Application No.:	A.08-07-021
Exhibit No.:	SCE-1 Second Amended
Witnesses:	G. Rodrigues D. Jacot C. Wynn G. Ander N. Jenkins S. Kiner S. Galanter D. Arambula M. Brown J. Holmes

SOUTHERN CALIFORNIA EDISON

An *EDISON INTERNATIONAL* Company

(U 338-E)

~~*Revised*~~ *Second Amended Testimony of Southern California Edison Company In Support of Its ~~2009-2011~~ 2010-2012 Application for Approval of Its Proposed Energy Efficiency Program Plans and Public Goods Charge and Procurement Funding Requests*

Before the

Public Utilities Commission of the State of California

Rosemead, California
July 2, 2009~~March 2, 2009~~

LAW-#1594981

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I.

INTRODUCTION AND EXECUTIVE SUMMARY

In this Second Amended Application (Application) and supporting Testimony and Exhibits, Southern California Edison Company (SCE) requests approval of its proposed energy efficiency program plans, its proposal to establish a 2010-2012 program cycle, its proposed energy efficiency policy rule changes, and SCE's funding requests.[1] SCE hereby amends the testimony and exhibits submitted on March 2, 2009, in its Revised 2009-2011 Proposed Energy Efficiency Program Plans And Funding Requests[2] (First Amended Plan) and the subsequent additional amendments to this Application filed on March 12, 2009,[3] and March 25, 2009.[4] This amendment partially replaces the First Amended Plan as detailed in Exhibit SCE-11 of this Application, dated July 2, 2009. SCE requests authority to fund these proposed programs through: (1) its existing Energy Efficiency-related Public Goods Charge (PGC); (2) its existing Procurement Energy Efficiency-related Public Purpose Programs Charge (PPPC); and (3) an increase in its Procurement Energy Efficiency-related PPPC.

As discussed below, the 2009-2011 Utility Energy Efficiency Application process has been critically derailed by a series of delays and extensive modifications to Application requirements. It is no longer feasible to accomplish an ambitious 36-month plan in the remaining 24-27 months and meet the 2006-2011 cumulative goals. SCE estimates the regulatory process, including program solicitations, will have taken more than two years before a final Decision is issued on what is now a two-year program cycle. Consequently, in order to provide SCE and its partners with a reasonable opportunity to achieve the cumulative energy savings goals and make progress toward the long-term strategies included

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1 All references in this Testimony to portfolio, program plan, plan, strategy scenario, refer to SCE's proposed 2010-2012 energy efficiency program plans.

2 Southern California Edison Company's Application For Approval of Its Revised 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge And Procurement Funding Requests, dated March 2, 2009.

3 Southern California Edison Company's First Amendment to its Amended Application for Approval of its 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge and Procurement Funding Request, dated March 12, 2009.

4 Southern California Edison Company's Second Amendment to its Amended Application for Approval of its 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge and Procurement Funding Request, dated March 25, 2009.

in the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan), SCE proposes a full three-year program cycle of 2010-2012, with a 2007-2012 cumulative goal. This adjustment will allow SCE to execute a full, three-year program plan as originally designed and expected by the energy efficiency stakeholders and the marketplace.

SCE will diligently work to meet the annual cumulative energy savings and demand reduction goals ultimately set forth by the California Public Utilities Commission (Commission). However, even assuming the adoption of a 2010-2012 cycle, SCE recognizes there is still considerable risk of not being able to achieve the ambitious cumulative energy savings goals, due to the regulatory delays in the approval of SCE's Application and changes in the policies and counting resulting from Decision (D.) 09-05-037.

In Decision (D.)07-10-032 the Commission set forth the original schedule for the 2009-2011 Energy Efficiency Applications,[5] setting May 15, 2008 as the due date for the investor-owned utilities' (Utilities or IOUs) Applications, with a final Decision slated for October 2008. This initial Application

[5] D.07-10-032 specifically stated:

The schedule for the efforts we describe in this order, which may be modified by the assigned Commissioner, is as follows:

November 5	Initial strategic planning meeting to discuss work products, format, outreach and schedule at Commission Courtroom, State Office Building, 505 Van Ness Avenue, San Francisco, CA 94102
November - December 2007	Strategic planning meetings; IOU workshops on programmatic initiatives;
	Initial solicitations and program proposals for third-party contracts and local government partnerships
February 1, 2008	Publication of utilities' draft statewide strategic plan
January – February	Utility meetings on preliminary strategic plan
	Written comments from Commission staff and interested parties submitted to utilities (not filed)
May 15, 2008	Utility applications for 2009-2011 energy efficiency portfolios, including final proposed strategic plan
Summer 2008	Review of applications; hearings, workshops and written comments as required
October 2008	Commission decision

deadline was postponed several times due to delays in the release of 2008 DEER updates, and the substantial impact of these updates. After the original Application filing on July 21, 2008,[6] the Utilities were required to file amended Applications to align with the Strategic Plan[7] issued in September 2008 and to comply with extensive modifications to the Application requirements – modifications issued through Rulings released in the fourth quarter of 2008.[8] The Rulings required a complete reorganization of the Utilities' proposed program structure, entirely revised requirements for program plans and related tables and analysis that the Commission's Energy Division had initially directed prior to the original Application.[9] In order to comply with all required modifications, SCE and the other Utilities filed Amended Applications on March 2, 2009,[10] and additional supplements to these Amended Applications on March 12, 2009,[11] and March 25, 2009.[12]

On May 26, 2009, the Commission issued D.09-05-037,[13] which denied the majority of the proposed policy changes in the Utilities' Amended Applications. A subsequent Ruling[14] ordered the Utilities to again file amended Applications by July 2, 2009, to reflect this new Decision.

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6 Southern California Edison Company's Application For Approval Of Its 2009-2011 Energy Efficiency Program Plans And Public Goods Charge And Procurement Funding Requests, dated July 21, 2008.

7 D.08-09-040 Decision Adopting the California Long-Term Energy Efficiency Strategic Plan, dated September 19, 2008.

8 ALJ Ruling Requiring Supplemental Filings, dated October 30, 2008; Scoping Memo And ALJ Ruling Determining The Scope, Schedule, And Need For Hearing In This Proceeding, dated November 25, 2008; and ALJ Ruling Modifying Schedule And Requiring Additional Information For 2009-2011 Supplemental Filings, dated December 12, 2008.

9 Assigned Commissioner's And Administrative Law Judge's Ruling Regarding 2009 To 2011 Energy Efficiency Program Applications, dated February 29, 2008.

10 Southern California Edison Company's Application For Approval of Its Revised 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge And Procurement Funding Requests, dated March 2, 2009

11 Southern California Edison Company's First Amendment to its Amended Application for Approval of its 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge and Procurement Funding Request, dated March 12, 2009.

12 Southern California Edison Company's Second Amendment to its Amended Application for Approval of its 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge and Procurement Funding Request, dated March 25, 2009.

13 D.09-05-037, Interim Decision Determining Policy And Counting Issues for 2009 to 2011 Energy Efficiency Programs, dated May 26, 2009.

14 ALJ Ruling Setting Schedule For Supplemental Filings Per Decision 09-05-037, dated May 29, 2009.

Recently, the Commission has expanded discussion of issues related to the 2009-2011 Applications through a series of public workshops held throughout June 2009. In addition to discussing issues directly related to the Utilities' Applications, discussion has expanded to include some very basic and fundamental questions that are not in direct response to program proposals. Most recently, the assigned Administrative Law Judge (ALJ) has again opened the record for comment on a wide range of 2009-2011 program issues that are well beyond the Amendments filed by the Utilities. The June 9, 2009 ALJ Ruling[15] allows parties to comment on the June workshops and discuss other issues raised in the June 9 Ruling.

At this juncture, SCE recognizes that a Decision on the 2009-2011 Applications is not likely until the third quarter of 2009, at the earliest, and that program implementation will not realistically begin until 2010. Although significant program achievements have been made during the 2009 bridge funding period, SCE has not been allowed to launch its proposed new, innovative, and comprehensive programs for the full three-year cycle.

Given the present realities, SCE believes it is not feasible to meet the proposed 2006-2011 cumulative energy savings goal by the end of 2011 due to the decreased time now allowed for the implementation of a 36-month plan. Alternatively, in order to provide SCE and its partners with a reasonable opportunity to achieve the cumulative energy savings goals, SCE is proposing a 2010-2012 program cycle, with a 2007-2012 cumulative goal. SCE's First Amended Plan, as filed on March 2, 2009, remains otherwise unchanged- including program design and structure and overall funding levels. However, this adjustment to the timing of the cycle will allow SCE to thoroughly and properly execute a full three-year program plan, as originally designed. This will also provide greater certainty to market participants than a limited 2-year portfolio period would provide. As part of this request, SCE proposes that the Commission extend bridge funding through December 31, 2009, as authorized by D.08-10-027.

SCE recognizes that in order to implement a 2010-2012 program cycle, the Commission must formally adopt a 2012 goal. SCE proposes that the Commission adopt the IOU programs component of

[15] ALJ Ruling Seeking Additional Record And Comments On Workshop Issues, dated June 9, 2009.

SCE's Interim 2012 Total Market Gross (TMG) Goal established in D.08-07-047, as this Decision established interim TMG goals for each IOU service territory for the years 2012 through 2020.[16] This approach is detailed further in Chapter II of this Testimony.

Additionally, SCE understands that a 2010-2012 cycle must take into account adjustments for the staged implementation of the Huffman Bill which will increasingly affect the savings attributable to CFLs. This adjustment is also discussed in Chapter II of this Testimony and reflected in the 2010-2012 Second Amended Energy Efficiency Proposed Program Plan (Proposed Program Plan) tables in Second Amended Exhibit SCE-2, dated July 2, 2009.

As stated above, however, even with the adoption of a 2010-2012 cycle, there is still considerable risk that despite SCE's best efforts, cumulative energy savings goals will not be met due to the aforementioned delays. There are also outstanding policy issues that must be clarified to provide a higher degree of certainty around the energy efficiency process for the Commission, the Utilities, and other stakeholders. These policy issues are detailed in Chapter II of this Testimony and include:

1. **Cumulative Savings**: To align with SCE's proposed 2010-2012 program cycle, SCE proposes to define cumulative energy savings goals to include program years 2007-2012.
2. **Attribution:** The Commission should not adopt a separate attribution factor to account for actions taken by customers with external motivations (e.g., federal stimulus funds). This issue may impact multiple programs. In the case of government partnerships, the current .70 net-to-gross ratio for government partnership program savings should be retained, on an overall program basis, for all projects.
3. **Assumptions:** Ex ante benefit and measure cost assumptions used for planning the 2010-2012 Energy Efficiency Portfolio should also be used for portfolio reporting and evaluation. These assumptions should include limited SCE-proposed revisions to the Energy Division's 2008 DEER update.

[16] D.08-07-047, Table A-4, Appendix p. 3

SCE's Proposed Program Plan complies with all previous Commission Decisions, Rulings, and directives, with the exception of the issues listed above. Specifically, the Proposed Program Plan assumes: a) a 2010-2012 cycle with a 2007-2012 cumulative goal; b) application of the current net-to-gross ratios, including a net-to-gross ratio of .70 for local government partnerships to account for external influences (*e.g.*, federal stimulus funds); and c) limited Utility-proposed revisions to the December 2008 DEER update, as discussed further in Chapter II of this Testimony and supported by Second Amended Exhibit SCE-8, dated July 2, 2009.

