratepayer funds to support third-party administered loan programs that may or may not contain energy efficiency measures vetted by the IOUs;

h) The impact of designating financing programs as "resource" programs;

i) Whether it is appropriate to support loans for measures that are not energy-related (i.e., from ratepayer subsidized financing). In the meantime, the Commission should only allow energy efficiency measures that are rebated and/or receive incentives from the utility to be supported by ratepayer-subsidized financing; and

j) Defining success metrics and evaluation criteria in order to best understand which models / pilots are working the best for customers and for the IOUs.

There is merit in testing the IOUs' "Line-Item Billing" product as a relatively easy to design and implement strategy to engage the private lenders. Importantly, such an approach avoids the many complicated issues associated with OBR (shut-off, prorating partial payments and lending laws). PG&E suggests issuing such a solicitation to attract private lending partners with the intent to begin implementation in early 2013.

Additionally, financing programs would continue to be defined as "non-resource" programs, and additional research would need to be conducted and vetted before it is determined to make financing and incentives an "either-or" proposition for customers (which would be particularly limiting in light of the Commission's desire to pursue deeper retrofits).

ATTACHMENT B

Custom Project Review Process

Energy Division Process for Review of Investor Owned Utility Custom Measure *Ex Ante* Values

Introduction:

This document details how the California Public Utilities Commission (Commission) will review the *ex ante* energy savings claims of Investor-Owned Utilities (IOUs) and 3rd Parties implementing custom measures or projects in the ~~2010-2012~~ 2013-2014 Energy Efficiency program cycle.

Custom measures and projects are energy efficiency efforts where the customer financial incentive and the *ex ante* energy savings are determined using a site-specific analysis of the customer's existing and proposed equipment, and an agreement is made with the customer to pay the financial incentive upon the completion and verification of the installation. The efforts are by definition unique, each with ~~their~~its own characteristics. Parameters that determine estimated energy savings from a custom measure or project are more variable and less predictable without a site-specific analysis than the more common deemed measures for which savings parameters can be predetermined. As such, it is necessary to establish a clear process by which *ex ante* energy savings estimates from custom measures and projects can be reviewed in real-time as such measures and projects are identified and implemented.

An effective custom measure and project review process balances the needs of program participants who are investors and beneficiaries, the IOUs and 3rd Party Implementers who administer the programs, and ratepayers who provide incentive funding contingent on adequate oversight of their investment. The process identified here aims to strike that balance. This review process is intended to be applied consistently throughout the program cycle; however, clarification may be made at the discretion of the Assigned Commissioner or Administrative Law Judge.

Chart A of this Attachment includes a graphical schematic depicting the process outlined in this document. In addition, the principles guiding this process and supporting resources are defined herein.

Guiding Principles:

1. Energy savings are the paramount priority of custom measures and projects.

2. The ~~Customer~~Custom Measure and Project Review Process is a continuous improvement (*i.e.*, quality control rather than project approval) collaborative process that involves the IOU, the Energy Division, the customer and the third party implementer (if applicable to a specific project). The process shall be conducted according to an annual Evaluation Plan, developed by the stakeholders, which outlines the areas concentration for the year's work (technologies, types of customers, industries, etc.); and a project review schedule, agreed in writing by all parties, that specifies the maximum expected turnaround times for the various steps in a project review.

3. Each project review shall also be a collaborative process, designed to improve the quality of individual projects and thus to continuously improve the quality of custom projects. For each selected project, the project review process shall start with an initial conference call with all parties to go over project parameters and help the ED reviewer gain a basic familiarity with the project description, measures and savings estimates in order to expedite the identification of issues on baselines, data submitted and timeliness of responses. During the review process, all parties shall have access to all project documents, including data requests, data submittals, review comments, etc. Customers and third party implementers shall have input into the discussions during the review process to assure that codes and industry standards are being applied in the most appropriate way to each project. All parties shall ensure that the final project reviews are written in a format that facilitates their application to future similar projects.

4. The Custom Measure and Project Review Process is intended to allow Energy Division (ED) to review customer projects ~~in parallel with the IOUs, thereby allowing for maximum customer convenience~~and suggest savings methodologies and or *ex ante* values for Commercial projects above 500MWh or 250M Therms and above 1MM Therms for Industrial projects. For Commercial projects below 500MWh or 250M Therms and Industrial projects below 1MM Therms Energy Division may undergo prospective reviews intended to simplify the process of project implementation and program oversight. Prospective reviews by Energy Division shall include an objective engineering analysis along with site specific results for each Custom Project reviewed and evaluated by

Energy Division. Each IOU shall provide all data available and in their possession (unless otherwise deemed confidential) to Energy Division in performance of their prospective engineering review.

~~3~~5. The cost of the review and incremental M&V for a particular project shall be limited to a reasonable percentage (*e.g.*, 10%) of the proposed project incentive, unless the project is considered an example of a number of similar projects, in which case the extra cost of the review can be spread across the similar projects or funded through EM&V allocation.

6. When ~~possible and~~ applicable for a given project, and where practical, custom measure and project calculation methodologies shall be based upon Database Energy Efficiency Resources (DEER) methodologies ~~as frozen for 2008 DEER version 2008.2.05~~ or upon methodologies documented within the most current Energy Division reviewed and approved IOU non-DEER deemed ~~workpapers.~~Workpapers.

~~4.~~For the 2013-2014 transition period, these final DEER methodologies are all those indicated below that are frozen for the duration of the program cycle:

- DEER 2011 Update report and appendices (except A) dated November 8, 2011
- DEER 2011 Appendix A dated May 16th, 2012
- 2011 DEER database – version 4.01 dated May 16, 2012
- Net To Gross tables dated May 23, 2012 (note that adjustments for spill over will be frozen later)
- HVAC interactive effects tables dated May 23, 2016* (assuming 2012 was meant)
- Load shapes tables dated May 16, 2012
- READI tool version 0.99.7 dated May 25, 2012
- Cost values and comments dated June 2, 2008
- EUL/RUL values dated October 10, 2008
- EUL/RUL summary documentation posted April 2008

Additions for new measures and/or clarification of documentation above as agreed upon by ED and the IOUs may be considered as acceptable, with the intent that existing methodologies are to remain frozen for the program cycle.

7. IOUs are responsible for effective record keeping such that calculation tools, documentation of how those tools were applied to custom measures and projects, and documentation of custom project *ex ante* savings calculations are submitted electronically (as permitted by confidentiality and security restrictions) to the Energy Division once IOU confidentiality and security concerns are satisfied.

8. Stakeholders shall conduct periodic EM&V studies, with allocated EM&V funding, to evaluate whether a custom measure offer shall be modified, moved to Deemed, or discontinued. Such changes would be implemented during the next cycle, with IOU Program Implementation Plans revised on a go forward basis only. Changes that are directed by Energy Division would take effect on future projects within the same cycle after sufficient time has been allowed to change program language and inform customers (*i.e.*, 3-4 months). Identification of new "industry standard practice" baselines shall not impact customer commitments mid cycle.

Supporting Resources:

IOUs are directed to maintain the following supporting resources to enable timely, effective review of custom measures and projects by the Energy Division and their consultants.

Calculation Tool[1] Archive (CTA):

Each IOU shall maintain an archive of all generic tools used in calculating *ex ante* values such that they remain accessible to the Energy Division throughout the program cycle.~~[2]~~ The archive shall contain all versions of all tools (except those tools that are proprietary and or licensed which shall be listed but not kept in the archive) used in the development of *ex ante* values for custom measures or

[1] Tools, in the context of this document, means software, spreadsheets, "hand" calculation methods with procedure manuals, or any automated methods used for estimating *ex ante* values for custom measures or projects.

~~[2] The Utilities must arrange access to any proprietary tools and software used in the development of *ex ante* values so that Energy Division can perform the review described in this document.~~

projects claimed during the current program cycle. Project specific tools and processes will be stored in the Custom Measure and Project Archive described below.

The tool archive shall include:

a. All manuals and user instructions, where applicable. If the calculation tool is simply a generic spreadsheet, then all cell formulas and documentation shall be readily accessible from the tool~~.~~, if available to the IOU

b. A list of technologies, measures or projects for which custom calculations are performed using the tool~~.~~, unless apparent from an engineering inspection of the given tool being used

The Calculation Tool Archive shall be updated by the IOUs on an ongoing basis during the ~~2010-2012~~2013-2014 program cycle as tools are publicly revised.

Custom Measure and Project Archive (CMPA):

Each IOU shall keep a complete up-to-date electronic archive of all custom measures and projects. Each project ~~should~~shall be added to the Archive ~~as soon as possible after either~~on the earlier of the date that it is identified in the pre-application stage or the date of the customer's application to the IOU~~, whichever is earlier.~~. Each project ~~should~~shall be assigned a unique identifier that shall not be re-used or re-assigned to other projects.

The IOUs shall provide a summary list of all projects, in ~~pre-application stage and application stage, in~~ their CMPA. Energy Division will provide the utilities with the format of the summary list. The summary list shall identify each project using its unique identifier ~~and provide a link to the detailed files of each project.~~. The summary list shall also reflect the date of the most recent entry into each project. The summary list shall include for each project the following (Energy Division and the IOUs will work out details of the meaning and specifics of each item below):

- The customer type
- The project type
- Industry Type
- Status (pre-application, application received, application in review, agreement signed, completed, paid, claimed, etc.)

- ~~For pre-application stage projects, a best guess at probability the project will become an application (unknown, very low, low, medium, high, very high; or a percentage probability 0-100% for none to definite) with this status updated as new information becomes available)~~
- Project location (address)
- Utility contact person (Primary IOU review contact and, if appropriate, primary IOU customer interface contact such as marketing representative)
- Customer segment
- Equipment or process involved
- General description of the proposed project and its energy saving premise
- Estimated *ex ante* energy savings
- ~~the target date when a customer agreement is expected to be issued for customer signature (Agreement Target Date)~~

The summary list shall be updated at least on the first and third Monday of every month for the duration of the ~~2010-2012~~2013-2014 program cycle, however, the IOU shall provide the updated list more often as necessary to provide Energy Division with information on high priority or fast-tracked applications, so as to allow Energy Division to perform reviews of such projects at its sole discretion. The IOUs may provide the summary list by program instead of a consolidated list, ~~should~~shall they so desire.

For projects that, within a regular bi-monthly CMPA summary list submission, are projects for which applications have been newly received or projects that have moved from the pre-application state into the application state, Energy Division will inform the IOUs of projects which have been selected for review. Such notification shall be before or by the next regularly scheduled CMPA summary list submission. Thus Energy Division will have a minimum of approximately two weeks to decide if a new application measure or project, either in pre-application or application stage will be subject to review and included into its review "sample." An IOU may request that a project review decision be expedited for high priority or fast tracked projects and Energy Division will make its best effort to accommodate such requests. If Energy Division chooses not to review a project an IOU may request such a project be included in the Energy Division review sample. Energy Division shall consider such decision change requests but will limit such changes based upon available resources to ensure adequate coverage of the full cycle portfolio of measures and projects in its review sample. An IOU request for Energy Division project review may be accepted, denied or deferred into the Early Opinion process at Energy Division's discretion, however, Energy Division shall inform the IOU of its decision as quickly as possible.

For each project sampled for a review, the specific types of documents to be maintained in the CMPA and parameters required to be in the supporting documentation may vary based on the type of project. *Examples* of the expected data elements are listed below.

- Documentation to support Baseline assignment (Code or Standard requirement, Early Retirement, Retrofit, Replace On Burnout, industry standard practice, CPUC policy, etc)[3]
- Existing system controls and operating status description
- Existing system output capacities – current output and maximum/design capacity
- Pre-installation inspection report
- ~~Post-installation inspection report~~
- Proposed modifications with schematic as applicable
- Preliminary savings calculations and supporting data with documentation to ensure replicability
- Manufacturer's cut sheets when used to estimate *ex ante* savings or when needed to ensure replicability
- Fuel switching considerations and any required analysis per CPUC policy regarding fuel switching projects (see Energy Efficiency Policy Manual)
- Other fuel savings and/or load increases resulting from the project
- Heating, Ventilation, and Air Conditioning (HVAC) interactive effects values and methods used to develop those values, when measures cause a change in HVAC system loads
- Interactions between multiple measures that act to increase or decrease savings relative to a measure stand-alone savings estimate
- ~~Pre/post production~~Production output data when used in savings

[3] The baseline parameters used are of primary importance in estimating project savings. Appendix I of this document provides the guidelines by which Energy Division will review baseline parameter selection.

calculations and the source of such records

- Billing history - one-year pre installation, with interval data required when available; when *ex ante* estimated values rely upon a per-unit-production changes based on multi-year production data, corresponding billing histories are required
- IOU or implementer program manual (a single archive of these documents ~~should~~shall be referenced rather than including the documents in each project archive)
- M&V plans, reports and raw data archives, where applicable
- EUL/RUL value, analysis or source

Projects Energy Division selects for review will have their complete documentation from the IOU CMPA placed into an Energy Division Review CMPA which, with the Utility Custom Project Summary List, will be housed on an internet-accessible website that meets reasonable security and legal requirements. The Energy Division will be responsible ~~to~~for establishing and maintaining that website.

Custom Measure and Project Review Process:

There are two categories of Energy Division's Custom Measure and Project Review Process: general and claims. All reviews are at the Energy Division's discretion; however, if an IOUs *ex ante* values are not reviewed by the Energy Division, the IOU shall rely on those values in making energy savings claims before the Commission after adjusting those values using the gross realization rates as shown in Table 1 below.

Table 1: Default Custom Measure Gross Realization Rates

IOU	kWh	kW	Therm
PG&E	0.9	0.9	0.9
SCE	0.9	0.9	
SDG&E	0.9	0.9	0.9
SCG			0.9

In applying the GRR values in Table 1 above, projects that adhere to comments made by Energy Division on previous similar projects of like kind shall apply a GRR of 1.0 to avoid double discounting.

The **General Review** will include Energy Division's oversight of the CTA and CMPA. Energy Division, at its discretion, will review tools, measures, and projects, as well as inputs to the tools for selected projects. Energy Division may choose to provide the IOUs with input on one or more of the tools, measures, or projects. The tools reviews will be done on a prospective basis. IOUs shall adjust their subsequent use of the tools, where practical, to conform to Energy Division input, or will request a re-evaluation of the inputs to be conducted by an independent third party selected by consent of both Energy Division and the affected IOU.

The more specific **general project reviews** include a close examination of a selected subset of custom projects.

Data Requirements for a Project to be Reviewed

The Evaluation Plan described above shall contain a definitive set of requirements for project documentation that the IOUs can implement (appendix 1). Clear requirements will minimize the back and forth, time delays and uncertainty in what is required. Note that a similar approach is being used in New York for the evaluation of custom and deemed measures, including a simplified approach for early retirement measures.[4]

- As noted above, costs of a project review shall be consistent with the impact and possible savings from the project. For instance, required EM&V work shall not exceed more than 10% of the project incentive. EM&V set aside shall be used for cases where ED wishes to conduct some more general analysis. The findings of this analysis may apply to multiple projects if they can be generalized.
- The requirements for documenting early retirement shall not be excessive (*e.g.*, Appendix 1), requiring, for example, customer interrogation or investigation of the customer's finances.

[4] New York Evaluation Advisory Contractor Team, *New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs*, (October 2010), *at* http://www.dps.ny.gov/TechManualNYRevised10-15-10.pdf

- Cost documentation for incremental costs needs to be simple to apply. IOUs have proposed a conceptual approach that is reasonable to implement. Project-by project analysis of hypothetical costs is cost prohibitive.
- The IOUs may propose a method to simplify the Base case determination in the standard comments. The proposed approach could be termed the Base Case Ratio (BCR). The BCR would be a high level adjustment to the single baseline ex ante savings values, where both real costs and savings are known and can readily be measured and validated. This approach would eliminate the need for the complexity of calculating dual baselines by incorporating a simplified "average" life baseline adjustment. The exact formulation and use of the BCR to be determined in the IOU/ED working group (see below).

For all custom applications with *ex ante* values that are not reviewed by the Energy Division, the IOU shall apply an adjustment to the gross savings estimate values using the Default Custom Measure Gross Realization Rates (Table 1) above when making energy savings claims before the Commission~~.~~, unless the project is similar in nature and has already incorporated previous Energy Division comments, in which case the applied GRR shall be 1.0

Energy Division will conduct general project reviews at three stages of the IOU custom project process: concurrent and collaborative pre-installation review, post-installation review, and claim review.

Pre-Installation Review

~~The objective of the Pre-Installation Review is for Energy Division to perform a parallel review, with the IOUs, and then for Energy Division to provide to the IOUs input on the estimated custom measure or project *ex ante* savings. The Pre-Installation Review allows~~Projects selected by Energy Division for review at the Pre-Installation stage allow Energy Division to supplement the resources and information available through the CTA and CMPA in making its recommendations. The objective of the Pre-Installation Review is for Energy Division to perform a parallel review with the IOUs on Commercial projects above 500MWh or 250M Therms, and above 1MM therms for Industrial projects, and a prospective review for projects below that size. For the Commercial projects above 500MWh or 250M Therms and above 1MM Therms for Industrial projects Energy Division will provide IOUs input on the estimated custom measure or project *ex ante* savings.

For projects that are above 500MWh or 250M Therms for Commercial projects and 1MM Therms for Industrial Projects and selected for review ED will submit an initial data request and IOU's will submit a response. If ED requires additional information it may make one additional data request and must submit that data request within 5 working days of the IOU's initial data request response. ED must inform the IOU if it has not received all requested material within 5 days of IOU's data response. After the ED has received all requested material it has 20 working days to review the project. If a final project review is not submitted by ED within the timeframe listed than the project will be approved as submitted by the IOU. This review will inform the current project savings values as well as calculations for future similar projects.

For projects that are smaller than 500MWh or 250M Therms for Commercial projects and 1MM Therms for Industrial Projects ED may perform a prospective review. This prospective review will not inform the selected project energy savings values but will be used to inform future project calculations as specifically directed by ED.

Future projects are considered to be similar if they are identical to the reviewed project or so similar as to warrant inclusion of such comments and methodologies. The IOU shall be responsible for demonstrating, within a reasonable engineering judgment, that comments have been applied to future projects, or must reasonably demonstrate that Energy Division comments are not relevant to the future project, if requested.

For projects that are selected by Energy Division for prospective review for which savings and incentives to Customer are based on completed M&V results, Energy Division review will be focused on review of the M&V Plan and Baseline determinations, not quantification of *ex-ante* savings.

The IOUs shall provide the Energy Division the opportunity to participate in any site visits, pre-installation inspections, customer interviews, pre-installation M&V, or spot measurements that may occur during this and subsequent phases. ~~If such events are scheduled by IOUs more than five days in advance, the~~The IOU shall provide notification to the Energy Division ~~within one business day of scheduling the event; the~~as soon as possible for projects Energy Division ~~should be immediately notified for events scheduled less than five days away~~has selected for review. The Energy Division will notify the IOUs prior to the event if they plan to send a representative. If the project is implemented by a third party, the IOUs shall coordinate and notify the third party as applicable.

During the Pre-Installation Review, the Energy Division will coordinate any of its Measurement & Verification (M&V) activities on these custom projects with the IOU or its third party program implementer depending on who is the primary relationship manager for the customer and project in question. The Energy Division may choose to use the Utilities' or its own contractors, at Energy Division expense, to perform site inspections or pre-installation M&V.

~~The Energy Division will provide the IOUs with the results of its Pre-Installation Review, including recommended *ex ante* values and documentation to support its recommendation, at least ten days before the Agreement Target Date identified by the IOU in the CMPA summary list. However, the~~The IOU shall provide Energy Division with all CMPA documents that have been received by the IOU (or third party) in a timely manner ~~such that Energy Division has a reasonable ability to meet this timeline.~~. Energy Division and the IOUs agree to work together to allow timely review of expedited and high priority projects. If the Energy Division affirms the IOU's estimated *ex ante* values or suggests approaches which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values for the reviewed project and modify its approach when entering into future estimated incentive agreements for similar projects as soon as practical. If Energy Division approves a project with modifications it must present alternate *ex ante* values for IOU's to use for an incentive agreement and may not propose conditional approvals that rely on post installation data.

Post-Installation Review

The objective of the Post-Installation Review is to provide the Energy Division with the opportunity [to] verify that the equipment installed by the customer conforms with that approved in the pre-installation review. The approved methodologies used to calculate *ex ante* energy savings values shall not be modified for the project under review. The IOU shall allow the Energy Division access to site visits, post-installation inspections, customer interviews, post-installation M&V, or spot measurements. ~~project.~~ Such access shall not impede or delay the established IOU process of executing an Agreement for Incentives with the specific customer. IOU and Energy Division notifications for these events shall follow the guidelines described above for Pre-Installation Review. Similarly, the Energy Division will work with either the IOU or the 3rd Party program implementer to coordinate the Post-Installation review to maintain consistent communication with the customer and manage customer expectations appropriately.

If the Energy Division affirms the IOU's estimated *ex ante* values or suggests values which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values when entering into future estimated incentive agreements for ~~the project~~similar projects. Energy Division must present alternate *ex ante* values for IOU's to use for an incentive agreement and ~~shall also~~may not propose conditional approvals that rely on ~~those values for subsequent energy savings claims before the Commission if no further~~*ex post*~~-installation adjustments are identified by either the IOUs or Energy Division, as described below.~~ data.

~~**Post-Installation Review**~~

~~The objective of the Post-Installation Review is to provide the Energy Division with continued opportunity to review and provide input on the accuracy of *ex ante* values assumed by the IOU prior to the utility making its final incentive payment to its customer.~~Selection of either a pre-installation or a post-installation review by Energy Division shall not affect the IOU approved incentive or Agreement with the customer for the current project. The IOU assumes responsibility and risk associated with the non-performance of the current project and non-compliance on subsequent projects with specific direction from Energy Division to incorporate previously made comments on past identical projects or projects similar in nature. Subsequent projects are required to adhere to accepted direction from Energy Division regarding method of analysis, analytical parameters, and specific data to be collected that will allow such future projects to be adequately evaluated.

All written dispositions from Energy Division are to state one of the following: Acceptable or Update future similar projects as indicated.

~~The IOU shall allow the Energy Division access to site visits, post-installation inspections, customer interviews, post-installation M&V, or spot measurements. IOU and Energy Division notifications for these events should follow the guidelines described above for Pre-Installation Review. The IOUs shall continue maintenance of the CTA and CMPA in accordance with the direction provided above. If the post-installation M&V inspection results in an IOU adjustment of savings for projects that were reviewed by Energy Division during the pre-installation stage, Energy Division shall have the option to review and approve such adjustments. If, as a result of the post-installation inspection, the Energy Division affirms the IOU's estimated *ex ante* values or suggests values which~~

~~would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values for making energy savings claims before the Commission. Otherwise, no deliverables are due to either IOU or Energy Division.~~

IOU Claim Review

The IOU Claim Review allows the Energy Division to conduct a Quality Control review of energy savings for custom projects included into the IOU Quarterly Claim[5] to ensure that:

1. ~~appropriate~~Appropriate default realization rates were applied to *ex ante* gross savings estimates for projects that were not reviewed by the Energy Division~~;~~ and,
2. ~~recommendations~~Recommendations made by Energy Division for previously reviewed projects were accurately reflected in the claim.

The IOU Claim Review shall commence upon the IOU submittal of a quarterly reporting period claim containing those projects, and end at the later of ninety-days after that submission or the subsequent IOU quarterly submission. Energy Division shall notify the IOU of any errors found in their claim review and the IOU shall comply and revise the claims.

Custom projects that were not reviewed by the Energy Division prior to appearing in a Quarterly claim may be further reviewed for the purpose of gaining new information and prospective improvements to *ex ante* estimates and planning, but IOU's ~~**will not** be held accountable for energy savings adjustments for such reviews~~assumptions **will be accepted as submitted** for any projects covered by then existing customer agreements or already approved customer applications.

Dispute Resolution ~~of Disagreements:~~

~~1.~~ Should Energy Division and ~~a Utility~~an IOU have a ~~technical~~ disagreement ~~on~~regarding prospective comments or adjustments to a project's *ex ante* values, Energy Division and the Utility shall meet to discuss and resolve the differences~~.~~

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[5] As a component their energy efficiency portfolio reporting requirements each IOU will submit a quarterly filing on EEGA which includes details of all measure *ex ante* savings values for all individual projects and measures which have been installed prior to that claim.

within two weeks. If the parties fail to come to agreement, and the Energy Division recommended *ex ante* value is ~~less than~~within a plus/minus 20 percent of the utility estimated *ex ante* value, Energy Division and the utility shall split the difference of the two values. ~~However, this does not apply if~~If the ~~disagreement is where~~ parties fail to come to agreement and the Energy Division ~~determines that savings will not accrue at all or when a CPUC policy has not been followed. However, in cases where the difference is greater than a~~recommended *ex ante* value exceeds plus~~ or~~ /minus 20 percent~~, then Energy Division's value will be~~ of the ~~frozen~~utility estimated *ex ante* value~~. –~~, then an independent third party not associated with the project shall be contracted to determine the outcome at the expense of Energy Division. No party considered to have a conflict of interest shall be engaged.

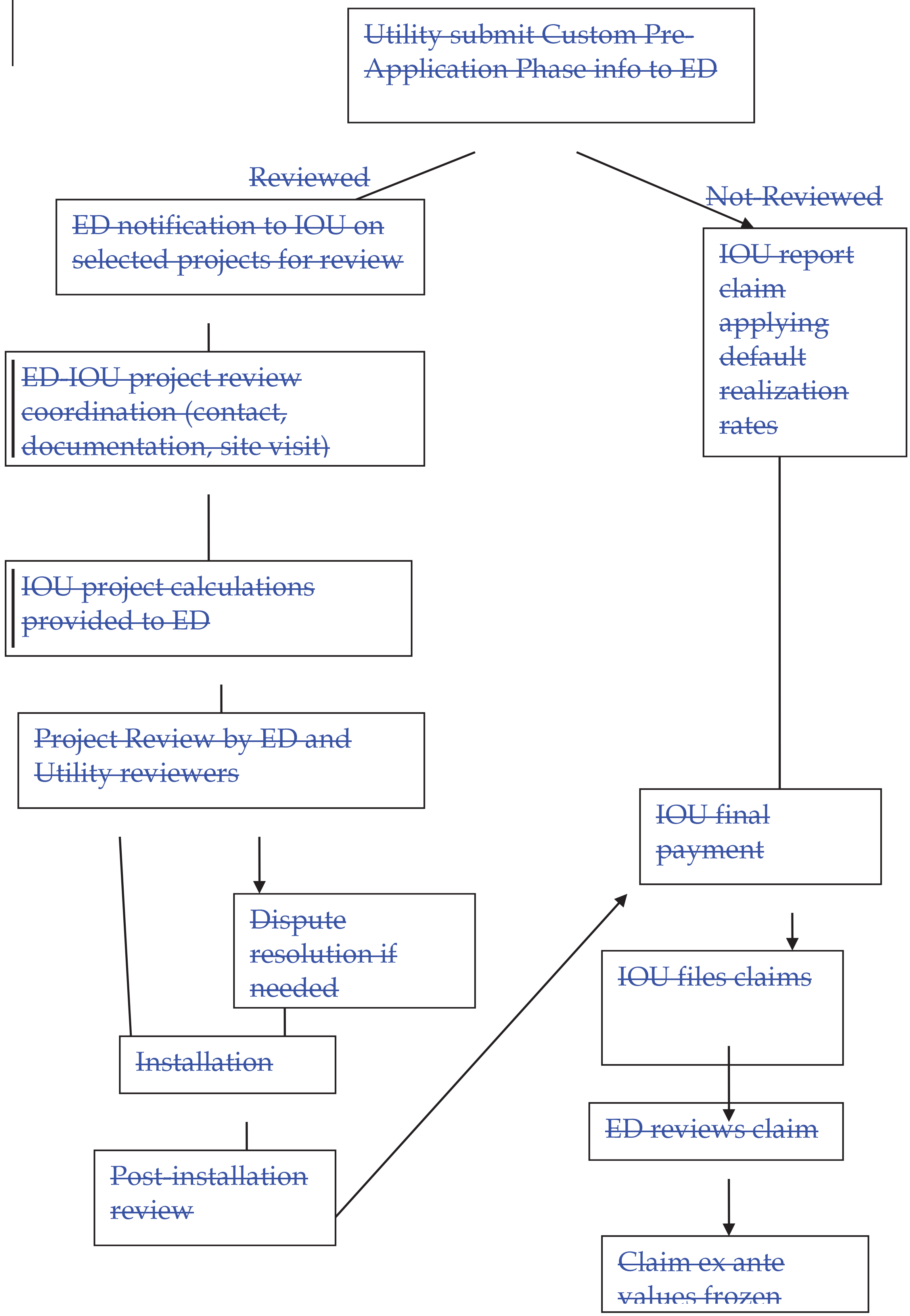
To facilitate future communication:

Energy Division and the IOUs shall establish a working group to allow an ongoing dialog on the custom measure and project review process. This working group will provide a forum for all parties to exchange information on their current activities and future plan and to discuss and resolve problems and issues with the process outlined in this document. The working group will also provide a forum for Energy Division to inform the IOUs on issues arising in its custom measure *ex ante* estimation review process~~. These issues may include items such as~~, including but not limited to baseline definitions~~,~~ and net versus gross savings ~~definitions and other items as any party deems necessary.~~ . To provide guidance for future projects, Energy Division will maintain a public archive database of the summary of issues identified in its custom applications and projects reviews~~,~~ and the Energy Division dispositions of those issues and will notify stakeholders how and where to access this information. Customer specific data and information will be removed from the Energy Division summary of issues and dispositions.

At any time during their development of *ex ante* estimates for a specific custom measure or project the Utilities may submit to Energy Division a request for an early Energy Division review or opinion on a specific issue. This process has been established by Energy Division issuance of the "Custom Measure Early Opinion Process" document posted as "Custom Measure Early Energy Division Opinion Process v2.docx" on basecamp 9/30/2010 in the "Early Opinion Shared" project area. Energy Division shall respond to that request ~~in as~~

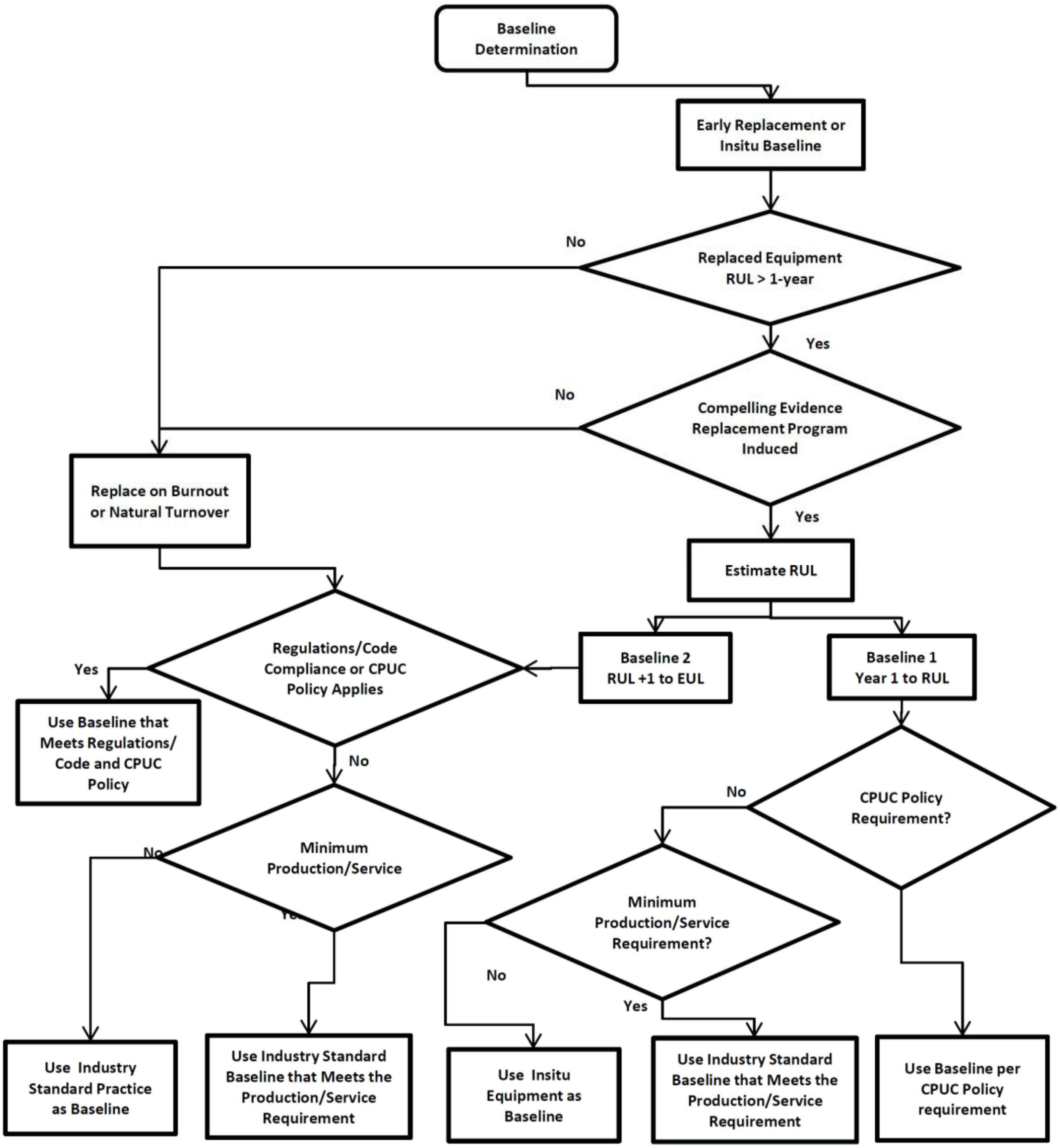
~~expeditious a manner as possible~~within five (5) business days to provide the IOUs with guidance and to allow ~~the Utilities~~them to complete their *ex ante* estimates in a timely manner. However, this type of early guidance shall not limit or constrain any later Energy Division review of *ex ante* claims submitted by the Utilities.