This Application and Testimony support SCE's Proposed Program Plan approach. SCE believes that approval of its Proposed Program Plan will greatly promote the State, Commission, and the Strategic Plan's aggressive and essential goals of market transformation and resource procurement for the deployment of energy efficiency products and services, and of big, bold and long-term strategies for energy efficiency. SCE's proposed portfolio, if approved with the proposed policy changes, represents an investment of $1.344 billion that will generate an unprecedented 5.457 billion kilowatt hours of cumulative gross annualized energy savings, 1,063 megawatts of gross peak demand reduction, and over $4.1 billion in gross resource benefits to ratepayers, resulting in nearly $1.7 billion in gross benefits to ratepayers, after program costs.[17] A full detailed showing of the anticipated outcomes of this proposal is shown in Second Amended Exhibit SCE-2, dated July 2, 2009. Additionally, the amended Program Implementation Plans included in Exhibit SCE-10, dated July 2, 2009, reflect this revised SCE Proposed Program Plan approach.

For information purposes, SCE also includes a compliance scenario, compliant with all Commission directives. This scenario also assumes the current net-to-gross ratio of .70 for local government partnerships. SCE does not endorse, support, or propose this scenario be adopted in any way by the Commission, and firmly believes that due to the repeated delays discussed above, this compliance scenario will not allow SCE to achieve the 2006-2011 cumulative goal by 2011. This compliance scenario would represent an investment of $1.344 billion that would generate 5,275 billion

[17] Gross savings and benefits are not reduced by an estimate of free-ridership.

kilowatt hours of cumulative gross[18] annualized energy savings 1,098 megawatts of gross peak demand reduction, and over $2.8 billion in net electric resource benefits to ratepayers, which would result in nearly $525 million in net benefits to ratepayers, after program costs. A full detailed showing of the compliant scenario is also shown in Second Amended Exhibit SCE-2, dated July 2, 2009.

Exhibit SCE-11, dated July 2, 2009, summarizes the differences between the Application filed on March 2, 2009 (including the subsequent amendments to exhibits filed on March 12, 2009, and March 25, 2009), and this Second Amended Application.

SCE's Proposed Program Plan aspires to fully realize all cost-effective energy efficiency as a reliable, robust, and least-cost resource, fully aligned with the State's vision of energy efficiency and all activities as communicated in the *Energy Action Plan* (EAP).[19] SCE's proposed portfolio offers a unified program approach where all programs work together seamlessly to encourage customers to take actions towards energy efficiency. SCE relies on a combination of short- and long-term solutions to energy efficiency that will vigorously implement SCE's commitment to making energy efficiency part of its long-term resource solution.

SCE's proposed portfolio creates a framework for sustainable energy efficiency and other demand reduction programs and a process for achieving extensive energy savings through short-term programs and using long-term planning to sow the seeds of future programs and initiatives. SCE maximizes the benefits of diversity within the portfolio among approaches, measures, markets, delivery channels, and implementers. SCE maximizes the potential of its programs by engaging in collaborative efforts with others in planning and delivering energy efficiency savings. SCE also continues to develop and sustain partnerships as a key element of efforts to build a durable distributed infrastructure of local

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[18] Gross goals were used in compliance with the Proposed Decision Adopting Interim Energy Efficiency Savings Goals For 2012 Through 2020, And Defining Energy Efficiency Savings Goals For 2009 Through 2011, dated July 1, 2008, p. 2.

[19] The Energy Action Plan, most recently updated jointly by the Commission and the California Energy Commission in March 2008, identifies specific goals and actions to ensure that adequate, reliable and reasonably-priced electrical power and natural gas supplies are achieved and provided through cost-effective and environmentally sound strategies. A copy of the Energy Action Plan is posted on the Commission's website at http://www.cpuc.ca.gov/static/energy/electric/energy+action+plan/index.htm. *See also*, D.05-06-043, (*mimeo),* p. 15; Energy Efficiency Policy Manual Version 3 (Policy Rules), Rule II.2 (Attachment 3 to D.05-04-051).

energy efficiency networks. SCE views partnerships as an effective means to encourage customers, on a local level, to embrace energy efficiency. Furthermore, SCE looks to new and emerging technologies, promising program designs, and codes and standards to build the future for energy efficiency.

It is important to step back and note the magnitude and difficulty of the task at hand with regard to the state's energy, economic, and environmental future. All parties to this proceeding are disappointed and frustrated in the ongoing delays in getting the new, innovative and comprehensive efficiency programs underway. Nonetheless, at this time it is necessary to recognize the realities of successful program implementation and shift the program cycle to 2010-2012 for maximum energy savings. California's concerns in these regards – ongoing severe recession and credit crunch, State budget shortfalls, volatile oil and natural gas prices, and projections of climate change-driven heat waves – are serious and stubborn. Energy efficiency must play a central, if not leading, role in responding to these challenges, and SCE is committed to contributing most vigorously to energy efficiency success. SCE's Proposed Program Plan and the related strategies laid out in the Strategic Plan are critical in SCE, its partners, and its customers doing so.

~~In this Revised Application and supporting Testimony and Exhibits, Southern California Edison Company (SCE) requests approval of its proposed 2009-2011 energy efficiency program plans, its proposed energy efficiency policy rule changes, and SCE's funding requests.[20] SCE hereby withdraws all testimony and supporting exhibits submitted on July 21, 2008.[21] This Testimony and supporting Exhibits replace the July 21, 2008 Testimony and Exhibits in their entirety. SCE requests authority to fund these proposed programs through: (1) its existing Energy Efficiency-related Public Goods Charge (PGC); (2) its existing Procurement Energy Efficiency-related Public Purpose Programs Charge (PPPC); and (3) an increase in its Procurement Energy Efficiency-related PPPC.~~

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[20] ~~All references in this Testimony to portfolio, program plan, plan, strategy scenario, refer to SCE's proposed 2009-2011 energy efficiency program plans.~~

[21] ~~Exhibit SCE-1, Testimony dated July 21, 2008; Exhibit SCE-2, Compliance Tables, dated July 21, 2008; Exhibits SCE-3 and SCE-4, Program Implementation Plans, dated July 21, 2008; Exhibit SCE-5, DSM Coordination, dated July 21, 2008; Exhibit SCE-6, Strategic Plan Cross Reference, dated July 21, 2008; Exhibit SCE-7, AB 32, dated July 21, 2008; and Exhibit SCE-8, Workpapers, dated July 21, 2008.~~

This Application comes at a particularly important time for energy efficiency in California and for SCE. Together we are at a turning point in both the importance of energy efficiency to the state's energy and environmental future and the commitment of state and utility leaders to pursue innovative and forceful efficiency measures. As the *California Long-Term Energy Efficiency Strategic Plan* (Strategic Plan) states:

> ". . .the California Public Utilities Commission (CPUC) [has] created a framework to make energy efficiency a way of life in California by refocusing ratepayer-funded energy efficiency programs on achieving long-term savings through structural changes in the way Californians use energy. [Strategic planning stakeholders recognize] that ever-increasing energy prices and the urgent threat of climate change require that California set the bar high and move forward quickly and purposefully to realize the full extent of efficiency opportunities statewide and achieve deep reductions in energy demand and usage."[22]

This Application is the first SCE energy efficiency program application to be developed and proposed since several ground-breaking energy efficiency-related developments in California – most notably:

- Enactment of Assembly Bill 32 (AB 32), and its ongoing implementation;
- Adoption by the California Public Utilities Commission (Commission) of a series of important decisions including:
  - establishing a shareholder incentive mechanism for energy efficiency,
  - approving Big, Bold Energy Efficiency Strategies (BBEES), and
  - requiring the Investor Owned Utilities (IOUs)[23] to develop a first-ever statewide energy efficiency strategic plan to 2020, with a strong emphasis on market transformative actions;
- Adoption of new approaches in related demand-side and distributed resources, including demand response and distributed renewable generation, such as SCE's proposed 250 megawatts of customer-sited photovoltaics; and

[22] California Long-Term Energy Efficiency Strategic Plan, September 2008, p. 1.

[23] Southern California Edison Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Gas Company.

- Adoption of an energy efficiency strategic plan by the Commission with strong input from the IOUs and stakeholders.[24]

This proposed 2009-2011 Energy Efficiency Program Plan (Proposed Program Plan) complies with all Commission Decisions related to the 2009-2011 energy efficiency programs, including D.04-09-060, D.05-01-055, D.05-04-051, D.07-10-032, D.08-07-021, D.08-10-027 and numerous rulings, including the February 29, 2008, "Assigned Commissioner and Administrative Law Judge's Ruling Regarding 2009-2011 Energy Efficiency Program Applications," the October 30, 2008 "Assigned Commissioner's and Administrative Law Judge's Ruling Requiring Supplemental Filings," the November 25, 2008, "Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge Determining the Scope, Schedule, and Need for Hearing in this Proceeding," the December 12, 2008, "Assigned Commissioner and Administrative Law Judge's Ruling Modifying Schedule and Requiring Additional Information for 2009-2011 Supplemental Filings," the December 18, 2008 "Decision Granting in Part, Denying in Part the Petition for Modification," and acknowledges the February 4, 2009 Order Instituting Rulemaking addressing the energy efficiency risk reward incentive mechanism.[25] Perhaps more importantly, it adheres to the spirit of those Commission Decisions, the Energy Action Plan, Energy Division requests, the Strategic Plan, and other important State actions.

However, within the framework of the new Strategic Plan, and its call for long-term market transformative actions, several selective changes to current policies are necessary to enable SCE to effectively rise to the challenge of meeting the Commission's aggressive and visionary goals. These essential proposed policy changes are described in Chapter II hereof.

SCE believes that approval of its Proposed Program Plan will greatly promote the Commission's and the Strategic Plan's goals of resource procurement and market transformation from the provision of energy efficiency products and services, and of big, bold and long-term strategies for efficiency. SCE's proposed portfolio, with the proposed policy changes, represents an investment of $1.344 billion that

[24] California Long-Term Energy Efficiency Strategic Plan, September 2008.

[25] Other related rulings: Assigned Commissioner and Administrative Law Judge's Ruling, dated May 5, 2008 and Assigned Commissioner and Administrative Law Judge's Ruling, dated June 2, 2008.

will generate an unprecedented 5.553 billion kilowatt hours of cumulative gross annualized energy savings, 1,078 megawatts of gross peak demand reduction, and over $4.4 billion in gross resource benefits to ratepayers, resulting in nearly $2 billion in gross benefits to ratepayers, after program costs.[26] This Application and Testimony support SCE's Proposed Program Plan approach. A full detailed showing of this proposal is shown in Exhibit SCE-2.

For information purposes, SCE also includes a mandated scenario with the 2009-2011 Commission directives. SCE does not endorse, support or propose this scenario be adopted in any way by the Commission. This mandated scenario would represent an investment of $1.344 billion that would generate 6.238 billion kilowatt hours of cumulative net[27] annualized energy savings 1,271 megawatts of gross peak demand reduction, and nearly $3.1 billion in net resource benefits to ratepayers, which would result in $765 million in net benefits to ratepayers, after program costs. Although the mandated scenario would meet the 2004-2011 cumulative energy savings and demand reduction goals, it would require a significant shift of funds to the residential lighting program (more than doubling the size of the proposed basic compact florescent lamp (CFL) program) at the expense of many of the long-term Strategic Plan-related programs and activities. Specifically, SCE's proposal to fund a diverse portfolio of Codes and Standards Advocacy, Workforce Education and Training activities, Emerging Technologies, On-Bill Financing, and Residential New Construction offerings will be severely altered in order to include sufficient CFL lighting-yielded savings that would deliver a strictly cost-effective portfolio meeting the 2004-2011 cumulative goals. A full detailed showing of the mandated scenario is also shown in Exhibit SCE-2.

In D.07-10-032, the Commission concluded the goals adopted for SCE in D.04-09-060 are reasonable and appropriate to use in the 2009-2011 program planning cycle[28] and suggested that the proposed energy efficiency program portfolio plans and funding levels meet the adopted goals. D.07-

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[26] Gross savings and benefits are not reduced by an estimate of free-ridership.

[27] Gross goals were used in compliance with the Proposed Decision Adopting Interim Energy Efficiency Savings Goals For 2012 Through 2020, And Defining Energy Efficiency Savings Goals For 2009 Through 2011, dated July 1, 2008, p. 2.

[28] D.07-10-032, dated October 18, 2007, OP #24 p. 48.

10-032 also directed that the goals must be aggressive and must stretch the capabilities and efforts of those involved. In D.08-07-047, the Commission clarified that the adopted energy efficiency savings goals for 2009-2011 be defined as a "gross" level that includes free riders.[29] Such a determination is reflective of the latest data on energy efficiency potential and is in line with the promotion of strategic, long-term energy efficiency programs, such as those embodied in this proposed portfolio.[30]

D.07-10-032 affirmed D.05-01-055, which ordered the IOUs to assume responsibility for program choice and portfolio management functions for post-2005 energy efficiency programs.[31] D.07-10-032 required, among other items, that the IOUs file their Applications no later than May 15, 2008, for development of and Commission approval of a proposed statewide strategic plan, energy efficiency program plans, and funding levels through both the public goods charge and procurement rates, for the three-year program implementation and funding cycle beginning January 1, 2009.[32]

A subsequent Assigned Commissioner's Ruling Regarding Due Dates for 2009-2011 Energy Efficiency Portfolio Plans and Energy Efficiency Strategic Plan Application dated May 5, 2008, extended the deadline for the portfolio plans to June 23, 2008, and the deadline for the strategic plan to June 2, 2008.[33] The deadline for the portfolio plans was subsequently extended to July 21, 2008, by Assigned Commissioner's And Administrative Law Judge's Ruling Resetting Date For 2009-2011 Energy Efficiency Program Applications, dated June 2, 2008.[34] Subsequently, the November 25, 2008, Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge Determining the Scope, Schedule, and Need for Hearing in this Proceeding[35] and the December 12, 2008 Assigned

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[29] D.08-07-047, OP # 4, p. 39.

[30] *Id.*, pp. 2-3, and 27.

[31] D.07-10-032, dated October 18, 2007, p. 4.

[32] D.07-10-032, dated October 18, 2007, OP #4, 10 and 12, pp. 141-144.

[33] Assigned Commissioner's and Administrative Law Judge's Ruling Regarding Due Dates for 2009-2011 Energy Efficiency Portfolio Plans and Energy Efficiency Strategic Plan Application, dated May 5, 2008, pp. 2-3.

[34] Assigned Commission's and Administrative Law Judge's Resetting Date for 2009-2011 Energy Efficiency Program Application, dated June 2, 2008, p. 2.

[35] Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge Determining the Scope, Schedule, and Need for Hearing in this Proceeding, dated November 25, 2008.

Commissioner and Administrative Law Judge's Ruling Modifying Schedule and Requiring Additional Information for 2009-2011 Supplemental Filings[36] extended the deadline for portfolio plans to February 16, 2009.[37] In the interim, D.08-10-027 authorized bridge funding for select 2008 programs pending resolution of the 2009-2011 application.[38]

In response to the IOUs' February 3, 2009 request for a 45-day extension,[39] the ALJ issued a 14-day extension, establishing a filing date of March 2, 2009.[40] D.05-04-051 clarified the goals, policies, and administrative framework and D.07-10-032 directed that utility energy efficiency performance should be evaluated on the basis of overall portfolio achievement rather than individual programs.[41] Consistent with these Decisions, SCE's Proposed Program Plan, with proposed policy changes, presents a portfolio that exceeds the established near-term goals, while also supporting and funding the long-term strategic activities and initiatives identified in the Strategic Plan.

To meet D.07-10-032's requirement by the IOUs to develop and file a final strategic plan as part of their Applications, the IOUs prepared a Preliminary Energy Efficiency Strategic Plan (PEESP) over a three-month period, involving the guidance of the Commission and bringing together the input of over 1,100 participants in over 35 workshops. Based on subsequent input from filed comments, stakeholder public workshops, and discussions with Commission staff, the IOUs revised the PEESP and submitted it as the final California Energy Efficiency Strategic Plan (CEESP) on June 2, 2008.[42] After consideration of the CEESP and based upon additional input from stakeholders including Commission staff, on

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[36] Assigned Commissioner and Administrative Law Judge's Ruling Modifying Schedule and Requiring Additional Information for 2009-2011 Supplemental Filings, dated December 12, 2008.

[37] February 16, 2009 is a legal holiday; therefore the deadline would be recognized as February 17, pursuant to Commission Rules of Practice and Procedure, Rule 1.14.

[38] D.08-10-027, dated October 17, 2008.

[39] "Request for Extension on Supplemental Filings of Energy Efficiency 2009-2011 Applications" to the Commission's Executive Director from Bruce Foster on behalf of the state's IOUs, requested until April 2, 2009 to refile this Application.

[40] Administrative Law Judge's Ruling Revising Proceeding Schedule, dated February 10, 2009.

[41] D.05-04-051, dated April 21, 2005, p. 7 *see also* D.07-10-032, dated October 18, 2007, p. 12.

[42] A.08-06-004.

September 18, 2008 the Commission unanimously adopted[43] and issued the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan).[44]

The primary objective of the CEESP and the Strategic Plan is to contribute to the state's goal of having reasonably priced, stable, reliable, and clean energy resources by bringing energy efficiency efforts – not only those of the utilities, but of the many other essential energy actors – to a "next level," by identifying and implementing a path of aggressive resource acquisition, market transformation, and innovative, integrated solutions for an ultra-efficient and even zero net energy future.

SCE's 2009-2011 Energy Efficiency Proposed Program Plan aspires to fully realize all cost-effective energy efficiency as a reliable, robust, and least-cost resource, fully aligned with the State's vision of energy efficiency and all activities as communicated in the *Energy Action Plan* (EAP).[45] SCE's proposed portfolio offers a unified program approach where all programs work together seamlessly to encourage customers to take actions towards energy efficiency. SCE relies on a combination of short- and long-term solutions to energy efficiency that will vigorously implement SCE's commitment to making energy efficiency part of its long-term resource solution.

SCE's portfolio creates a framework for sustainable energy efficiency and a process for achieving extensive energy savings through short-term programs and using long-term planning to sow the seeds of future programs and initiatives. SCE maximizes the benefits of diversity within the portfolio among approaches, measures, markets, delivery channels, and implementers. SCE maximizes the potential of its programs by engaging in collaborative efforts with others in planning and delivering energy efficiency savings. SCE also continues to develop and sustain partnerships as a key element of efforts to build a durable distributed infrastructure of local energy efficiency networks; SCE views

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[43] D.08-09-040, dated September 18, 2008.

[44] California Long-Term Energy Efficiency Strategic Plan, dated September 2008.

[45] The Energy Action Plan, most recently updated jointly by the Commission and the California Energy Commission in March 2008, identifies specific goals and actions to ensure that adequate, reliable and reasonably-priced electrical power and natural gas supplies are achieved and provided through cost-effective and environmentally sound strategies. A copy of the Energy Action Plan is posted on the Commission's website at http://www.cpuc.ca.gov/static/energy/electric/energy+action+plan/index.htm. *See also*, D.05-06-043, (*mimeo),* p. 15; Energy Efficiency Policy Manual Version 3 (Policy Rules), Rule II.2 (Attachment 3 to D.05-04-051).

~~partnerships as an effective means to encourage customers, on a local level, to embrace energy efficiency. Furthermore, SCE looks to new and emerging technologies, promising program designs, and codes and standards to build the future for energy efficiency.~~

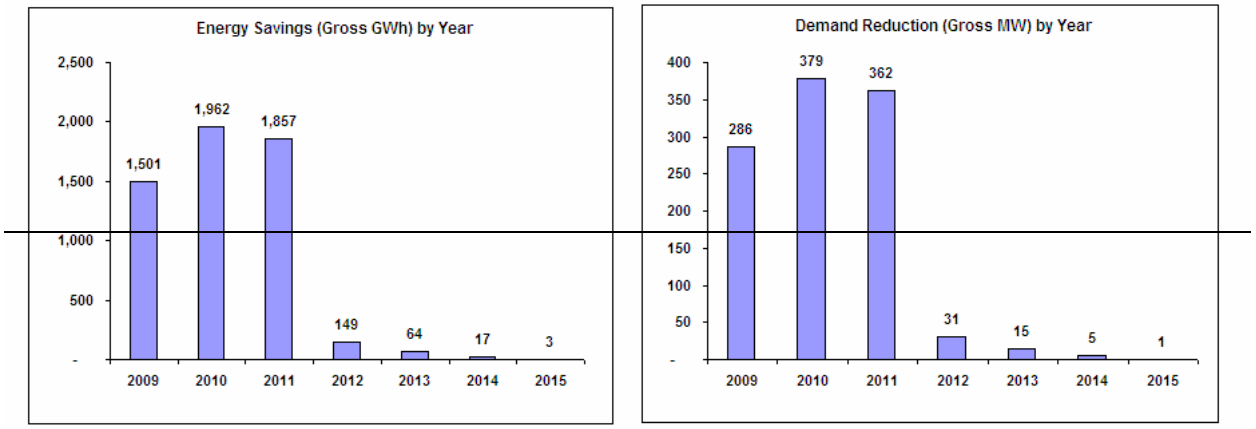
~~It is important to note the magnitude and difficulty of the task at hand with regard to the state's energy, economic, and environmental future; California's concerns in these regards – volatile oil and natural gas prices, severe recession and ongoing credit crunch, and projections of climate change-driven heat waves – are serious and stubborn. Energy efficiency and other demand-side management (DSM) must play a central, if not leading, role in responding to these challenges, and SCE is committed to contribute vigorously to energy efficiency and DSM's success. SCE's Proposed Program Plan and the related strategies laid out in the Strategic Plan are critical in SCE doing so.~~

A. Summary Tables And Pie Charts Of Portfolios And Energy Efficiency Measure Groupings

1. Energy Savings And Demand Reduction

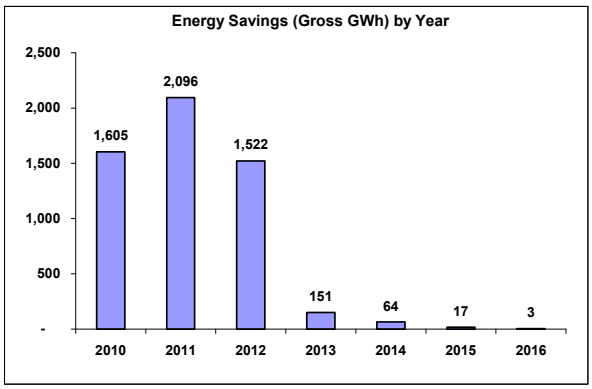
SCE's Second Amended 2010-2012 ~~2009-2011~~ Proposed Program Plan represents ~~5.553~~ 5.457 billion kilowatt hours of cumulative annualized gross energy savings and ~~1,078~~ 1,063 megawatts of gross peak demand reduction. See Second Amended Table I-1 below for energy savings and demand reduction by year. Second Amended Exhibit SCE-2, Table 1.1, dated July 2, 2009 includes a detailed projection.