~~**Chart A**~~

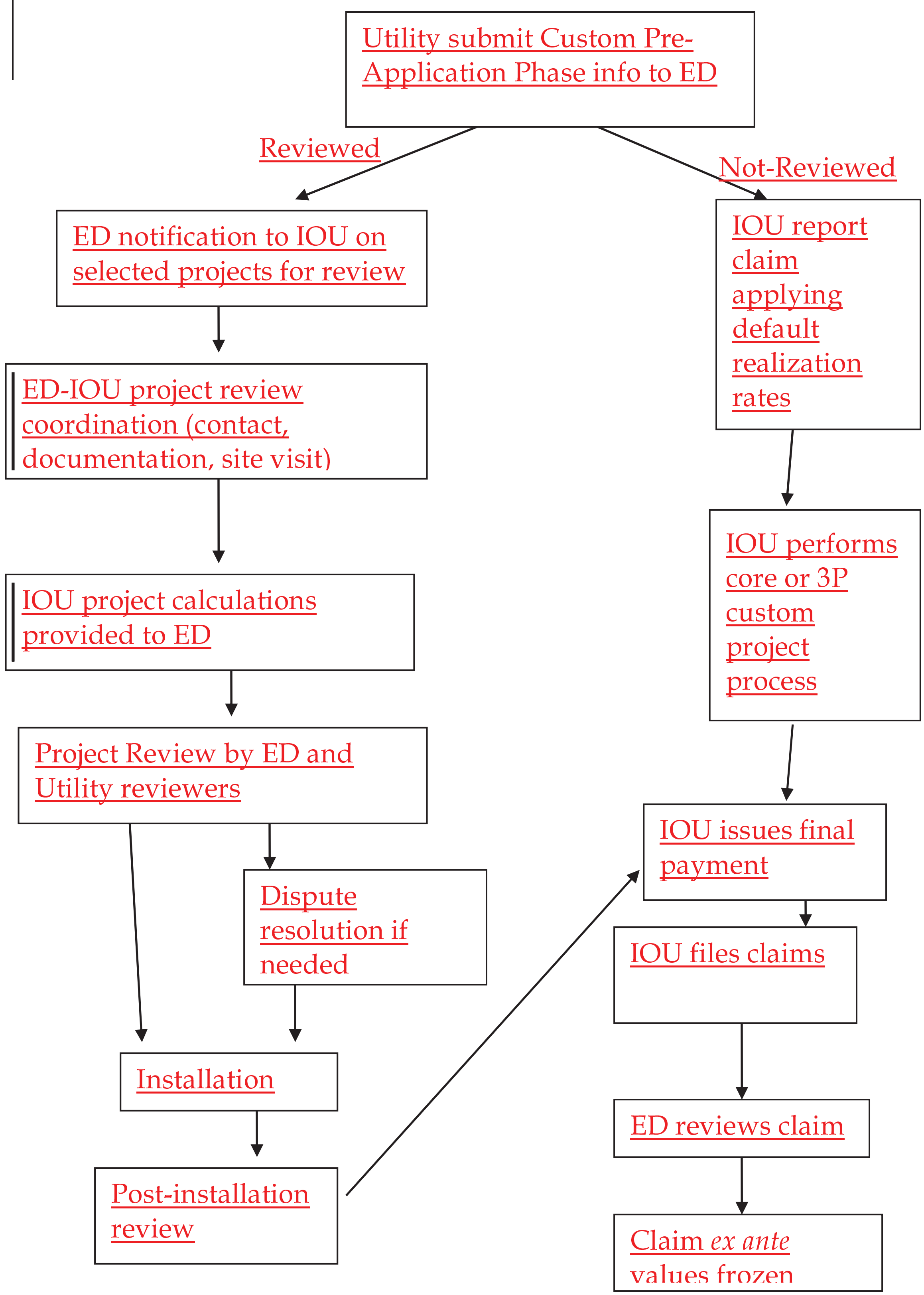

~~Utility submit Custom Pre-Application Phase info to ED~~
~~Reviewed~~
~~Not Reviewed~~
~~ED notification to IOU on selected projects for review~~
~~ED-IOU project review coordination (contact, documentation, site visit)~~
~~IOU project calculations provided to ED~~
~~Project Review by ED and Utility reviewers~~
~~Dispute resolution if needed~~
~~Installation~~
~~Post-installation review~~
~~IOU report claim applying default realization rates~~
~~IOU final payment~~
~~IOU files claims~~
~~ED reviews claim~~
~~Claim ex ante values frozen~~

~~Appendix 1~~

~~Energy Division Methodology for Determination of Baseline for Gross Savings Estimate~~

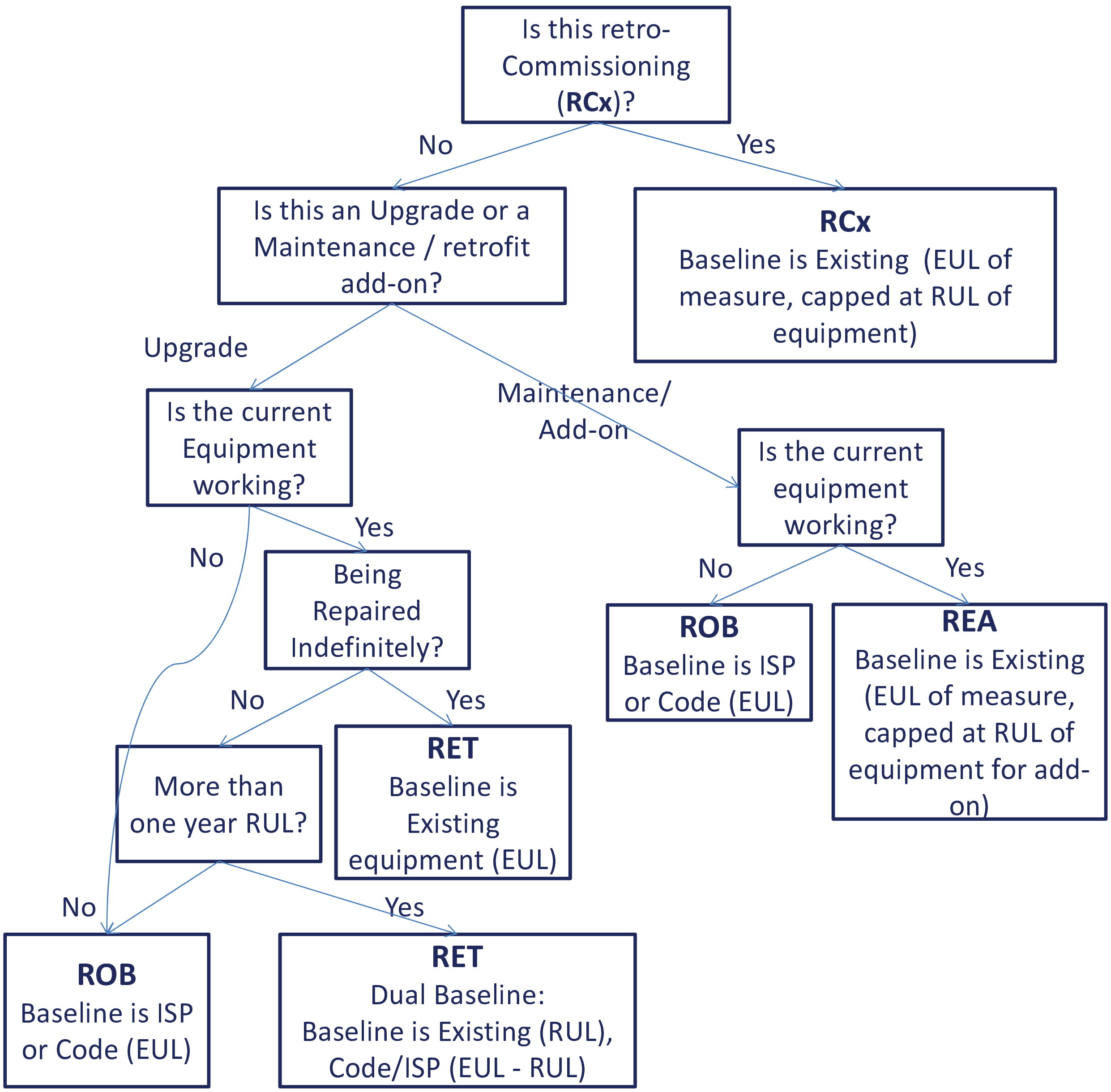


Energy division and the IOUs will undertake a focused collaborative effort for the first three months of the program cycle to develop a guidance document for establishing all *ex ante* values for customized projects. This document will be a living document, updated on a quarterly basis, which will be the means by which Energy Division conducts its quality control. Energy Division's reviews will use this document as the means by which the QC will be evaluated. Appendix 1 along with content provided by the IOUs to the collaborative working group will be the starting basis for this document.


Utility submit Custom Pre-Application Phase info to ED
Reviewed
Not-Reviewed
ED notification to IOU on selected projects for review
ED-IOU project review coordination (contact, documentation, site visit)
IOU project calculations provided to ED
Project Review by ED and Utility reviewers
Dispute resolution if needed
Installation
Post-installation review
IOU report claim applying default realization rates
IOU performs core or 3P custom project process
IOU issues final payment
IOU files claims
ED reviews claim
Claim ex ante values frozen

Appendix 1

Custom Project Decision Tree (proposed)



See Notes below

Review of Baseline for Gross Savings Estimates

The estimation of *ex ante* saving values requires the selection of a baseline performance for every project. ~~The baseline selection and specific baseline parameters are of primary importance to establishing the *ex ante* savings estimates.~~ Early retirement measures driven by a code or policy requirement shall use a typical industry compliant baseline. The baseline parameters are selected by establishing the project category from the possible alternatives including New Construction or Major Renovations, program~~-~~-induced Early Retirement, Standard Retrofit~~ or~~, Normal/Natural Replacement/Turnover, and Replace On Burnout. ~~These alternative categories result~~The establishment of the project category results in the utilization of an alternative baseline ~~parameters~~parameter set by Code or Standard requirements, industry standard practice, CPUC policy, or other considerations. In ~~the~~its review of IOU projects, Energy Division will follow the guidelines as presented here in establishing the baseline for all gross savings estimates.

~~Notes to above flowchart~~

The process for selecting the applicable baseline parameter is depicted in the graphic above. Descriptions of the alternative baseline parameters are given below.

Pre-existing equipment[6] baselines are only used in cases where there is clear evidence the program has induced the replacement ~~rather than merely caused an increase in efficiency in a replacement that would have occurred in the absence of the program.~~prior to the end of its useful life

Pre-existing equipment baselines are~~ only~~ used for the portion of the remaining useful life (RUL) of the pre-existing equipment that was eliminated or the function replaced by new, more efficient equipment due to the program. These early or accelerated retirement cases may require the use of a "dual baseline" analysis that utilizes the pre-existing equipment baseline with annualized first year energy savings during an initial RUL period and a code

[6] Here the term equipment is intended to cover all technology cases including envelope components, HVAC components and process equipment and may also include configuration and controls options.

requirement/~~industry standard practice~~ baseline for the balance of the EUL of the new equipment.

- A pre-existing equipment baseline is used as the gross baseline ~~only~~ when there is ~~compelling~~clear evidence that the pre-existing equipment has a remaining useful life and that the program activity induced or accelerated the equipment replacement. This baseline can only apply for the RUL of the pre-existing equipment.
- A code ~~requirements~~requirement or industry standard practice baseline (commercially available) is used for replace-on-burnout, natural turnover and new construction (including major rehabilitation projects) situations. This baseline applies for the entire EUL as well as the RUL+1 through EUL period of program induced early retirement of pre-existing equipment cases (the second period of the dual baseline case.)

CPUC policy rules and IOU program eligibility rules govern the baseline

A careful review of utility and third-party program and CPUC policy rules must be undertaken and adjustments applied to gross savings in some cases. Adjustments are indicated for gross savings when there was clear evidence from program or policy rules that savings claims could not be made nor rebates paid for the baseline in question. Program rules come into play with respect to gross baseline requirements, for example, when those rules specify:

- ~~a~~A minimum required efficiency level;
- ~~a~~A minimum percentage improvement above applicable minimum code requirement;
- ~~a~~A minimum RUL of the existing equipment;
- ~~the~~The type or range of retrofits that are allowed be included in a program.

CPUC policy may apply to establishing the gross baseline when Policy Manual Rules, a CPUC Decision or a ~~decision maker~~ Ruling from an Administrative Law Judge or Assigned Commissioner includes special requirements or consideration for the situation or technologies of a measure. For example, projects or sites that involve fuel switching, co-generation or renewable technologies are usually subject to special baseline considerations ~~(or other considerations)~~ that must be considered in the savings estimates.

Minimum production level or service requirements govern the baseline

In some situations, a measure for which savings might be claimed could be determined to be the only acceptable equipment for an application. In such cases, the baseline must be set at the minimum needed to meet the requirements, which may be the same as the equipment planned for installation. An example would be an industrial process where only a variable-speed drive pumping system could meet the production requirements. For situations where the baseline conditions or requirements were changed (such as production level changes), the baseline equipment is defined as the minimum equipment needed to meet the revised conditions. If the pre-existing equipment is not capable of reliably meeting the new requirement (such as production change) for its remaining life, then a new equipment baseline must be established utilizing either minimum code requirement or industry standard practice equipment, whichever is applicable.

Industry standard practice baselines are established to reflect typical actions absent the program

Industry standard practice baselines establish typically adopted industry-specific efficiency levels that would be expected to be utilized absent the program. If the Customer is not required to make a change to Industry Standard practice by code or other compelling market reasons (*e.g.* non-availability of replacement parts or equipment), pre-existing equipment use shall be the basis of baselines for RUL of existing equipment. Standard practice determination ~~must~~shall be supported by ~~recent studies or market research~~reasonable evidence that reflects current market activity. Typically market studies (or IOU work papers if no market studies are available) should be less than five years old; however this guideline is dependent on the rate of change in the market of interest relative to the equipment in question. For example, the lighting markets may change significantly in the next two years while larger process equipment markets might change more slowly. Regulatory changes might cause very rapid market practice shifts and must also be considered. For example, ~~forthcoming~~ changes in Federal Standards relating to linear fluorescent ballasts will result in rapid market shifts of equipment use.

(END OF ATTACHMENT B)

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 2

PORTFOLIO REFLECTS GUIDANCE

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
PORTFOLIO REFLECTS GUIDANCE

TABLE OF CONTENTS

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
PORTFOLIO REFLECTS GUIDANCE

A. Introduction

In this chapter, Pacific Gas and Electric Company (PG&E) summarizes its proposals to revise its 2013-2014 Energy Efficiency Portfolio to comply with Decision 12-05-015 (the Decision). Details regarding the program changes are included in Appendix C – Program Implementation Plans and Addendums. A comprehensive index of the portions of PG&E's testimony and supporting appendices that demonstrate PG&E's compliance with each requirement of the Decision is in Appendix G – Table of Compliance.

B. Energy Savings Goals for the 2013-2014 Applications

PG&E proposes a cost-effective portfolio of programs that meet the 2013-2014 energy savings goals for both Investor-Owned Utility (IOU) Programs and Codes and Standards (C&S) Advocacy. As directed in the Decision, PG&E's energy savings forecast for C&S Advocacy includes a compliance rate of 85 percent for appliances and 83 percent for codes. (Ordering Paragraph (OP) 18.) PG&E presents a prospective showing of cost effectiveness with the estimated Total Resource Cost (TRC) and Program Administrator Cost (PAC) ratios for the proposed portfolio in Appendix A – Portfolio Cost-Effectiveness Analysis. (OP 4.) In its cost-effectiveness evaluation, PG&E used the new Energy and Environmental Economics, Inc. (E3) avoided cost calculator and the post-tax weighted average cost of capital as the discount rate. (OP 2.)

As noted in the Decision, there are many outstanding issues that must be addressed prior to including decay in energy saving goals for the IOU Programs. Therefore, cumulative energy savings (including decay and market transformation effects) were not adopted for 2013-2014. To the extent that decay has been embedded in the 2013-2014 annual goals, PG&E has included decay makeup in its 2013-2014 energy savings forecast. (p. 95, OP 20.)[1]

The Decision requires the IOUs to endeavor to exceed the behavioral programs' participation minimum of 5 percent of the households represented in their program portfolios. (OP 16.) In accordance with the objective of driving behavior change elements of energy improvement, PG&E will reach at least 5 percent of its residential customers through its residential behavioral program. Additional detail on the residential behavioral programs is presented in the Energy Advisor subprogram in the Residential Program Implementation Plan (PIP).

C. Financing

The Decision requires the IOUs to collectively propose a budget of $200 million statewide for programs that will finance energy efficiency improvements for all customer segments. (OP 22.) The allocation of the $200 million has been agreed upon

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1 OP 20 appears to be in error in stating that the IOUs shall be responsible for making up one half of the decay as the text on page 95 of the final version of the Decision was revised from the first proposed decision to state the IOUs will only be responsible for annual goals for the transition period. (PD Rev. 1, pp. 98-99.)

among the IOUs, and PG&E's total proposed Statewide Financing Program budget is $73 million for 2013-2014. The financing programs include continuation of the existing On-Bill Financing (OBF) program, funding third-party financing programs including successful American Recovery and Reinvestment Act (ARRA) through third-party financing programs, and proposals for new financing pilots.

PG&E is continuing its existing OBF program, with changes to make the program a statewide, rather than local program. (OP 22b.) PG&E's proposed budget for the OBF loan pool is $16 million per year, which is approximately equal to the OBF reservations in PG&E's program in 2012. (OP 22b.) PG&E proposes an additional $3 million per year to cover administration and implementation costs.

As directed in the Decision (OPs 28, 119), PG&E is working with the other IOUs to ensure that statewide a minimum of $5 million and no more than $10 million of the remaining 2010-2012 Statewide Marketing, Education, and Outreach (ME&O) Program budget is provided to local governments by August 1, 2012, to fund the most successful and/or replicable Energy Upgrade California (EUC) related programs previously implemented by local governments with ARRA funding. The IOUs presented selection criteria, including the criteria provided in Conclusion of Law 26, to the California Public Utilities Commission's (CPUC or Commission) Energy Division staff (Staff) and the California Energy Commission (CEC) staff, as well as local governments, at the EUC Steering Committee meeting on May 24, 2012. In addition to inviting funding proposals from meeting participants, each IOU directly contacted local governments who were known to have ARRA-funded EUC financing, marketing and/or workforce education programs.

PG&E will fund successful ARRA loan programs in 2012, 2013 and 2014. One program PG&E is considering funding, subject to negotiations, is the Moderate Income Sustainable Technology Program, a program that serves residential and small business customers in the vast majority of counties in PG&E's service area. (OP 22b.) PG&E is also considering the EmPower SBC Program administered in the County of Santa Barbara. These programs both meet the criteria in the Decision.

As directed, PG&E is working with the other IOUs and will work with the statewide consultant to propose several financing pilot projects. Specifically, the proposals will include a credit enhancement program for single family and multi-family residential customers. (OP 23.) The proposal will also include a new third-party loan program for all commercial (non-residential) customers, with a credit enhancement for small and medium business (SMB) customers that will reduce the interest rate for these customers, below the rate available for other commercial loan products. (OPs 23-24.) These pilot programs are described in more detail in Chapter 3, Attachment A – PG&E's Financing Proposal. PG&E's proposals for financing include a procedure for PG&E to provide to a loan applicant an estimated forecast of energy savings for any energy efficiency investments. (OP 30.)

Finally, the IOUs, in consultation with the statewide consultant hired by San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas) and the working group to be convened by the consultant, will begin creating a statewide financing database. (OP 25.) The database will include financing-related data and information on customer type; host site characteristics; utility payment history; borrower credit scores and energy project repayment history; energy efficiency project performance data; and billing impacts of projects comparing pre- and post-installation utility bills. (OP 25.) Additional information may be included in the database based on recommendations from the working group.

D. Local Government, Government Partnerships and Third-Party Delivery

1. Government Partnerships

PG&E's collaborative approach to working with government partners has created an outstanding delivery channel that leverages the local and regional governments' access to their customers, delivers cost-effective energy savings, promotes code compliance, provides sustainability planning resources, and encourages innovation. Consistent with the Commission's overarching goal to achieve deeper energy savings, PG&E proposes to continue successful partnerships with institutional government partners and local and regional government partners. In accordance with the Decision, PG&E developed criteria for continuation of successful partnerships and expansion of partnership programs in collaboration with the other IOUs and key stakeholders. (OPs 32, 33.) These criteria are further discussed in Chapter 3.

PG&E evaluated each partnership program using the success criteria, and has determined that all partnerships funded in 2010-2012 are successful and should be continued in 2013-2014. PG&E's detailed evaluation of each partnership's performance using the success criteria is presented in Appendix F.2 – Local Government Partnership Assessment. The Commission's directions for the business improvement districts are discussed below in Section G.

2. Third-Party Programs

Third-party programs represent an important delivery channel for residential, commercial, industrial, and agricultural customers. PG&E's proposed third-party contracts comprise existing, cost-effective programs continuing from the 2010-2012 cycle, adjusted as required to incorporate newer efficient technologies. PG&E will obtain new third-party contracts through a competitive solicitation process beginning in 2013. The programs PG&E proposes to continue exhibited success based on criteria developed in collaboration with the other IOUs. The criteria and selected programs, and a discussion of programs that PG&E proposes to discontinue after application of the criteria, are discussed in Chapter 3. (Ops 32, 33, 39.)

The new third-party programs will be selected in a comprehensive, transparent, and competitive bid solicitation process intended to attract new, innovative service providers and technologies and provide energy efficiency delivery channels suitable for all customer segments. This competitive bid process will enhance the portfolio design and expand the use of third parties. The IOUs held the 2013-2014 Energy Efficiency Planning Statewide Stakeholder Meeting on May 29, 2012, to discuss and receive input on third-party programs, among other topics. PG&E's proposed third-party contracts for 2013-2014, including statewide programs implemented by third parties, are approximately $176 million, representing a minimum of 20 percent of the total 2013-2014 portfolio budget. (OP 37.) A listing of all existing third-party contracts, as required in the Decision, is attached as Appendix F.1.A – Procurement Table (Public Version), with certain confidential pricing information redacted from the public version. An un-redacted copy of the procurement table and copies of confidential third-party contracts are provided to the Commission pursuant to Public Utilities Code (Pub. Util. Code) Section 583 and General Order 66-C as Appendix F.1.B. At a later date, PG&E will file a motion to file the confidential information under seal and a motion to submit the testimony into evidence. (OP 38.)

E. Reducing the Number and Complexity of Programs

PG&E supports the Commission's direction to reduce the number and complexity of programs by eliminating some programs from the 2010-2012 cycle and moving those activities to an appropriate continuing program to better align programs with customer segments. (Decision, p. 160.) PG&E has eliminated the separate Heating, Ventilation and Air Conditioning (HVAC) Program and the appropriate subprogram activities are included in the respective Residential and Commercial Programs (HVAC Residential and Commercial Quality Maintenance (QM), Residential Quality Installation (QI), and Commercial QI). (Ops 41, 42.) The HVAC Technologies and System Diagnostics Advocacy and HVAC Workforce Education & Training (WE&T)subprograms have been integrated into the Statewide Emerging Technologies (ET) and Workforce Education and Training (WE&T) Programs, respectively. In addition, the Statewide New Construction Program has been eliminated, and Residential and Commercial New Construction subprograms have been aligned with the respective Statewide Residential and Commercial Programs for better integration with the overall market segment strategies for these customer segments. (OPs 41, 42.)

In addition to the program consolidation directed in the Decision, the IOUs have consolidated subprograms within the Statewide Residential, Commercial, Industrial, and Agricultural Programs. For both the Statewide Residential and Commercial Programs, the residential and commercial HVAC subprograms (QI, QM, and Upstream HVAC) have been consolidated into Residential and Commercial HVAC subprograms, respectively. The Commercial New Construction (Savings by Design) subprogram is merged into the Commercial Calculated subprogram. For the Statewide Agricultural Program, the Non-Residential Audits and Pump Efficiency Services subprograms have been consolidated into the Energy Advisor subprogram. Finally, the IOUs have consolidated the Statewide ET Program into three subprograms including Technology Development Support (Formerly Technology Development Support and Business Incubation Support subprograms), Technology Assessments, and Technology Introduction Support (Demonstration Showcases and Scaled Field Placement); the former Market and Behavioral Studies subprograms cross-cuts the three new subprograms.

To further reduce the number of programs in its 2013-2014 portfolio, PG&E consolidated its Zero Net Energy (ZNE) Pilot Program and Local Demand-Side Management Coordination and Integration (IDSM) Program into PG&E's existing statewide programs. PG&E will integrate the ZNE Pilot Program into residential and commercial new construction, C&S, and ET activities to better align residential and commercial ZNE initiatives with these programmatic activities for 2013-2014. In addition, the Local IDSM Program activities will be integrated into the Statewide Residential, Commercial, Industrial, Agricultural, WE&T, and IDSM Programs. Local program consolidation is discussed in more detail in Chapter 3.

F. Residential Program

Based on directions in the Decision, PG&E has made a number of modifications to the statewide Residential Program.[2] The EUC Whole House Retrofit subprogram, which will be referred to as the Whole Home Upgrade Program (WHUP) as EUC transitions to the statewide brand, will continue to be a market transformation-oriented program. (OP 43.) The WHUP includes strategies to increase savings from plug loads, appliances, lighting, and/or swimming pools. (OP 45.) The WHUP also includes a streamlined HVAC emergency replacement protocol. (OP 47.) This protocol allows for equipment replacement in an emergency, following the approach documented in the Decision, Attachment B –HVAC Emergency Retrofit Protocol, and describes contractor participation expectations for all "Fast Track" applications. (OPs 48, 49.) The WHUP subprogram PIP contains further details, including a proposal for a declining 10-year incentive structure. (OP 46.)

PG&E has consulted with state, regional and local government entities to define their expected budget and roles for the 2013-2014 WHUP. (OP 54.) Upon completion of WHUP process evaluations, the IOUs will conduct a workshop to review workforce training needs and may enact changes to the existing WHUP based on the outcome of the workshop. (OP 55.) For example, the IOUs may enhance training and modify the WHUP to better appeal to middle income households. (OPs 56, 57.) PG&E will continue to implement a middle income direct install (MIDI) program and explore opportunities to broaden the coverage of the MIDI program and make it more comprehensive. (OP 58.) PG&E will consult with relevant stakeholder groups to develop a proposal for partnering with California's real estate industry to implement voluntary training and outreach partnerships. (OP 59.) PG&E will work with local governments and the CEC to identify opportunities for assessment and/or rating incentives that could be added to the WHUP program. (OP 60.) Additionally, the IOUs will assist Staff and the CEC in 2013-2014 in identifying approaches to broaden allowable software used for WHUP in the post-2014 program cycle. (OP 61.) The WHUP PIP defines the number of single family homes the IOUs plan to engage in the 2013-2014 transition period. (OP 62.)

The IOUs are merging the previous Home Energy Efficiency Rebate (HEER), Business Consumer Electronics (BCE), and Appliance Recycling subprograms into the new Plug Load and Appliances (PLA) subprogram. (OPs 64, 65.) The 2013-2014 Plug Load and Appliances subprogram PIP explains the criteria used to determine the best delivery channel for any plug load or appliance incentive or intervention. (OP 63.) In most cases, intervention is required at multiple levels of the value chain. The former HEER, BCE, and Appliance Recycling subprograms and Residential New Construction (RNC) subprogram will continue to enhance coordination with the C&S Program to support market transformation through Title 20 and Title 24 C&S changes. (OPs 67, 69.) The Plug Load and Appliances subprogram will incorporate exploratory measures to support manufacturers' implementation of voluntary product specifications that support developing mandatory "horizontal standards" for plug loads and appliances. (OP 66.) These changes, among others, will drive synergies to allow for more coordinated engagement work with Plug Load and Appliance subprogram retailers and

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[2] Also referred to in Decision 09-09-047 as California Statewide Program for Residential Energy Efficiency, or SPREE.

manufacturers. The IOUs will introduce the measures proposed in this subprogram using methods to minimize costs and to maximize savings. (OP 68.)

The California Advanced Homes Program will help to eliminate market barriers in supporting ZNE residential homes by guiding builders to produce ZNE homes cost-effectively. (OP 70.) The RNC subprogram will evaluate potential pilot programs, integrate ZNE design solutions at the development and single home scale, and programmatic approaches that increase customer and builder interest in ZNE solutions. (OP 71.) The RNC subprogram will develop a roadmap outlining a strategy for reaching ZNE goals in 2020. (OP 72.) The IOU teams will take care to ensure that this roadmap activity builds upon, and does not duplicate, the ZNE roadmap exercise already underway in the 2010–2012 portfolio.

The Decision would require the IOUs to propose changes to the Upstream HVAC Equipment Incentive Program,[3] if necessary, to comply with Senate Bill (SB) 454, while preserving the program's cost-effectiveness. (OP 50.) PG&E's Residential subprogram, the Upstream HVAC Equipment Incentive Program (Upstream HVAC subprogram) is compliant with SB 454, which is codified at Pub. Util. Code Section 399.4, and thus no further changes are required. Section 399.4 (b) (1) refers to rebates or incentives for installed energy efficiency measures. The transaction for which an incentive is paid in the Upstream HVAC subprogram is for the sale, rather than the installation, of HVAC equipment. No permits are required at point of sale. The Upstream HVAC subprogram does not come in direct contact with the equipment installation process by the contractor or end-user; therefore it does not violate the permitting and licensing requirements in Section 399.4.

The Decision also would require the customer or contractor to certify that he/she has obtained a permit and utilized a licensed contractor. (OP 51.) Pursuant to a multi-party settlement of issues related to SB 454,[4] the IOUs' applications for incentives for HVAC replacements or installations already require the person applying for the incentives to certify that a contractor is licensed and a permit has been obtained, if applicable. Thus, no further changes are needed to PG&E's rebate applications to comply with this requirement. (OP 51, 52.)

Ordering Paragraph 53 requires the IOUs to institute the following changes to their documentation for programs involving HVAC installations or replacements: (a) submittal of the permit number for the HVAC-related work; and (b) a contractor certification that appropriate permits have been obtained. (OP 53.) These two requirements will necessitate a change to PG&E's rebate applications for residential, multi-family, and business customers. An example of contractor certification which will be added to the rebate applications is included in Appendix F.3 – Rebate Application Exemplar. The new requirements would apply to the IOU energy efficiency programs listed below, all of which could include the installation or replacement of a HVAC unit. (OP 53 (b).)

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3 The 2010-2012 Upstream HVAC Incentive Program is currently operated as a commercial program. Therefore, we address commercial, as well as residential, in this discussion.

4 Letter from Office of Attorney General, CEC, CPUC, and Contractors State License Board to PG&E, dated October 18, 2010.

TABLE 2-1
PACIFIC GAS AND ELECTRIC COMPANY
PROGRAMS WITH HVAC MEASURES

Line No.	Business Segment	Programs With HVAC Measure Installation/Replacement
1	Residential	PLA Residential HVAC Residential New Construction (Core) WHUP Multi-Family Energy Efficiency Rebates
2	Commercial	Deemed Incentives Calculated Incentives Commercial HVAC
3	Industrial	Deemed Incentives Subprogram Calculated Incentives Subprogram
4	Agricultural	Deemed Incentives Subprogram Calculated Incentives Subprogram
5	Third Party	Multiple Subprograms
6	Government Partnerships	Multiple Subprograms

G. Commercial Program

The 2013-2014 Statewide Commercial Program, in coordination with local and regional government partnerships and business improvement districts, will engage SMB customers mostly through its Deemed Incentive and Direct Install subprograms. Direct Install subprograms are generally implemented by government partners and third parties. (OP 73.)

As required by the Decision, PG&E will examine the effects of an audit requirement on customers implementing three or more measures. (OP 74). PG&E will explore testing an incentive “kicker” for customers who comply with a qualified audit prerequisite and/or an increased incentive level for customers installing a higher number of overall energy efficiency measures. The test would be designed to determine which approach(es) most effectively encourage customers to pursue deeper energy savings.