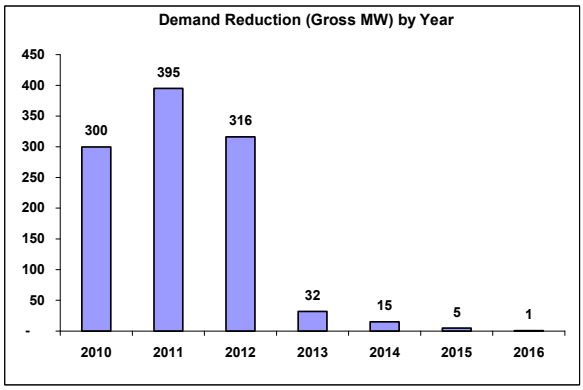
~~Table I-1~~
~~Annual Energy Savings and Demand Reduction~~



Note: Includes forecast of Low Income Energy Efficiency and Codes and Standards impacts for the 2009-2011 program cycle

Second Amended Table I-1
Annual Energy Savings and Demand Reduction



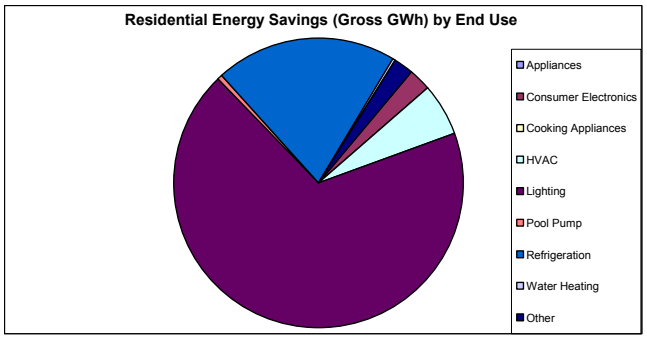


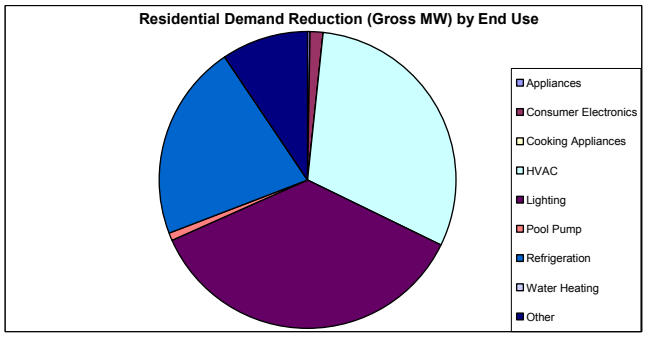
Note: Includes forecast of Low Income Energy Efficiency and Codes and Standards impacts for the 2010-2012 program cycle

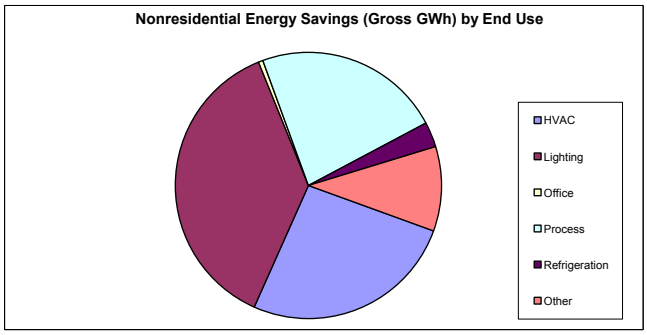
2. End Use Savings

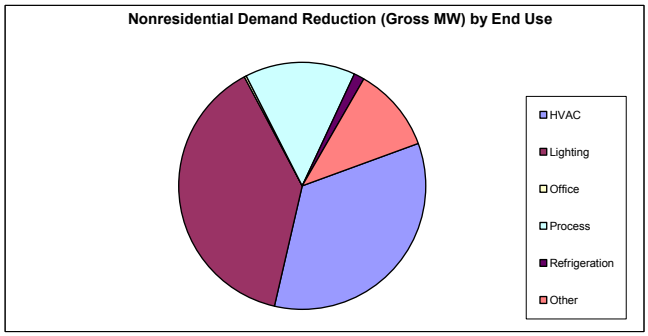
SCE's ~~2009-2011~~ 2010-2012 Proposed Program Plan savings is comprised of HVAC, lighting, refrigeration and other end uses. The break out of energy savings and demand reduction among end uses is shown below in Second Amended Table I-2. Further detail is provided in Second Amended Exhibit SCE-2, Table I-2, dated July 2, 2009.

~~*Table I-2*~~
~~*Energy Savings and Demand Reduction by End Use*~~

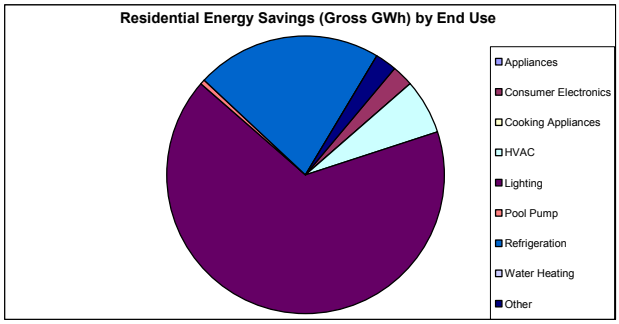


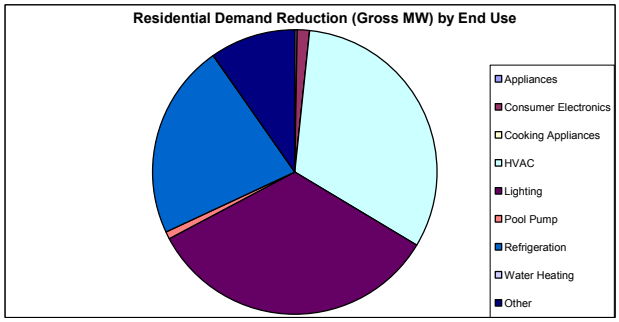


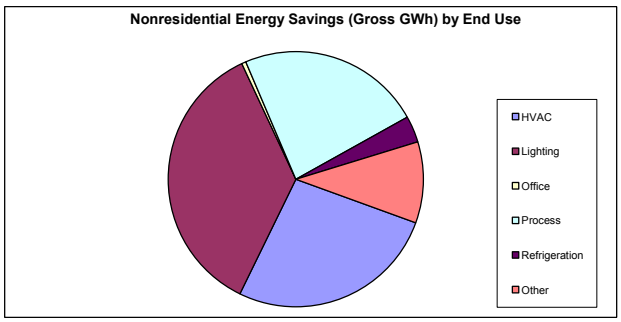


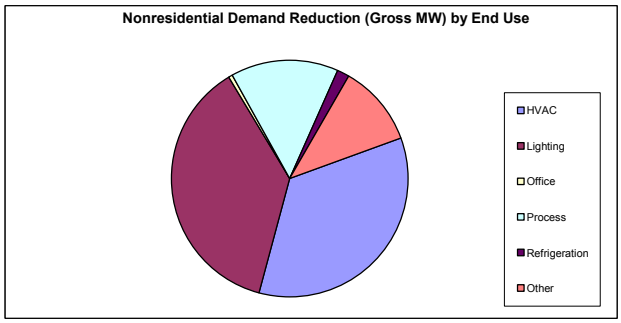


Second Amended Table I-2
Energy Savings and Demand Reduction by End Use









3. Budget

SCE's 2010-2012 ~~2009-2011~~ Second Amended Proposed Program Plan represents $1.344 billion. Second Amended Table I-3 below represents SCE's proposed annual budget. Second Amended Exhibit SCE-2, dated July 2, 2009 contains SCE's proposed yearly and total program budgets.

~~*Table I-3*~~
~~*Annual Budgets*~~

	2009 Budget	2010 Budget	2011 Budget	Total 2009-2011 Program Cycle Budget
Total SCE Program Budget	$ 366,666,000	$ 428,377,000	$ 460,257,520	$ 1,255,300,520
Total SCE/CPUC EM&V Budget	$ 22,118,000	$ 33,177,000	$ 33,083,480	$ 88,378,480
Total SCE Portfolio Budget	$ 388,784,000	$ 461,554,000	$ 493,341,000	$ 1,343,679,000

Second Amended Table I-3
Annual Budgets

	2010 Budget	2011 Budget	2012 Budget	Total 2010-2012 Program Cycle Budget
Total SCE Program Budget	$ 368,611,720	$ 432,488,706	$ 452,918,574	$ 1,254,019,000
Total SCE/CPUC EM&V Budget	$ 20,172,280	$ 29,065,294	$ 40,422,426	$ 89,660,000
Total SCE Portfolio Budget	$ 388,784,000	$ 461,554,000	$ 493,341,000	$ 1,343,679,000

B. Elements Of SCE's ~~2009-2011~~ 2010-2012 Proposed Portfolio Are Designed To Reflect The Strategic Plan

In D.07-10-032, the Commission approved a ground-breaking new requirement for the state's IOUs to prepare a single strategic plan for energy efficiency through 2020 and beyond, as "a directed, statewide strategic planning effort [that] will deliver more savings from existing measures, create new savings opportunities for the future, and afford efficiencies in the development and delivery of programs."[46]

SCE strongly supports the development of a single statewide strategic plan for energy efficiency, as outlined by the Commission in the Decision. Since that Decision, over 1,100 participants, including the Commission and IOU staffs and other key stakeholders, have invested significant time, resources, and effort in this process. SCE and the other IOUs submitted a supplemented draft California Energy Efficiency Strategic Plan on March 8, 2008 and the final version by the IOUs, on June 2, 2008. Subsequently the Commission issued the Strategic Plan.

As a foundation for continued strategic planning and implementation during ~~2009-2011~~ 2010-2012 and beyond, SCE has established a dedicated and substantial energy efficiency strategic planning team. This team helps lead SCE's strategic planning, including collaboration with the Commission and other key actors towards the goals, strategies, actions, and results put forward in the Strategic Plan.

Additionally, SCE's entire Proposed Program Plan is ~~both~~ guided by the goals and strategies of the Strategic Plan. Strategic Plan-guided programs permeate this proposed portfolio; examples include:

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[46] D.07-10-032, dated October 18, 2007, p. 20.

- Comprehensive Home Performance Program – this program advances comprehensive energy efficiency measures, including whole house solutions, plug load efficiency, visual monitoring and displays, performance standards, local government opportunities, and DSM integration. The program addresses the key "whole house" residential strategy[47] of the Strategic Plan by influencing homeowner "decision triggers" to improving home energy efficiency and generating deeper levels of energy efficiency participation in homes to reach savings goals. Additionally, the program provides training support and resources to contractors helping to build their competencies in offering comprehensive solutions to customers. This program also supports the HVAC sector strategy[48] to promote whole-building performance to improve space conditioning.
- Savings By Design – this program advances comprehensive energy efficiency including integrated design approach, support of commissioning and measurement and evaluation, and support of training activities, in alignment with the Strategic Plan's commercial sector strategy[49] to promote integrated design knowledge for zero net and ultra-low energy commercial buildings.
- Sustainable Communities (including Advanced Homes component) – this program stimulates demand for lower energy, and eventually, zero net energy new homes and buildings. The program aligns with the Strategic Plan's residential sector strategy[50] to mount an effort to deliver zero net energy new homes by 2020 and the Strategic Plan's commercial sector strategy[51] to promote integrated design knowledge for zero net and ultra-low energy commercial buildings.

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47 California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp.18-21.

48 California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 58.

49 *Id.* p. 30.

50 *Id.* p. 9.

51 *Id.* p. 30.

- Residential and Commercial HVAC Program – this program accelerates market penetration of advanced technologies by updating/expanding current programs to include new technologies. Program activities also include Quality Installation and Maintenance Initiatives (QI/QM), a comprehensive training needs assessment to identify and address industry skill gaps, statewide HVAC efficiency branding, and development of an advisory group involving high-level industry stakeholders, such as manufacturers, distributors, contractors, and other key players. This program aligns with the Strategic Plan's HVAC sector strategies[52] to charter an HVAC Advisory Group, develop new California-oriented HVAC technologies, and promote quality HVAC installation/maintenance.
- Emerging Technologies Program – this program continues to expand its efforts to increase market demand for new energy efficiency technologies, ramp up targeted market intelligence-gathering, and expand activities that result in a greater supply of energy efficient technologies offered in the market. Additionally, the new TRIO Program leverages private industry technology research and investment by providing training and networking for entrepreneurs and companies providing energy saving technologies. This program also includes evaluation of products that integrate various DSM offerings. The program aligns with the Strategic Plan's research and technology sector strategies to enhance market intelligence, expand activities to create market pull for efficient technologies, leverage private industry, drive product improvement, and focus on the leading edge.
- Local Government And Institutional Partnerships – the partnership portfolio partners with cities, counties, and other local government organizations that have a vision for sustainability and a desire to provide leadership to their communities. Partners are required to lead by example, take action in their own facilities, and provide opportunities for constituents to take action in their homes and businesses. Additionally, the ~~2009-2011~~ 2010-2012 partnerships include an increased emphasis on integration with demand response and other DSM

[52] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 59.

offerings. SCE's partnerships align with the Strategic Plan's local government sector strategies[53] including local governments leading by example and local governments supporting clean energy goals.

- Marketing, Education & Outreach – in accordance with the Strategic Plan,[54] this program includes exploration of a statewide energy efficiency (EE) DSM brand for California, utilization of statewide segmentation and social marketing techniques to develop appropriately shaped marketing campaigns and messages that facilitate awareness and long-term behavior change, and development of a statewide EE/DSM web portal with information on greenhouse gas(GHG) reductions, energy efficiency, and DSM awareness and options.
- Codes & Standards Program – this program strives to promote more comprehensive standards, move to a zero energy based methodology, and focus on improved Title 24 and 20 code compliance. It also seeks to address the pre-emption of California appliance efficiency standards by the federal government. The program aligns with the Strategic Plan's codes and standards sector strategies[55] including development of more stringent and comprehensive codes and standards, and improved code compliance and enforcement.
- On-Line Buyer's Guide – this program provides SCE's residential customers with one web-based source for information and tools needed to overcome market barriers that prevent customers from purchasing energy efficient products and participating in energy efficiency programs. The program aligns with the Strategic Plan's residential sector strategy[56] to encourage development and penetration of more energy efficient products, particularly plug load devices.
- Industrial Energy Efficiency Program – this program advances comprehensive energy efficiency, including integrating approaches to better maximize savings and minimize lost

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[53] *Id.*, p. 94.

[54] *Id.* p. 82.

[55] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 92

[56] *Id,.* p. 21-3

opportunities, planning and recruiting sites for a pilot certification program in industrial facilities, analyzing and identifying resulting process improvements, investigating financing options, benchmarking, and promoting advances in equipment efficiency and operations through process improvements. The program aligns with the Strategic Plan's industrial sector strategy to leverage the marketing and competitive benefits of energy efficiency branding, certification, and continuous improvement methods.

There are numerous initiatives throughout SCE's Proposed Program Plan that are designed to better integrate the energy efficiency activities and goals with those of other demand side resources, including demand response, advanced metering, low income energy efficiency, California Solar Initiative (CSI), *etc.* See Second Amended Exhibit SCE-6, dated July 2, 2009, Demand Side Management Integration and Coordination and the Statewide Integrated Demand Side Management Program Implementation Plan for more detail.

C. Summary Of Initiatives And Activities Proposed To Accomplish The Sector Objectives And Why SCE's Proposed Program Strategies Will Meet The Stated Goals

One of the most important aspects of the regulatory and business environment guiding the design of SCE's proposed ~~2009-2011~~ 2010-2012 energy efficiency portfolio is the need to be strategic, comprehensive, and "big and bold." This Proposed Program Plan makes essential steps in that direction. Below are examples of the proposed initiatives and activities that will help accomplish the goals.

1. SCE's Proposed Initiatives And Activities Address The Goals Of The Big, Bold Energy Efficiency Strategies

BBEES 1: All new residential construction in California will be zero net energy (ZNE) by 2020.

The proposed program plan includes both residential new construction and crosscutting initiatives, programs, and activities to accomplish the goals of the residential new construction ZNE

BBEES, as they are laid out in D.07-10-032 and the Strategic Plan.[57] Residential new construction activities include:

- Statewide New Construction: California Advanced Homes Program (CAHP) – CAHP offers financial incentives (as well as training opportunities, technical support, and marketing resources) to homebuilders who construct homes that exceed Title 24 standards. SCE proposes two important steps to enhance the program and put it directly on a path to support ZNE new construction:
  - Switching to performance-based incentives
  - Establishing a Service Planning "fast track" for qualifying new construction projects. The incentive structure will further promote the BBEES and related goals by incenting homes that are green, compact, and/or zero peak.

Crosscutting activities that significantly help meet the residential ZNE BBEES include:

- Sustainable Communities Program (SCP) – SCP is the step beyond CAHP, offering integrated design assistance and financial incentives to encourage builders to use sustainable energy efficient building design and construction practices for homes, buildings, and communities. Additionally, SCP promotes the integration of energy efficiency, demand response, advanced metering, and clean distributed generation, while facilitating the most appropriate package of services. SCE proposes piloting ZNE strategies and communities (as a non-resource program) that will mainstream over time into core programs (*e.g.,* CAHP and Savings By Design) as they become cost-effective.
- Codes & Standards (C&S) Program – C&S strives to promote more comprehensive standards and move to a zero energy based methodology. Also, C&S focuses on improved Title 24 and 20 code compliance and on addressing the pre-emption of California appliance efficiency standards by the federal government.

[57] D.07-10-032, dated October 18, 2007, pp. 42-44, *see also* California Long-Term Energy Efficiency Strategic Plan, pp. 12-13.

- Emerging Technologies Program (ETP) – ETP works to encourage new technology and product development and contribute to the accelerated market demand that is necessary for widespread development of ZNE new homes.
- Local Government & Institutional Partnerships – the Partnership Program strives to increasingly focus on the residential new construction ZNE goal.
- Additional contributory programs – these include the Business & Consumer Electronics Program, Marketing, Education, & Outreach, and Workforce Education & Training.

BBEES 2: All new commercial construction in California will be zero net energy by 2030.

SCE's Second Amended 2010-2012 Proposed Program Plan includes both commercial new construction, and crosscutting initiatives, programs, and activities to accomplish the goals of the commercial new construction ZNE BBEES, as laid out in D.07-10-032 and the Strategic Plan.[58] Commercial new construction activities include:

- Statewide New Construction Program: Savings By Design (SBD) – SBD is a statewide sub-program that targets new and expanding commercial, industrial, governmental and institutional facilities, offering a full spectrum of support to building owners, architects, engineers, and others. SBD provides multi-level design and technical and financial assistance to influence basic design. The program aims to minimize lost opportunities that result when a building's energy performance is not a primary consideration in a project's design. SBD is promoting zero net and very low energy efficiency through three complementary components – Whole Building Approach (Integrated Design), Systems Approach, and a Simplified Approach for Small Projects. Guided by the Strategic Plan, SBD now offers additional financial incentives beyond direct energy savings and demand reduction incentives to

[58] D. 07-10-032, dated October 18, 2007, pp. 46-48, *see also* California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 30-41.

qualifying projects that achieve green building certification, in support of enhanced energy efficiency, perform building commissioning during design and construction, and/or establish and follow a building measurement and verification (M&V) plan after occupancy. In addition, SBD offers design firms extensive technical support to build their in-house integrated design and energy modeling capability.

Crosscutting actions that significantly help meet the commercial ZNE BBEES include:

- Sustainable Communities Program (SCP) – SCP addresses commercial and residential construction practices that affect energy use, and is also coordinated with any incentives offered by Air Quality Management District (AQMD) and others to promote water efficiency, occupant health, and environmental well-being. SCP recognizes that the integration of Demand Side Management (DSM) approaches and integrated design is important to achieving ZNE new construction. SCP will help commercialize ZNE approaches for incorporation into the ~~2012-2014~~ next cycle and beyond and is an important component of implementing the Strategic Plan.
- Other programs that advance specific commercial sub-sectors toward zero net and very low energy performance, such as the Automated Energy Review for Schools Program.
- Codes & Standards Program – C&S strives to promote more comprehensive standards for Title 24-jurisdictional commercial buildings, and move to a zero energy based methodology. Also, C&S focuses on improved Title 24 and 20 code compliance and on addressing the pre-emption of California appliance efficiency standards by the federal government.
- Emerging Technologies Program – ETP encourages new technology and product development and contributes to the accelerated market demand that is necessary for widespread development of ZNE new buildings.

- Additional contributory programs – these include Marketing, Education & Outreach, Local Government & Institutional Partnerships, and Workforce Education & Training.

BBEES 3: Heating, Ventilation, and Air Conditioning (HVAC) will be reshaped to ensure optimal equipment performance.

The Second Amended 2010-2012 Proposed Program Plan includes both specifically targeted and crosscutting initiatives, programs and activities to accomplish the goals of the HVAC BBEES, as laid out in D.07-10-032 and the Strategic Plan.[59] HVAC specific initiatives include:

- Implementing a variety of downstream, midstream, and upstream strategies designed to positively influence the overall behavior of all stakeholders in both the residential and light commercial HVAC markets. Upstream strategies will be used to increase shipments of innovative HVAC equipment that offers better peak demand and energy efficient performance in California's hot, dry climate. Increased emphasis will be placed on statewide marketing and branding efforts to create market pull, and contractor training and education to create market push. The proposed strategies include comprehensive midstream activities (that differ between residential and non-residential applications) and significant downstream customer incentives for quality installed and code compliant air conditioning systems.