PG&E will test the new CEC Building Energy Asset Rating System auditing tool when it becomes available (OP 75), raise incentive levels for products moved from the ET Program into measures (OP 76), and evaluate approaches that bundle various equipment, technologies and software solutions to improve the measurement, retention, and use of performance data. (OP 77.)

PG&E’s proposals include several program modifications to achieve deeper energy savings over time. (OP 78.) PG&E will seek to achieve cost-effective, deeper energy savings for customers through bundling of measures, innovative approaches to energy insights and management, reaching previously under-served customers and whole building approaches. PG&E considers measure bundling a useful approach for delivering both high-impact measures to customers and for effecting deeper energy savings. PG&E will explore other mechanisms to more highly reward comprehensive energy management retrofits, e.g. premium incentives for bundled measures coupled with energy audit. PG&E will also evaluate approaches which bundle various equipment and technologies to encourage customer adoption of long and short-term payback IDSM measures. PG&E will seek to motivate owners and operators of large facilities, utilizing new software tools on the mark today to provide deeper insights on how customers use energy and identify opportunities (e.g., by end-use) to reduce energy usage. Greater understanding and insight, paired with compelling return on investment (ROI) or payback-based business cases, can lead customers to undertake more improvements. PG&E is planning to demonstrate innovative approaches to achieve deeper energy savings over time, including a whole building approach that may integrate customized retrofit and retro-commissioning in a single, performance-based program.

PG&E proposes to enhance its advanced pumping efficiency offerings to make it easier for customers and to address a greater number of customers with pumping loads. Enhancements will include adding variable frequency drives as an option and investigating the benefits of including soil moisture sensors as a pump operations strategy. PG&E will explore a water leak detection option for non-residential customers with water distribution systems. To determine savings values, PG&E's audit tools and programs will utilize: (1) publically available information; (2) *ex-ante*; or (3) calculated values, or some combination of the three. ROI or payback calculations applied to equipment and technology bundles will provide a broader assessment of the economic value of energy efficiency and support implementation of more comprehensive energy audits and greater integration of other demand-side management opportunities.

PG&E will seek input from industry experts regarding the split-incentive barrier in multi-tenant buildings.[5] (OP 79.) The effort will result in a focused research report that will make specific recommendations on programmatic solutions to the split-incentive barrier. If appropriate based on the resulting recommendations, PG&E will either: (a) incorporate split-incentive solutions that include incentives for sub-metering and plug load control technologies for both owner and non-owner occupied buildings into existing commercial programs; or (b) propose a pilot program to the Commission to address the split-incentive barrier. (OP 80.)

H. Lighting Program

The new Statewide Lighting Program is comprised of all existing residential lighting measures, non-residential lighting measures, and the 2010-2012 Lighting Market Transformation program. (OP 82.) Current basic and advanced lighting program activities will continue under the Primary Lighting subprogram, and market transformation activities will continue under the Lighting Market Transformation subprogram. The Lighting Innovation subprogram will support demonstrations and program pilots for advanced lighting technologies and program models as described in the PIP. (OP 84.) This subprogram will demonstrate both technology performance and program innovations to test new approaches for under-utilized technologies. The IOUs will continue to support technology assessments of new or emerging lighting technologies in the ET Program. (OP 83.)

The Primary Lighting subprogram will promote lighting measures that are in the mass commercialization phase. (OPs 85, 86.) This subprogram will provide upstream rebates for basic Compact Fluorescent Lamps (CFL) and more advanced technologies, including light emitting diodes. (Decision, p. 243; OP 81.) Rebates for basic CFLs will

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5 Split incentives refer to a condition where neither the owner nor the tenant is willing to make improvements to a leased space because neither party is likely to accrue the entirety of benefits associated with their investment.

continue to be reduced; however, the IOUs will continue to focus on the remaining savings potential as identified in the 2011 Potential Study.[6] (Decision, pp. 238-239.) The IOUs will not provide rebates for dimmable CFLs, but will provide rebates for dimmable linear fluorescent ballasts. (Decision, p. 243; OPs 89, 90.) The Primary Lighting subprogram will provide upstream rebates for Light Emitting Diodes (LED), specialty CFLs, and fluorescent dimming ballasts. (OP 90.)

PG&E will only provide rebates for LED products that are either ENERGY STAR® or DesignLights™ Consortium qualified and have the Federal Trade Commission (FTC) Lighting Facts label. Medium screw based LEDs will need to be on the Department of Energy Lighting Facts list in order to receive rebates. (OP 88.) Currently, there is no Title 20 lighting standard for general service LED lamps. Thus, PG&E will continue its policy of only incenting general service LED lamps that are ENERGY STAR® qualified and have the FTC Lighting Facts label until the Title 20 lighting quality standard for LEDs is made available. Once this standard is developed, PG&E will determine the most appropriate way to adopt the standard as part of the lighting program structure to remain compliant with the Decision. (OP 87.)

The Lighting Market Transformation subprogram will continue to develop and test market transformation strategies. (OP 86.) This subprogram will execute and update its existing plan, including facilitating the progression of technologies from the ET Program to the Lighting Innovation and Primary Lighting subprograms.

The IOUs will continue to offer a portion of non-residential lighting measures, where appropriate, through a downstream channel to mitigate the impact to the customer experience. Several existing measures will be marketed as downstream for multiple years in order to increase market adoption of these measures.

I. Codes and Standards

The Statewide C&S Program is a critical component to achieving the State's long-term energy efficiency goals. PG&E and the other IOUs will implement several changes to the program in 2013-2014.

PG&E, in collaboration with the other IOUs, proposes a new Planning and Coordination subprogram designed to support an integrated dynamic approach to portfolio planning and the relationship of each C&S subprogram to other energy efficiency programs. This new subprogram will provide a formal process for conducting strategic planning that identifies energy efficiency program priorities for achieving policy goals through support of C&S. This subprogram supports efforts to prepare the market for future code adoption, to ensure higher code compliance rates and advance the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) goals such as ZNE. This subprogram will comprise four elements: (1) strategic planning and coordination; (2) outreach within each IOU to other program areas; (3) statewide planning and coordination; and (4) workforce education and training. (OP 91.)

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6 *The Analysis to Update Energy Efficiency Potential, Goals, and Targets for 2013 and Beyond: Track 1 Statewide Investor Owned Utility Energy Efficiency Potential Study,* prepared for the Commission by Navigant Consulting, completed in May 2012. See http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Energy+Efficiency+Goals+and+Potential+Studies.htm.

PG&E, with the other IOUs, proposes a new coordinated initiative between the Statewide C&S and WE&T Programs. C&S will collaborate with WE&T to not only prepare contractors and technicians to implement current codes (such as residential air conditioning quality installation), but to also prepare them with technical training (including continued support for California Advanced Lighting Controls Training Program (CALCTP) on advanced technologies projected to become part of reach codes and then the statewide code. (OP 92.)

The IOUs propose a process through which the C&S program may gain and share recommendations on: (a) potential local jurisdictions to target for Reach Code adoption; and (b) specific areas of low code compliance appropriate for exploring incentives to augment code compliance. C&S will continue working with the Compliance Improvement Advisory Group (CIAG) formed in 2010. The CIAG comprises 15 to 20 practitioners representing a wide variety of professions directly involved in decisions and actions that lead to compliance with the state building code and appliance standards. Through their quarterly meetings and white papers, members will provide street level advice on how certain compliance issues affect them, how execution of their jobs affect compliance, and how various potential solutions might be made more workable given the day-to-day activities in which they engage as practitioners. C&S will continue collaborating with Government Partnership Programs to reach local jurisdictions that may benefit from updating or developing a Reach Code. (OP 95.)

The IOUs propose a marketing and outreach campaign in collaboration with the CEC and the Commission. C&S will collaborate with the CEC to develop and implement an outreach campaign designed to improve compliance with Title 24, Part 6 and Title 20 standards. The campaign will be based on the CIAG's guidance and may include activities such as developing flyers for contractors to provide to potential customers explaining the code requirements and benefits, mini measure-based code seminars for big box store employees, etc. (OP 93.)

Finally, the PG&E, in collaboration with the other IOUs, will propose pilots to test using incentives to support critical improvement code compliance. C&S will implement a pilot project designed to improve compliance by providing nonmonetary incentives. The pilot will be based on the CIAG's guidance and may include training or provision of tools designed to streamline the permitting and inspection processes for additions and alterations. (OP 94.)

J. Emerging Technologies Program

The 2013-2014 Statewide ET Program will organize the ET activities under three subprograms that reflect the progression of technologies through the early part of their lifecycle. The subprograms will include all of the elements that were in the 2010-2012 ET subprograms as well as integrating some additional elements. First, the Technology Development Support subprogram will focus on product development and incubation of energy efficiency technology companies (it will comprise the 2010-2012 Technology Development Support and Business Incubation Support subprograms). Second, Technology Assessments is similar in scope to the 2010-2012 ET Technology Assessments subprogram, and will leverage findings from existing research and other studies to develop robust market potential estimates as well as assessing various aspects of the technology (OP 96.). Third, the Technology Introduction Support subprogram will concentrate on understanding or improving technology adoption in the market. (OP 97.) It includes the activities in the previously-named ET Scaled Field Placements and Demonstration Showcases subprograms. All three of the new ET subprograms (Technology Development Support, Assessments, and Introduction Support) will also encompass activities that were previously in the ET Market and Behavioral Studies subprogram, HVAC Technology and System Diagnostics subprogram, and portions of the ZNE Pilot Program. (Decision, p. 160.)

The ET Program goals in the PIP have been modified to better align with the restructuring of the program. As required by the Decision, the PIP includes a detailed plan describing how each of the subprograms will meet the three primary ET Program goals. The revised PIP will provide information on reducing plug load consumption and advancing building integrated design and operation solutions to contribute to the Strategic Plan ZNE goals for 2020 and 2030. (OP 103.) The PIP will also include updates to quantifiable targets, timelines, and budgets. (OP 98 b.) The Decision requires the IOUs to develop a budget allocation by market sectors and end-uses for each subprogram element. (OP 98 c.) Because ET subprogram budgets will change over the next two years, the ET budget shown in Appendix D – Budgets and Savings Placemat Tables, should be considered planning budgets. (OP 98 c, d.) Instead, each ET subprogram element will have a budget allocation for short-term projects (within the program cycle) versus long-term projects (those that will exceed three years). (OP 98 e.) The revised PIP includes a planning budget allocation for assessing new advanced and/or unproven technologies versus emerging and/or under-utilized technologies. (OP 98 f.)

The Statewide ET Program will seek to expand the membership of the Emerging Technologies Coordinating Council (ETCC) by the end of 2012. (OP 99.) In addition to the current ETCC members comprised of the IOUs, Sacramento Municipal Utility District, CPUC and CEC, the ETCC will seek to add a variety of stakeholders ranging from institutions to other government entities as collaborating members. (OP 100.) The ET program will collaborate with the CEC's C&S programs by working closely with each of their respective IOU C&S program teams (pp. 249, 270).

The IOUs will also expand the Technology Resource Incubator Outreach trial solicitation as Southern California Edison Company (SCE) proposed in its Advice Letter 2627-E. This will become an element of the Technology Introduction Support subprogram. (OP 101.) Finally, the IOUs will develop residential and commercial roadmaps that encompass existing building retrofit and new construction programs, consistent with the Decision, (OP 104) as described in more detail in the ET PIP addendum.

The IOUs' plan for transitioning new technologies from external initiatives into IOU energy efficiency programs is described in more detail in the ET PIP addendum. (OP 102.)

K. Workforce Education and Training

PG&E, in collaboration with the other IOUs, will continue to partner with the CALCTP to offer training as part of their portfolio of classes to various customer segments of the advanced lighting controls workforce. Where appropriate, the IOUs will serve as program advisors and instructors, and provide financial and other program support. (OPs 105, 106.) The IOUs plan to test a sector strategy approach for HVAC, beginning with the nonresidential customer segment, is included in the addendum to the WE&T PIP. While the addendum includes the broad outlines of the plan, additional details will be worked on later this year and early 2013; an additional addendum will be provided, if needed. (OPs 107, 108.) The IOUs have already addressed the recommendations from the 2011 Needs Assessment Study[7] in an advice letter that was approved last year and have included their recommendations in the WE&T PIP addendum.[8] (OP 110.) The IOUs will continue to build on the approved strategies and include additional recommendations in the WE&T PIP. The WE&T PIP also addresses information about HVAC QI and the CALCTP installations and other sector strategies, and new initiatives. (OPs 111, 112.)

L. Water-Energy Nexus Programs

In addition to the water pumping related activities described in Section G, PG&E will continue to offer water-energy savings measures and services through its Commercial, Industrial, and Agricultural Calculated subprograms, with an increased focus on industrial and agricultural customers. (OPs 113, 114.) In addition to exploring pilots for water leak-loss detection and remediation for customers with water distribution systems, PG&E will explore collaborating with the other IOUs to develop water-energy pilots that test different objectives in each service area to determine best practices for achieving combined water-energy savings. Further, PG&E will: (a) promote increased participation from small and medium water customers; and (b) continue to explore emerging technology in soil moisture sensing. (OP 115.)

M. Marketing, Education, and Outreach

PG&E's statewide marketing proposals and budget request will be filed in a separate application by August 3, 2012. (OP 117.) PG&E will enter into a contract with the California Center for Sustainable Energy, the statewide ME&O implementer, to begin the transition to the 2012 statewide marketing campaign. (OPs 122, 123.) PG&E's proposals for its local marketing campaign for the residential, commercial, industrial and agricultural customer segments, including coordination with the statewide marketing campaign and other demand-side management (DSM) programs, are discussed further in the Residential, Commercial, Industrial, Agricultural, Lighting, Financing, and IDSM PIPs and in Chapter 3, Section E.

N. Continuation of 2010-2012 Programs Not Otherwise Addressed

1. Statewide DSM Coordination and Integration (IDSM) – PG&E recognizes the importance of promoting integrated DSM program offerings of Energy Efficiency, Demand Response, Distributed Generation, and Energy Savings Assistance (ESA) Programs to provide comprehensive solutions to customers and support the Strategic Plan goals. The IOUs' 2010-2012 portfolios included IDSM activities at the statewide and local program level. Pursuant to Decision 12-04-045 (OP 74), PG&E's total proposed budget includes funding for 2013-2014 Demand Response Program IDSM activities.

   PG&E proposes to continue IDSM activities during 2013-2014, as directed, but will merge implementation of local IDSM activities into existing programs.

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[7] *California Workforce, Education and Training Needs Assessment for Energy Efficiency, Distributed Generation and Demand Response*, prepared by the Donald Vial Center on Employment in the Green Economy, Institute for Research on Labor and Employment, U.C Berkeley, 2011. Available at http://www.irle.berkeley.edu/vial/publications/WET_Part1.pdf.

[8] Advice Letters SDG&E 2260-E-B/2041-G-B, SoCalGas 4249-B, SCE 2588-E-B, and PG&E 3212-G-B/3852-E-B were approved with an effective date of October 29, 2011.

(OPs 129-136.) PG&E believes that consolidating the 2010-2012 Local IDSM Program scope and budgets into PG&E's existing programs is a more streamlined, understandable way of administering local IDSM activities, since integration efforts are underway in various areas of PG&E's portfolio.

The IOUs modified the Statewide IDSM PIP to include plans for obtaining input from stakeholders on the eight directives from Decision 09-09-047 (p. 210), included a detailed accounting of IDSM pilots and programs, and provided a timeline for completion for the Progressive Energy Audit Tool in the Commercial PIP. Consistent with OP 134, PG&E will leverage existing project tracking and reporting systems and determine the best approach to consolidate and improve these systems across DSM programs.

2. <u>Continuous Energy Improvement (CEI)</u> – CEI seeks to test approaches to promote customer demand-side energy resource management by providing a toolkit of planning and other resources. PG&E will continue to support the CEI subprogram in the statewide Commercial, Industrial, and Agricultural Programs. (OP 137.) The CEI subprograms will explore expansion to include mid-sized nonresidential customers and strategies to actively engage WE&T sector strategy efforts. (OPs 138, 139.) CEI PIP, embedded as a subprogram in the Commercial, Industrial, and Agricultural PIPs, will subsequently be revised mid-cycle to incorporate evaluation findings when available. (OP 140.)

3. <u>Benchmarking</u> – PG&E will continue its current benchmarking activities, an initiative designed to educate and motivate customers to benchmark their facilities. (OP 128.) PG&E will offer tools and support that will enable customers to utilize benchmarking as an energy management tool. PG&E will incorporate key findings from the 2012 Commission study by NMR Consulting and Optimal Energy on benchmarking, an evaluation of how current benchmarking initiatives impact both savings and program awareness and participation, to further improve our benchmarking program.

O. Other Portfolio Directions

This section discusses PG&E's use of the Database for Energy Efficient Resources (DEER) values to prepare its 2013-2014 Energy Efficiency Portfolio and PG&E's compliance with Section 17 of the Decision. In creating its workpapers, custom project tools and other savings calculations, PG&E followed Commission direction to use DEER values where possible. (OPs 143, 147.) Where DEER values are not available for use, PG&E is following Commission direction to use due diligence in preparing workpaper *ex-ante* values, undertake research where information is not available and use information from pilot programs and projects to inform *ex-ante* creation. (OP 144.) In creating these workpapers, custom project tools and custom project calculations, PG&E has collaborated with Staff's Data Management and Quality Control team and is incorporating information from DEER, Remote *Ex-Ante* Database Interface (READI), and other documentation as instructed by Staff and the Commission. In addition, PG&E is working with Staff to refine the custom programs and work through the appropriate review channels. (OPs 146.) These updates include values from the 2006-2008 evaluation reports as directed by the Commission. (OP 150, Decision, p. 332.) In compliance with Commission direction, PG&E includes, in Appendix B – Workpapers, the Summary Table of PG&E's 2013-2014 Non-DEER Workpapers and 151 workpapers to be used in the 2013-2014 portfolio cycle. (Decision, p. 333.) PG&E

will develop and submit new, Phase 2 workpapers between July 2 and December 31, 2012, for additional promising technologies to be incented for the 2013-2014 Energy Efficiency Portfolio.

PG&E agrees that "ex ante values should be adopted and held constant throughout the portfolio cycle. However, mid-cycle updates of ex ante values are warranted if newly adopted codes or standards take effect during the cycle." (Decision, p. 329.) To this extent, PG&E recommends the Commission lock-down all *ex-ante* values used in planning the portfolio as of June 1, 2012. This date incorporates the complete changes to all databases prepared by Staff and provides sufficient time for the IOUs to plan their portfolios with those locked down values. PG&E also notes that the DEER database is not a complete list of frozen values, and therefore, the Commission should lock down all of the following files and databases provided by Staff to complete the *ex-ante* data set to avoid confusion:

- 2011 DEER database – Version 4.01 dated May 16, 2012
- Net To Gross tables dated May 23, 2012
- HVAC interactive effects tables dated May 23, 2012
- Load shapes tables dated May 16, 2012
- READI tool Version 0.99.7 dated May 25, 2012
- Gross Savings Installation Adjustment (GSIA) tables as used to populate READI tool Version 0.99.7 dated May 25, 2012

P. Evaluation

PG&E's Evaluation, Measurement and Verification (EM&V) budget proposal for program years 2013-2014 is four percent of its total portfolio funding to support all EM&V activities, including utility and Commission-managed EM&V studies, policy support, strategic planning projects, and staffing. (OP 157.) As directed by the Decision, PG&E proposes a continuation of the 72.5 percent/27.5 percent split of EM&V funding between Commission-managed studies, policy support, and strategic planning projects, and studies managed by the IOUs. (OP 158.) The current division of responsibilities between Staff and the IOUs will continue during the 2013-2014 portfolio cycle. (Decision, p. 354.) The IOUs' applications do not include a detailed EM&V Plan for 2013-2014. Instead, as directed in the Decision, Staff and the IOUs will update and modify the existing 2010-2012 Energy Efficiency EM&V Work Plan, Version 1. (Decision, pp. 354-55.) PG&E proposes that this update be completed by December 2012 so as to not delay the 2013-2014 EM&V analyses.

Q. Shareholder Incentive Mechanism

Rules for a shareholder incentive for energy efficiency for 2013-2014 will be established in Rulemaking 12-01-005. The Decision directs the IOUs to reflect any guidance the Commission has issued in the rulemaking that may impact program design proposed by the IOUs. (Decision, pp. 361-362.) On June 15, Administrative Law Judge Pulsifer issued a Ruling soliciting comments by July 16, 2012 on possible energy efficiency incentive reforms for the 2013-2014 program cycle. The Ruling solicits comments on the design of the 2013-2014 Risk Reward Incentive Mechanism (RRIM) and in particular whether the RRIM should be calibrated relative to the different types of programs in the portfolio and whether it should provide a greater incentive for deeper savings achievements. Since the ruling does not provide guidance on the 2013-2014

RRIM, no changes are suggested to the portfolio to make it consistent with a new RRIM mechanism.

R. Next Steps and the Process for 2013-2014 Utility Portfolio Applications and Review

This section responds to program directives in Section 20 of the Decision.

The IOUs have estimated spillover and have included their spillover proposals and support for their estimates in Appendix A, as suggested in Staff's 2013-2014 Energy Efficiency Portfolio Application Information Requirements served in Rulemaking 09-11-014 on May 24, 2012 (Decision, pp. 362-363). PG&E's portfolio cost effectiveness, which complies with the Commission's directives in the Decision and additional Staff instructions provided on May 24, 2012, is also included in Appendix A. (OPs 165, 166.) Staff has provided guidance on PIP addendums and new PIP templates, and the completed PIPs and addendums are included in Appendix C. (Decision, pp. 363-365.)

PG&E proposes to use the Program Advisory Group (PAG) as a consultative resource for mid-cycle program changes or additions for post-2014 portfolio planning. (OP 167.) PG&E proposes to establish a PAG for 2013-2014. Issues raised by stakeholders will be assigned to the PAG, and the PAGs will be purpose-driven meetings used to address outstanding issues. In addition to the PAG, PG&E will continue to meet with its third-party implementers and local and regional government partners annually to discuss key issues for their programs.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 3

PROPOSED PORTFOLIO FULFILLS

ENERGY EFFICIENCY GOALS

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PROPOSED PORTFOLIO FULFILLS ENERGY EFFICIENCY GOALS

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CHAPTER 3
PROPOSED PORTFOLIO FULFILLS ENERGY EFFICIENCY GOALS

A. Portfolio Meets Energy Efficiency Goals

Pacific Gas and Electric Company's (PG&E's) proposed 2013-2014 Energy Efficiency Portfolio is designed to meet the California Public Utilities Commission's (Commission or CPUC) annual energy savings goals as outlined in Decision 12-15-015 (the Decision). PG&E's proposals support changes to Commission policy in the Decision, including: (1) establishing program targets at 100 percent of incremental market potential based on the 2011 Potential Study (p. 81); (2) separating annual targets for investor-owned utility (IOU) Programs and Codes and Standards (C&S) Advocacy (p. 87); (3) establishing C&S goals on an adjusted net basis to provide the IOUs credit for their C&S Advocacy, while adopting IOU Program goals on a gross basis (p. 90); and (4) adopting goals on an annual basis without a decay adjustment until there is an improved ability to measure the impact of decay (p. 99). PG&E's proposed portfolio leverages a diverse set of program offerings delivered by multiple delivery channels, including local and regional government partnerships, third-party implementers, retail market actors, and utility program staff.

Table 3-1 below includes the Commission's adopted 2013-2014 annual goals for both IOU Programs and C&S Advocacy, and PG&E's forecast of its ability to meet or exceed each goal. Additional detail on the breakdown of energy savings by program and subprogram is provided in Appendix D – Budget and Savings Placemat Tables and Appendix E – 2013-2014 Energy Efficiency Portfolio Tables (Tables 1-1 to 1-3).

TABLE 3-1
PACIFIC GAS AND ELECTRIC COMPANY
PROPOSED 2013-14 ELECTRIC AND GAS ENERGY SAVINGS

	Minimum Required by CPUC		Actual Proposed by PG&E	
2013-2014 Electric and Gas Goals	**2013**	**2014**	**2013**	**2014**
Annual Electricity Savings (GWh/Yr.)				
IOU Program Targets	599	593	782	808
C&S Advocacy	276	262	276	262
Annual Peak Savings (MW)				
IOU Program Targets	114	100	136	141
C&S Advocacy	36	38	36	38
Annual Natural Gas Savings With Interactive Effects (MMth/Yr.)				
IOU Program Targets	21.0	20.3	25.7	26.6
C&S Advocacy	1.1	1.6	1.1	1.6

PG&E anticipates its portfolio will achieve 127 to 133 percent of 2013-2014 energy savings goals for IOU Programs. The energy savings forecast is driven by strong market demand for residential, commercial, industrial, and agricultural calculated energy efficiency projects. PG&E has successfully developed multiple channels for delivering energy efficiency to customers, including a robust network of local governments, third parties, trade professionals, retailers, manufacturers, and distributors. As a result of the strong market demand created by this robust network of program delivery channels, PG&E has signed commitments for over 1,500 calculated projects with estimated incentive payments of approximately $68 million that are expected to be completed in the 2013-2014 portfolio cycle.

The C&S Advocacy goals in the Decision should be adjusted. The Analysis to Update Energy Efficiency Potential, Goals, and Targets for 2013 and Beyond: Track 1 Statewide Investor-Owned Utility Energy Efficiency Potential Study (2011 Potential Study)[1] acknowledges a significant discrepancy between the market baseline assumption provided in the C&S evaluation reports and actual market conditions, particularly reduced construction activity and appliances sales resulting from the economic downturn in California.[2] This reduction in economic activity was not reflected in the establishment of the 2013-2014 C&S Advocacy goals and, as a result, the C&S Advocacy goals are overly optimistic. Therefore, PG&E requests that the Commission revise the C&S Advocacy goals to reflect more realistic construction rates in the final decision on this application. PG&E recommends that the Commission make this adjustment with forecasts from the California Building Industry Association (CBIA).[3] Table 3-2 below presents PG&E's proposed C&S Advocacy goals.

TABLE 3-2
PACIFIC GAS AND ELECTRIC COMPANY
PROPOSED REVISIONS TO 2013-14 ELECTRIC AND GAS ENERGY SAVINGS FOR CODES AND STANDARDS ADVOCACY

	Revisions Proposed by PG&E		Difference Between Minimum Required by CPUC and Revised Proposed by PG&E	
2013-2014 Electric and Gas Goals	**2013**	**2014**	**2013**	**2014**
Annual Electricity Savings (GWh/Yr.)				
C&S Advocacy	249	232	27	30
Annual Peak Savings (MW)				
C&S Advocacy	29	31	7	7
Annual Natural Gas Savings With Interactive Effects (MMth/Yr.)				
C&S Advocacy	-0.02	0.4	1.1	1.2

If the Commission elects to maintain the C&S Advocacy goals specified in the Decision, PG&E requests construction rates be evaluated when assessing goal achievement to normalize for economic factors outside of the IOUs' control.

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1 Prepared for the Commission by Navigant Consulting, completed in May 2012. See http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Energy+Efficiency+Goals+and+Potential+Studies.htm.

2 2011 Potential Study, p. 68.

3 Comments of the California Building Industry Association Regarding the Proposed 2013 Building Energy Efficiency Standards, Robert E. Raymer, PE and Michael G. Hodgson (CBIA) dated March 28, 2012 (CEC Docket No. 12-BSTD-1).

B. Portfolio Meets Cost-Effectiveness Objectives

PG&E's proposed portfolio includes market strategies that balance cost-effective energy savings and other efforts to support the Decision. These strategies achieve cost-effective energy savings under current CPUC rules while also laying the foundation for long-term energy savings. The proposed portfolio achieves a Total Resource Cost (TRC) result of 1.25 and a Program Administrator Cost (PAC) result of 1.82 (excluding spillover). PG&E's proposed portfolio maximizes funding for long-term efforts while maintaining near-term ratepayer benefits.

The California Standard Practice Manual includes the methodologies for the cost-effectiveness evaluation, which consist of the TRC and PAC tests.[4] The Energy and Environmental Economics, Inc. (E3) calculator is the Commission-approved tool to run the TRC and PAC cost-effectiveness calculations. PG&E used the latest version of the E3 calculator to calculate cost effectiveness.[5] In compliance with the Decision, PG&E also applied the post-tax weighted-average cost of capital as the discount rate. (OP 2.) Costs related to financing programs that are excluded from the cost-effectiveness analysis are discussed in Chapter 4. PG&E presents its prospective showing of cost-effectiveness for its 2013-2014 energy efficiency portfolio with and without spillover in Table 3-3 below. Additional details on the portfolio cost-effectiveness calculations are presented in Appendix A – Portfolio Cost Effectiveness Analysis.

TABLE 3-3
PACIFIC GAS AND ELECTRIC COMPANY
2013-2014 PORTFOLIO COST EFFECTIVENESS

Line No	Portfolio Cost Effectiveness	TRC	PAC
1	Proposed Portfolio Without Spillover Estimates	1.25	1.82
2	Proposed Portfolio With Spillover Estimates	1.30	2.04

C. Market Potential

The 2011 Potential Study includes forecasts of technical, economic, and market or maximum achievable energy efficiency potential. Technical potential represents the energy savings that would be possible if all technically applicable and feasible opportunities to improve energy efficiency were implemented in California. Economic potential is included in the technical potential analysis as the subset of technical potential that represents the total energy efficiency potential available for only cost-effective measures. Market potential is a subset of economic potential. Market potential includes expected energy efficiency savings based on anticipated program funding levels and customer participation given market influences and barriers. Table 3-4 presents the gross market potential for 2013-2014 for PG&E's service area.

4 http://www.energy.ca.gov/greenbuilding/documents/background/07-J_CPUC_STANDARD_PRACTICE_MANUAL.PDF.

5 PG&E used the E3 Calculator v1c4 released by Energy Division and E3 on June 22, 2012.

TABLE 3-4
PACIFIC GAS AND ELECTRIC COMPANY
GROSS MARKET POTENTIAL 2013-2014 FOR SECTORS TARGETED BY PG&E[a]

Line No.	Gross Market Potential 2013-2014	GWh	MW	MMth
1	Residential Sector	353	49	11.8
2	Commercial Sector	456	104	11.1
3	Industrial Sector	249	46	17.9
4	Agricultural Sector	134	15	0.5
5	Overall Portfolio	1,193	215	41.2

(a) 2011 IOU Service Territory EE Potential Study – Analytica Model (V. 1.1).

The 2013-2014 electric and gas goals in the Decision are based on the 2011 Potential Study and accompanying Analytica Model (V. 1.1). As indicated by Navigant, the 2011 Potential Study is limited because it did not include a comprehensive update of all existing sources of potential or address all new sources of energy efficiency potential. (2011 Potential Study, p. 15.) Consequently, the 2013-2014 energy savings goals may not accurately reflect the gross market potential for energy efficiency.

D. Proposed Portfolio Design

PG&E's proposals were developed in coordination with the other IOUs, and are designed to simultaneously simplify program participation for customers and vendors, and tailor efforts to meet the unique customer needs of each market segment through statewide and local strategies. The continuing programs, new programs, and eliminated programs are each described briefly below. Details for each program and subprogram are in Appendix C – Program Implementation Plans (PIP) and Addendums. The program budgets are discussed in Chapter 4.

1. Continuing Programs from 2010-2012 Portfolio Cycle

PG&E will continue to offer certain resource and non-resource programs from the 2010-2012 portfolio cycle. The continuing statewide programs are: Residential, Commercial, Industrial, and Agricultural market sectors as well as C&S, Emerging Technologies (ET), Workforce Education and Training (WE&T), Marketing Education and Outreach (ME&O), and Demand-Side Management (DSM) Coordination and Integration. Subprograms for each program are described below.

a. Resource Programs

1) Residential

The Statewide Residential Program offers and promotes energy solutions for the residential market. By encouraging adoption of economically viable energy efficiency technologies, practices, and services, the Residential Program will employ strategies and tactics to overcome market barriers and deliver services that support the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan).[6] The focus of the Residential Program is to: (1) facilitate, sustain, and transform the long-term delivery and adoption of energy-efficient products and services

6 Adopted in D.08-09-040.

for single and multi-family dwellings; (2) cultivate, promote, and sustain lasting energy-efficient behaviors by residential customers through a collaborative statewide education and outreach mechanism; and (3) meet customers' energy efficiency preferences through a range of offerings including single-measure incentives and more comprehensive approaches.

To surmount market barriers, the PG&E and the other IOUs will employ multiple approaches that integrate, leverage and build upon existing delivery channels, market actors, and customer relationships including: direct install; downstream (customer), midstream (retailer or distributor), and upstream (manufacturer) channels; and web-based tools. The six subprograms summarized below will deliver direct energy savings and demand reductions, as well as promote market transformation in coordination with the statewide brand: Energy Upgrade California (EUC). The residential retrofit program that has been referred to as EUC will be renamed the Whole Home Upgrade Program (WHUP).[7] All six residential subprograms described below reflect portfolio guidance as described in Chapter 2.