Crosscutting actions that help meet the HVAC BBEES include:

- Codes & Standards Program – C&S strives to promote more comprehensive standards, including the development of HVAC standards better suited for hot, dry climates, and move to a zero energy based methodology. C&S also focuses on improved code compliance and addressing the pre-emption of California HVAC efficiency standards by the federal government.

[59] D.07-10-032, dated October 18, 2007, pp. 50-52, *see also* California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 57-65.

- Emerging Technologies Program – ETP encourages new technology and product development and contributes to the accelerated market demand that is necessary for widespread transformation of HVAC (especially hot/dry oriented air conditioning) in California.
- Additional contributory programs – these include the Local Government & Institutional Partnerships, Financial Solutions, Workforce Education & Training, and Marketing, Education, & Outreach.

2. SCE's Proposed Initiatives And Activities Address Other Important Sector Objectives And Goals

Local Government

Recognizing the key role played by local governments to provide energy efficiency, conservation, distributed renewable generation and other DSM resources, SCE embraces the vision of the Strategic Plan to strengthen and capitalize on the capacity of local governments. Local governments' role includes improving codes and standards compliance, providing energy efficiency and other DSM incentives and regulations, reaching out to their communities, and leading by example in their own facilities.

The Local Government Partnerships (LGPs) in this Proposed Program Plan work with the Sustainable Communities Program and Codes and Standards Program to provide support to local governments to adopt and support relevant policies, ordinances, and building codes. Peer-to-peer support is considered a key part of this strategy; the partnerships provide forums for local governments to come together and share best practices and to learn from and support each other. In addition, SCE includes local government organizations such as Councils of Government and other Joint Powers Associations in the partnership portfolio.

- As recognized by the Strategic Plan,[60] code compliance is a challenge for many local governments. The LGPs supports local government Title 24 compliance activities with energy code training for plan checkers and building inspectors.
- Local governments also provide venues for the piloting of new technologies, many of which are ZNE or ultra low energy related. SCE will explore opportunities to test technologies that could be coordinated statewide.
- SCE will provide assistance for cities and counties to identify energy efficiency retrofit projects, as well as technical assistance including audits to help overcome barriers to implementation of energy efficiency projects.
- To help local governments mobilize their communities and set community-wide goals and strategies, SCE is enhancing its partnership offering to support and reward such initiative. Furthermore, SCE strongly supports and promotes the integration of DSM efforts by local governments.
- The enactment of AB 811[61] provides a very important new energy efficiency opportunity for local governments and for SCE ratepayers. SCE will assist local governments to utilize this new authority to the maximum extent possible, as part of our Local Government Partnership and Financial Solutions programs.

Marketing, Education & Outreach (ME&O)

SCE's Proposed Program Plan includes an integrated portfolio of Marketing, Education, and Outreach (ME&O) actions designed to educate consumers about energy efficiency and other DSM offerings, a need discussed in both D.07-10-032 and the Strategic Plan.[62] SCE continues to develop integrated marketing campaigns, using customer segmentation research and techniques, to efficiently and successfully move consumers through a continuum from awareness to attitude change to action.

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[60] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 89-97.

[61] California Assembly Bill 811 (Levine), approved by Governor July 21, 2008 adds a Section 5898.14 to the Streets and Highways Code.

[62] D.07-10-032, dated October 18, 2007, pp. 55-64, *see also* California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 71-73 and 79-82.

ME&O materials leverage statewide branding to maximize participation, market transformation, and adoption of long-term energy efficiency behaviors. Emphasis will be placed on program bundling, to coordinate and pull together relevant energy efficiency, demand response, low income, California Solar Initiative, and SmartConnect™ (advanced metering) enabled offerings.

For example, SCE plans to launch three marketing campaigns each year featuring relevant solutions to common consumer issues, such as managing cooling costs. Efforts include activities such as point-of-sale, direct response, outbound calling, trade journals, sce.com, on-line and electronic advertising, and bill messaging and inserts.

Accomplishing the long-term goal of dramatically changing consumer energy-related behavior requires, as is described in the Strategic Plan,[63] a coordinated effort that includes:

- Statewide branding;
- Coordination among IOUs; and
- Utilizing a spectrum of market actors, including but not limited to –
  - Retailers
  - Builders, manufacturers, and other key market players
  - Local governments
  - Trade associations
  - Non-profit/community-based organizations.

Workforce Education & Training

SCE's Proposed Program Plan strongly supports the Workforce Education & Training (WE&T) activities and goals laid out in the Strategic Plan that focus on educating and training Californians to perform the jobs needed to achieve the State's clean energy and climate mitigation goals. SCE is proposing a collaborative and comprehensive approach to education and training. This program will develop new types of energy efficiency- related jobs, and increase awareness and demand for these careers. The program coordinates with other utilities and key players on a statewide basis and addresses

[63] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 79-83.

energy efficiency WE&T needs and those of other DSM resources, to achieve streamlined and accessible programs with cost-effective economies of scale. This work, while always important, takes on new meaning as the result of the very difficult employment and economic conditions facing southern California, and SCE will take new steps to expand needed training curricula and facilities, and leverage other resources, both SCE's and those of others.

SCE's ~~2009-2011~~ 2010-2012 WE&T program includes three important core delivery components: WE&T Planning, WE&T Centergies, and WE&T Connections. Each component is designed to target specific market segments, and accomplish the larger education and training Strategic Plan goals and objectives. In aggregate they will target key workforce (and potential workforce) areas including: community colleges and adult education, K-12 students, technicians and contractors, colleges and universities, and minority, low-income, and disadvantaged communities.

The WE&T Planning component is a statewide program that serves as the planning and support function to the greater Strategic Plan WE&T long-range activities. This component facilitates implementation and completion of the four key activities identified in the Strategic Plan as needed to drive long term WE&T development and strategic planning.

The WE&T Centergies Program component utilizes SCE's Energy Centers, Technology Test Centers, and other information and training venues and program implementation strategies to provide comprehensive education and training offerings across all market sectors. This program is dynamically designed to focus training on specific market sector needs.

The WE&T Connections component is a three-fold program. First, the program promotes green careers to K-12 and university students through energy and environmental curriculum, relevant degree programs, courses, and internships. Second, the program educates students on energy, water, and the environment, with the goal of influencing day-to-day decisions of students and their households. Third, the program educates schools on energy efficiency and demand response programs[64] and benefits and helps schools overcome barriers to adopting energy efficiency in their facilities.

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[64] Funding for these demand response activities is identified in A.08-06-001.

Industrial Sector

The industrial sector strategy targets industrial processes and systems (plus appropriate building-related measures) and is structured to reflect industrial consumers' reluctance to alter elements of a working production system for reasons other than production output or quality. SCE's industrial sector activities are designed to increase industrial consumers' awareness of and their participation in energy efficiency, demand response, and/or renewable self-generation opportunities.

The proposed industrial energy efficiency programs offer both calculated and deemed incentives, in addition to other services as part of a more integrated bundling of energy efficiency options. These bundled solutions provide:

- Robust economic returns measured by payback period, net present value, and/or return on investment; and
- Promoting continuous energy efficiency improvement as a long-term strategy that delivers energy and resource benefits to California as well as cost savings and competitive advantage to participating industrial consumers.

Agricultural Sector

The proposed agricultural strategy for ~~2009-2011~~ 2010-2012 is designed to enhance adoption of energy efficient equipment and practices among agriculture and water systems customers, by mitigating historical barriers to adoption. As memorialized in the Strategic Plan, the primary barriers are economics, lack of coordination among programs offered to the agricultural sector, and a general lack of information.

The statewide agricultural program brings together the disparate IOU programs of the past and augments them, as necessary, to implement the agricultural strategies in the Strategic Plan. The program improves customer economics, provides a central information warehouse and increases outreach to agricultural customers.

Integrated DSM

SCE's proposed program includes the formation of a statewide Integrated DSM (IDSM) Task Force in collaboration with the other IOUs and the Commission's Energy Division. The Task

Force will meet regularly and will address key issues like cost-effectiveness, demonstration pilots and other ways to drive greater levels of DSM integration. In addition, each Program Implementation Plan addresses IDSM where applicable.

The proposed budgets and savings for the program activities listed above in Section C are included in Second Amended Table I-4 below.

~~Table I-4~~
~~Estimated Budgets and Savings for New Approaches~~

	SCE EE Program	Total 2009-2011 Program Cycle Budget	Total Gross Energy Savings (kWh)	Total Gross Demand Reduction (kW)
	Residential & Commercial HVAC Program	$ 76,413,000	124,443,900	91,954
	Industrial Energy Efficiency Program	$ 101,066,000	584,491,601	97,459
	Agriculture Energy Efficiency Program	$ 29,578,000	172,975,916	41,731
	Sustainable Communities	$ 14,254,000	-	-
	SW Codes & Standards	$ 11,080,000	232,416,517	43,441
	SW Emerging Technologies	$ 22,901,000	-	-
	New Construction Program	$ 77,655,000	241,674,434	62,128
	Automatic Energy Review for Schools	$ 2,015,000	2,900,732	650
	SW Marketing, Education & Outreach	$ 20,213,514	-	-
	Energy Leader Partnership Program (Core)	$ 5,609,000	14,395,899	2,884
1	Energy Leader Partnership Strategic Support	$ 994,000	-	-
1	City of Redlands Energy Leader Partnership	$ 798,000	1,875,000	376
1	Community Energy Leader Partnership	$ 3,891,000	10,000,000	1,986
1	City of Beaumont Energy Leader Partnership	$ 573,000	1,250,000	251
1	Desert Cities Energy Leader Partnership	$ 1,486,000	3,750,000	728
1	Eastern Sierra Energy Leader Partnership	$ 956,000	2,250,000	487
1	Kern County Energy Leader Partnership	$ 2,645,000	6,743,750	1,354
1	City of Long Beach Energy Leader Partnership	$ 1,851,000	4,619,795	907
1	Orange County Cities Energy Leader Partnership	$ 2,218,000	5,625,000	1,104
1	City of Ridgecrest Energy Leader Partnership	$ 786,000	1,856,250	376
1	City of Santa Ana Energy Leader Partnership	$ 1,858,000	4,750,000	943
1	City of Simi Valley Energy Leader Partnership	$ 391,000	625,000	126
1	Ventura County Energy Leader Partnership	$ 4,765,000	12,500,000	2,454
1	South Santa Barbara County Energy Leader Partnership	$ 2,958,000	7,500,000	1,472
1	South Bay Energy Leader Partnership	$ 2,969,000	7,500,000	1,490
1	City of South Gate Energy Leader Partnership	$ 798,000	1,875,000	372
1	San Gabriel Valley Energy Leader Partnership	$ 1,996,000	5,000,000	1,011
1	San Joaquin Valley Energy Leader Partnership	$ 2,225,000	5,625,000	1,129
1	Palm Desert Demonstration Partnership	$ 20,815,000	62,130,677	18,214
	Institutional and Government Core Energy Efficiency Partnership Program (Core)	$ 4,294,000	9,384,376	1,392
1	California Community Colleges Energy Efficiency Partnership	$ 12,041,000	38,926,292	5,774
1	California Department of Corrections and Rehabilitation Energy Efficiency Partnership	$ 3,241,000	7,188,089	1,066
1	County of Los Angeles Energy Efficiency Partnership	$ 2,737,000	7,188,096	1,140
1	County of Riverside Energy Efficiency Partnership	$ 3,727,000	8,042,578	1,425
1	UC/CSU Energy Efficiency Partnership	$ 14,019,000	45,516,901	6,705
1	County of San Bernardino Energy Efficiency Partnership	$ 2,186,000	5,466,335	874
1	State of California Energy Efficiency Partnership	$ 3,669,000	7,982,776	1,184
1	Business and Consumer Electronics Program	$ 12,642,000	51,622,602	5,334
1	WE&T Connections	$ 9,056,000	4,504,564	790
1	WE&T Centergies	$ 26,334,000	-	-
	Total	**$ 509,703,514**	**1,704,597,080**	**400,713**

1 - Represents a element within a proposed SCE EE program.

Second Amended Table I-4
Estimated Budgets and Savings for New Approaches

	SCE EE Program	Total 2010-2012 Program Cycle Budget	Total Gross Energy Savings (kWh)	Total Gross Demand Reduction (kW)
	Residential & Commercial HVAC Program	$ 76,413,000	124,443,900	91,954
	Industrial Energy Efficiency Program	$ 101,066,000	584,491,601	97,459
	Agriculture Energy Efficiency Program	$ 29,578,000	172,975,916	41,731
	Sustainable Communities	$ 14,254,000	-	-
	SW Codes & Standards	$ 11,080,000	270,023,041	47,516
	SW Emerging Technologies	$ 22,901,000	-	-
	New Construction Program	$ 77,655,000	241,674,434	62,128
	Automatic Energy Review for Schools	$ 2,015,000	2,900,732	650
	SW Marketing, Education & Outreach	$ 20,213,514	-	-
	Energy Leader Partnership Program (Core)	$ 5,609,000	14,395,899	2,884
1	Energy Leader Partnership Strategic Support	$ 994,000	-	-
1	City of Redlands Energy Leader Partnership	$ 798,000	1,875,000	376
1	Community Energy Leader Partnership	$ 3,891,000	10,000,000	1,986
1	City of Beaumont Energy Leader Partnership	$ 573,000	1,250,000	251
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1	City of Santa Ana Energy Leader Partnership	$ 1,858,000	4,750,000	943
1	City of Simi Valley Energy Leader Partnership	$ 391,000	625,000	126
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1	South Santa Barbara County Energy Leader Partnership	$ 2,958,000	7,500,000	1,472
1	South Bay Energy Leader Partnership	$ 2,969,000	7,500,000	1,490
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1	San Gabriel Valley Energy Leader Partnership	$ 1,996,000	5,000,000	1,011
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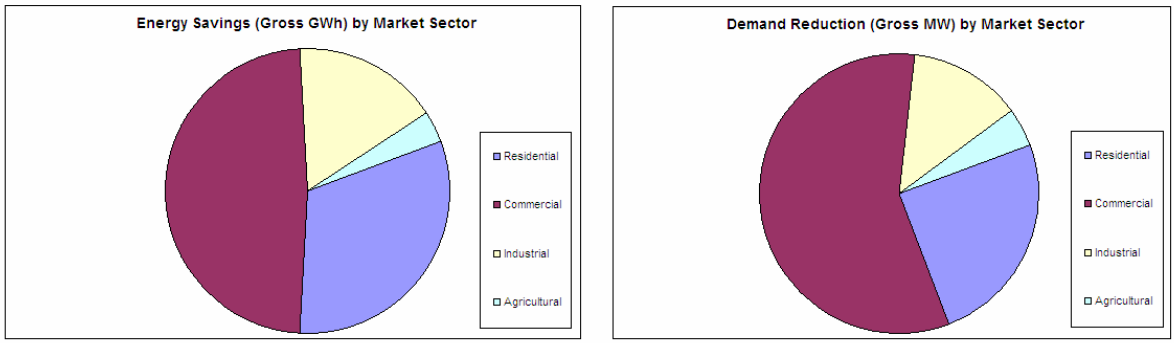
1	County of Los Angeles Energy Efficiency Partnership	$ 2,737,000	7,188,096	1,140
1	County of Riverside Energy Efficiency Partnership	$ 3,727,000	8,042,578	1,425
1	UC/CSU Energy Efficiency Partnership	$ 14,019,000	45,516,901	6,705
1	County of San Bernardino Energy Efficiency Partnership	$ 2,186,000	5,466,335	874
1	State of California Energy Efficiency Partnership	$ 3,669,000	7,982,776	1,184
1	Business and Consumer Electronics Program	$ 12,642,000	51,622,602	5,334
1	WE&T Connections	$ 9,056,000	3,247,809	576
1	WE&T Centergies	$ 26,334,000	-	-
	Total	**$ 509,703,514**	**1,740,946,849**	**404,575**

1 - Represents a element within a proposed SCE EE program.

D. Charts Summarizing Projected Energy Savings From Each Of The Four Major Sectors For The Program Cycle; And, Charts Of Expected Savings Against Estimated Baseload Consumption, Averaged Over Three Years

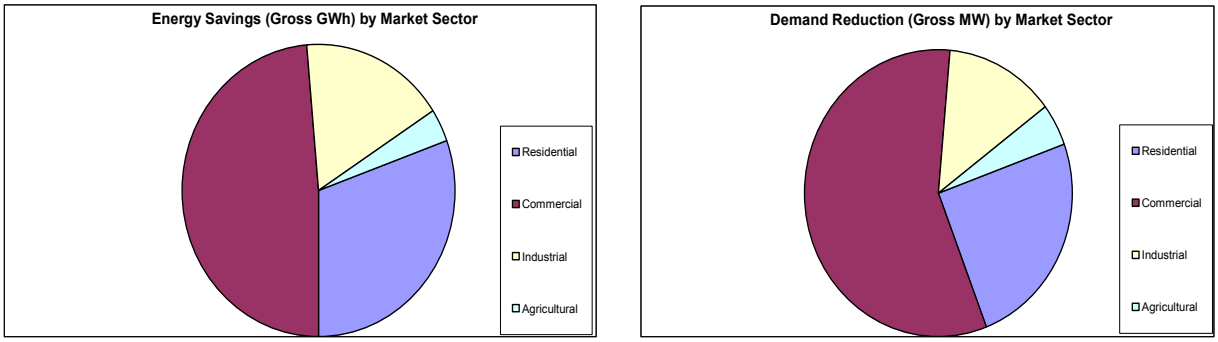
Second Amended Table I-5 below shows projected energy savings and demand reduction from each of the four major sectors (Residential, Commercial, Agricultural, and Industrial). Second Amended Exhibit SCE-2, dated July 2, 2009, includes a detailed breakdown by sector of SCE's proposed budget, energy saving, and demand reduction. Second Amended Exhibit SCE-2, dated July 2, 2009, also includes a break down of energy efficiency measures.

~~Table I-5~~
~~Energy Savings And Demand Reduction By Market Sector~~



Note: Does not include forecast of Low Income Energy Efficiency and Codes and Standards impacts for the 2009-2011 program cycle.

Second Amended Table I-5
Energy Savings And Demand Reduction By Market Sector



Note: Does not include forecast of Low Income Energy Efficiency and Codes and Standards impacts for the 2010-2012 program cycle.

II.

PROPOSED ENERGY EFFICIENCY POLICIES AND RULES

A. Introduction

In this chapter, SCE proposes key policy modifications that are necessary to enable the success of California's energy efficiency programs in the 2010-2012 period and beyond. This Second Amended testimony on proposed policies supersedes the policy testimony submitted by the Joint IOUs on March 2, 2009.[65] This Testimony is being submitted to the Commission pursuant to D.07-10-032, the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) D.08-09-040 adopted on September 18, 2008, the Order Instituting Rulemaking 09-01-019 on the Energy Efficiency Risk Reward Incentive Mechanism issued February 4, 2009, and other rulings and orders.[66]

Although Decision (D.) 09-05-037, issued May 26, 2009, adopted changes in existing rules on the calculation of energy savings and portfolio cost-effectiveness for the Utilities' 2009-2011 Energy Efficiency Applications, SCE believes there are still outstanding policy issues that must be clarified to provide a higher degree of certainty around the energy efficiency process for the Commission, the Utilities, and other parties and stakeholders. These policy issues include:

1. **Cumulative Savings**: To align with SCE's proposed 2010-2012 program cycle, SCE proposes to define cumulative energy savings for the 2010-2012 cycle as including energy savings goals for years 2007-2012.
2. **Attribution**: The Commission should not adopt a separate attribution factor to account for actions taken by customers with external motivations (e.g., federal stimulus funds). This issue may impact multiple programs. In the case of government partnerships, the current .70

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65 Southern California Edison Company's Application For Approval of Its Revised 2009-2011 Proposed Energy Efficiency Program Plans and Public Goods Charge And Procurement Funding Requests, Exhibit SCE-1, Chapter II, Proposed Energy Efficiency Policies And Rules, dated March 2, 2009.

66 *See also* Administrative Law Judge (ALJ) Ruling dated October 31, 2008; Scoping Memo dated November 25 2008; Guidance Ruling dated December 12, 2008; ALJ Ruling Revising Proceeding Schedule dated February 10, 2009; ALJ Ruling Regarding Policy Issues, dated February 25, 2009; D.09-05-037 Interim Decision Determining Policy And Counting Issues For 2009 To 2011 Energy Efficiency Programs, dated May 26, 2009; and ALJ Ruling Setting Schedule for Supplemental Filings, dated May 29, 2009.

net-to-gross ratio for government partnership program savings should be retained, on an overall program basis, for all projects.

3. **Assumptions:** Ex ante benefit and measure cost assumptions used for planning the 2010-2012 Energy Efficiency Portfolio should also be used for portfolio reporting and evaluation. These assumptions should include limited Utility-proposed revisions to the 2008 DEER update proposed by the Energy Division.

It is essential that these policy matters are resolved in order for the Commission to adopt successful energy efficiency portfolios. SCE's proposal focuses on cost-effectively maximizing the total energy savings necessary to meet California's aggressive vision and need for energy efficiency. These requests allow SCE to focus on the forceful execution of an energy efficiency portfolio that supports the State's energy efficiency goals as articulated in the Strategic Plan, including the Big, Bold Energy Efficiency Strategies, AB 32 – the California Global Warming Solutions Act of 2006, and the State's Energy Action Plan (EAP). Additionally, adjustment of the program cycle from 2009-2011 to 2010-2012 creates a more reasonable timeframe for SCE to implement the strategies necessary to achieve these aggressive goals.

SCE's Proposed Program Plans for 2010-2012 are contingent upon Commission adoption of the above-described policy changes. The energy savings and cost-effectiveness of the Proposed Program Plans are summarized in the amended testimony and tables in Second Amended Exhibit SCE-2, dated July 2, 2009. SCE's testimony and tables also include results for a compliance scenario required by the Administrative Law Judge that assumes cumulative savings cover the period 2006-2011, full December 2008 DEER updates as proposed by the Energy Division, and other current policies mandated in Commission Decisions and Rulings. This scenario also assumes the current net-to-gross ratio of .70 for local government partnerships.

At this point in the Application process, SCE believes that the compliance scenario is not feasible, as the remaining 24-27 months following a Commission decision on its Application do not provide SCE and its partners the time needed to achieve the 2006-2011 cumulative goals. Accordingly, to maximize the likelihood that SCE is able to implement a portfolio that maximizes energy efficiency

and greenhouse gas reductions and supports the Commission's long-term vision for efficiency as presented in the Strategic Plan and elsewhere, SCE urges the Commission to adopt the proposed policy changes upon which the portfolio is built.