- Energy Advisor – This continuing statewide subprogram (formerly Home Energy Efficiency Surveys) will employ interactive tools designed to engage customers and encourage participation in innovative initiatives that will help customers understand and manage their energy use. This subprogram also will advance whole home solutions where appropriate.
- Plug Load and Appliances – This new statewide subprogram merges the former Home Energy Efficiency Rebate (HEER), Business Consumer Electronics (BCE), and Appliance Recycling subprograms. This subprogram will include a retailer recycling strategy.
- Multi-Family Energy Efficiency Rebates (MFEER) – This continuing statewide subprogram is designed to promote energy efficiency by providing equipment rebates to owners and tenants of multi-family properties, including residential apartment buildings, condominium complexes, and mobile home parks. It will serve as a bridge while whole building multi-family solutions are developed and launched.
- WHUP – This continuing statewide subprogram began in the 2010-2012 program cycle. The WHUP will consolidate the previously separate Prescriptive Whole House Retrofit and PG&E's local Whole House Retrofit subprograms. The WHUP subprogram is designed to build customer and contractor awareness of the house-as-a-system approach to residential retrofits and to encourage comprehensive upgrades and deeper energy savings. In addition to single-family retrofits, WHUP will also include a multi-family path in 2013-2014.

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[7] D.12-05-015 (OP 117) and D.12-04-045, *Decision Adopting Demand Response Activities and Budgets for 2012 Through 2014* ordered the IOUs to file separate applications by August 3, 2012, to transition Energy Upgrade California to the new brand name for overall statewide marketing, education and outreach.

- Residential Heating, Ventilation and Air Conditioning – This continuing subprogram has a primary objective of increasing the quality of technology, equipment, installation, and maintenance in the heating, ventilation and air conditioning (HVAC) market. An additional objective of the subprogram is to increase customer awareness that effective HVAC installation and maintenance practices will increase energy efficiency and peak load reduction. The Residential HVAC subprogram will incorporate a comprehensive set of downstream and midstream strategies that build on existing program, education, and marketing efforts and leverage relationships within the HVAC industry to transform the HVAC market into a sustainable and quality driven market.
- Residential New Construction (RNC) – This is a continuing subprogram that includes the California Advanced Homes Program (CAHP). CAHP targets traditional single-family and multi-family new construction building, including custom homes, subdivisions, apartments, and condominiums. This subprogram will provide comprehensive energy efficiency solutions to the RNC market and help to eliminate market barriers in achieving Zero Net Energy (ZNE) residential homes by guiding builders and manufacturers to produce ZNE homes cost effectively.

PG&E requests a total budget of $123.6 million to implement the Residential Program and achieve 323 gigawatt-hours (GWh), 42 megawatts (MW), and 11.0 million therms (MMth) in energy savings from this program for 2013-2014 excluding third-party programs. Appendix D presents budget, energy savings, and cost-effectiveness details for each Residential subprogram.

2) Commercial

The Statewide Commercial Energy Efficiency Program will continue to offer strategic energy planning support, technical support (such as energy usage insights, facility audits, calculation and design assistance), and financial support through rebates, incentives, and financing options aimed at providing integrated energy management solutions for energy efficiency, demand response, and distributed generation, including renewables. Targeted non-residential customer segments will include distribution warehouses, office buildings, hotels, motels, municipalities, restaurants, schools, universities, colleges, hospitals, high-tech facilities, bio-tech facilities, retail facilities, entertainment centers, and hard-to-reach small and medium business (SMB) customers with similar buying characteristics.

The Commercial Program will be comprised of six subprograms. These subprograms are described below and reflect portfolio guidance as described in Chapter 2.

- Commercial Calculated Incentives – This continuing subprogram offers standardized incentives for non-residential new construction (formerly Savings by Design subprogram of the statewide New Construction program), customized retrofit, and retro-commissioning energy efficiency and integrated projects. This subprogram also provides comprehensive technical and design assistance and support. PG&E proposes that the IOUs offer payments and incentives for energy management systems and equipment and claim the savings based on ex-post measurement. In addition, PG&E will consolidate integrated technology incentives into this subprogram, and offer incentives to businesses that install and utilize demand response-enabling equipment or control software that provides energy efficiency and demand response benefits.

- Commercial Deemed Incentives – This continuing subprogram offers rebates to non-residential customers in a cost-effective and easy-to-use vehicle to offset the cost of off-the-shelf energy saving equipment. Energy management and information systems are increasingly important technologies for quantifying, capturing, and preserving operational and behavioral savings in commercial buildings.

- Energy Advisor – This continuing subprogram (formerly Nonresidential Audits) brings together under one subprogram a number of services designed to encourage and support customer participation in energy efficiency, demand response, and self-generation. This subprogram provides customers with integrated tools to understand their energy usage and make plans to take actions to manage it, including a variety of audits. These services provide an inventory of technical project opportunities and financial analysis information.

- Continuous Energy Improvement (CEI) – This continuing subprogram provides a toolkit of strategic energy planning and other energy management resources.

- Commercial HVAC – This continuing subprogram (formerly a subprogram of the statewide HVAC program) offers rebates to non-residential customers and contractors for HVAC education, equipment, installation, and maintenance services. The subprogram delivers a comprehensive set of upstream strategies for non-residential customers built on education and marketing efforts. It also leverages relationships within the HVAC industry geared towards market transformation.

- Direct Install – This continuing local subprogram offers turnkey services to small business customers with low peak demands. Third-party contractors retrofit customer facilities with more efficient measures; at either no or low cost to the customer. PG&E currently delivers direct install services through its local and regional government partnerships and various third-party implementers.

These energy efficiency program offerings will be packaged with distributed generation and demand response offerings, and will be marketed directly to commercial customers through a multi-channel approach by IOU program staff, trade professionals, third parties, and government entities including business improvement districts. Other components of the program will be delivered by local and regional government partnerships, contractors, and utility energy advisors. These include energy management tools and services such as audits and CEI, as well as direct install. Rebates will be delivered through coordination with manufacturers, distributors, government partnerships and entities, retailers, vendors, contractors, and direct-to-consumer marketing.

PG&E will expand its current efforts to help SMB customers prepare for time-varying pricing, including an increased focus and delivery of all demand-side products to help SMB customers manage their energy use and reduce their costs. PG&E will actively engage hard-to-reach SMB customers through the design of new innovative delivery approaches, such as the whole building approach, to capture deeper energy savings and expand energy savings opportunities for SMB customers.

PG&E recently joined the Better Buildings Challenge from the White House and U. S. Department of Energy (DOE), as a Better Buildings Challenge Utility Ally. As a Utility Ally, PG&E will provide energy efficiency programs that deliver cost savings that will reach 30 million square feet of its commercial customers by 2015. PG&E will honor its commitment to the Better Buildings Challenge through the delivery of existing authorized products and services approved by the CPUC. PG&E does not anticipate its commitment to the Better Buildings Challenge will require incremental funding.

PG&E requests a total budget of $121.8 million to implement the Statewide Commercial Program to achieve 204 GWh, 50 MW, and 8.0 MMth in energy savings from this program excluding third-party programs. Appendix D presents budget, energy savings, and cost-effectiveness details for each subprogram in the Statewide Commercial Program.

3) Industrial

The Statewide Industrial Program has partnered with industry stakeholders to promote integrated energy management solutions to industrial end-use customers. The program offerings are 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. PG&E's program emphasizes integrated solutions in proper sequence to support the most cost effective and satisfactory energy and financial results for customers. 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. PG&E will continue the focus on water and energy measures for this customer segment.

The Industrial Program will be comprised of four subprograms, each of which is described below and reflects portfolio guidance as described in Chapter 2.

- <u>Industrial Calculated Incentives</u> – This continuing subprogram offers standardized incentives for customized retrofit and retro-commissioning energy efficiency and integrated projects.

The program also provides comprehensive technical and design assistance and support. In addition, PG&E will consolidate integrated technology incentives into this subprogram, and offer incentives to businesses that install and utilize demand response-enabling equipment or control software that provides energy efficiency and demand response benefits.

- Industrial Deemed Incentives – This continuing subprogram offers customer rebates in a cost effective and easy to use vehicle to offset the cost of off-the-shelf energy saving equipment.
- Energy Advisor – This continuing subprogram brings together under one program services to encourage and support customer participation in energy efficiency, demand response, and self-generation. This subprogram provides customers with integrated tools to understand their energy usage and make plans to take actions to manage it, including a variety of audits. These services provide an inventory of technical project opportunities and financial analysis information.
- CEI – This continuing subprogram provides a toolkit of strategic energy planning and other customer service resources.

While many industrial projects focus on process technologies, implementation strategies will vary based on the end user. Program offerings will be packaged with distributed generation and demand response and marketed directly to industrial customers leveraging a multi-channel approach including utility program staff, trade professionals, and third parties. Audits, incentives, and CEI components will be delivered by PG&E staff and contractors.

PG&E requests a total budget of $48.5 million to implement the Statewide Industrial Program and achieve 72 GWh, 11 MW, and 13.0 MMth in energy savings from this program for 2013-2014 excluding third-party programs. Appendix D presents budget, energy savings, and cost-effectiveness details for each subprogram in the Statewide Industrial Program.

4) Agricultural

The Statewide Agricultural Program will continue to offer PG&E’s diverse agricultural customers a suite of products and services to overcome the market barriers to optimized energy management. The program targets integrated energy management solutions, including energy efficiency, demand response, and distributed generation, through strategic energy planning support, technical support services, such as facility audits, pump tests, calculation and design assistance, financing options, and financial support through rebates and incentives. Targeted market 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. PG&E will increase focus on water and energy savings measures for this customer segment.

The Agricultural Program will be comprised of four subprograms, each of which is described below. The subprograms reflect portfolio guidance as described in Chapter 2.

- Agricultural Calculated Incentives – This continuing subprogram offers incentives for customized retrofit and retro-commissioning energy efficiency and integrated projects. The program also provides comprehensive technical and design assistance support. In addition, PG&E will consolidate integrated technology incentives into this subprogram, and offer incentives to businesses that install and utilize demand response-enabling equipment or control software that provides energy efficiency and demand response benefits.
- Agricultural Deemed Incentives – This continuing subprogram offers rebates to customers in a cost-effective and easy-to-use mechanism to offset the cost of off-the-shelf energy saving equipment.
- Energy Advisor – This continuing subprogram brings together under one program services that encourage and support customer participation in energy efficiency, demand response and self-generation. This subprogram provides customers with integrated tools to understand their energy usage and make plans to take actions to manage it, including a variety of audits. These services provide an inventory of technical project opportunities and financial analysis information. This subprogram also aims to overcome key informational, technical, and financial barriers to pump optimization by offering pump efficiency tests, repair incentives, and targeted education.
- CEI – This continuing subprogram provides a toolkit of strategic energy planning and other customer service resources.

All energy efficiency program offerings will be packaged with distributed generation and demand response options, and marketed directly to agricultural customers leveraging a multi-channel approach including IOU program staff, trade professionals, and third parties. Opportunities for additional water and energy savings projects will be targeted with water districts. Further, audits, incentives, and CEI components will be delivered by PG&E staff and contractors.

PG&E requests a total budget of $39.9 million to implement the Statewide Agricultural Program and achieve 161 GWh, 48 MW, and 6.7 MMth in energy savings from this program for 2013-2014 excluding third-party programs. Appendix D presents budget, energy savings, and cost-effectiveness details for each subprogram in the Statewide Agricultural Program.

5) Codes and Standards

The C&S Program reduces energy usage by working with standards and code-setting entities to strengthen energy efficiency regulations by improving compliance with existing codes and standards, and by working with local governments to develop ordinances that exceed statewide minimum requirements. The C&S Program conducts advocacy activities to improve building and appliance efficiency regulations. The principal audience is the California Energy Commission (CEC) which conducts periodic rulemakings, usually on a three-year cycle (for building regulations), to update building and appliance energy efficiency regulations. C&S also seeks to influence the DOE in setting national energy policies that impact California.

The C&S Program will be comprised of five subprograms to support both advocacy and compliance improvement. These subprograms are described below and reflect portfolio guidance as described in Chapter 2.

- Building Codes Advocacy – This continuing subprogram primarily targets improvements to Title 24 Building Efficiency Regulations that are periodically updated by the CEC. This subprogram also seeks changes to national building codes that impact California building codes. Advocacy activities include, but are not limited to, development of code enhancement proposals and participation in public rulemaking processes. This subprogram may coordinate with or intervene in ratings organizations referenced in Title 24, including the National Fenestration Rating Council and the Cool Roof Rating Council.
- Appliance Standards Advocacy – This continuing 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 DOE. Advocacy activities include, but are not limited to, development of code enhancement proposals and participation in the public rulemaking process (Title 20), comment letters based on IOU research and analysis DOE, and participation in direct negotiations with industry. This subprogram monitors state and federal legislation and intervenes, as appropriate.
- Compliance Improvement – This is a new subprogram that combines the former Extension of Advocacy and Compliance Enhancement subprograms. It provides education, training, and other activities targeting building departments and other industry actors responsible for compliance with Building Energy Code and Appliance Standards requirements. Activities may include: developing "best practices tools" and other infrastructure elements that serve multiple compliance improvement objectives; collaborating with the CEC to develop and implement an outreach campaign designed to improve compliance with Title 24, Part 6 and Title 20 standards; and exploring a pilot project designed to improve compliance by providing nonmonetary incentives that may include training or provision of tools designed to streamline the permitting and inspection processes for additions and alterations.
- Local Ordinances (Reach Codes) – This continuing 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 Title 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. This subprogram also supports local governments that seek to establish residential or commercial energy conservation ordinances for existing buildings.

- Planning and Coordination – This new subprogram provides a formal process that aligns planning activities across the IOUs' portfolios (including, but not limited to, emerging technologies, HVAC, and new construction and retrofit activities) within the C&S program activities. This subprogram supports efforts to prepare the market for future code adoptions (i.e., improve code readiness) to ensure higher code compliance rates and advance the Strategic Plan's ZNE goals. C&S will collaborate with WE&T to not only prepare contractors and technicians to implement current codes, but also prepare them with technical training, including continued support for California Advanced Lighting Controls Training Partnership, on advanced technologies projected to become part of reach codes and then the statewide code.

PG&E requests a total budget of $12.8 million to implement the Statewide Codes and Standards Program and achieve 538 GWh, 74 MW, and 2.7 MMth in energy savings measured on a net basis from this program. Appendix D presents budget, energy savings, and cost-effectiveness details for each C&S subprogram.

b. Non-Resources Programs

1) Workforce Education and Training

The Statewide WE&T Program will include a portfolio of education, training, and workforce development, planning and implementation funded by or coordinated with the IOUs. This program focuses on energy efficiency, the water/energy nexus, demand response, distributed generation, global warming impacts associated with the production of energy, greenhouse gas (GHG) emissions, and green career awareness/exploration and preparation. All curriculum materials are developed or enhanced to incorporate these concepts.

WE&T will be comprised of three subprograms that enable PG&E to not only educate and train current workers but also prepare future workers to be able to successfully perform the jobs needed to help achieve California's aggressive energy savings goals. These subprograms are described below and reflect portfolio guidance as described in Chapter 2.

- Centergies – This continuing 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. These activities allow potential green workforce candidates to explore energy efficiency, integrated demand-side management technologies, and resource management techniques. This is the main subprogram that will implement sector strategy recommendations from the 2011 Needs Assessment Study,[8] including testing an HVAC sector strategy approach.

- Connections – The WE&T K-12 subprogram is a continuing subprogram organized around IOU relationships with the educational sector, community-based training efforts that support workforce development in energy efficiency, energy management, and new emerging green careers. This subprogram includes the Green Campus, PEAK Student Energy Actions (PEAK), Green Pathways High School Program, and Energenius Program.
  - Green Campus is a statewide program managed by The Alliance to Save Energy. Green Campus engages students in building pathways into green careers. It infuses energy and energy efficiency concepts into academic curricula, and promotes energy efficiency awareness throughout the campus community.
  - Green Pathways High was piloted in 2010-2012 with great success, and it will be a local program in 2013-2014. Green Pathways leverages the online environment and social networking trends in education, utilizing online learning and communication with K-college level program offerings that support energy efficiency education and career preparation.
  - Energenius is a continuing local program which provides curriculum to K-8 students and teachers on energy efficiency and conservation. The program delivers curriculum materials to schools to educate children about energy and environmental protection. The program collaborates with statewide educational organizations which provide environmental resources and/or conferences to educators.
  - PEAK is a K-12 student education program that provides energy efficiency and DR curriculum that educates students on smart energy management for their homes, schools, and communities. The program enhances each level of the DSM model by using education to shift behavior. PEAK is also focused on recruitment efforts in minority or low income, Title 1 school districts. PEAK was formerly funded through the DR proceeding, but PG&E is requesting that PEAK be funded through WE&T in this proceeding pursuant to Decison12-04-045 (p. 174).
- Strategic Planning – This continuing subprogram involves management and execution of several strategic statewide planning

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8 California Workforce, Education and Training Needs Assessment for Energy Efficiency, Distributed Generation and Demand Response, prepared by the Donald Vial Center on Employment in the Green Economy, Institute for Research on Labor and Employment, U.C Berkeley, 2011. Available at http://www.irle.berkeley.edu/vial/publications/WET_Part1.pdf.

tasks identified in the Strategic Plan: (1) continue the IOU/CPUC WE&T Task Force; (2) address the 2011 Needs Assessment Study recommendations; (3) facilitate annual WE&T public meetings; and (4) contribute WE&T-specific resources as part of the statewide energy efficiency web portal.

PG&E requests a total budget of $25.9 million to implement the Statewide WE&T Program excluding third-party programs. Appendix D presents budget details for each Statewide WE&T subprogram.

2) Emerging Technologies

The ET Program will continue to support increased energy efficiency market demand and technology supply by contributing to development and deployment of new and underutilized energy efficiency measures and by facilitating their adoption to support California's aggressive energy and demand savings goals. As discussed in the Decision, the ET Program also supports the Strategic Plan goals of advancing energy efficient technologies to achieve California's ZNE goals. (Decision, pp. 258-259.) The ET Program will leverage complementary efforts and entities to support its mission. These effort and entities include other statewide and local IOU energy efficiency programs; statewide ET programs; and energy efficiency innovation activities by external organizations in the private, non-profit, and government sectors. This program will also fund studies of markets as well as new and emerging integrated technologies and equipment, processes, and products.

The ET Program will be comprised of three subprograms that evaluate the application of energy-saving measures in real-world settings by building a pipeline of measures to consider for deployment through utility energy efficiency programs. These subprograms have been modified consistent with the Decision as described in Chapter 2.

- Technology Development Support – This new subprogram merges Technology Development Support and Business Incubation Support (Technology Resource Innovation Outreach). This subprogram supports the development of new technologies and seeks targeted opportunities to support energy efficiency and integrated technology product development. Product development is the process of transforming an early-stage technology or concept into a saleable product. To date, the ET product development process has resulted in new technology televisions, computer monitors, illuminated signs, and lighting fixtures.
- Technology Assessments – This continuing subprogram is focused on identifying promising technologies for energy efficiency programs. This subprogram will evaluate energy efficient and integrated measures that are new to a market or under-utilized considering performance claims and overall effectiveness in reducing energy consumption and peak demand. Assessments typically will generate the data necessary for energy efficiency rebate programs to construct a workpaper estimating energy and demand savings over the life of the

measure. All assessments will allow independent verification of performance claims and quantification of energy and demand savings.

- Technology Introduction Support – This subprogram merges the Demonstration Showcases, Scaled Field Placement, and Third-Party Solicitation (Technology Resource Innovation Program) subprograms. The objective of this subprogram is to "seed" market demand among targeted end users.

These three ET subprograms all include cross-cutting elements from the 2010-2012 ET Market and Behavioral Studies subprogram and the 2010-2012 HVAC Technology and System Diagnostics subprograms. Additionally, aspects of the former PG&E ZNE Pilot Program, including project consultations, will be offered as a component of each of the three subprograms.

PG&E requests a total budget of $12.3 million in order to implement the Statewide ET Program. Appendix D presents budget details for each subprogram.

3) Statewide Demand-Side Management Coordination and Integration

The Strategic Plan encourages programs that integrate the full range of demand side management options including energy efficiency, demand response, and distributed generation to achieve California's strategic energy goals. The Statewide DSM Coordination and Integration (IDSM) Program will continue to build upon the work completed by the IOU and Staff Statewide Integration Task Force (IDSM Task Force) during the 2010-2012 portfolio cycle. The Task Force will continue to promote, in a statewide-coordinated fashion, the strategies identified in the Strategic Plan and the eight integration directives described in Decision 09-09-047. The Task Force will continue to coordinate closely with local program teams, local utility integration and Evaluation, Measurement and Verification (EM&V) teams, and the statewide and local ME&O teams to ensure a consistent approach and gain knowledge from statewide and local marketing and outreach efforts.

PG&E requests a total budget of $1.6 million to implement the Statewide IDSM Program for 2013-2014. Appendix D presents budget details for the Statewide IDSM Program.

4) Marketing, Education, and Outreach

ME&O increases consumer awareness and participation in DSM activities and to encourage behavior changes that save energy, reduce GHG emissions, and support clean energy solutions. To succeed, ME&O must move consumers through a transitional process from awareness to attitude change to action. Statewide ME&O activities will be submitted in the Statewide ME&O Application to be filed on August 3, 2012.

5) Local Zero Net Energy Pilot Program

The 2010-2012 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 generally requires 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 2010-2012 ZNE Pilot Program focuses primarily on residential and commercial new construction.

In 2013-2014, PG&E will integrate the ZNE Pilot Program into residential and commercial new construction, codes and standards, and emerging technology (ET) activities to better align residential and commercial ZNE initiatives with these programmatic activities for 2013-2014. The ZNE activities are described in more detail in the revised Residential, Commercial, C&S, and ET PIPs in Appendix C.

6) Local Demand-Side Management Coordination and Integration Program

The 2010-2012 Local IDSM Program is a PG&E-specific non-resource program that focuses on internal coordination of marketing approaches and collateral, education and training of sales forces and delivery channels, tools needed to support integrated offerings, and support the Statewide IDSM Task Force.

PG&E proposes to consolidate the scope and budget for local IDSM activities into PG&E's existing programs to streamline the programs and program delivery in a more customer-friendly fashion. PG&E will consolidate local IDSM subprograms as described below:

- <u>Integrated Marketing and Outreach</u> – Integrated marketing is included in PG&E's overall local marketing efforts for statewide and local programs (Decision, OP 133). Local integrated marketing campaigns leverage multiple tactics and multiple communications that combine to present customers with a holistic view of programs and service offerings and a connection to the actions customers can take to participate. To reach the diverse customers and maximize accessibility to integrated energy efficiency messaging for hard-to-reach audiences and the disabled, PG&E will use a mix of communication channels and languages. Marketing channels may include, but are not limited to: customer call centers, business account representatives, direct mail, email, PG&E and third-party websites, bill inserts, outreach events, partnership activities, social media, and ethnic advertising. When possible, PG&E will utilize the customer's preferred method for receiving communications.

  PG&E will continue to promote energy efficiency programs to help customers achieve energy cost savings and meet environmental goals. Increasing customer awareness and interest in new technologies and service options requires that PG&E use proven outreach and education tactics to capture the attention of customers. Energy efficiency-focused advice, support, education, and other resources will be promoted and provided to customers through a variety of channels geared to increase accessibility and account for the needs of PG&E's diverse customer audience. This approach will generate sustainable customer awareness and interest, lead to implementation of additional measures, and result in lasting engagement.

- Integrated Education and Training – Integrated education and training subprogram efforts will be captured in the WE&T PIP. This program provides PG&E employees, vendors, and partners with training to educate customers and foster customer participation in IDSM programs.
- Integrated Sales Training and Integration Support – PG&E will incorporate integrated sales training and integration support subprograms into the Statewide IDSM PIP. To educate and share best practices and experiences with integrated products, marketing and sales, PG&E will expand training for the customer-facing, marketing, and program teams. Training topics will include best practices, lessons learned from integrated products, marketing and sales, understanding how IDSM integration can enhance new program offerings, and presenting integrated audits to customers.
- Integrated Energy Audits – Integrated energy audits will be included in the Commercial, Industrial, and Agricultural PIPs. Ongoing program efforts include providing large commercial and industrial customers with audits for their facilities, identifying specific savings opportunities for customers, and developing an enhanced web-based audit tool Progressive Energy Audit Tool (PEAT).
- Integrated Emerging Technology – Integrated ET efforts are defined in the ET PIP. This program funds research studies of new and emerging technologies equipment, processes, and products. PG&E will focus on HVAC, model-based control and optimization, smart appliances, and advanced lighting controls.

Decision 12-04-045 directed the IOUs to IDSM submit requests for 2013-2014 Demand Response Program budgets in the energy efficiency application. OP 135 specifies that DR, DG, and Advanced Metering Initiative portions of IDSM-related costs in the IDSM budget requests be included in the IOUs' 2013-2014 energy efficiency applications. Funding should be approved to allow for the continuation and development of robust integration efforts. Examples include customer solutions that integrate site-specific and optimized packages of comprehensive energy efficiency, demand response, solar, combined heat and power and thermal storage opportunities, Agricultural and Industrial audits to assist with energy management, ET trainings and workshops, and coordination with ME&O.

PG&E's funding request for IDSM, incremental to the energy efficiency funding request, is in Table 3-5 below.

TABLE 3-5
PACIFIC GAS AND ELECTRIC COMPANY
2013-2014 DEMAND RESPONSE PROGRAM IDSM INCREMENTAL FUNDING REQUEST FOR 2013-2014

Line No	Integrated Programs/Activities	Authorized 2012 Demand Response Budget	Demand Response IDSM Budget Requested for 2013-2014	Energy Efficiency IDSM Budget Requested for 2013-2014
1	Integrated Education and Training	$61,000	No additional DR funding is requested.	No additional EE funding is requested. Integrated education and training is included the WE&T budget.
2	Integrated Energy Audits – includes Large Integrated Audits and Energy Carbon Management Software	$1,264,000	$2,528,000	No additional EE funding is requested. Integrated audits are included in the Energy Advisor subprograms for Commercial, Industrial, and Agricultural Programs.
3	Integrated Emerging Technology	$440,000	No additional DR funding is requested.	No additional EE funding is requested. Integrated ET is included the ET budget.
4	Integrated Marketing & Outreach	$304,500	No additional DR funding is requested.	No additional EE funding is requested. Integrated marketing is including in local marketing budget.
5	Integrated Sales Training	$76,000	Not Applicable	No additional EE funding is requested. Integrated marketing is including in the Statewide DSM Coordination and Integration budget.
6	Integration Support Tools	Not Applicable	Not Applicable	No additional EE funding is requested. Integrated marketing is including in the Statewide DSM Coordination and Integration budget.
7	Integrated Technology Incentives	$3,538,000	$4,000,000	No additional EE funding is requested. Technology incentives are included in the Commercial, Industrial, and Agricultural Programs.
8	PEAK	$560,000	No additional DR funding requested in since these activities are included in the WE&T program.	No additional EE funding is requested. PEAK is included the WE&T budget.
9	Total 2012 Budget	$6,243,500	$6,528,000	$0

c. Third-Party Programs

As required by the Decision, the IOUs developed the following criteria to determine whether 2010-2012 Third-Party Programs should continue. The evaluation process involved an extensive review of each subprogram's 2010-2012 performance based on the following criteria:

- <u>Performance to Goal Accomplishment</u> – An evaluation of whether the program has delivered energy savings relative to goal as defined in the third-party contract.
- <u>Cost Effectiveness</u> – A measurement of the program's TRC to determine the cost effectiveness of the program as described in the California Standard Practice Manual. A program is cost effective when the TRC benefit cost ratio is greater than one. Actual TRC is also compared to the filed TRC to assess delivery to plan.
- <u>Customer/Program Satisfaction</u> – An evaluation of the satisfaction level of customers who have participated in the program, and the consistency and quality of program and reporting deliverables with the utility.

- Market and Program Potential – An evaluation of the program's backlog of projects, whether there are sufficient remaining customers to justify continuation of the program and whether the technology marketed by the third party has sufficient customer appeal.
- Other Factors – This is a determination of whether the program can reach customers who may have been underserved due to remote location or other circumstances and whether other energy efficiency measures could viably be added to the program to make it more successful, while avoiding overlap with other programs.

PG&E proposes to continue 39 of the 50 third-party programs. Descriptions of the continuing programs are in the third party PIP addendums in Appendix C. In addition, an assessment of why the existing third-party program should or should not be extended can be found in Appendix F.1.A – Procurement Table. The following are the continuing third-party programs grouped by the market sector served by the program:

- Residential (3 Programs) – Heschong Mahone Group, Inc. (HMG) California New Homes Multi-Family, Proctor Enhanced Time Delay Relay, and Synergy Direct Install for Manufactured and Mobile Homes.
- Commercial (21 Programs) – Ecology Action (EA) Casino Green, EA LodgingSavers, EA RightLights, EFM Solutions Energy-Efficient Parking Garage, Energy Solutions LED Accelerator, EnerNoc Monitoring-Based Commissioning, Enovity Boiler Energy Efficiency Program, Enovity Monitoring Based Persistence Commissioning, Honeywell SmartVent for Energy-Efficient Kitchens, KEMA Enhanced Automation Initiative, KEMA Small Business Commercial Comprehensive, Low-Income Investment Fund California Preschool Energy Efficiency Program, Matrix Furniture Store Energy Efficiency, Matrix K-12 Private Schools and Colleges Audit Retro, Portland Energy Conservation, Inc. (PECI) Air Care Plus, PECI EnergySmart Grocer, Resource Solutions Group (RSG) School Energy Efficiency, Richard Heath and Associates (RHA) Energy Fitness Program, The Energy Alliance Association Energy Savers, Willdan Energy Solutions Healthcare Energy Efficiency Program, and Willdan Energy Solutions Ozone Laundry Energy Efficiency Program.
- Industrial (6 Programs) – Ecova (formerly Ecos Air) Industrial Compressed Air Program, Global Energy Efficiency Services for Oil Production, Lockheed Martin Heavy Industry Energy Efficiency Program, Nexant Industrial Recommissioning Program, Nexant Refinery Energy Efficiency Program, and Quantum Energy Services and Technologies, Inc. (QuEST) California Wastewater Process Optimization Program.
- Agricultural (7 Programs) – BASE Process Wastewater Treatment Energy Management (EM) Program for Ag Food Processing, EnSave Dairy Energy Efficiency Program, Global Comprehensive Food Process Audit and Resource Efficiency Program, RSG Dairy Industry Resource Advantage Program, RSG Wine Industry Efficiency Solutions, RHA Light Exchange Program, and Vacom Industrial Refrigeration Performance Plus.

- Workforce Education and Training (2 Programs) – Build It Green (BIG) Green Building Technical Support Services and Consol Builder Energy Code Training.

Third-party programs represent an important energy efficiency delivery channel for customers, and PG&E values these implementers' contributions as a key component of the energy efficiency portfolio. PG&E requests a total budget of $182.8 million be allocated to Third-Party Programs, including both continuing and newly-selected programs. PG&E expects to achieve 435 GWh, 60 MW, and 11.6 MMth in third-party energy savings with these funds. The proposed budgets and goals are preliminary, pending negotiation of contract terms, determination of measure mix, and finalization of budgets and savings. Appendix D presents budget, energy savings, and cost-effectiveness details for each program. These programs are presented within the respective market sector that the program serves.

To support a January 1, 2013 launch, PG&E will execute a communication and implementation plan for continuing third-party programs describing a process for a rigorous, streamlined schedule with key milestone targets for negotiations and contract finalization. PG&E is providing with the current application: E3 cost-effectiveness calculators and PIP addendums, including its proposed budgets, energy savings goals, energy savings values for current and/or new energy savings measures, and contract templates for third-party implementers. PG&E plans to conduct negotiations with its continuing third-party implementers in August and September, concluding by October 1, 2012. Contracts are anticipated to be signed in December 2012 after PG&E's application is approved. The process for soliciting new third-party programs is discussed below in Section 2 – New Programs for the 2013-2014 Portfolio Cycle

d. Government Partnership Programs

Government Partnerships (GPs) include institutional government partners, local and regional government partners, and strategic planning resource subprograms.

- Institutional Partnerships – The proposed institutional partnership program will continue the current structure of joint agreements among several state agencies and the four IOUs. The partnerships are with the following entities: California Community Colleges (CCC), University of California (UC)/California State University (CSU), State of California, and the California Department of Corrections and Rehabilitation. PG&E will continue all four institutional partnerships.

- Local and Regional Government Partnerships – PG&E's proposes to continue the 2010-2012 partnership structure with some enhancements and follows the local partnership programs of the other IOUs. The local and regional partnerships involve agreements with governmental and quasi-governmental agencies to deliver comprehensive energy savings. The overarching structure of the partnerships is consistent statewide with regards to program offering, eligibility, expectations, and results. However, the details or extent of programs may vary among the utilities due to each government partnership model.

- Strategic Energy Resources – This subprogram merges elements of Green Communities and Innovator Pilots into a new governmental partnership subprogram. PG&E proposes to complete the projects funded under the innovator pilot programs in 2010-2012 and offer additional support for local governments and their efforts in support of the Strategic Plan through the Sustainable Energy Efficiency Collaborative program. Four continuing Green Communities projects and 15 continuing Innovator Pilots from the 2010-2012 portfolio cycle will be completed in 2013-2014.

The IOUs jointly developed criteria to continue and expand the local and regional government partnerships in collaboration with key stakeholders. PG&E discussed the criteria with numerous government partners, several of which are members of the Local Government Sustainable Energy Coalition (LGSEC). PG&E hosted a Central Valley Regional Forum for government partners on March 29, 2012 in coordination with the Local Government Commission and other IOUs. In addition, PG&E sponsored an annual All-Partner Meeting on May 24, 2012 with PG&E's local and regional partners territory-wide. At both events, PG&E discussed the proposed criteria to continue and expand programs and received feedback from stakeholders on the process. While the IOUs developed consistent criteria statewide to measure success, each IOU may have slightly different GP models for their evaluation which warrant different measures of success.

The IOUs' criteria for successful local and regional government partnerships are based on two fundamental elements: individual element evaluation criteria and overarching criteria.

- Individual Element Evaluation Criteria – To be successful, government partners working with municipal facilities must provide additional energy planning services such as benchmarking, audits, project management assistance, and training and education of city/county officials, and, where applicable, leverage additional funding sources such as American Recovery and Reinvestment Act (ARRA) funding and On-Bill Financing (OBF). PG&E also looks at core program coordination and implementation, including whether the partnership can engage and achieve cost-effective energy savings with non-profit, small/medium businesses, residential, and/or other hard-to-reach customers; and foster greater program participation in PG&E's overall portfolio through Third Party and Energy Efficiency Programs statewide and other DSM program offerings (demand response, Solar). PG&E's criteria also includes an analysis of whether the LGP is providing strategic plan support, such as whether the partnership is making progress towards achieving Strategic Plan goals, including leveraging other resources to work towards strategic plan objectives, including PG&E and non-PG&E resources.
- Overarching Criteria (Criteria Applied Across the Program Scope) – PG&E's criteria for continuation of successful local and regional government partnerships includes the community engagement of the partnership, including whether the partnership is promoting local presence through community-based initiatives and/or leverage community resources (financial and non-financial) to ensure the success of the partnership; whether the partner is working as a community leader with other local

stakeholders to enhance the success of the partnership; and whether the program is successful, including a review of additional local benefits beyond energy savings, such as local job creation, local economic development, community engagement, and staff capacity-building. PG&E also considers whether the partnership links energy efficiency projects and initiatives to elements of an adopted energy, climate change or sustainability plan, and whether the partnership accomplished any additional goals in its PIP.

Based on these criteria, PG&E deemed 19 local and regional government partnerships successful and recommend they continue based on the criteria listed above. PG&E's detailed evaluation of each partnership's performance using the success criteria is presented in Appendix F.3 – Local Government Partnership Assessment. Some common successes include program performance, Strategic Plan menu support, and community engagement. PG&E found all local and regional government partnerships successful, and, therefore, did not discontinue any partnerships. The programs of the selected partners are described in greater detail in individual PIP addendums in Appendix C.

The IOUs also developed additional criteria to determine whether to expand local and regional government partnerships. PG&E and its local and regional partners agree that for a partnership to expand in 2013-2014, the new elements to be implemented through the local and regional government partnerships must achieve deeper energy efficiency savings while complementing existing and continuing programs. Examples of elements that were identified as appropriate expansion opportunities include: local marketing, outreach and education for WHUP and financing programs; comprehensive direct install elements; benchmarking assistance; codes and standards support; and the integration of emerging technologies into municipal and community facilities.

Based on the application of this criteria, PG&E proposes to expand local and regional government partnerships by broadening the activities of continuing partnerships and by folding elements of the Green Communities and Innovator Pilots that support the Strategic Plan into the local and regional government partnerships. PG&E has reached out to each of the partners interested in program expansion, and it has included the expansion elements in the PIP addendums. Expansion elements proposed by the local and regional government partnerships have met the partnership expansion criteria. The final list of expanded partnership programs will depend upon successful negotiation of the partnership agreements.

During 2010-2012, PG&E also explored new energy efficiency program offerings with two new partners (Lake County and Yolo County) through Local Government Energy Action Resources (LGEAR). PG&E intends to continue these activities in 2013-2014, and will explore creating new partnership programs with Lake County and Yolo County in 2013-2014. PG&E also intends to develop and support partnership efforts in other areas of its territory including Solano County, Tulare and Kings Counties, Sacramento Valley, and North San Joaquin Valley.

PG&E requests a total budget of $140.9 million to implement the Government Partnership Program including budget for continuing Green Communities projects and Innovator Pilots. PG&E expects to achieve 207 GWh, 32 MW, and 3.6 MMth in energy savings with these funds. Appendix D presents budget details for the Government Partnership Program.

2. New Programs for the 2013-2014 Portfolio Cycle

a. Lighting Program

The Statewide Lighting Program will focus on developing and testing market transformation strategies for emerging lighting technologies and commercially viable, advanced lighting technologies for introduction into the utility energy efficiency programs. The Statewide Lighting Program will comprise the following subprograms: Lighting Market Transformation (LMT), Lighting Innovation, and Primary Lighting. All existing residential and non-residential deemed and calculated lighting measures from the Statewide Residential, Commercial, Industrial, and Agricultural Programs will be unified under the Statewide Lighting Program. The Residential Lighting Incentive for Compact Fluorescent Lamp (CFL) and the Advanced Consumer Lighting programs, previously under the Residential Program, will now fall under the Statewide Lighting Program. The LMT, Lighting Innovation, and Primary Lighting subprograms are described in more detail in the PIP addendum in Appendix C.

- <u>Lighting Marketing Transformation</u> – This subprogram establishes the process through which the IOUs can develop and test market transformation strategies for emerging lighting technologies (products, systems and design strategies), and for technologies already incorporated into their energy efficiency programs. This subprogram will focus on lighting technology advancement through prioritizing and setting goals for lighting program intervention and coordinating with lighting programs outside of California. The subprogram also focuses on lighting education for key stakeholders through communicating lighting technology advancement activities and improving access to information regarding lighting technologies.
- <u>Lighting Innovation Program</u> – This subprogram is designed as an intermediary step to foster markets for measures that are more mature than those being developed under the ET Program, but less mature than those in the Primary Lighting subprogram. Lighting Innovation will develop medium scale pilots, demonstration projects, and trial studies to identify measures that might be supported in the Primary Lighting subprogram. This subprogram will focus on: (1) Technology trials and pilots to evaluate the effectiveness of new products and measures in the end-use environment to collect data for scaled deployment; (2) Program trials and pilots to test customer choice preferences, price elasticity, promotional approaches, educational messaging, and program delivery methods; and (3) Education training and outreach efforts to promote information garnered from the pilots/ trials.
- <u>Primary Lighting Program</u> – This subprogram is the largest component of the Statewide Lighting Program and administers incentive offers for energy

efficient lighting measures to the customer base. It includes deemed measures that were formerly included in other programs, including commercial and residential. This subprogram will employ multiple delivery strategies including: (1) upstream offers, which proposes incentives to manufacturers that get passed on to customers; (2) midstream offers, which proposes incentives to distributors and retailers; and (3) downstream offers, which provide incentives directly to the end-use customer.

Lighting measures offered through local and regional government partnerships and third-party implementers will continue to be offered within their current programs. These lighting measures are generally offered as a component of a bundled direct install offering, making it very difficult and disruptive to disaggregate the lighting measures that are part of these subprograms. Therefore, the lighting measures offered through the government partnership and third-party delivery channels have not been integrated into the Statewide Lighting Program.

PG&E requests a total budget of $41.9 million to implement the Statewide Lighting Program and achieve 186 GWh, 33 MW, and -1.6 MMth in energy savings from this program for 2013-2014. Appendix D presents budget, energy savings, and cost-effectiveness details for each subprogram in the Statewide Lighting Program.

b. Financing Program

PG&E supports the goal of expanding financing to customers to enable greater investment into energy efficiency. The Statewide Financing Program will include three subprograms: OBF, Third-Party Financing Programs (ARRA-originated), and New Financing Offerings.

- <u>OBF</u> – This subprogram is a continuation of the existing program, which currently has an $18.5 million loan pool to fund interest free loans for energy efficiency retrofits for non-residential customers. PG&E proposes to add an additional $16 million per year to the loan pool in 2013 and 2014, bringing the total loan pool to $50.5 million. PG&E also proposes to implement changes to OBF for statewide consistency, based on best practices from Southern California Edison (SCE), San Diego Gas and Electric Company (SDG&E) and Southern California Gas Company (SoCalGas), in addition to recommendations from the Cadmus Group.[9] More detail on PG&E's proposals is in Chapter 3, Attachment A – PG&E's Financing Proposal.

  PG&E proposes that OBF be complementary to any future financing offerings, including OBR and credit enhancement products. As such, further changes may be made to OBF when the new financing programs, discussed in following sections, are launched per the statewide consultant's recommendations.

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[9] The Cadmus Group, Inc., 2010-2012 CA IOU On-Bill Financing Process Evaluation and Market Assessment (March 2012).

Currently, PG&E tracks incentive budgets and energy savings for projects financed by OBF to the statewide or local programs that fund the incentives and deliver the energy efficiency projects to customers. OBF projects have been offered through the Commercial, Industrial, and Agricultural Calculated Program, Government Partnership Programs, and Third-Party Programs. The energy savings and incentive budgets for OBF projects are included in these statewide and local programs in this application. However, PG&E proposes to track energy savings and incentives for OBF projects delivered by statewide programs to the OBF subprogram for the 2013-2014 portfolio cycle.

- <u>Third-Party Financing (ARRA-Originated Financing Programs)</u> – PG&E proposes supporting financing programs that originated through ARRA funding. Pending ongoing contract negotiations, these programs will include:
  - <u>Moderate Income Sustainable Technology Program</u> – The Moderate Income Sustainable Technology Program (MIST) Program is administered by the CRHMFA Homebuyers Fund (CHF) (formerly known as the California Rural Home Mortgage Finance Authority), a Local Government Joint Powers Authority (JPA). The current program exists in 52 of the 58 counties in California, including all but two counties in PG&E's service area, and is expected to expand into the remaining counties by the end of this year. MIST provides financing to moderate income residential customers for energy efficiency and solar measures, in connection with applications for IOU and POU rebates when available, to reduce overall program costs and loans.
  - <u>The emPowerSBC Program</u> – This program is administered by the County of Santa Barbara. The current program leverages ARRA funding to create a public-private partnership between the County, all eight incorporated cities, the EUC Program, and two local credit unions. Through this partnership, the County successfully leverages public grant funds, with rate payer incentive dollars, and $20 million in lender capital to achieve local, state, and federal goals related to reducing energy use consumption and economic development.
- <u>New Financing Offerings</u> – PG&E proposes several new financing offerings for 2013-2014. First, PG&E proposes a credit enhancement strategy for the single-family residential market: PG&E proposes to establish a Credit Enhancement Fund (CEF) which will be used to fund a Loan Loss Reserve (LLR) that can be utilized by approved financial institutions for the purpose of lending to PG&E’s single-family residential customers. As described in previous sections, PG&E is proposing to fund loan loss reserves to CHF for the MIST 2 single-family residential program and therefore proposes that any additional funds be spent to complement (not compete with) that product.

PG&E proposes that the CEF be managed by a single entity that can be utilized by both local and statewide lenders to administer credit enhancements. A single entity can offer consistency across the State and gain economies of scale of its operations. Entities such as California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) or other organizations with similar capabilities and experiences will be considered for this role. At a minimum, PG&E expects the appointed entity to identify potential financial institutions, prepare request for proposals (RFP) from financial institutions, work with financial institutions to structure loan programs that are compliant with statewide single-family residential energy efficiency finance criteria and develop, negotiate, and close on the implementing agreements. In addition, PG&E recognizes that although a LLR typically supports a primary lender, the benefits and risk coverage of a LLR can also be assignable to a secondary market capital source (provider) if the loans are sold to an investor in the secondary market. This is an important provision for each grantee and financial institution to incorporate into a program's LLR Agreement in order to provide access to secondary markets in the future. More details and analysis of this program can be found in Attachment 3A.

Second, PG&E proposes a financing program strategy designed specifically for the multi-family residential market that includes both a credit enhancement option and an on-bill repayment (OBR) option. PG&E proposes to use the same approach to credit enhancement for the multi-family residential market as outlined in the single-family residential market. That is, PG&E will allocate funds to the CEF as a LLR for use in the multi-family residential market. The LLR would be utilized by approved financial institutions, with the CEF to be managed by a single entity that can be utilized by both local and statewide lenders to administer credit enhancements.

PG&E also proposes to work with the statewide consultant to help design an OBR program for the multi-family residential market consistent with the objectives and design features the Commission would like to see achieved and taking into consideration current legislative requirements, including the prohibition of terminating residential service for non-payment to a third-party (Public Utilities Code §§ 777.1(e)(3) and 779.2(a)). PG&E would also work with the statewide consultant to identify and work on at least one multi-family OBR type pilot that would not include service disconnection for non-payment. PG&E would work with the statewide consultant to identify other potentially interesting and applicable pilot programs in the multi-family residential marketplace.

PG&E proposes a credit enhancement strategy for the small business market, which would have the same approach to credit enhancement for the small business market as taken in the residential and multi-family markets. PG&E will allocate funds to the CEF as a LLR for use in the small business market.

PG&E plans to offer the credit enhancement for small business as an alternative to the zero interest OBF option currently available to the same customers. PG&E proposes to work with the statewide consultant on specific program design details as well as eligibility criteria for OBF loans, as opposed to credit-enhanced private loans. For example, OBF loans may be offered to customers who fall within the program's existing loan terms (loan maximums and terms), while larger projects may be offered through a third-party financial institution.

PG&E also proposes an OBR strategy for all non-residential customers. PG&E proposes to work with the statewide consultant to help design an OBR program for all types of non-residential customers beginning in 2013 for expansion in 2014, consistent with the objectives and design features the Commission would like.

PG&E's role in these financing programs would be to provide a billing and collection service, for which PG&E will receive a fee per bill issued and for each collection made and transmitted to the lender. PG&E would provide marketing support in reaching out to potential customers, contractors, and other relevant stakeholders. PG&E would also collect and maintain relevant program performance information as agreed with the statewide consultant that is relevant for PG&E to collect and maintain. PG&E would potentially provide credit enhancements, if lenders deem this a necessary mechanism to support the establishment of the marketplace. For example PG&E has been approached by an energy services company who targets large commercial and industrial clients and is interested in PG&E supporting an insurance type credit enhancement product as well as OBR. The discussions are very preliminary but PG&E proposes to explore this concept and bring it to the attention of the statewide consultant for further discussion, as appropriate.

PG&E would not be responsible for loan origination, contractor qualification, pre-project energy assessments, inspection of project results, or default loan collection past a certain date. These would be obligations of the loan originator. Potential OBR program design features are discussed in Attachment 3A.

1) Billing System Upgrades and/or Other Information Technology Requirements

In order to implement OBR for multi-family customers and all non-residential customers, new business processes will need to be developed and existing processes modified. Both on-time development costs and on-going administrative costs will be incurred.

The PG&E billing system must have the ability to accept vendor enrollments and de-enrollments for customers, accept vendors' billable charges, place billable charges on a customer's bill, print the bill, accept a customer's payments for the charges, remit the payments to the vendor, and charge billing fees to the vendor. Further, communications mechanisms must be established between lenders and the utility, and any intermediary (Servicing Agent). This may involve the use of Electronic Data Interchange (EDI) transaction sets that will need to be modified for this purpose and the implementation of a data transfer mechanism for transmission of these transactions between parties. Additional human resource costs, as well as internal training costs, which will need to be developed and administered to communicate OBR business processes and system changes, are likely to be incurred as well. Details of the requirements can be found in Attachment A.

2) Financing Database Development and Data Sharing

PG&E proposes to support the development of a database that will eventually, once confidentiality protocols are established, enable sharing of anonymous customer data with stakeholders of energy investments. PG&E proposes to work with the statewide consultant on the process for collecting and maintaining a statewide database. In particular, PG&E will determine if each IOU should collect such data or if a third party should collect relevant data from program participants based on a set of predefined requirements.

Finally, PG&E proposes to support the work of the statewide consultant in obtaining guidance on what loan data and qualities will be needed to engage the secondary financial markets to purchase loan portfolios.

PG&E's proposals are necessarily preliminary and will depend in large part on further analysis and work by the statewide consultant. While PG&E proposes pilots to comply with the directives in the Decision, the budgets for the new financing pilots should be established in consultation with the statewide financing consultant after the ultimate design and timetable for the rollout of these new financing pilots is completed.

In addition, PG&E proposes to work with the other IOUs, the Commission and statewide consultant to further understand and clarify the Commission requirement that not all financed measures must be eligible measures to be treated by one or another program in PG&E's portfolio. (Decision, OP 31.) PG&E believes it is critically important to understand how to count the benefits from measures outside its portfolio and understand what standard for energy efficiency savings would be applied to measures that are outside its portfolio that are eligible for financing.

PG&E requests a total budget of $73 million to implement its financing program and anticipates using $38 million for the OBF including $32 million for the loan pool and $6 million for program administration, $4 million for the third-party financing programs, and $31 million for single family, multi-family, and non-residential pilots. Appendix D presents budget details for each subprogram in the Financing Program.

c. New Third-Party Programs

1) Proposed Competitive Solicitation Process for New Third-Party Programs

The IOUs collectively propose a new third-party program called the Innovative Designs for Energy Efficiency Approaches (IDEEA) subprogram for solicitations in 2013-2014. This program will be used to expand third-party programs and promote the "rolling" solicitation concept by offering two unique types of solicitations. PG&E intends to set aside $15 million over two years to fund the IDEEA subprogram. The IDEEA subprogram is included in the total third-party program detailed above.

PG&E will offer a targeted solicitation to support identified program and market needs and technologies. The solicitation may include, but is not limited to, water/energy nexus projects, hard-to-reach markets such as the multi-tenant residential and commercial segments, and programs supporting an integrative approach.

The second type of solicitation promotes additional innovation ideas delivered by third parties. PG&E encourages new service providers who develop and deploy new and existing emerging technologies or have innovative ideas to submit proposals through this process.

For each solicitation, PG&E may offer a two-prong staged approach. Stage 1 is designed to allow bidders to submit a Request for Abstract (RFA) describing the program concept. PG&E will recommend RFA's that pass the review process to continue on to Stage 2, by submitting a RFP for further evaluation.

This staged approach follows the Commission's direction and support for expanded third-party programs. The programs selected through the IDEAA subprogram are expected to yield new and/or existing program and technological approaches that may be unproven in the marketplace and enlist new third-party service providers into the program. The new strategies should bring innovation into the portfolio and help achieve deeper retrofit savings while maintaining cost effectiveness.

PG&E proposes to implement the following modifications to improve the solicitation process.

- Outreach to Third-Parties – To further expand third-party programs and ensure that a wide range of qualified firms across the energy efficiency and related industries are aware of future RFP opportunities, PG&E proposes to: (1) provide a third-party web page for new bidders to register to receive notification of new competitive solicitations; (2) coordinate with the ET program to engage new innovative program ideas and service providers; and (3) provide training to new service providers on key topics such as: steps to become a third-party program, proposal writing, and understanding cost effectiveness as it relates to implementing a third-party program. New service providers or existing third-party program providers seeking additional information are encouraged to participate.
- Stakeholder Input – To support the Commission's vision for stakeholder involvement in the planning process, PG&E will collaborate and coordinate with the IOUs on statewide efforts. In addition, PG&E proposes to solicit input and feedback, as appropriate, from Peer Review Group members and other key stakeholders on third-party RFPs/RFAs, selection criteria, and proposals.
- Feedback to Third Parties – To improve quality of proposals, PG&E will, upon bidder request, provide specific feedback to bidders who submit proposals through the competitive solicitation process. The feedback will include suggestions to improve the application. PG&E will offer bidders feedback regardless of whether they were selected to move to the next phase of the process.

d. Local Government Regional Energy Network Pilots

PG&E highly values its relationships with local, regional, and statewide government and community partners. During the 2010-2012 portfolio cycle, PG&E and its government partnerships have successfully delivered benefits to customers by leveraging the relationship local governments have with their citizens, and their understanding of local community needs; reducing their government buildings' energy use and costs; and identifying and engaging hard-to-reach customers such as moderate-income customers and local small and medium businesses. PG&E proposes to build upon the success of these local, regional, and statewide government partnerships by expanding the scope of the Government Partnership Program in 2013-2014.

Local and regional partnerships in PG&E's service area currently deliver energy efficiency programs in 38 of the 49 counties. PG&E plans to engage new partners in the remaining counties in 2013-2014. In response to local and regional government partnership requests for more comprehensive community-based approaches to address energy management needs, PG&E is collaborating with its partners to develop solutions that best meet the need of each region's residents and businesses. Based on proposals from over 30 local and regional partners, PG&E intends to expand the scope of current partnerships with complementary offerings focused on achieving deeper energy efficiency savings on a local and regional level such as: (1) local marketing, education, and outreach for WHUP and financing programs; (2) comprehensive direct install elements; (3) retro-commissioning targeting smaller facilities; (4) municipal and commercial benchmarking assistance; (5) moderate income whole home approach; (6) comprehensive community outreach campaigns; (7) audits and technical assistance; (8) codes and standards support; (9) integration of emerging technologies into municipal and community facilities; (10) promote water/energy nexus; and (11) local and regional strategic energy resources.

The Commission will accept proposals from local governments for Regional Energy Network pilot programs for the 2013-2014 portfolio cycle. (Decision, p. 148.) After discussions with existing local and regional partners, PG&E proposes to expand the scope of program offerings and funding for local and regional government partnerships in 2013-2014 to meet objectives that have been identified by PG&E and its partners. PG&E's proposed budget for expanded regional and local government partnerships will be sufficient to fully fund the energy efficiency elements of new partnerships. Given the expansion of its local and regional partnerships, PG&E believes its proposal for local and regional government partnerships in this Application completely covers the objectives and scope identified in the discussion of Regional Energy Network pilots in the Decision.

3. Eliminated Programs from the 2010-2012 Portfolio Cycle

Based on the evaluation of Third-Party Programs using the success criteria defined above, PG&E recommends that 10 programs be discontinued based on program performance. One additional program closed in October 2011 at the request of the third-party implementer.[10] Details of each program can be found in the 2010-2012 PIPs.[11]

1. Matrix Energy Efficiency Entertainment Centers – This program provides comprehensive energy efficiency services to movie theaters, and it has achieved all the viable potential for this market.

2. QuEST Comprehensive Retail Energy Management Program – This program was designed to provide large retail chains with in-depth engineering analysis and a comprehensive approach to energy savings, including benchmarking, building optimization, energy management system upgrades, capital upgrades, equipment procurement assistance, and personnel training. It has not met energy savings goals and its potential customer base has been unresponsive. Projects have been limited to one department store chain, and attempts to penetrate other department store chains have been unsuccessful.

3. QuEST Data Centers Cooling Controls Program – This program offers technical assistance, facility audits, and financial incentives for the installation of energy efficiency measures. The program has not met savings goals and has not been cost effective.

4. QuEST Medical Building Tune-Up – This program provides retro-commissioning services for large (100,000 square feet or more of conditioned space) hospitals and medical office buildings owned or leased by several healthcare chains. The program has not met savings goals and has not been cost effective.

5. Sylvania High Performance Office Lighting – This program delivers lighting solutions to office buildings, warehouses, and other large commercial buildings. The program has not met its savings goals and has not been cost effective.

6. Trane Cool Cash – This program provides HVAC energy savings measures to SMB customers. The program has not delivered energy savings and is not cost effective. It is a single technology program and has not demonstrated the ability to sell projects.

7. Trane Cool Schools – This program offers comprehensive facility audits and financial incentives for the installation of HVAC energy efficiency measures at qualifying private school facilities. The program has not delivered energy savings and is not cost effective. It is a single-technology program in a sector with financial challenges. Most savings for the measure come during the summer when schools are closed.

8. AirPower AIM Compressed Air Efficiency – This program provides air compressor replacement and compressed air system optimization for industrial customers. The program has not met savings goals and has not been cost effective.

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10 The Honeywell Cool Control program was a low or no-cost comprehensive program that targeted in-room PTAC units and lighting, common lighting and vending machines in small hotels and motels. It closed in October 2011 due to lack of energy savings.

11 http://eega.cpuc.ca.gov/.

9. Onsite Cement Production and Distribution Energy Efficiency Program – This program provides energy efficiency and demand reduction energy efficiency services to cement production, cement distribution, and ready-mix plants. The program has not met its energy savings goals and is not cost effective. This program is targeted to a limited market sector. Improvement in this market sector is not likely in the near term due to the economic downturn.

10. Systems Building Research Alliance ENERGY STAR® Manufactured Homes Program – This program moves a substantial share of 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® levels by the strategic application of rebates. Systems Building Research Alliance (SBRA) has not met savings goals and has not been cost effective, at least in part due to the downturn in the residential real estate market.

E. Local Marketing, Education and Outreach

ME&O increases consumer awareness and participation in DSM activities to encourage behavior changes that save energy, reduce GHG emissions, and support clean energy solutions. To succeed, ME&O must move consumers through a transitional process from awareness to interest and desire to action.

PG&E plans to leverage the increased awareness generated by the statewide ME&O campaign and use that point of contact and education as a step towards deeper energy efficiency engagement. In 2013-2014, PG&E proposes to implement targeted and segment-specific local ME&O campaigns that focus on customer needs and educate customers about energy efficiency measures. PG&E plans to build upon previous local ME&O successes and customer engagement to drive ongoing energy efficiency participation, including one-time measures such as rebates as well as increase the number of measures per customer, and drive further and deeper customer retrofits (i.e., calculated measures and WHUP).

PG&E's local integrated marketing strategy will focus on helping customers understand the relevance of energy efficiency programs and services and enabling customers to take actions that are appropriate to their needs. This local energy efficiency marketing strategy will be coordinated through a variety of channels and tactics, with appropriate targeting to reach customers at the right place and at the right time to drive increases in participation and ongoing engagement. For example, many residential customer take advantage of rebates at the time of purchase, so a robust retail outreach presence is one component of the integrated plan. Third-party and direct-to-customer outreach are key channels for reaching SMB customers. PG&E plans to leverage numerous influencer channels, including local government partnerships to expand reach to the multi-family customer audience, targeting residents as well as property owners and property managers.

Locally-driven outreach efforts will also focus on audiences such as large commercial, industrial, and agricultural customers that may not be directly targeted by the statewide ME&O campaign. Many of these customers are sophisticated energy users and have significant energy management needs and savings potential due to the size of their business and the energy intensive nature of their operations.

Many customers have energy needs that align with multiple program and service offerings. An important part of PG&E's integrated approach to local marketing, is to match cross-sell opportunities to customer needs through campaigns that target customers with a history of participation in rebates, DSM programs or MyEnergy. PG&E intends to market complementary products to customers that are already participating in energy efficiency or other PG&E programs and services, and educate a broad audience of PG&E customers about financing opportunities - potentially as another means of promoting deeper retrofits for SMB and residential customers.

To deliver energy efficiency program goals and maximize the relevance and benefit of energy efficiency for all types of customers, PG&E will conduct customer data analysis and segmentation to identify key audiences for targeted outreach, including gas usage-intensive customers, water-energy nexus customers, customers who participated in some energy efficiency rebate programs and may be receptive to additional measures, and residential single and multi-family customers that may seek deeper retrofits.

In addition to cross-selling DSM programs and promoting various energy efficiency solutions, PG&E intends to educate customers about the variety of resources available and drive enrollment in web-based billing and analysis tools available to PG&E customers through My Energy. This will enable and encourage customers to better understand and manage their energy usage by taking advantage of the online tools. It will also provide PG&E with additional opportunities to continue to increase engagement over time and cross-sell DSM programs and services, including deeper retrofits.

PG&E's proposed 2013-2014 budget includes an allocation of 5 percent of the total portfolio budget for local ME&O. The initial attribution of this budget by program and channel is in Table 3-6 below:

TABLE 3-6
PACIFIC GAS AND ELECTRIC COMPANY
ANNUAL LOCAL MARKETING INCREMENTAL FUNDING REQUEST

Line No.	Program/Channel	Annual Marketing Budget	% of Total Annual Marketing Budget	Examples of Activities
1	Residential	$4,132,935	19%	Retail marketing including point-of-sale and co-marketed programs, targeted behavioral outreach, online marketing and social media.
2	Commercial	$3,868,338	18%	SMB-focused outreach through retail, direct to customer and trade or industry groups, targeted outreach including collateral and trade advertising to support deemed and calculated measure participation, online content and marketing.
3	Industrial	$1,216,369	6%	Targeted outreach including collateral and trade advertising to drive participation in calculated and deemed measures, outreach related to industry events and trade shows, online content and marketing.
4	Agriculture	$1,263,803	6%	Trade advertising and co-marketing efforts such as workshops and events facilitated by trade groups. Targeted outreach including collateral to support deemed and calculated measure participation, online content and marketing.
5	Lighting	$1,245,725	6%	Retail marketing including point-of-sale and co-marketed programs, as well as marketing support for upstream and midstream efforts as appropriate.
6	Financing	$3,900,000	18%	New product launch and multi-channel support to educate customers across all segments about Financing options. Specific offerings may be targeted to customer segments based on alignment with customer needs.
7	Government Partnerships (GP)	$4,771,024	22%	Co-marketing support for Energy Watch partnerships and other local government programs. Increased targeted outreach to multi-family customers.
8	Third Parties (3P)	$1,000,378	5%	Co-marketing support for outreach, including collateral and targeted marketing (i.e., direct mail). Support for cross-selling of multiple measures and deeper retrofits.
9	Other (WET, ET)	$279,086	1%	Outreach support for Workforce Education and Training services and events and support for marketing pilots and outreach for Emerging Technologies.
10	Total (Per Year)	$21,677,658	100%	PG&E's annual Local Marketing budget total (proposed).

PG&E’s local marketing proposal is designed to help meet Commission energy savings goals and broader Commission policy goals. The budget requested for local marketing is necessary to drive behavior change through the expansion of efforts such as Home Energy Surveys and Reports and to support outreach to drive additional energy efficiency participation among SMB customers. An integrated multi-channel approach will leverage third parties, local and regional government partnerships, retail, and direct-to customer outreach and drive interest and engagement with PG&E's diverse group of residential customers, including hard-to-reach and multi-family audiences. PG&E also plans to use customer data analysis to encourage deeper retrofits and enhanced engagement among customers that have previously participated in other PG&E programs. Local marketing for new and existing financing programs will create awareness in these programs and educate customers about how to overcome financial obstacles such as cash flow and enable them to implement deeper retrofits and calculated measures. And finally, the local marketing efforts targeted to SMB and Residential customers will complement the efforts of the SW ME&O campaign by increasing the depth of customer interest and engagement in energy management and energy efficiency and driving customers toward program enrollment, engagement and adoption. PG&E's local marketing efforts will create a clear path for customers to take action and participate in energy efficiency as well as other DSM programs on an ongoing basis.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 3

ATTACHMENT A

PG&E'S FINANCING PROPOSAL

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A. On-Bill Financing

Non-residential customers are eligible for On-Bill Financing (OBF) loans if the project qualifies for a rebate or incentive through Pacific Gas and Electric Company's (PG&E) 2013-2014 Energy Efficiency Portfolio, including the Commercial, Industrial, and Agricultural Calculated Incentive subprograms, and certain PG&E Third-Party and Government Partnership Programs. These loans bear no interest. The maximum loan amount is $100,000 for commercial customers and $250,000 for government customers, and the term of a loan cannot exceed five years and 10 years, respectively. The OBF loans are structured to be bill neutral so that the loan payment approximates the amount of the estimated energy savings.

PG&E proposes the following changes to its OBF program for statewide consistency, based on best practices from Southern California Edison (SCE), San Diego Gas and Electric Company (SDG&E), and Southern California Gas Company (SCG), in addition to the Cadmus Group's recommendations on the OBF program.[1]

- Underwriting Criteria – PG&E currently uses Dun & Bradstreet (D&B) reports to perform commercial credit reviews to pre-approve customer loans. The commercial credit reviews have proven to be administratively burdensome and have resulted in the disqualification of over 25 percent of the loan applications. PG&E proposes eliminating the commercial credit check and solely using utility billing history to pre-approve customers and increase access to the OBF loans. Under PG&E's proposal, customers with at least two years of utility billing history and no late payments within the last year would qualify for an OBF loan. This is the same practice used by SCE, SDG&E and SCG.
- Multi-Program Participation – A single project should not receive funds from more than one loan program supported by ratepayer dollars. For example, a small business customer receiving a credit enhancement offered through the utility for a specific project will not be eligible to receive OBF loan funds for the same project.[2]
- Vendor Support – PG&E will work with the other investor-owned utilities (IOU) to develop standard practices and standard support guidelines to monitor performance, manage customer expectations, and set clear roles and responsibilities.
- Relationship to Rebate/Incentive – PG&E will work with the other IOUs to determine the best method for reducing or eliminating rebates/incentives

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1 The Cadmus Group, Inc., *California 2010-2012 On-Bill Financing Process Evaluation and Market Assessment* (March 2012).

2 At this time PG&E is not offering a credit enhancement option.

associated with OBF projects and plans to phase in these reductions/eliminations beginning in 2014.

PG&E has also been reviewing its internal loan processing procedures and recognizes that further work needs to be done to reduce overall application processing time and increase coordination across loan processing functions at PG&E. As part of this effort, PG&E has identified several areas of focus. These include: (1) implementing guidelines for releasing commitments on aging applications to assure that funds are available for viable projects; (2) standardizing communications protocols; (3) developing more management support protocols through the creation of a formal governance process; and (4) increasing reporting capabilities from the database used to track and process OBF loans.

B. New Financing Offerings

PG&E supports the establishment of Loan Loss Reserves (LLR) that set energy efficiency funds aside to provide financial institution lenders with security against customer energy project loan defaults. LLRs can be implemented with or without an On-Bill Repayment (OBR) mechanism. Specifically, PG&E supports LLRs for the following reasons:

- LLRs have the potential to significantly leverage ratepayer funds. LLRs would appear to stretch ratepayer funding effectively, since funds are required only to cover actual loan losses due to non-payment.
- LLRs can provide important credit enhancement but is not a guarantee. PG&E's liability to fund loan defaults would be limited to a fixed amount of funds provided to support a specific energy project loan offering.
- LLRs are best applied where the market consists of large numbers of small projects so that some money is available to cover early defaults and will be meaningful as a credit enhancement support to the lender. PG&E believes this will be necessary for the residential and small and medium business segments.
- Typically, the ratio of the loss reserve fund to the total lending amount is higher to begin with and can be lowered as experience is gained with collections payment performance and loss experience, which will allow PG&E to further leverage ratepayer funds using this approach in the long term.
- LLRs can potentially broaden access to financing for more borrowers by allowing the financial institution partner to: (1) modify its underwriting criteria and accept more risk than it would otherwise; (2) lengthen loan terms; and (3) reduce loan interest rates, reflecting the lower risk associated with access to a loan loss reserve.

In addition to LLRs, PG&E has been reviewing other forms of credit enhancement. PG&E is aware of energy efficiency finance programs making use of Interest Rate Buy-Downs (IRBD) as a credit enhancement mechanism, including the MassSaves Program.[3] PG&E's initial inquiries into IRBDs indicate that IRBD programs are not sustainable and have the potential to be more expensive than a LLR approach, as they

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3 Mass Save, 2011 Trade Ally Presentation Financing (2011), p. 3, fn. 1, available at http://www.masssave.com/~/media/Files/Professional/Information-and-Edu-Docs/2011%20Trade%20Ally%20Presentaion%20Financing.ashx.

require funding to offset the interest rate reduction for each and every loan which can be very expensive for the portfolio overall. PG&E does not support, at this stage, an IRBD program for 2013-2014 unless there is sufficient evidence and rationale presented by the appointed statewide financing consultant.[4] This does not preclude the possibility of developing an IRBD program in 2013 or 2014 should PG&E find that customers do not respond to the terms and rates offered by financial institutions offering energy efficiency loan products supported by LLRs. Should this be the case, PG&E proposes to reserve the right to use a portion of the funds made available for credit enhancement for IRBDs.

PG&E is unaware, at this time, of many programs offering other forms of credit enhancement, such as loan loss insurance, debt service reserve funds and subordinated capital structures. PG&E believes that these offers are slightly more complex than a LLR or IRBD, but proposes to work with the statewide consultant to learn more about these potential offerings. PG&E may seek to refine the proposal based on these conversations, should they be seen as potentially beneficial approaches.

C. Multi-Family On-Bill Repayment

PG&E continues to have concerns about the possibility of disconnection for OBR for residential customers, particularly low-income customers (e.g., those that qualify for the California Alternate Rates for Energy (CARE) Program) who could find themselves overburdened with energy improvement debt. However, PG&E understands the California Public Utilities Commission's (CPUC or Commission) desire to test projects in the multi-family residential sector and therefore PG&E proposes to work with the statewide consultant to identify and work on at least one multi-family OBR-type pilot. For example, PG&E understands that a pilot program is being developed by the California Housing Partnership Corporation (CHPC), SCE and SCG. This pilot includes many elements consistent with the Commission's initial guidance on program design features, including:

- Starting with a bill neutrality objective, at least for credit-challenged or lower-income populations;
- Placing the loan obligations with owners of master-metered buildings, with a second phase tying the payment obligation to individual tenant meters, subject to regulatory changes;
- Including an objective of financing up to 90 percent of the expected savings, as determined by an investment grade audit;
- Seeking to support the financing through use of a LLR credit enhancement facility; and
- The possibility to offer (and test) with a variety of multi-family residences, including high rises and low rises, condos and rentals, and different physical configurations (e.g., central vs. individual building systems).

PG&E proposes working with the CHPC and the appointed statewide consultant to explore the possibility of offering a pilot to the low to moderate income multi-family residential marketplace in PG&E's service territory. One aspect of these discussions will be the possibility of working within PG&E's existing Line Item Billing capabilities to test an OBR option. From initial discussions with CHPC, PG&E recognizes that

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4 D.12-05-015, OP 21.

utilization of Line Item Billing is a way of reducing the amount of the LLR required by an existing financial institution to participate in a pilot program. This could be an interesting interim step while issues around loan obligation transferability, disconnection and *pro rata* allocation of customer payments between energy charges and third-party loan amounts are further explored.

Other issues PG&E would expect to resolve as part of the pilot include: (1) agreements regarding PG&E's specific role and the resources contributed by PG&E and other parties, including any free services (for example under the Energy Savings Assistance Program), rebates, incentives, and on-bill facilities and charges; (2) identifying the types of properties most likely to participate; (3) development of property outreach and recruitment of owners/managers for participation; (4) preparing the documentation in support of credit enhancement; (5) understanding and developing Evaluation, Measurement and Verification (EM&V) requirements, including appropriate audit protocols; designing education and training programs; (6) establishing customer and other data sharing and exchange protocols; and (7) establishing program checkpoints to assess performance and make adjustments as necessary.

PG&E proposes to work with the statewide consultant to identify other potentially interesting and applicable pilot programs in the multi-residential marketplace.

D. Potential On-Bill Repayment Program Design

Without assuming the statewide consultant's recommendations, PG&E sets out below is an overview of how an OBR Program could be designed.

1. Loan Origination

- An eligible customer contacts an energy services contractor and is presented with an estimate of the expected energy savings and bill impacts of the energy efficiency project.
- An eligible customer completes and submits a credit application to a Loan Originator.
- The Loan Originator reviews the application for adherence to loan underwriting criteria. Loan criteria will be determined by the lender.
- PG&E provides billing history (if required as a part of the lender's underwriting criteria). Customers can obtain this information directly from PG&E, or can consent in writing to allow the Loan Originator to request and obtain this information directly from PG&E on the customer's behalf using a process and schedule to be mutually agreed upon between PG&E and the Loan Originator. PG&E will charge a fee for this service.
- Loan Originator verifies with Title Company the borrower's title to property; Title Company reports back to Loan Originator the results of last owner search (in situations where title is transferable, i.e., linked to the meter).
- Loan Originator notifies applicant in writing of the loan approval/denial.
- Loan Originator prepares and sends to customer the loan documents.
- Customer signs, notarizes, and returns the loan documents.
- Customer contacts contractor to schedule the work.

- Loan proceeds are disbursed to customer/borrower once the loan documents are signed and returned.

2. Billing

- Loan Originator transmits loan information to a Clearinghouse/Servicing Agent. The Servicing Agent verifies loan information and enters into its servicing system.
- On a weekly basis, Servicing Agent will provide to PG&E a Loan Establishment File, summarizing all new loans for PG&E's customers during the week.
- PG&E will establish the Loan Installment on the customer's account and provide confirmation to Servicing Agent via a PG&E Account Openings File.
- Servicing Agent will notify the Loan Originator that the Loan Installment charge will be included in the next bill issued by PG&E for a billing period commencing after the date on which the Loan Servicer notifies PG&E. This notification will include the amount of the monthly or bi-monthly Loan Installment charge and the loan term in number of payments.
- Loan originator is responsible for notifying the borrower that all paperwork has been completed and the loan installment will appear on the next utility bill.
- The customer will be directed to contact Loan Originator/Serving Agent if they have any questions. PG&E will not be responsible for customer inquiries.
- PG&E will commence charging the Loan Installment on the first billing period commencing after the date notified by Servicing Agent through a Loan Establishment File. PG&E will bill installment amounts according to its normal billing cycle.
- PG&E shall charge one Loan Installment for each month of PG&E service, provided that no more than 12 installments shall be billed per year. Loan charges will be presented on the PG&E billing statement.
- The bill will contain the following information:
  - – Loan Installment amount;
  - – Outstanding loan balance; and
  - – Customer information contact details: phone number and email address for customer questions or complaints.
- Annually, PG&E will include a copy of the complaint handling procedures as an insert to PG&E's bill for each customer account with an active Loan Installment.
- PG&E will collect installment payments with monthly electric and/or gas services.
- PG&E will remit to Servicing Agent any Loan Installment amounts collected during the prior calendar month and will provide a PG&E Remittance file providing the details of such remittance.
- PG&E is eligible to receive a fee per bill issued (dollar fixed amount per bill or percentage of loan) to defray costs directly associated with billing and payment

activities. This is paid for by the lender and can be structured as a sub-management fee of the servicing agent, or other structure deemed appropriate in consultation with the Statewide Consultant.

3. Account Changes/Partial Payment/Prepayment/Bankruptcy

- Should a customer remit less than the total amount due for electric and/or gas services and Loan Installment, PG&E will leverage existing payment arrangement functionality to apply payments for electric and/or gas PG&E services and to the Loan Installment.
- Customers wishing to make a pre-payment of the Loan Installment obligation must contact the Loan Originator, prior to any acceptance of pre-payment by PG&E. Should pre-payment be agreed and allowed, PG&E will apportion prepayment on a pro-rata basis to future bills, unless an alternative approach is agreed in consultation with the statewide consultant. For example, a borrower can make payments directly to the Loan Originator or Servicing Agent, the Serving Agent then notifies PG&E of an amended bill amount via a Change in Terms File.
- PG&E will update the account with the new number of remaining loan installments. In cases where a loan is fully repaid, PG&E discontinues Loan Installment charge.
- Servicing Agent/Loan Originator makes necessary notifications of debt satisfaction with appropriate parties.
- Any changes in PG&E's account details for an active Loan Installment account shall be provided to Servicing Agent via a PG&E Change of Account File. This will include information relating to events such as voluntary account closure, account suspension, etc.
- If PG&E is contacted by an account owner with active Loan Installment charges requesting that the PG&E account be (permanently) closed, PG&E will discontinue the Loan Installment charges on such account and report the account closure in the PG&E Account Closing File to the Servicing Agent.
- If PG&E is contacted by the account owner with active Loan Installment charges requesting that the PG&E account be temporarily suspended, such as in the case of a seasonal customer who suspends PG&E service, PG&E will discontinue the Loan Installment charges on such account and report the account in the PG&E Account Closing File to the Servicing Agent.
- PG&E may also close an account after non-payment by customer and termination of service. If so, PG&E will discontinue the Loan Installment charges on such account and will report the account closure in the PG&E Account Closing File to the Servicing Agent.
- In the case of outstanding arrears on the Loan Installment that exist when an account is closed, if the customer does not re-establish service with PG&E within 66 days, it will be the responsibility of the Servicing Agent/Loan Originator and not PG&E, to collect any arrears that are due and owing on the loan installment, regardless of whether or not the customer subsequently re-establishes service with PG&E.

- If the customer establishes a new account with PG&E during the 66 day period, PG&E will transfer and bill the arrears associated with the Loan Installment on the new PG&E service account.
- PG&E will report to Servicing Agent any arrears balance remaining after 66 days without the customer re-establishing service with such PG&E service through a PG&E Transfer of Uncollected Payment File.
- No Loan Installment will be charged by PG&E during a period of property vacancy where the account is suspended or closed and no PG&E bill is sent to the customer.
- Upon notification of any account closure or temporary suspension of PG&E service by the PG&E, the Servicing Agent/Loan Originator shall commence direct statement billing to the closed account customer, or current property owner if not the customer, pursuant to the terms of the loan agreement. Any amounts directly billed shall be collected by the Servicing Agent/Loan Originator and shall not be subsequently transferred to PG&E for billing and/or collection.
- Prior to PG&E establishing a Loan Installment charge on the successor customer's bill, the Servicing Agent must provide supporting information on the Loan Establishment File, including written customer acceptance of accepting the charge (if applicable).
- PG&E will establish the Loan Installment on the successor customer's account and provide confirmation of same to Serving Agent via the PG&E Account Openings File.
- There will be no late payment charges calculated on unpaid Loan Installments billed by PG&E. However, a late payment charge will be incurred during any timeframe that the customer is no longer receiving a bill from PG&E (i.e., if utility terminates the customer's service for nonpayment; if customer requests the utility terminate the service; and if customer requests temporary service suspension). During this timeframe, the customer will receive a direct statement billing from Servicing Agent who may impose late payment fees.
- PG&E will terminate service for failure to pay Loan Installment charges and fees in the same manner as for failure to pay Utility service charges, subject to appropriate evaluation milestones to determine if such disconnections are negatively impacting PG&E's bad debt expense and disconnections.
- If PG&E terminates service without closing the customer's account, PG&E will continue to bill the future Loan Installment charges to the customer in statement billings sent to the customer. If the termination of service results in the account being closed, the account closure procedures will be followed.
- PG&E will provide notice of termination to customer for failure to pay Loan Installment charges in the same manner as failure to pay Utility service charges.
- In the case of customer bankruptcy: PG&E will notify the Servicing Agent as soon as practical, that a customer with an outstanding Loan Installment balance has filed for bankruptcy protection.

4. Complaints/Disputes

- Upon receipt of a complaint by Loan Originator/Servicing Agent from a customer with a Loan Installment, the Servicing Agent will log the complaint and make an initial determination of any Loan Installment charges billed to the customer by PG&E to be considered in dispute.
- Loan Originator/Servicing Agent will communicate to PG&E any amounts initially considered to be in dispute, any subsequent changes in the amount to be considered in dispute, or upon closure of the dispute any adjustments that should be made to the Loan Installment charges billed to the customer. The communication shall be made as soon as practicable upon determining the disputed amount, or any subsequent adjustment.
- Upon final resolution of the complaint, the customer will be required to pay the amount no longer considered in dispute.
- If the resolution of the complaint results in a change in the amount of Loan Installment charges to be billed to the customer in the future, Servicing Agent will report this to PG&E through the Change in Terms File.

5. Data Exchange

- Electronic files will be exchanged that provide information on PG&E customer accounts with Loan Installments: the status of PG&E accounts with Loan Installments; and remittance information.
- Authorization to exchange necessary customer information between PG&E and Loan Originator/Servicing Agent will be granted through customer signed agreements (which will authorize exchange of information regarding current and successor customers).

Consistent with the approach outlined above PG&E proposes working with the statewide consultant to make appropriate changes to existing activities in support of an OBR pilot. However, PG&E proposes to evaluate the impact and effectiveness of pro rata payment allocations on PG&E's uncollectible payments and disconnections for non-payment of OBR loans at six and 12 months after implementation of an OBR program. Adverse effects to PG&E's collections and customer disconnections may warrant a suspension or change to an OBR program.

E. Billing System Upgrades and Other Information Technology Changes

PG&E anticipates associated billing changes will include, but not be limited to, the following:

- New workflow process profile and events characteristics.
- New OBR enrollments/de-enrollments.
- New customer class, debt class, collection class.
- New electronic data interface for communication with lenders.
- Process inbound (to PG&E) and outbound (to lenders) OBR payments.
- Modify bill print process to read new characteristics and read new templates.
- Modify file recording functions to create records for OBR bill segments.

PG&E estimates such changes will be approximately $1 million; however, this estimate is based on a number of assumptions including:

- PG&E's existing Line Item Billing Third-Party Vendor Services capabilities will be leveraged to develop the Information Technology (IT) requirements.
- The estimate excludes changes to existing accounts payable accounting setup and changes for notification to the vendor for customer service disconnects, bill cycle changes or mailing address changes.
- The estimate does not include automation for the "Obligation Stays with Meter" rule for OBR, which is assumed to be a business process.
- Vendor record set up process will be manual (business process).
- A single loan servicing agent that aggregates on behalf of lenders; for each organization with whom PG&E must interface, PG&E will incur additional costs.

PG&E estimates that it will take 6-12 months to build out the necessary IT capabilities. Both the cost estimate and timing are preliminary assessments and will be refined once PG&E begins working with the statewide consultant to develop specific requirements.

PG&E proposes to cover the one-time development costs out of the budget allocated to new financing programs. PG&E proposes to cover the costs of ongoing billing expenses and infrastructure upgrades by charging a fee per transaction associated with billing and payment activities. This fee will be paid by the lender and can be structured as a sub-management fee of the servicing agent, or other form of structure deemed appropriate in consultation with the statewide consultant.

The estimate excludes changes to existing accounts payable accounting setup and changes for notification to the vendor for customer service disconnects, bill cycle changes or mailing address changes. These changes may incur additional costs. PG&E also anticipates that updates to the PG&E website will be made for new offerings. PG&E does not anticipate these costs to be significant.

F. Financing Database Development and Data Sharing

PG&E notes that the data supporting a database is likely to come from various sources and by a number of participants involved in any of the financing offerings described above. Table 3A-1 indicates program participants whom PG&E envisions having primary access to relevant information:

TABLE 3A-1
PACIFIC GAS AND ELECTRIC COMPANY
PROGRAM PARTICIPANTS WITH PRIMARY DATA ACCESS

Line No.	Data Type /Provider	PG&E	Lender	Servicing Agent and/or Clearinghouse for Data Flow	Contractors
1	Customer Type, for Example, Residential, Master-Metered Multi-Family Service	X	X		
2	Host Site Characteristics, for Example Common Meters, Location	X			X
3	Utility Payment History	X			
4	Borrower Credit Scores		X		
5	Project Repayment Histories	X(a)		X	
6	Energy Project Performance Data (by Building or Customer, Not Only by Measure)	X			X
7	Billing Impacts Comparing Pre-and Post-Installation Utility Bills	X			

(a) PG&E will have access to project payment history in cases where it provides OBR, but not necessarily in cases such as in the single-family residential market where PG&E may only provide credit enhancement and have no direct role in loan origination, energy project assessment, project delivery, performance or billing. In addition where PG&E may provide OBR, if loans beyond a certain time period of default are transferred from PG&E to a service agent for collection then PG&E may not have access to repayment histories outside its direct collection responsibilities.

PG&E proposes to work with the statewide consultant on the process for collecting and maintaining a statewide database. In particular, PG&E will work to understand if each IOU should collect such data or if a third party should collect relevant data from program participants based on a set of predefined requirements. PG&E also wants to assure that customer privacy is protected.

Finally, PG&E supports the work of the statewide consultant in obtaining guidance on what loan data and qualities will be needed to engage the secondary financial markets to purchase loan portfolios.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 4

PROPOSED FUNDING REQUEST IS REASONABLE

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PROPOSED FUNDING REQUEST IS REASONABLE

A. Introduction

Pacific Gas and Electric Company's (PG&E) proposed 2013-2014 Energy Efficiency Portfolio budget supports both the achievement of the California Public Utilities Commission's (CPUC or Commission) 2013-2014 energy savings goals and implementation of specific strategies and actions identified in Decision 12-05-015 (the Decision). PG&E requests a total budget for the 2013-2014 Energy Efficiency Portfolio of $859.5 million, which is a reduction from the average two-year budget of $892 million for the 2010-2012 energy efficiency portfolio cycle. PG&E also requests funding for 2013-2014 Demand Response Program Integrated Demand-Side Management (IDSM) activities of $6.5 million. The total proposed budget by program is presented below in Table 4-1, including third-party program budgets within the respective market sectors as described in Chapter 3. PG&E's funding request is reasonable and results in a cost-effective energy efficiency portfolio that meets the Commission's energy savings goals and complies with the Decision.

TABLE 4-1
PACIFIC GAS AND ELECTRIC COMPANY
2013-2014 ENERGY EFFICIENCY PORTFOLIO AND DEMAND RESPONSE IDSM FUNDING REQUEST

Line No.	Program/Cost Element	Requested 2013-2014 Budget
1	Residential(a)	$132,605,474
2	Commercial(a)	224,678,331
3	Industrial(a)	101,547,289
4	Agricultural(a)	55,862,567
5	Lighting	41,880,691
6	Codes and Standards	12,762,470
7	Emerging Technologies	12,312,940
8	Workforce Education and Training(a)	27,827,060
9	Statewide DSM Coordination and Integration	1,630,899
10	Financing	73,000,000
11	Government Partnerships	140,910,724
12	Evaluation, Measurement and Verification	34,437,754
13	Total Energy Efficiency Portfolio Budget Request	$859,456,198
14	Total Demand Response IDSM Budget Request	$6,528,000

(a) Budget includes third-party programs as shown in Appendix D.

The proposed 2013-2014 Energy Efficiency Portfolio budget is a decrease in approximately 3.6 percent from PG&E's approved 2010-2012 program cycle budget. If the incremental $54.4 million required for expanding financing programs was excluded, PG&E's proposed 2013-2014 budget would represent a 10 percent decrease from its approved 2010-2012 budget. The total portfolio budget decrease is primarily attributable to the reduction in electric energy savings goals in the Decision and the removal of the Statewide Marketing, Education and Outreach (ME&O) Program funds from the energy efficiency portfolio.[1] In addition, PG&E has decreased the local marketing budget from 6 percent of the total portfolio budget for 2010-2012 to 5 percent of the total portfolio budget for 2013-2014. This budget reduction is consistent with the level of spending required to sustain current local marketing to drive customer participation in energy efficiency programs and meet energy savings goals.

While the 2013-2014 total budget represents a decrease in funding at the portfolio level, PG&E proposes an increase in funding over the previous program cycles for the following efforts and measures:

- Increased support for programs and initiatives that promote deeper, longer lasting savings for both residential and non-residential customers through subprograms such as Whole Home Upgrade Program (WHUP), Commercial Calculated Incentives, Industrial Calculated Incentives, and Agricultural Calculated Incentives. PG&E proposes to increase the WHUP budget by $8.2 million per year for 2013-2014 relative to the approved 2010-2012 portfolio budget.
- Expansion of current efforts underway to help small and medium business (SMB) customers prepare for time-varying pricing, including increased focus on and delivery of energy efficiency measures to help customers manage their energy use. PG&E proposes to leverage both Third-Party and Government Partnership Programs to reach SMB customers.
- Increased targeting of industrial and agricultural customers, introduction of new measures, and implementation of new targeted offerings for water leak detection and repair and pressure management to promote water and energy savings. PG&E proposes to increase the Statewide Industrial and Agricultural Program budgets by $6.9 million per year for 2013-2014.
- Expansion of the GP Program to include more comprehensive energy efficiency solutions for local and regional government partners to meet their residential and small business customer needs. PG&E proposes to increase the Government Partnership Program budget by $6.67 million per year for 2013-2014.
- Introduction of new financing program offerings including funding for third-party programs such as successful programs previously funded through the American Recovery and Reinvestment Act and new pilot offerings for single family and multi-family residential customers as well as all non-residential customers. PG&E proposes to increase its Statewide Financing Program budget by $27.26 million per year for 2013-2014.

PG&E provides its 2013-2014 detailed budget proposal in Appendix D – Budget and Savings Placemat Tables. Additional budget views are available in Appendix E – 2013-2014 Energy Efficiency Portfolio Tables, Table 4.1 and Table 4.2.

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[1] Pursuant to the Decision (Ordering Paragraph 117) statewide ME&O funding will be requested through a separate application to be filed August 3, 2012.

B. Certain Costs Are Excluded From the Cost-Effectiveness Analysis Consistent With the Strategic Plan and Commission Direction

PG&E proposes to include all forecasted costs associated with supporting the long-term Strategic Plan activities and Commission's directives into the cost-effectiveness calculations with the exception of the costs associated with the revolving loan fund for On-Bill Financing (OBF). In Decision 09-09-047, the Commission determined that the Investor-Owned Utilities (IOU) are not required to include ratepayer funds used for a revolving loan fund in portfolio cost-effectiveness calculations. However, the Commission noted that the IOUs should include an allowance for the funds not repaid to ratepayers due to loan default in the cost-effectiveness showing. (D.09-09-047, p. 288.)

As OBF is a relatively new program with a small loan portfolio and PG&E has not had experience with loan defaults, PG&E proposes to use the loan default rate used by San Diego Gas & Electric Company (SDG&E) in its cost-effectiveness analysis to estimate future loan defaults in PG&E's portfolio. Based on evaluation of loan repayment history for SDG&E, PG&E proposes to use 2 percent default rate for the revolving loan fund for OBF. PG&E will evaluate loan performance data on an annual basis, and revise the loan default rate for inclusion in cost-effectiveness calculations, as necessary.

C. Requested Revisions to Fund-Shifting Rules to Align With Decision

In Decision 09-09-047, the Commission adopted fund-shifting rules to provide the utilities with flexibility in managing their portfolios over each program cycle. In the Assigned Commissioner Mark J. Ferron's *Ruling Clarifying Fund Shifting Rules and Reporting Requirements*, dated December 22, 2011 (Fund Shifting Assigned Commissioner Ruling (ACR)), Commissioner Ferron updated the Energy Efficiency Policy Manual to reflect the fund shifting rules adopted in Decision 09-09-047, and clarified the fund shifting categories for statewide and local programs. Specifically, the Fund Shifting ACR designated Third-Party Programs as the 13th fund-shifting category. (Fund Shifting ACR, p. 4.)

For 2013-2014, PG&E requests the IOUs continue to have the flexibility to shift a portion of the authorized budget between programs to respond effectively to market demand for energy efficiency measures and efficiently use funds for programs with the highest value and/or greatest customer participation. PG&E proposes to retain the existing fund shifting rules approved in Decision 09-09-047 as clarified by the Fund Shifting ACR, with one exception. PG&E proposes to modify the fund shifting categories from the Fund Shifting ACR to eliminate Third-Party Programs as a stand-alone category. In an effort to further simplify the portfolio, PG&E proposes that the Third-Party Programs be incorporated into the applicable Statewide Programs. This modification will align the fund shifting categories with the program groupings in Appendix D, as proposed by the Energy Division in the 2013-2014 Energy Efficiency Portfolio Application Requirements dated May 24, 2012.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 5

PROPOSED EVALUATION, MEASUREMENT AND VERIFICATION PLAN AND BUDGET

PACIFIC GAS AND ELECTRIC COMPANY
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PROPOSED EVALUATION, MEASUREMENT AND VERIFICATION PLAN AND BUDGET

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PROPOSED EVALUATION, MEASUREMENT AND VERIFICATION PLAN AND BUDGET

A. Introduction

Pacific Gas and Electric Company and the other investor-owned utilities' (IOU) propose an Evaluation, Measurement and Verification (EM&V) budget for the 2013-2014 Energy Efficiency Portfolio equal to 4 percent of their total portfolio budgets to support all EM&V activities, as adopted in Decision 12-05-015 (the Decision). The proposed funds are needed to support IOU and California Public Utilities Commission (CPUC or Commission) EM&V studies, policy support, strategic planning projects, and staffing.[1] Specialized and experienced staffing is necessary for utility-administered EM&V activities and to support the Commission's staff-administered activities. For PG&E, 4 percent of the 2013-2014 portfolio budget equals $34.4 million.

As with previous cycles, the IOUs will carry forward unspent EM&V funds within the portfolio period and, as necessary, beyond 2014 to conduct and complete ongoing evaluations.

The Decision directs a continuation of the 72.5 percent/27.5 percent split of EM&V funding between Commission-managed studies, policy support, strategic planning projects, and studies managed by the IOUs.[2] This allocation is included in PG&E's budget proposal shown in Appendix D – Budget and Savings Placemat Tables and Appendix E-2013-2014 Energy Efficiency Portfolio Tables, Table 5.1. The current division of responsibilities between the Energy Division (Staff) and the IOUs will continue during 2013-2014.[3]

Experience demonstrates that study needs, scopes of work, and related costs often change over time. Studies may be combined or separated, new studies may be identified, and work may be re-prioritized based on the portfolios' research requirements. Because budget flexibility is critical, the IOUs request that the Commission continue its long-standing practice of permitting full flexibility in the allocation of EM&V funding after the 2013-2014 EM&V Plan is agreed upon.

B. 2013-2014 Energy Efficiency EM&V Work Plan

The IOUs' applications do not include a detailed EM&V Plan. Instead, as directed in the Decision, Staff and the IOUs will update and modify the existing 2010-2012 Energy Efficiency EM&V Work Plan, Version 1 (2010-2012 EM&V Plan) to develop the 2013-2014 Energy Efficiency EM&V Plan.[4] The Decision directs Staff and the IOUs to work collaboratively to assess the status of existing studies and new research

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1 D.12-05-015, OP 157.

2 D.12-05-015, OP 158.

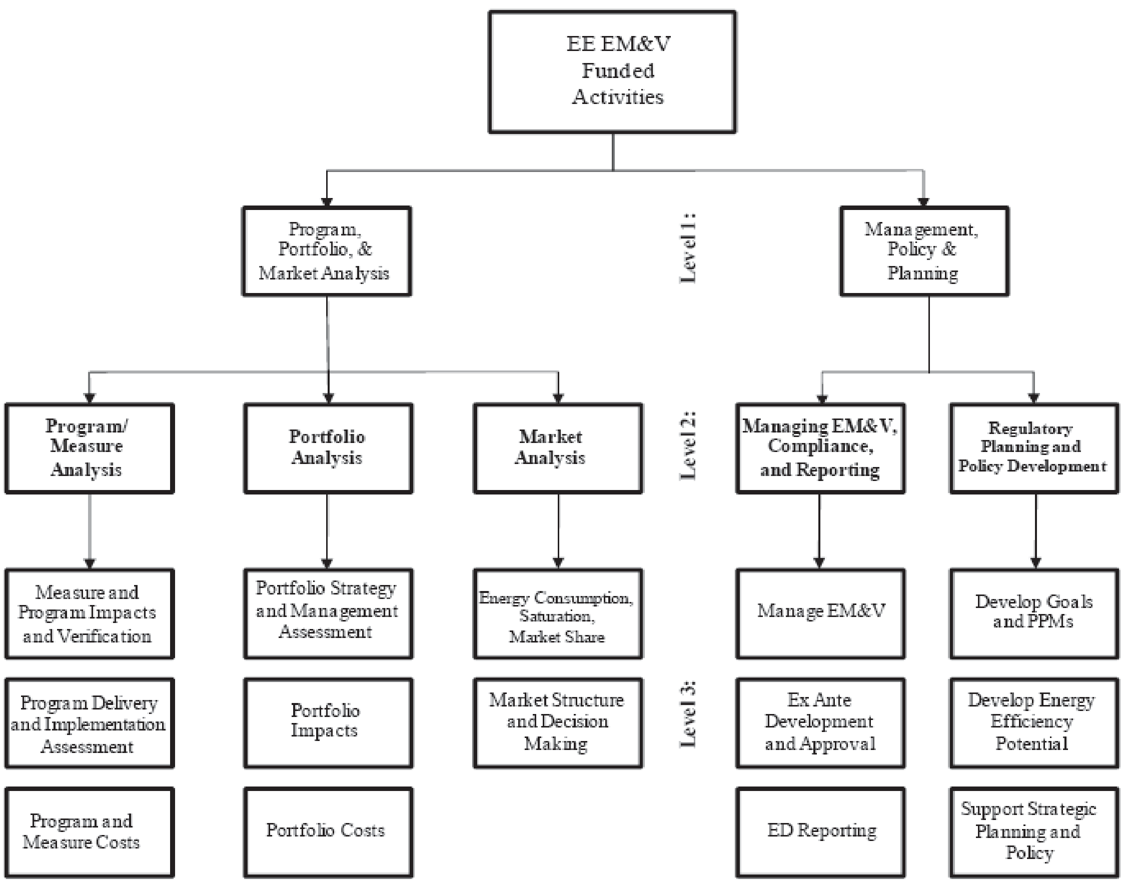
3 D.12-05-015, p. 354.

4 D.12-05-015, pp. 354-355.

needs. At a minimum, new studies will be considered for: market transformation and Market Transformation Indicator (MTI) reporting, information needs to support spillover/market effects in 2015 and beyond, the IOUs' new financing pilots, third-party financing programs including loan programs previously funded by the American Recovery and Reinvestment Act, baseline studies, impact evaluations of new whole-building systems, controls strategies, and other identified research needs. The Commission should require that the updated 2013-2014 EM&V Plan to be mutually agreed upon by Staff and the IOUs within 60 days of the adoption of the IOUs' 2013-2014 Energy Efficiency Portfolio Applications. Until the updated plan is created, the existing 2010-2012 EM&V Plan should remain in effect.

In addition to new studies, the updated 2013-2014 EM&V Plan will likely continue to include research in the areas outlined in the 2010-2012 EM&V Plan depicted in Figure 5-1 below.[5]

FIGURE 5-1
PACIFIC GAS AND ELECTRIC COMPANY
2010-2012 EM&V ACTIVITY ORGANIZATIONAL STRUCTURE



The 2013-2014 EM&V Plan will also support the following additional EM&V activities.

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5 2010-2012 Energy Efficiency EM&V Work Plan, Version 1 (December 2010), p. 3-3

1. Multi-Client Studies

Each year, several opportunities arise for the IOUs to participate in multi-client studies dealing with energy efficiency program issues. Multi-client studies typically address a subject of broad, often strategic, interest within an industry or discipline. The costs of these studies are shared across multiple study subscribers enabling large, often very expensive research, to be acquired very cost effectively. IOU-specific costs for these studies typically range from $10,000 to $50,000 which is a small fraction of the total study cost. These studies are relatively low-cost options for gathering data. Typically regional or state-level breakdowns are available that are reasonably representative of IOU service areas. At times, the regional or state-level data available through these multi-client studies are the only data available regarding certain subject areas. In many cases, over-sampling within a specific area can be provided for an additional nominal cost, so that the client can compare local results with national or regional results.

2. California Measurement Advisory Council Support and Website

The California Measurement Advisory Council website makes publicly available electronic copies of all energy efficiency studies completed with Commission-authorized energy efficiency funding.

3. Statewide Saturation Surveys

The IOUs are required by Title 20 of the California Code of Regulations to conduct periodic saturation or similar surveys of their customers and to provide the survey results to the California Energy Commission for demand forecasting purposes. These surveys are also used as primary data sources for energy efficiency potential analyses, and are used by IOU program managers in program implementation to target customers. Funding is needed for each of the sector saturation surveys. Budget requirements for these studies can be significant, since these studies generally require some level of detailed onsite surveys to gather data for representative samples needed to meet Title 20 requirements.

4. Other Research and Analysis

Additional important research and analysis projects may be identified during the 2013-2014 program cycle that do not fit clearly into any of the categories of EM&V work described in previous sections. The IOUs propose that if Staff and IOUs concur on a need for a study, that additional study could be undertaken with EM&V funds. Further, the IOUs recommend continuing the existing small project authority that permits IOUs to perform studies that cost no more than $30,000 after advising Staff via Basecamp.[6]

C. Data Needs for Reporting and Evaluation

The Decision instructs the IOUs to include in their testimony a request for budget, if needed, to support data tracking. While the tracking data submittals do not require PG&E to invest in a new system, system modifications may be significant to comply with this requirement. Since final system requirements have not been established for the

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6 Authorization provided to the IOUs at the Monthly Energy Division and IOU Measurement and Evaluation meeting on July 12, 2011.

tracking database, PG&E cannot develop a meaningful budget for meeting the compliance requirements for standardized tracking data submittals in this testimony.

D. Suggested Changes to Enhance EM&V Cost Effectiveness, Accuracy, Transparency, Timeliness and Usability

PG&E proposes three recommendations to improve EM&V effectiveness, credibility, timeliness and applicability, while reducing costs for customers. The recommendations are: (1) use rolling or staged studies; (2) increase program-level results; and (3) increase collaboration between Staff and IOUs.

1. Rolling Studies Improve Cost Effectiveness, Timeliness, and Quality of Research

EM&V studies are currently planned and executed in conjunction with portfolio funding cycles. This design was better suited to the simpler, smaller annual funding cycles of the past. Today's complex, dynamic energy efficiency markets, and large, multi-year portfolio funding cycles require research to address both the short-and long-term feedback needs of the portfolio.

PG&E proposes that research be staged and roll across program years and portfolio funding cycles. Staging research will resolve the current resource bottlenecks created by concurrent start and end dates that compress timeframes and overwhelm the capability of all evaluation stakeholders. As described in The California Evaluation Framework:

> A large portfolio of programs launched with concurrent start and end dates can create large "spikes" in the workloads of various entities, including portfolio administration staff, contracting entities, program implementers, evaluation contractors, and other stakeholders. This can lead to inefficiency and, sometimes, efforts that have a higher probability for error due to strain on the resources available.[7]

Staging EM&V would also provide for continuous program measurement and more timely updates to energy efficiency potential, goals, and program assumptions. Staff and IOU EM&V teams could agree to a suite of staged research studies to smooth the workload across a wider timeframe and include the timing of the studies in the 2013-2014 EM&V Plan. Staging the studies would prioritize studies to make the "right information" available at the "right time," thereby maximizing the value of EM&V expenditures.

2. Impact Evaluations Should Blend Program and High-Impact Measure Approaches

Evaluations seek, among other things, to estimate energy savings at the portfolio and at the program level.[8] The High-Impact Measure approach may be well suited to estimating portfolio-level impacts, while the program-level approach may be most appropriate to provide actionable program-level implementation enhancements. To improve the effectiveness of impact evaluations, increased program-level results should be included in evaluation plans and reporting. This increased program emphasis has already begun in some 2010-2012 impact

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7 CPUC, The California Evaluation Framework, p. 61.

8 2010-2012 Energy Efficiency EM&V Work Plan, Version 1 (Dec. 2010), p. 2-1.

evaluations. This change could be implemented by including a goal to emphasize program-level results in the 2013-2014 EM&V Plan, and to subsequently incorporate this requirement into impact evaluation project work plans.

3. EM&V Activities Would Be Improved by Enhanced Collaboration

Increased collaboration between Staff and IOUs would improve the current portfolio evaluation process. The working relationship among the IOUs and Staff has significantly improved in recent years; however, there are additional opportunities to increase collaboration. The current level of collaboration among the parties is primarily driven by the compressed timing imposed on the parties due to how EM&V studies are currently planned and executed. In some instances, the IOUs receive near final work products drafted without the benefit of prior IOU input, and with very short turnaround time for review, allowing only a cursory review. Improving the evaluation process through better staging of studies, as proposed, will positively affect collaboration. To implement this change, PG&E suggests the following changes.

- The Staff and its consultants could include the IOUs much earlier in the development of research scopes, methods, and analysis of results.
- The 2013-2014 EM&V Plan could include a process evaluation of the evaluation process at least once during the portfolio cycle.
- An independent peer review working group should be established to resolve research issues. For example, both the custom projects *ex-ante* review and the new measures workpapers processes could be significantly improved through an independent working group process.

Staff working on EM&V could be assisted by other Commission staff to allow sufficient time to focus on measurement activities. The CPUC audit function could support verification of costs and results while the strategic planning area could be leveraged to develop directional plans, based on Commission guidance to support the strategic planning process.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 6

REVENUE REQUIREMENTS AND COST RECOVERY

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REVENUE REQUIREMENTS AND COST RECOVERY

A. Introduction

This chapter presents the cost recovery and rate impacts proposed in Pacific Gas and Electric Company's (PG&E) 2013-2014 Energy Efficiency Portfolio Application. This testimony is submitted in compliance with *Decision Providing Guidance on 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education and Outreach* (D.12-05-015, the Decision), *Decision Adopting Demand Response Activities and Budgets for 2012 Through 2014* (D.12-04-045), *Decision Regarding Continuation of Funding For Energy Efficiency Programs* (D.11-12-038), and *Decision Regarding Public Purpose Program Funds* (D.11-10-014).

PG&E requests approval of a total revenue requirement[1,2] to be recovered in gas and electric rates for the two-year program cycle of $873.8 million, based on a proposed 2013-2014 Energy Efficiency Portfolio budget of $859.5 million and 2013-2014 Demand Response Program budget for Integrated Demand-Side Management (IDSM) activities of $6.5 million, as supported throughout this testimony. PG&E requests that the revenue requirement adopted in this proceeding be made effective January 1, 2013.

In this chapter, PG&E specifically requests that the California Public Utilities Commission (CPUC or Commission):

- Authorize PG&E to recover in rates the 2013-2014 revenue requirements, excluding a reduction for any unspent, uncommitted funds until the uncertainty around the State's sweep of gas energy efficiency funds is resolved.
- Approve the allocation of expenditures and authorized funding between gas and electric customers based on net benefits of PG&E's proposed portfolio of 84 percent electric and 16 percent gas.
- Extend the balancing account treatment for recording the electric portion of energy efficiency expenditures adopted in Decision 11-12-038 beyond 2012.
- By October 1, 2012, issue an interim decision authorizing PG&E to continue to recover energy efficiency funding in 2013 from gas and electric customers at the rates set for 2012 subject to balancing account adjustment once a final decision is issued adopting its 2013-2014 Energy Efficiency Portfolio Application.

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1 In this chapter, PG&E uses the term revenue requirement to mean both the electric revenue requirement and the gas funding requirement. The electric revenue requirement is equal to the budget plus an allowance for franchise fees and uncollectible (FF&U) accounts expense. The gas funding requirement is equal to the budget and does not include FF&U. The gas portion is referred to as a "funding requirement" rather than as a "revenue requirement" in accordance with Decision 04-08-010 and Public Utilities Code (Pub. Util. Code) Sections 890-98; and California State Board of Equalization (BOE) opinion dated February 9, 2001, on the Natural Gas Consumption Surcharge.

2 PG&E's energy efficient funding request excludes benefit burden as these costs are recovered through the General Rate Case (GRC), in accordance with GRC settlement adopted in Decision 07-03-044 at page C-12, paragraph 34. The GRC settlement states that the benefit burden will not be litigated in multiple proceedings.

Table 6-1 summarizes PG&E's proposed portfolio and associated revenue requirement request for 2013-2014. Decision 12-04-045, OP 74 states: "Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company may request funding for post-2012 IDSM activities in their request for 2013-2014 Energy Efficiency funding." PG&E therefore is also including a request for demand response IDSM activities in the funding request as shown in Table 6-1.[3]

TABLE 6-1
PACIFIC GAS AND ELECTRIC COMPANY
2013-2014 ENERGY EFFICIENCY AND DEMAND RESPONSE IDSM FUNDING REQUEST
($000s)

Line No.	Description	2013	2014	Total
1	Energy Efficiency			
2	2013-2014 Energy Efficiency Portfolio Budget	$429,728	$429,728	$859,456
3	Unspent/Uncommitted Carryover Funds	–	–	–
4	Total Funding Request for 2013-2014 Energy Efficiency Portfolio	$429,728	$429,728	$859,456
5	Electric Portion (84%)			
6	Former Electric Public Goods Charge (PGC-EE)	$119,446	$119,446	$238,891
7	Procurement Energy Efficiency Funds	241,526	241,526	483,052
8	Total Electric Funds	$360,972	$360,972	$721,943
9	Gas Portion (16%)			
10	Gas Public Purpose Program (PPP) Surcharge Funds	$68,756	$68,756	$137,513
11	Total in Rates (Including FF&U on Electric)			
12	Former Electric PGC-EE	$120,734	$120,734	$241,469
13	Electric Energy Efficiency Procurement	244,132	244,132	488,264
14	Gas PPP Surcharge	68,756	$68,756	$137,513
15	Total Energy Efficiency in Gas and Electric Rates	$433,623	$433,623	$867,246
16	Demand Response			
17	2013-2014 Demand Response IDSM Budget Request	$3,264	$3,264	$6,528
18	2013-2014 Demand Response IDSM Total in Electric Rates (Including FF&U)	$3,299	$3,299	$6,598

The subsequent sections of this testimony address the recovery of the proposed revenue requirement, disposition of the unspent, uncommitted funds, rate and bill impacts, balancing account treatment for financing proposals, and PG&E's proposal for 2013 interim funding.

B. Energy Efficiency Funding Request Allocated to Electric and Gas Customers Based on Forecast of Proposed Portfolio Avoided Costs

PG&E proposes to split the 2013-2014 Energy Efficiency revenue requirement between electric and gas customers for cost recovery using the expense ratio for the

3 Demand response authorized funding is collected through electric distribution rates..

proposed portfolio that assigns 84 percent of all program expenditures and authorized budgets to PG&E's electric customers and 16 percent of all program expenditures and authorized budgets to PG&E's gas customers. This method was confirmed in Decision 09-09-047 and through the approval of PG&E's 2010-2012 Energy Efficiency Portfolio compliance Advice Letter 3065-G/3562-E. The expense ratio is determined by calculating the electric and gas avoided cost (net benefit) for the proposed energy efficiency portfolio, as shown in Appendix E – 2013-2014 Energy Efficiency Portfolio Tables, Tables 1.7 and 1.8.

C. PG&E's Proposed Electric Revenue Requirement

Table 6-2 shows the electric revenue requirement to be recovered in PPP rates in 2013 is $364.8 million, a decrease of $4.8 million over 2012 authorized funding levels.[4] As directed by the Commission in Decision 12-05-045, this application also includes an electric revenue requirement for demand response IDSM activities of $3.3 million for 2013, a decrease of $2.9 million over the demand response IDSM funding authorized for 2012.

TABLE 6-2
PACIFIC GAS AND ELECTRIC COMPANY
TOTAL 2013 ELECTRIC REVENUE REQUIREMENT IN RATES
($ MILLIONS)

Line No.	Description	2012	2013	Annual Revenue Requirement Change From 2012
1	Energy Efficiency			
2	Former Electric PGC-EE Revenue Requirement	$120.7	$120.7	–
3	Electric Procurement Revenue Requirement	248.9	244.1	$(4.8)
4	Total Electric Energy Efficiency Revenue Requirement	$369.6	$364.8	$(4.8)
5	Demand Response			
6	Total Electric Demand Response IDSM Revenue Requirement	$6.2	$3.3	$(2.9)

Pub. Util. Code Section 399.8, which authorized the electric PGC, expired on January 1, 2012. The continuing recovery and balancing account treatment of the PGC portion of energy efficiency (PGC-EE) funding in rates was addressed in Decision 11-12-038. The Commission adopted PG&E's proposal to consolidate the tracking of the electric portion of its energy efficiency expenditures into one balancing account, the Procurement Energy Efficiency Balancing Account, and close the account that tracked the PGC-EE portion of expenditures, the electric Public Purpose Program

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4 As discussed in Chapter 4, the decrease is in part due to the removal of Statewide Marketing, Education and Outreach (ME&O) funding from the energy efficiency portfolio. Pursuant to the Decision (Ordering Paragraph (OP) 117), statewide ME&O funding will be requested through a separate application to be filed August 3, 2012.

Energy Efficiency Balancing Account (PPPEEBA) through December 31, 2012.[5] PG&E requests that the Commission adopt PG&E's proposal to continue this method of tracking expenses on an ongoing basis.

For cost recovery purposes, Decision 11-12-038 preserved the existing allocation of the PGC-EE at the 2011 funding level in rates until the allocation of electric PPP funds is addressed in a future GRC Phase 2 proceeding. The former PGC-EE funding level, including FF&U, is recovered through the Public Purpose Program Revenue Adjustment Mechanism balancing account in PG&E's Annual Electric True-Up (AET).

The electric procurement revenue requirement, including FF&U, is recovered as a non-bypassable charge through electric PPP rates in the AET. The electric procurement revenue requirement is recovered through the Procurement Energy Efficiency Revenue Adjustment Mechanism balancing account pursuant to Decision 03-12-062. PG&E procurement funding is included in electric PPP rate components effective January 1, or as soon thereafter as possible, based on the then current revenue allocation and rate design methods adopted for procurement energy efficiency funding.

The electric demand response revenue requirement, including FF&U, is recovered through electric distribution rates in the AET in the Distribution Revenue Adjustment Mechanism.

D. PG&E's Proposed Gas Funding Requirement

Table 6-3 shows the gas funding requirement (FRQ) to be recovered in rates for 2013 is $68.8 million, a decrease of $11.5 million over 2012 authorized funding levels.[6] The gas energy efficiency funding requirement does not include FF&U, in accordance with Decision 04-08-010. The gas portion of energy efficiency expenditures are tracked in the gas PPPEEBA. For cost recovery purposes, the gas energy efficiency funding requirement is recovered through the gas Public Purpose Program-Energy Efficiency balancing account.

TABLE 6-3
PACIFIC GAS AND ELECTRIC COMPANY
TOTAL 2013 GAS ENERGY EFFICIENCY PPP FUNDING REQUIREMENT IN RATES
($ MILLION)

Line No.	Description	2012	2013	Annual FRQ Change From 2012
1	Energy Efficiency			
2	Total Gas Funding Requirement	$80.3	$68.8	$(11.5)

PG&E's gas energy efficiency funding requirement is recovered through its annual gas PPP surcharge advice filing due October 31 of each year. Decision 04-08-010 authorized gas investor-owned utilities (IOU) and other gas utilities to file gas PPP surcharge rates based on authorized amounts subject to update only if by not making the

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5 PG&E Advice Letter 3976-E and 3976-E-A was approved by the Commission on April 4, 2012.

6 As discussed in Chapter 4, the decrease is in part due to the removal of Statewide ME&O funding from the energy efficiency portfolio. Pursuant to Commission direction statewide ME&O funding will be requested through a separate application to be filed August 3, 2012.

rate change a forecasted increase of 10 percent or more will result in the following year.[7] As discussed below, PG&E requests that the Commission issue a 2013 interim funding decision authorizing the level of energy efficiency funding to be recovered in gas PPP surcharge rates by October 1, 2012.

E. Disposition of Unspent Funds From Prior Program Cycles

The revenue requirement to be recovered in 2013 and 2014 rates shown in Table 6-1, above does not include a reduction for the unspent, uncommitted funds carried over from prior program years.[8] PG&E's total unspent and uncommitted funds from program years prior to 2010, as shown in PG&E's April 2012 CPUC Monthly Accounting Report and summarized in Table 6-4, below, equal $70.4 million.[9]

Decision 11-10-014 authorizes PG&E to use unspent, uncommitted energy efficiency program funds of $55.1 million and 2006-2009 Evaluation, Measurement and Verification (EM&V) funds of $13.5 million (subject to update) to backstop for the potential loss of energy efficiency funding under California Senate Bill (SB) 87. SB 87 allows the State to transfer up to $155 million in gas PPP surcharges collected by PG&E and the other gas utilities in order to help balance the State's 2011-2012 fiscal year budget through June 2012. When SB 87 passed, the Natural Resources Defense Council (NRDC) filed a petition challenging the legality of transferring PPP funds to the State General Fund to be used for purposes other than energy efficiency programs. Late last year, the Alameda Superior Court issued a decision granting NRDC's petition to prevent the State from implementing this legislation. On January 24, 2012, the deadline for appealing the court decision passed without any appeal by the State.

However, due to the fact that the CPUC is still holding PG&E's 3rd and 4th quarter 2011 and 1st quarter 2012 energy efficiency gas funds remittance to the State equal to $68 million, PG&E considers this amount encumbered and not available for refund to customers, at this time. Since the remaining unencumbered unspent and uncommitted funding is only $2.4 million. PG&E proposes to wait until the uncertainty of the sweep of the gas energy efficiency funds is resolved to address the disposition of its unspent, uncommitted funds.[10]

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7 Decision 04-08-010 at p. 7. If such an advice letter is necessary, PG&E would file to make it effective at the start of the next quarter in accordance Decision 04-08-010 and the requirements of the State BOE to whom PG&E remits the surcharges on a quarterly basis.

8 Decision 12-05-015, OP 120 directs the IOU to return any unspent 2010-2012 Statewide ME&O funds after addressing OPs 118 and 119 (the Decision erroneously references OPs 115 and 116). At this time, PG&E does not expect any 2010-2012 Statewide ME&O funds to remain unspent at the end of 2012.

9 Committed program funds for 2006-2009 are for incentives; for 1998-2005 are for Savings for Design and Commission program commitments.

10 If any pre-2010 unspent, uncommitted funds are included in rates during this portfolio cycle, PG&E proposes that the net benefit expense ratio adopted for the 2013-2104 portfolio be used to allocate the carryover funds between gas and electric customers.

TABLE 6-4
PACIFIC GAS AND ELECTRIC COMPANY
PRE-2010 UNSPENT/UNCOMMITTED ENERGY EFFICIENCYFUNDS
($000)

Line No.	Program Cycle	Electric Former PGC-EE	Electric Procurement	Total Electric	Gas	Total
1	Total Unspent/Uncommitted Funds(a)					
2	2009	$(17,087)	$(29,138)	$(46,226)	$(9,331)	$(55,556)
3	2006-2008	(3,201)	(4,398)	(7,599)	(602)	(8,201)
4	1998-2005	(4,620)	(2,343)	(6,963)	287	(6,676)
5	Total Pre-2010	$(24,909)	$(35,879)	$(60,788)	$(9,645)	$(70,433)
6	EM&V Unspent/Uncommitted Funds(a)					
7	2009			$(8,184)	$(1,676)	$(9,860)
8	2006-2008			(2,644)	(430)	(3,075)
9	1998-2005			–	–	–
10	Total Pre-2010			$(10,828)	$(2,107)	$(12,935)
11	Program Unspent/Uncommitted Funds					
12	2009			$(38,042)	$(7,654)	$(45,696)
13	2006-2008			(4,955)	(171,323)	(5,126)
14	1998-2005			(6,963)	286,856	(6,676)
15	Total Pre-2010			$(49,959)	$(7,539)	$(57,498)

(a) EM&V unspent uncommitted amounts reflect update received on June 6, 2012, of Staff's share of remaining 2006-2009 EM&V project funds.

F. Balancing Account Treatment for Financing Proposals

After the 2013-2014 Energy Efficiency Portfolio Application is approved, PG&E in accordance with its approved tariffs, will record an entry in its gas and electric On-Bill Financing balancing accounts to increase the level of the revolving loan fund by $32 million, as requested in Chapter 3. PG&E will file an advice letter to revise its tariffs, as needed, to implement other financing programs developed and implemented during the 2013-2014 program cycle.

G. Rate and Bill Impacts

Approval of PG&E's proposed revenue requirement for 2013 will result in a slight decrease of less than 1 percent in both electric and gas rates compared to authorized 2012 rates. The energy efficiency revenue requirement will be incorporated into gas and electric PPP charges to customers who are allocated these costs. Approval of PG&E's proposed demand response IDSM budget for 2013 will reduce the level of demand response IDSM authorized funding for 2012 and will be incorporated into electric distribution rates.[11]

[11] Due to the timing of Decision 12-04-045, demand response IDSM funding authorized for 2012 was not included in 2012 rates.

PG&E has provided an illustrative allocation of these electric and gas charges among customer classes compared to revenue in rates in 2012, as shown in Appendix E, Table 6.1.a for electric and Table 6.1.b for gas.

If the Commission approves PG&E's electric request, the bill for a typical bundled residential customer using 550 kilowatt-hours (kWh) per month in 2013 remains unchanged at $89.73 per month. The bill for a typical bundled residential customer using approximately twice the baseline allowance, or 850 kWh per month in 2013, would decrease one cent from $185.92 to $185.91 per month.

If the Commission approves PG&E's gas request, the bill for a typical bundled residential customer using 37 therms per month in 2013 would decrease $0.16 from $46.13 to $45.97.

H. 2013 Interim Funding

The Commission adopted in Decision 09-09-047 a rolling budget trigger mechanism to avoid a hiatus of funding in case a final decision authorizing the next portfolio cycle budgets is delayed. "A rolling trigger is approved, so that the average monthly level of energy efficiency expenditures of [IOUs] for the final year of a budget cycle may continue on a month to-month basis until the next energy efficiency portfolio budget is approved (or as specified in the Commission decision for the next energy efficiency portfolio budget cycle)."[12] Decision 09-09-047 provides authority for energy efficiency programs to continue to operate into 2013 at the average 2012 expenditure level, but does not clearly specify the authorized amounts to be recovered in rates effective January 1, 2013.

Because a final decision is not expected in this proceeding until the end of the year, PG&E requests that the Commission issue an interim decision authorizing PG&E to continue to recover energy efficiency funding in 2013 gas and electric rates at the rates set for 2012.[13] Any difference between the energy efficiency and demand response funding recovered in 2013 rates and amounts adopted in the final decision would be subject to balancing account adjustment and true-up in future rates. Authorization to set rates in 2013 at a level consistent with the 2012 rate components would avoid a rate increase in the electric component and the possible resetting of the 2013 gas surcharge rate to zero.

PG&E requests that this interim decision be issued by August 15, 2012, for the authorized funding to be incorporated in the 2013 AET (due September 1, 2012), but no later than October 1 to be incorporated into the 2013 gas PPP Surcharge advice letter, which is due October 31, 2012.

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12 D.09-09-047, p. 312, OP 45.

13 PG&E will file its 2013 AET advice letter by September 1, 2012, pursuant to Resolution E-4432, and its 2013 Gas PPP Surcharge advice letter by October 31, 2012. The 2012 level is equal to PG&E's average annual 2010-2012 Energy Efficient funding authorized in Decision 09-09-047 with the net benefit split of 82 percent/18 percent for electric and gas customers, respectively, as adopted in Advice Letter 3065-G-A&B/3562-E-A&B.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 7

STATEMENTS OF QUALIFICATIONS

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF MICHAEL A. ALEXANDER

Q 1 Please state your name and business address.

A 1 My name is Michael A. Alexander, and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am the manager of Measurement and Evaluation for Integrated Demand Side Management Programs within the Customer Care Business unit. With respect to Energy Efficiency Evaluation, my responsibilities include: collaborating with the California Public Utilities Commission (CPUC or Commission) staff and key stakeholders regarding Energy Efficiency Portfolio evaluation studies conducted by the Commission staff, as well as overseeing formative research conducted by the utility including customer market analysis, policy development, process evaluations and knowledge transfer to program implementers. I am also responsible for similar evaluation research activities related to all Demand Response (including load impact studies) and Distributed Generation programs at the Utility.

Q 3 Please summarize your educational and professional background.

A 3 I graduated from Saint Mary's College of California in 1977, with a bachelor of science degree in economics. Upon graduation, I joined the Energy Conservation and Services Department at PG&E as a customer representative. I have held positions of increasing responsibility in the areas of customer account management and program management, as well as supervisory and managerial positions in the Energy Efficiency, Account Services, Customer Research, Gas and Electric Engineering, and Gas and Electric Procurement Departments. I have previously testified before the California Public Utilities Commission in a number of proceedings.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony in support of PG&E's 2013-2014 Energy Efficiency Portfolio Application:

- Chapter 5, "Proposed Evaluation, Measurement and Verification Plan and Budget."

Q 5 Does this conclude your statement of qualifications?
A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF JANICE S. BERMAN

Q 1 Please state your name and business address.

A 1 My name is Janice S. Berman, and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am the senior director of Policy and Integrated Planning in the Customer Energy Solutions organization. I am responsible for providing policy guidance and review of budgets and metrics pertaining to the Customer Energy Solutions organization.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of arts degree in mathematics from Whitman College in 1986. I received a master of science degree in operations research from Stanford University in 1987. In 1998, I received a master of business administration degree from the Haas School of Business at the University of California, Berkeley.

I began my employment at PG&E in 1987. I was an analyst, senior analyst, and manager in PG&E's Electric Resource Planning Department, where I focused on long- and short-term planning of generation and demand-side management programs. In 1994 and 1995, I was a manager in the Rates Department, with a focus on non-tariffed products and services. In 1995 and 1996, I worked at PG&E Enterprises, supervising the activities of PG&E's unregulated subsidiaries, as assistant to the chief executive officer. In 1996 through 1998, I was manager of business development. In 1998 and 1999, I was director of Regulatory Strategy, where I focused on the reliability must-run contracts and associated case at the Federal Energy Regulatory Commission. In 1999 and 2000, I was director of Gas System Operations, where I was responsible for the 24-hour operation of PG&E's gas transmission pipeline, expansion planning, scheduling gas flows through California, developing, and maintaining the scheduling system, and negotiations with interconnected pipelines and power plants. In 2000 through 2002, I was director of Business Development, where I focused on negotiating agreements with telecommunications companies for installation of their equipment on PG&E's infrastructure. In 2002 through 2004, as director of Operations Revenue Requirements, I was responsible for developing and managing PG&E's General Rate Case. In 2004 through 2007, as director of Rates and Tariffs, I was responsible for determining PG&E's gas and electric rates, and for administering PG&E's tariffs. In 2007, as director of Pricing and Emerging Products, I was responsible for development of new pricing options and products. In 2008 through 2009, as senior director of Customer Energy Efficiency, Generation, and Revenue Development, I was responsible for determining PG&E's customer energy efficiency programs, distributed generation programs, and the development of non-tariffed product and service opportunities. I assumed my current position in January of 2010.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony in support of PG&E's 2013-2014 Energy Efficiency Portfolio Application:

- Chapter 1, "Executive Summary."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF JANA R. COREY

Q 1 Please state your name and business address.

A 1 My name is Jana R. Corey, and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am the director of PG&E's Policy Planning Department for Customer Energy Solutions. My responsibilities are to address short- and long-term strategic issues of significance to our customers.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of science degree in systems engineering, and a master of science degree in electrical engineering, from the University of California, Los Angeles. I also received a master of business administration degree from Stanford Graduate School of Business. I joined PG&E in 1991. From 1991 to 2000, I held various positions, including manager, in Field Operations and director of Regulatory Relations. From 2000 to 2003, I was director of Strategic Planning. From 2003 to 2009, I managed PG&E's SmartMeter™ Project. I am currently the Director of PG&E's Customer Energy Solutions Policy Planning Department.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony in support of PG&E's 2013-2014 Energy Efficiency Portfolio Application:

- Chapter 1A, "Proposed Alternatives."
- Chapter 2, "Portfolio Reflects Guidance."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF DUANE F. LARSON

Q 1 Please state your name and business address.

A 1 My name is Duane F. Larson, and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am director of Energy Efficiency Strategy in the Customer Energy Solutions organization responsible for creating customer focused design of energy efficiency programs.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of arts degree in political science from California State University, Hayward, and a certificate of project management from the University of California, Berkeley, California. I have worked on energy efficiency at PG&E for 31 years. My energy efficiency and conservation work at PG&E includes residential energy auditor, small business and commercial auditor, ZIP loan supervisor, residential contractor liaison, quality assurance auditor of residential programs, program manager of residential, commercial, agricultural and industrial energy surveys and education, senior program manager and team lead for the heating and cooling, and retrofit and renovation programs, manager of residential programs, and senior manager of portfolio integration and director of program implementation. I am a member in good standing of the Association of Energy Services Professionals, served on the Board of Directors for the National Fenestration Rating Council from 2001-2002, Consortium for Energy Efficiency and Home Energy Magazine. I currently serve on the Board of Directors for TopTen USA and the National Association of Energy Services Companies. I am a member of the national steering committee for the Appliance Standards Awareness Project.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony in support of PG&E's 2013-2014 Energy Efficiency Portfolio Application:

- Chapter 3, "Proposed Portfolio Fulfills Energy Efficiency Goals."

- Chapter 4, “Proposed Funding Request Is Reasonable.”

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF SANDRA LAWRIE

Q 1 Please state your name and business address.

A 1 My name is Sandra Lawrie, and my business address is Pacific Gas and Electric Company, 77 Beale Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am currently a principal regulatory case manager in the Regulatory Proceedings Department.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of science degree in conservation of natural resources from the University of California at Berkeley. I joined PG&E in 1980 as a residential conservation auditor and commercial marketing representative until March 1991. I was the gas core transport program manager from the program's inception in March 1991 until November 1995. I have been in the Regulatory Relations Department since November 1995 as a case manager and expert witness in various regulatory proceedings, including PG&E's Biennial Cost Allocation Proceedings and Public Purpose Program Surcharge Rulemaking.

I have been in my current position as principal regulatory case manager for PG&E's Energy Efficiency Rulemaking proceedings since October 2007 and sponsored cost recovery testimony in PG&E's 2009-2011 Energy Efficiency Portfolio Application 08-07-021, et.al.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony in support of PG&E's 2013-2014 Energy Efficiency Portfolio Application:

- Chapter 6, "Revenue Requirements and Cost Recovery."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY

2013-2014 ENERGY EFFICIENCY PORTFOLIO APPLICATION

LIST OF ACRONYMS

Acronyms Used in PG&E's 2013-2014 Energy Efficiency Testimony

ACEEE	- American Council for an Energy-Efficient Economy
ACR	- Assigned Commissioner Ruling
AET	- Annual Electric True-Up
AIM	- Assessment, Implementation and Monitoring
APEP	- Agricultural Pump Efficiency Services Program
ARRA	- American Recovery and Reinvestment Act
BCE	- Business Consumer Electronics
BIG	- Build It Green
CAEATFA	- California Alternative Energy and Advanced Transportation Financing Authority
CAHP	- California Advanced Homes Program
CALCTP	- California Advanced Lighting Controls Training Program
CALMAC	- California Measurement Advisory Council
CalPOP	- California Wastewater Process Optimization Program
CARE	- California Alternate Rates for Energy
CBIA	- California Building Industry Association
CCC	- California Community Colleges
CCSE	- California Center for Sustainable Energy
CE	- Cost Effectiveness
CEC	- California Energy Commission
CEF	- Credit Enhancement Fund
CEI	- Continuous Energy Improvement
CFL	- Compact Fluorescent Lamp
CHF	- CRHMFA Homebuyers Fund
CHPC	- California Housing Partnership Corporation
CIAG	- Compliance Improvement Advisory Group
CPEEP	- California Preschool Energy Efficiency Program
CPUC	- California Public Utilities Commission
CREMP	- Comprehensive Retail Energy Management Program
CRHMFA	- California Rural Home Mortgage Finance Authority
C&S	- Codes and Standards
CSU	- California State University
D.	- Decision
D&B	- Dun & Bradstreet
DCCCP	- Data Centers Cooling Controls Program
DEER	- Database for Energy Efficient Resources
DG	- Distributed Generation
DMQC	- Data Management and Quality Control
DOE	- Department of Energy
DR	- Demand Response
DRAM	- Distribution Revenue Adjustment Mechanism
DSM	- Demand-Side Management
E3	- Energy and Environmental Economics, Inc.
EA	- Ecology Action
EAI	- Enhanced Automation Initiative
ED	- Energy Division
EDI	- Electronic Data Interchange
EE	- Energy Efficiency
ESA	- Energy Savings Assistance
ET	- Emerging Technologies
ETCC	- Emerging Technologies Coordinating Council
EM&V	- Evaluation, Measurement and Verification
EUC	- Energy Upgrade California
EUL	- Effective Useful Life
FF&U	- Franchise Fees and Uncollectible Accounts Expense
FI	- Financial Institution
FT	- Financial Transaction
FTC	- Federal Trade Commission
GHG	- Greenhouse gas
GL	- General Ledger
GP	- Government Partnership
GRC	- General Rate Case
GSIA	- Gross Savings Installation Adjustment
GWh	- Gigawatt-hour
HEEP	- Healthcare Energy Efficiency Program
HEER	- Home Energy Efficiency Rebate
HIM	- High-Impact Measure
HMG	- Heschong Mahone Group, Inc.
HUD	- Housing and Urban Development
HVAC	- Heating, Ventilation and Air Conditioning
IDEEA	- Innovative Designs for Energy Efficiency Approaches
IDSM	- Integrated Demand-Side Management
IE	- Independent Evaluator
IOU	- Investor-Owned Utility

IEPR	- Integrated Energy Policy Report
IRBD	- Interest Rate Buy-Down
IRCx	- Industrial Recommissioning Program
IT	- Information Technology
JPA	- Joint Powers Authority
kWh	- kilowatt-hour
LED	- Light Emitting Diode
LGEAR	- Local Government Energy Action Resource
LGP	- Local Government Partnership
LGSEC	- Local Government Sustainable Energy Coalition
LIIF	- Low Income Investment Fund
LLR	- Loan Loss Reserve
LMT	- Lighting Market Transformation
MBCx	- Monitoring-Based Commissioning
MBPCx	- Monitoring Based Persistence Commissioning
ME&O	- Marketing, Education and Outreach
MFEER	- Multifamily Energy Efficiency Rebates
MIDI	- Moderate Income Direct Install
MIST	- Moderate Income Sustainable Technology Program
MMth	- Million Therms
MT	- Market Transformation
MTI	- Market Transformation Indicator
MW	- Megawatt
MWh	- megawatt-hour
NRDC	- Natural Resources Defense Council
OBF	- On-Bill Financing
OBR	- On-Bill Repayment
OLEEP	- Ozone Laundry Energy Efficiency Program
OP	- Ordering Paragraph
PAC	- Program Administrator Cost
PAG	- Program Advisory Group
PEAT	- Progressive Energy Audit Tool
PECI	- Portland Energy Conservation, Inc.
PGC	- Public Goods Charge
PGC-EE	- Energy Efficiency portion of Public Goods Charge funding
PG&E	- Pacific Gas and Electric Company
PIP	- Program Implementation Plan
PLA	- Plug Load and Appliances
PPP	- Public Purpose Program
PPPEEBA	- Public Purpose Program Energy Efficiency Balancing Account
P.U.	- Public Utilities
QI	- Quality Installation
QM	- Quality Maintenance
QuEST	- Quantum Energy Services and Technologies
RD&D	- Research, Development, and Demonstration
READI	- Remote Ex Ante Data Interface
REEP	- Nexant Refinery Energy Efficiency Program
RFA	- Request for Abstract
RFP	- Request for Proposal
RHA	- Richard Heath and Associates
RNC	- Residential New Construction
ROI	- Return on Investment
RRIM	- Risk Reward Incentive Mechanism
RSG	- Resource Solutions Group
RUL	- Remaining Useful Life
SA	- Service Agreement
SB	- Senate Bill
SBRA	- Systems Building Research Alliance
SCE	- Southern California Edison Company
SCG	- Southern California Gas Company
SDG&E	- San Diego Gas & Electric Company
SMB	- small and medium business
SMUD	- Sacramento Municipal Utility District
SoCalGas	- Southern California Gas Company
SPREE	- California Statewide Program for Residential Energy Efficiency
Staff	- Energy Division Staff
Strategic Plan	- Long Term Energy Efficiency Strategic Plan
TEAA	- The Energy Alliance Association
TRC	- Total Resource Cost
TRIP	- Technology Resource Innovation Program
UC	- University of California
VFD	- Variable Frequency Drive
WE&T	- Workforce Education and Training
WHUP	- Whole Home Upgrade Program
ZNE	- Zero Net Ener

APPENDIX A

PORTFOLIO COST-EFFECTIVENESS ANALYSIS

APPENDIX A.1

List of E3 Calculator Files

Program	EEGA Code	E3 Filename	Total
2013-14 Subprogram E3 List			
Residential	PGE21001	Residential Energy Advisor_Output.xls	1
	PGE21002	Plug Load and Appliances_Output.xls	1
	PGE21003	Multifamily Energy Efficiency Rebates Program_Output.xls	1
	PGE21004	Whole Home Upgrade Program_Output.xls	1
	PGE21005	Residential New Construction_Output.xls	1
	PGE21006	Residential HVAC_Output.xls	1
Res. Total			**6**
Commercial	PGE21011	Commercial Calculated Incentives_Output.xls	1
	PGE21012	Commercial Deemed Incentives_Output.xls	1
	PGE21014	Commercial Energy Advisor_Output.xls	1
	PGE21015	Commercial HVAC_Output.xls	1
Com. Total			**4**
Industrial	PGE21021	Industrial Calculated Incentives_Output.xls	1
	PGE21022	Industrial Deemed Incentives_Output.xls	1
	PGE21024	Industrial Energy Advisor_Output.xls	1
Ind. Total			**3**
Agricultural	PGE21031	Agricultural Calculated Incentives_Output.xls	1
	PGE21032	Agricultural Deemed Incentives_Output.xls	1
	PGE21034	Agricultural Energy Advisor_Output.xls	1
Ag. Total			**3**
Codes and Standards	PGE2105	C and S_Output.xls	1
C and S Total			**1**
Lighting	PGE21041	Primary Lighting_Output.xls	1
	PGE21042	Lighting Innovation_Output.xls	1
Lighting Total			**2**
Government Partnerships	PGE21101	California Community Colleges_Output.xls	1
	PGE211010	Fresno_Output.xls	1
	PGE211011	Kern_Output.xls	1
	PGE211012	Madera_Output.xls	1
	PGE211013	Marin County_Output.xls	1
	PGE211014	Mendocino County_Output.xls	1
	PGE211015	Napa County_Output.xls	1
	PGE211016	Redwood Coast_Output.xls	1

Program	EEGA Code	E3 Filename	Total
	PGE211017	San Joaquin County_Output.xls	1
	PGE211018	San Luis Obispo County_Output.xls	1
	PGE211019	San Mateo County_Output.xls	1
	PGE21102	University of California_OR_California State University_Output.xls	1
	PGE211020	Santa Barbara_Output.xls	1
	PGE211021	Sierra Nevada_Output.xls	1
	PGE211022	Sonoma County_Output.xls	1
	PGE211023	Silicon Valley_Output.xls	1
	PGE211024	San Francisco_Output.xls	1
	PGE21103	State of California_Output.xls	1
	PGE21104	Department of Corrections and Rehabilitation_Output.xls	1
	PGE21106	Local Government Energy Action Resources (LGEAR)_Output.xls	1
	PGE21107	Association of Monterey Bay Area Governments (AMBAG)_Output.xls	1
	PGE21108	City of San Joaquin_Output.xls	1
	PGE21109	East Bay_Output.xls	1
GP Total			**23**
Third Parties	PGE21007	California New Homes Multifamily_Output.xls	1
	PGE21008	Enhance Time Delay Relay_Output.xls	1
	PGE21009	Direct Install for Manufactured and Mobile Homes_Output.xls	1
	PGE210110	Monitoring-Based Persistence Commissioning_Output.xls	1
	PGE210111	LodgingSavers_Output.xls	1
	PGE210112	School Energy Efficiency_Output.xls	1
	PGE210113	Energy Fitness Program_Output.xls	1
	PGE210114	Energy Savers_Output.xls	1
	PGE210115	RightLights_Output.xls	1
	PGE210116	Small Business Commercial Comprehensive_Output.xls	1
	PGE210117	Energy-Efficient Parking Garage_Output.xls	1
	PGE210118	Furniture Store Energy Efficiency_Output.xls	1
	PGE210119	LED Accelerator_Output.xls	1
	PGE210120	Monitoring-Based Commissioning_Output.xls	1
	PGE210121	GreenVent for Energy-Efficient Kitchens_Output.xls	1
	PGE210122	Casino Green_Output.xls	1
	PGE210123	Healthcare Energy Efficiency Program_Output.xls	1
	PGE210124	Ozone Laundry Energy Efficiency_Output.xls	1
	PGE210125	California Preschool Energy Efficiency Program_Output.xls	1
	PGE210126	K-12 Private Schools and Colleges Audit Retro_Output.xls	1

Program	EEGA Code	E3 Filename	Total
	PGE21016	Air Care Plus_Output.xls	1
	PGE21017	Boiler Energy Efficiency Program_Output.xls	1
	PGE21018	EnergySmart Grocer_Output.xls	1
	PGE21019	Enhanced Automation Initiative_Output.xls	1
	PGE210210	Industrial Recommissioning Program_Output.xls	1
	PGE21025	California Wastewater Process Optimization_Output.xls	1
	PGE21026	Energy Efficiency Services for Oil Production_Output.xls	1
	PGE21027	Heavy Industry Energy Efficiency Program_Output.xls	1
	PGE21028	Industrial Compressed Air Program_Output.xls	1
	PGE21029	Refinery Energy Efficiency Program_Output.xls	1
	PGE210310	Dairy Industry Resource Advantage Pgm_Output.xls	1
	PGE210311	Process Wastewater Treatment EM Pgm for Ag Food Processing_Output.xls	1
	PGE21035	Dairy Energy Efficiency Program_Output.xls	1
	PGE21036	Industrial Refrigeration Performance Plus_Output.xls	1
	PGE21037	Light Exchange Program_Output.xls	1
	PGE21038	Wine Industry Efficiency Solutions_Output.xls	1
	PGE21039	Comprehensive Food Process Audit and Resource Efficiency Pgm_Output.xls	1
3P Total			**37**
Sub-Program E3 Summary without Spillover.xls			**1**
Sub-Program E3 Total			**80**
Aggregated E3s without Spill Over			
Aggregated Channel E3s		Core without Spillover Input-Output.xls	1
		3P without Spillover Input-Output.xls	1
		GP without Spillover Input-Output.xls	1
		C and S_Output.xls	1
		Aggregated Channel E3 Summary without Spillover.xls	1
Aggregated Channel Total			5
Aggregated Portfolio E3		Portfolio without Spillover Input-Output.xls	1
		C and S_Output.xls	1
		Aggregated Portfolio E3 Summary without Spillover.xls	1
Aggregated Portfolio total			3
Aggregated E3s without Spill Over Total			8
Aggregated E3s with Spill Over			
Aggregated Channel E3s		Core with Spillover Input-Output.xls	1

Program	EEGA Code	E3 Filename	Total
		3P with Spillover Input-Output.xls	1
		GP with Spillover Input-Output.xls	1
		C and S_Output.xls	1
		Aggregated Channel E3 Summary with Spillover.xls	1
Aggregated Channel Total			5
Aggregated Portfolio E3		Portfolio with Spillover Input-Output.xls	1
		C and S_Output.xls	1
		Aggregated Portfolio E3 Summary with Spillover.xls	1
Aggregated Portfolio total			3
Roll-up E3s with Spill Over Total			8
2013-2014 E3 List Total			**96**

The following appendices are available electronically:

- Appendix A.2 – Portfolio Cost-Effectiveness Evaluation – Attachment 1 (Spillover Estimates for Selected 2013-2014 Energy Efficiency IOU Programs)
- Appendix A.3 – E3 Calculator Files

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select “Energy Efficiency 2013-2014 Portfolio” from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search

APPENDIX B

WORKPAPERS

APPENDIX B.1

Summary Table of PG&E 2013-2014 Non-DEER Workpapers (151 Total)				
Work Paper Number	**Description**	**Portfolio Estimate**	**Market Sector**	**Delivery Mechanism**
PGE3PLTG172	Linear Fluorescent Fixture, DI	**HIM (1+%)**	RCIA	DI
PGE3PLTG173	Compact Fluorescent Lamps, Downstream & DI	**HIM (1+%)**	RCIA	DOWN, DI
PGECOAGR112	Low Pressure Sprinkler Nozzles	**HIM (1+%)**	A	DOWN
PGECOAPP104	Energy Efficient Televisions	**HIM (1+%)**	RC	UP
PGECOAPP114	High Efficiency Clothes Washer - Res	**HIM (1+%)**	R	DOWN
PGECOAPP119	Appliance Recycling	**HIM (1+%)**	R	DOWN
PGECODHW104	Residential Water Heater	**HIM (1+%)**	R	DOWN
PGECODHW113	Low Flow Showerhead Thermostatic Valve	**HIM (1+%)**	R	DOWN, DI
PGECOHVC104	Pipe Insulation	**HIM (1+%)**	I	DOWN
PGECOLTG107	Upstream CFL Residential	**HIM (1+%)**	R	UP
PGECOLTG111	Upstream CFL Nonresidential	**HIM (1+%)**	C	UP
PGECOLTG114	Linear Fluorescent Interior Fixture	**HIM (1+%)**	CI	DOWN
PGECOPRO102	Steam Traps	**HIM (1+%)**	CI	DOWN
PGECOPRO107	Boiler Tune-Up for Drycleaners	**HIM (1+%)**	C	DOWN
PGECOREF103	Strip Curtains	**HIM (1+%)**	CI	DOWN
PGECOAGR102	Greenhouse IR Film	Almost HIM (0.5%-1%)	A	DOWN
PGECOAGR111	Sprinkler to Drip Irrigation	Almost HIM (0.5%-1%)	A	DOWN
PGECOCOM105	Network Power Mgmt Software	Almost HIM (0.5%-1%)	C	DOWN
PGECODHW103	Storage Water Heater	Almost HIM (0.5%-1%)	C	DOWN
PGECOLTG120	Occupancy Sensors	Almost HIM (0.5%-1%)	CI	DOWN
PGECOLTG134	Occupancy Sensors - Fixture-Integrated High Bay	Almost HIM (0.5%-1%)	CI	DOWN
PGECOPRO101	Water and Steam Process Boiler	Almost HIM (0.5%-1%)	I	DOWN
PGE3PAGR117	Dairy Ventilation Fans	Less than 0.5%	A	DI
PGE3PDHW116	Faucet Aerator	Less than 0.5%	R	DI
PGE3PDHW117	Low Flow Showerhead-3P	Less than 0.5%	R	DI
PGE3PHVC149	PTAC/PTHP Controller	Less than 0.5%	C	DI
PGE3PHVC150	Enhanced Time Delay Relay	Less than 0.5%	C	DI
PGE3PHVC151	Economizer Repair	Less than 0.5%	C	DI
PGE3PHVC152	Economizer Control	Less than 0.5%	C	DI
PGE3PHVC153	Programmable Thermostat	Less than 0.5%	C	DI

Work Paper Number	Description	Portfolio Estimate	Market Sector	Delivery Mechanism
PGE3PHVC156	Condenser Cleaning	Less than 0.5%	C	DI
PGE3PHVC157	Unoccupied Supply Fan Control	Less than 0.5%	C	DI
PGE3PHVC158	Evaporator Coil Cleaning	Less than 0.5%	C	DI
PGE3PHVC159	Residential Duct Test and Sealing	Less than 0.5%	R	DI
PGE3PHVC160	Refrigerant Charge and Airflow	Less than 0.5%	R	DI
PGE3PLTG166	Yard Light w/Photocell	Less than 0.5%	A	DI
PGE3PLTG167	LED Open Sign	Less than 0.5%	C	DI
PGE3PLTG168	Vending Machine Controller Uncooled	Less than 0.5%	C	DI
PGE3PLTG169	Case Lighting Time Clock	Less than 0.5%	C	DOWN
PGE3PLTG171	Walk-in LED	Less than 0.5%	C	DOWN
PGE3PLTG175	Low Wattage T8, DI	Less than 0.5%	CI	DI
PGE3PLTG176	Linear Fluorescent De-Lamping	Less than 0.5%	CI	DI
PGE3PLTG177	LED MR-16 Lamps, DI	Less than 0.5%	RC	DI
PGE3PLTG178	LED PAR Lamps, DI	Less than 0.5%	RC	DI
PGE3PLTG179	LED Candelabra Replacements, DI	Less than 0.5%	R	DI
PGE3PLTG180	LED Globes, DI	Less than 0.5%	R	DI
PGE3PMOT102	Time Delay Relay Motor	Less than 0.5%	RC	DI
PGE3PPRO108	Glycol Pump VFD	Less than 0.5%	CIA	DOWN
PGE3PPRO109	Pool Cover	Less than 0.5%	C	DOWN
PGE3PREF114	Glycol Pipe Insulation	Less than 0.5%	CIA	DOWN
PGE3PREF115	Glycol Tank Insulation	Less than 0.5%	CIA	DOWN
PGE3PREF116	Add doors to Open Medium Temp Cases	Less than 0.5%	C	DOWN
PGE3PREF117	Refrigeration Case Compressor Retrofit	Less than 0.5%	C	DOWN
PGE3PREF118	Refrigeration Case Evap Cooled Condenser	Less than 0.5%	C	DOWN
PGE3PREF119	Refrigeration Case Oversized Condenser	Less than 0.5%	C	DOWN
PGE3PREF120	Refrigeration Case SCT Control	Less than 0.5%	C	DOWN
PGE3PREF121	Refrigeration Case SST Control	Less than 0.5%	C	DOWN
PGE3PREF122	Refrigeration Coffin Retrofit	Less than 0.5%	C	DOWN
PGE3PREF123	ECM for Walk-In Evaporator Fan - 3P	Less than 0.5%	C	DI
PGE3PREF124	Display Case ECM Motor Retrofit	Less than 0.5%	C	DOWN
PGE3PREF125	Reach In Controller	Less than 0.5%	C	DI
PGE3PREF126	ECM for Walk-In Evaporator Fans with Fan Controller - 3P	Less than 0.5%	C	DI
PGE3PREF127	Add doors to Open Walk-in Coolers	Less than 0.5%	C	DOWN
PGE3PREF128	Medium Temp Open Case Retrofit	Less than 0.5%	C	DOWN
PGE3PREF129	Refrigeration Case Single Compressor Floating Head Pressure	Less than 0.5%	C	DOWN

Work Paper Number	Description	Portfolio Estimate	Market Sector	Delivery Mechanism
PGECOAGR101	Greenhouse Thermal Curtain	Less than 0.5%	A	DOWN
PGECOALL100	Custom Measures	Less than 0.5%	CIA	DOWN
PGECOALL101	Occupancy Sensor Plug Load	Less than 0.5%	RC	DOWN
PGECOALL102	Nonresidential Audits	Less than 0.5%	C	DOWN
PGECOALL104	Prescriptive Whole House Retrofit	Less than 0.5%	R	DOWN
PGECOAPP115	High Efficiency Clothes Washer - NR	Less than 0.5%	C	DOWN
PGECOAPP120	Clothes Washer MF Common Area	Less than 0.5%	R	DOWN
PGECOAPP123	Ozone Laundry	Less than 0.5%	CI	DOWN
PGECOAPP124	Energy Efficient Refrigerators	Less than 0.5%	R	DOWN
PGECOBLD104	Residential Cool Roofs	Less than 0.5%	R	DOWN
PGECOBLD106	Wall Insulation Nonres	Less than 0.5%	C	DOWN
PGECOBLD108	Reflective Window Film	Less than 0.5%	C	DOWN
PGECODHW101	Commercial Boiler	Less than 0.5%	C	DOWN
PGECODHW102	Instantaneous Water Heater	Less than 0.5%	C	DOWN
PGECODHW106	Electric Storage Water Heater - Res	Less than 0.5%	R	DOWN
PGECODHW114	High Effic. Central Storage Type Nat. Gas Water Heater-Multifamily	Less than 0.5%	R	DOWN
PGECODHW115	Boiler Controllers	Less than 0.5%	C	DOWN
PGECOFST100	Combination Oven, Commercial Electric and Gas	Less than 0.5%	C	DOWN
PGECOFST101	Convection Oven, Commercial Electric and Gas	Less than 0.5%	C	DOWN
PGECOFST102	Commercial Fryer - Electric and Gas	Less than 0.5%	C	DOWN
PGECOFST103	Griddles, Commercial Electric and Gas	Less than 0.5%	C	DOWN
PGECOFST104	Steamer Cookers, Commercial Electric and Gas	Less than 0.5%	C	DOWN
PGECOFST105	Insulated Hot Food Holding Cabinet - Electric	Less than 0.5%	C	DOWN
PGECOFST108	Commercial Ice Machines	Less than 0.5%	C	DOWN
PGECOFST109	Commercial Rack Ovens	Less than 0.5%	C	DOWN
PGECOFST116	Demand Ventilation controls	Less than 0.5%	C	DOWN
PGECOFST117	Commercial Conveyor Oven - Gas	Less than 0.5%	C	DOWN
PGECOFST121	Hi. Density Univ. Holding Cab't System-Electric	Less than 0.5%	C	DOWN
PGECOFST122	Turbopots	Less than 0.5%	C	DOWN
PGECOFST123	Reach In Refrigerators Comm	Less than 0.5%	C	DOWN
PGECOHVC101	Space Heating Boilers	Less than 0.5%	C	DOWN
PGECOHVC106	Variable Frequency Drives for HVAC Fans	Less than 0.5%	C	DOWN
PGECOHVC114	Package Terminal Air Conditioners and Heat Pumps	Less than 0.5%	C	DOWN

Work Paper Number	Description	Portfolio Estimate	Market Sector	Delivery Mechanism
PGECOHVC120	Air-Cooled Packaged Chillers	Less than 0.5%	C	DOWN
PGECOHVC125	Variable Speed Motor - Air Handler - nonres	Less than 0.5%	C	DOWN
PGECOHVC126	Unitary Air-Cooled Air Conditioners/Heat Pumps < 65 kBtu/h	Less than 0.5%	C	DOWN
PGECOHVC128	Unitary Air-Cooled Air Conditioners/Heat Pumps >= 65 kBtu/h	Less than 0.5%	C	DOWN
PGECOHVC134	Whole House Fans	Less than 0.5%	R	DOWN
PGECOHVC138	Non Residential Quality Maintenance	Less than 0.5%	C	DOWN
PGECOHVC139	Residential Quality Maintenance	Less than 0.5%	R	DOWN
PGECOHVC142	Non Residential Variable Refrigerant Flow	Less than 0.5%	C	DOWN
PGECOHVC143	Enhanced Ventilation for Packaged AC	Less than 0.5%	C	DOWN
PGECOHVC144	HVAC Fans Cogged V-belt Replacement	Less than 0.5%	C	DOWN
PGECOHVC145	95 AFUE Furnace Res	Less than 0.5%	R	DOWN
PGECOHVC146	95 AFUE Furnace Nonres	Less than 0.5%	C	DOWN
PGECOHVC147	97 AFUE Furnace Res	Less than 0.5%	R	DOWN
PGECOHVC148	97 AFUE Furnace Nonres	Less than 0.5%	C	DOWN
PGECOHVC161	Unitary Water and Evaporatively Cooled Air Conditioners	Less than 0.5%	CI	DOWN
PGECOHVC162	Unitary Water and Evaporatively Cooled Heat Pumps	Less than 0.5%	CI	DOWN
PGECOHVC163	Direct Evaporative Coolers- Res	Less than 0.5%	R	DOWN
PGECOHVC164	Direct-indirect Evaporative Coolers- Res	Less than 0.5%	R	DOWN
PGECOLTG101	Bi-Level Light Fixture	Less than 0.5%	C	DOWN
PGECOLTG103	Compact Fluorescent Reflector Lamp R30/R40	Less than 0.5%	C	DOWN
PGECOLTG109	Compact Fluorescent Exterior Fixture	Less than 0.5%	C	DOWN
PGECOLTG110	Compact Fluorescent Interior Fixture	Less than 0.5%	C	DOWN
PGECOLTG113	Interior Induction Fixture	Less than 0.5%	C	DOWN
PGECOLTG116	Low Wattage T8	Less than 0.5%	C	DOWN
PGECOLTG128	Time Clock: Lighting	Less than 0.5%	CIA	DOWN
PGECOLTG129	Photocell: Exterior Lighting	Less than 0.5%	CIA	DOWN
PGECOLTG130	Occupancy Sensors - Wall Box MF	Less than 0.5%	R	DOWN
PGECOLTG131	Compact Fluorescent Fixture - High Bay and Other Large	Less than 0.5%	CI	DOWN

Work Paper Number	Description	Portfolio Estimate	Market Sector	Delivery Mechanism
PGECOLTG135	Occupancy Sensors - Fixture-Integrated Low Bay	Less than 0.5%	CI	DOWN
PGECOLTG139	LED Surface, Pendant and Downlight	Less than 0.5%	RC	DOWN
PGECOLTG140	LED MR-16 Lamps	Less than 0.5%	RC	UP, DOWN
PGECOLTG141	LED PAR Lamps	Less than 0.5%	RC	UP, DOWN
PGECOLTG151	LED Outdoor Area and Street Lighting	Less than 0.5%	C	DOWN
PGECOLTG154	Interior Pulse Start MH Fixture	Less than 0.5%	CI	DOWN
PGECOLTG155	Exterior Pulse Start MH Fixture	Less than 0.5%	CI	DOWN
PGECOLTG158	Exterior Induction Fixtures	Less than 0.5%	CI	DOWN
PGECOLTG160	High Performance Troffer	Less than 0.5%	CI	DOWN
PGECOLTG162	3-way CFL Lamps	Less than 0.5%	R	UP
PGECOLTG163	LED Candelabra Replacements	Less than 0.5%	R	UP, DOWN
PGECOLTG164	LED Globes	Less than 0.5%	R	UP, DOWN
PGECOLTG174	LED Ref Case Lighting w/ Occ Sensors	Less than 0.5%	C	DOWN, DI
PGECOPRO103	Tank Insulation	Less than 0.5%	CI	DOWN
PGECOPRO105	Commercial Pool and Spa Heater	Less than 0.5%	C	DOWN
PGECOPRO106	Direct Contact Water Heater	Less than 0.5%	C	DOWN
PGECOPUM102	Variable Speed Pool Pump - Residential	Less than 0.5%	R	DOWN
PGECOREF101	Night Covers for Display Cases (Low and Medium Temp. Cases)	Less than 0.5%	C	DOWN
PGECOREF104	New Refrigeration Display Cases with Doors	Less than 0.5%	C	DOWN
PGECOREF106	Evaporator Fan Controller Walk-In	Less than 0.5%	C	DOWN
PGECOREF108	Anti-Sweat Heater (ASH) Controls	Less than 0.5%	C	DOWN
PGECOREF109	Efficient Evaporator Fan Motor - ECM and PSC	Less than 0.5%	C	DOWN
PGECOREF110	Auto-Closer for Main Cooler and Freezer Doors	Less than 0.5%	C	DOWN
PGECOREF111	Vending Machine Controller	Less than 0.5%	C	DOWN, DI
PGECOREF123	Low Anti Sweat Heat Display Doors	Less than 0.5%	C	DOWN

Work Paper Number	Description	Portfolio Estimate	Market Sector	Delivery Mechanism
Key				
R = Residential				
C = Commercial				
I = Industrial				
A = Agricultural				
UP = UPSTREAM				
DOWN = DOWNSTREAM				
DI = DIRECT INSTALL				

The following appendix is available electronically:

- Appendix B.2 – Workpapers Files

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select "Energy Efficiency 2013-2014 Portfolio" from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search

APPENDIX C

PROGRAM IMPLEMENTATION PLANS AND ADDENDUMS

APPENDIX C
PROGRAM IMPLEMENTATION PLANS AND ADDENDUMS

The following documents are available electronically:

1. Residential Program
2. Commercial Program
3. Industrial Program
4. Agricultural Program
5. Lighting Program
6. Codes and Standards Program
7. Emerging Technology Program
8. Workforce Education and training Program
9. DSM Coordination and Integration Program
10. Financing Program
11. Government Partnership Programs
12. Third Party Programs

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select “Energy Efficiency 2013-2014 Portfolio” from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search

APPENDIX D

BUDGET AND SAVINGS PLACEMAT TABLES

APPENDIX D
BUDGET AND SAVINGS PLACEMAT TABLES

The following appendices are available electronically:

- Appendix D.1 – Budget Placemat Table
- Appendix D.2 – Savings Placemat Table

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select “Energy Efficiency 2013-2014 Portfolio” from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search

APPENDIX E

2013-2014 ENERGY EFFICIENCY PORTFOLIO TABLES

APPENDIX E
2013-2014 ENERGY EFFICIENCY PORTFOLIO TABLES

The following tables are available electronically:

- Table 1.1 Annual Svgs
- Table 1.2 Svgs by End Use
- Table 1.3 Svgs by Mkt Sector
- Table 1.4a Measure Groups
- Table 1.4 Pgm Mea Grpg
- Table 1.5 Partnership Mea Gp
- Table 1.6 3rd Party Mea Gp
- Tables 1.7 & 1.7a TRC
- Tables 1.8 & 1.8a PAC
- Table 1.9 Program List
- Tables 2.1 thru 2.3 Emissions
- Tables 2.4 & 2.4a GBI
- Table 3.1 2013-14 Cum Svgs
- Table 3.2 2006-14 Cum Svgs
- Table 3.3 2010-12 Lifecycle Svg
- Table 3.4 3P Pgms
- Table 3.5 Partnerships
- Table 4.1 Portfolio FILED
- Table 4.2 Budget FILED
- Table 5.1 EM&V Budget
- Table 6.1 Bill Payer Impacts
- Table 6.1a-b Rates Rev
- Table 6.2(Rev) Funding Source
- Table 7 Table of Compliance (See Appendix G)
- Table 8 Portfolio Potential
- Table 9 Potential 2024

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select "Energy Efficiency 2013-2014 Portfolio" from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search

APPENDIX F

ADDITIONAL INFORMATION

APPENDIX F
ADDITIONAL INFORMATION

The following appendices are available electronically:

- Appendix F.1.A (public version)
  - Procurement Table (public version)
  - Standard Form Contract
- Appendix F.1.B (confidential version; provided to CPUC under Public Utilities Code Section 583 and General Order 66-C)
  - Procurement Table (confidential version)
  - Contracts (confidential version)
- Appendix F.2
  - Local Government Partnership Assessment

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select "Energy Efficiency 2013-2014 Portfolio" from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search

APPENDIX F.3

REBATE APPLICATION EXEMPLAR

Heating, Ventilation and Air Conditioning Programs (OPs 50 – 53).

The Decision requires the IOUs to institute the following changes to their documentation for programs involving HVAC installations or replacements: (a) submittal of the permit number for the HVAC installation or replacement; and (b) a contractor certification that appropriate permits have been obtained (OP 53). These two requirements will necessitate a change to PG&E's rebate applications for residential, multi-family, and business customers. PG&E proposes to revise their rebate applications to add the contractor box shown below. PG&E will implement the revisions so that the contractor box is on the rebate applications by January 1, 2013.

CONTRACTOR SIGNATURE (if applicable)

SKIP THIS SECTION IF THIS IS NOT A HVAC INSTALLATION OR REPLACEMENT

I certify I am a licensed contractor and have followed applicable permitting requirements, as appropriate, for this HVAC installation or replacement.

Permit # ___________ Agency ________________________

SIGN HERE

Signature _______________________ Date ___________ Name (Print) ____________________

APPENDIX G

TABLE OF COMPLIANCE

APPENDIX G
TABLE OF COMPLIANCE

The following document is available electronically:

- Appendix G – Table of Compliance

The documents may be accessed as follows:

1) Go to: htpp://apps.pge.com/regulation/
2) Click on "Search for Public Case Documents"
3) Select “Energy Efficiency 2013-2014 Portfolio” from the dropdown menu
4) Select 07/02/2012 and PGE as the party to narrow the search criteria
5) Click Search