B. Changes Needed For A Cost-Effective Portfolio That Meets Commission Goals

1. Cumulative Savings Should Be Defined To Include Program Years 2007-2012

At this juncture, SCE recognizes that a Decision on the 2009-2011 Applications is not likely until the end of the third quarter of 2009 at the earliest, and that program implementation will not realistically begin until 2010. Although significant program achievements have been made during the 2009 bridge funding period, SCE has not been authorized to execute the 2009 plans that were originally developed and launch new, innovative and comprehensive programs for the full three-year cycle.

Given the present realities, SCE believes it is not feasible to accomplish an ambitious 36-month plan in the remaining 24-27 months, in order to meet the proposed 2006-2011 cumulative energy savings goal by the end of 2011. In order to provide SCE and its partners with a reasonable opportunity to achieve the cumulative energy savings goals, SCE is proposing a 2010-2012 program cycle, with a 2007-2012 cumulative goal. SCE's overall First Amended Plan, as filed on March 2, 2009, remains otherwise unchanged – including program design and structure and overall funding levels. However, this adjustment to the timing of the cycle will allow SCE to thoroughly and properly execute a full three-year program plan, as originally designed. As part of this proposal, SCE proposes that the Commission extend bridge funding through December 31, 2009, as authorized by D.08-10-027.

SCE recognizes that in order to implement a 2010-2012 program cycle, several factors will need to be taken into consideration. These include:

a) CPUC Adoption of 2012 Energy Efficiency Goal

As of the date of this filing, the CPUC has not yet formally adopted IOU Energy Efficiency goals for 2012 and beyond. SCE proposes that the Commission adopt the IOU programs component of SCE's Interim 2012 and beyond. SCE proposes that the Commission adopt the IOU programs' component of SCE's Interim 2012 Total Market Gross (TMG) Goal established in D.08-07-

047, as this Decision established interim TMG goals for each IOU service territory for the years 2012 through 2020.

Unlike previous energy efficiency goals which were based on IOU programs only, the TMG goals incorporate energy efficiency from non-IOU savings mechanisms, including legislation (specifically AB 1109 California Lighting Efficiency and Toxics Reduction Act, also known as the "Huffman Bill"), state and federal standards, Big Bold Energy Efficiency Strategies (BBEES), and IOU programs. The Commission characterized the TMG goals as interim and identified the need to update the TMG goals and establish IOU program-specific expansive net goals.[67] However, the Commission's target date for completing the update is October 2010.[68]

In the absence of updated TMG and/or expansive net goals, SCE proposes to use the IOU Programs component of SCE's Total Market Gross goal adopted in D.08-07-047 as the goal for SCE's 2012 energy efficiency portfolio. SCE's Total Market Gross Energy Efficiency goal broken-down by savings mechanism is shown below.[69]

Table A-4: SCE (cumulative)

GWH	2012	2013	2014	2015	2016	2017	2018	2019	2020
Huffman Bill	151	302	453	604	755	906	1,057	1,207	1,358
T24+Federal Standards	83	170	270	390	546	708	874	1,046	1,223
BBEES	66	127	183	245	299	353	413	471	528
IOU Programs	673	1,236	1,713	2,129	2,546	2,969	3,394	3,818	4,241
Total Market Gross	973	1,834	2,618	3,368	4,146	4,935	5,737	6,543	7,350
MW									
Huffman Bill	20	40	61	81	101	121	142	162	182
T24+Federal Standards	29	60	94	136	199	265	332	402	473
BBEES	37	71	104	143	178	214	253	292	329
IOU Programs	129	243	345	438	531	625	720	814	908
Total Market Gross	215	415	604	797	1,010	1,225	1,447	1,670	1,892

Even though the Itron analysis underlying the TMG goals has not been updated to reflect the most recent energy efficiency input data, (e.g., DEER 2008), it remains the best publicly-

[67] D.08-07-047, p. 33

[68] D.08-07-047, OP#5

[69] D.08-07-047, Table A-4, Appendix p. 3

available analysis of IOU energy efficiency potential at this time. The Itron analysis is particularly valuable because it reflects the forecasted impacts of legislation, standards, and the California Long-Term Energy Efficiency Strategic Plan on the levels of energy efficiency achievable through IOU programs. Consequently, SCE believes that the IOU Programs component of the TMG goals represents the best available proxy for an IOU program goal until the Commission completes its updated study of energy efficiency potential in 2010.

In D.08-07-047 the Commission adopted the interim TMG goals for use by the California Air Resources Board in its Assembly Bill 32 planning process and in the Commission's long-term procurement planning process.[70] Further, IOUs were directed to use one hundred percent of the interim Total Market Gross energy savings goals for 2012 through 2020 in future Long-Term Procurement Planning proceedings, until superseded by permanent goals.[71] Use of the TMG goals adopted in D.08-07-047 for GHG planning was reiterated by the Commission in D.08-10-037.[72]

To maintain consistency with the Total Market Gross energy efficiency goals that the Commission has adopted for long-term procurement and GHG planning, it is appropriate to use the IOU Programs component of these goals as the goal for SCE's 2012 EE portfolio.

b) Assembly Bill 1109 ("Huffman Bill") Impacts

California Assembly Bill 1109 (California Lighting Efficiency and Toxic Reduction Act), also known as the "Huffman Bill," aims to reduce lighting energy usage in California. It does so by applying existing appliance energy standards to include lighting products, as well as require minimum lumen/watt standards for different categories of lighting products. In essence, the amount of energy efficiency savings attributed to compact fluorescent lighting will reduce. As a result, SCE's proposed program plans actively ramp down incentives on bare spiral CFLs in years 2010 and 2011 and increase its focus on more efficient lighting (including LEDs, dimmable CFLs, etc.) in 2012.

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[70] D.08-07-047, OP#1

[71] D.08-07-047, OP#3

[72] D.08-10-037, OP#1

2. The Commission Should Not Adopt A Separate Attribution Factor To Account For Actions Taken by Customers with External Motivations

D.09-05-037 denies the Utilities' request to change attribution rules regarding savings credit for actions taken by customers supported by Utility programs, but who may also be motivated by external factors (such as federal stimulus funds, Green Building Initiative, and other initiatives, as applicable). What is now needed is simply a clear understanding of how utilities should claim savings from program activities where it is known that the customer is also receiving support from other sources.

In fact, we already have the tool for making the attribution determination, and we're already using it. It is the program net-to-gross ratio (NTGR). The basic function of net-to-gross analysis is to correctly attribute energy savings due to program activities to the program, and to remove energy savings due to other causes. Free ridership analysis looks at the customer environment and seeks to answer the question: what is the probability that each customer would have achieved these savings (or a fraction of these savings) in the absence of the program?

Therefore, SCE proposes that the Utilities continue to rely on the currently-proposed program NTGRs as the appropriate attribution factors for each program. Ex post studies will determine the level of free ridership from all causes, from non-energy benefits to very strong paybacks to grants and tax credits. The federal stimulus funds simply represent a particular new instance of the types of other motivating factors that the NTGR has always been intended to take into account.

Because of the particular economic circumstances during this time, it is unnecessary to change the ex ante NTGRs of programs where some customers will have the opportunity to receive federal stimulus grants or tax credits or to respond to initiatives. The extreme national recession is taking a disproportionate toll in California on government budgets, employment, asset values, and credit availability. Recovery is projected to take longer in California. This results in a situation where substantially higher incentives and support are likely to be necessary for most customers who still have some capability to undertake costly energy efficiency upgrades. The combined effect of utility incentives and substantial utility support for participation in the other initiatives will probably be

necessary for most customers to participate. In addition, the stimulus funds are available for only a short time period. Thus, the NTGRs for the new program cycle are unlikely to decline from present values.

If the Commission chooses instead to establish a low NTGR for programs that provide support in areas where customers also have access to federal stimulus funds, the Commission runs the risk of substantially reducing California customer use of the stimulus funding. This will be the result if the utilities are unable to provide needed additional support to customers to take advantage of these funds, due to loss of calculated cost-effectiveness.

Consequently, as an example, SCE does not see any justification for prescribing new and different rules for crediting savings from existing program funds in the presence of federal stimulus funds. Given the short timeframes involved, SCE and local governments should maintain maximum flexibility to leverage available energy efficiency funding resources within existing program criteria in order to create jobs and energy savings in California. The Commission should maintain consistent policies regardless of whether local governments elect to fund a portion of their investment with ARRA funds or other previously available sources of support, such as bond funds. The net-to-gross ratio already takes this into account at the program level. This means that the current 0.70 net-to-gross ratio for government partnership program savings should be retained, on an overall program basis, for all projects.

3. Ex Ante Per-Unit Benefit And Cost Assumptions Should Be Adopted For 2010-2012 Portfolio Planning And Also Used For Portfolio Evaluation

SCE's 2010-2012 Proposed Program Plans support the Commission's goals for both short-term and long-term resource benefits to the State, focusing on a mix of both existing and emerging technologies and programs. Energy efficiency is the premier resource in California's loading order, and as such deserves and demands a reliable and reasonable planning and implementation environment. Such an environment allows the Utilities, the energy efficiency industry, and local partners to focus on producing savings and not continually be concerned about responding to shifting assumptions. It allows the State, the Commission, and ratepayers to receive the benefits the Utilities are proposing.

The benefits and measure costs supporting SCE's Proposed Program Plans are based on the DEER data, with limited IOU modifications as discussed herein. Failure to adopt the per-unit benefit and cost assumptions (including but not limited to kWh, kW, EUL, and measure costs) for portfolio planning, reporting, and evaluation jeopardizes achievement of the Commission's and State's energy goals, as currently established. The Commission has acknowledged the inconsistency in the per-unit benefit and cost assumptions underlying goal development and new assumptions being released, such as the 2008 December DEER update proposed by the Energy Division. The following sequence describes the Commission's actions:

1. The goals for the period 2004-2013 set forth in the 2004 Decision D.04-09-060 were created using a set of facts regarding benefits and measure costs available at that time. The energy savings potential, from which the goals are derived, exists as previously stated only when the underlying inputs (*e.g.,* energy savings, costs, EULs, *etc.*) remain consistent. Variations in the underlying inputs call into question whether the energy savings potential, upon which the goals are based, continues to exist at the previously estimated levels.
2. In 2008, the Commission confirmed that the 2009-2011 goals are gross goals, citing D.04-09-060 and new analysis showing "that the currently-adopted numeric goals for 2009-2011 are consistent with, and in most cases higher than, recent analysis of maximum achievable utility gross savings potential during these years."[73]
3. In D.08-07-047, the Commission found that 2009 and beyond goals were "now out of date. Key assumptions embedded in the current goals do not resemble trends visible in the overall energy efficiency market today. For example, the net-to-gross and expected useful life assumptions in the 2009-2011 goals are about ten years old."[74]

[73] D.08-07-047, dated August 1, 2008, p. 29.

[74] *Id.*, p. 28.

4. The Energy Division then updated key assumptions through the 2008 DEER update, most recently in December 2008. The Commission declined to reflect these assumption changes in the goals for 2009-2011 adopted in D.08-07-047, even though the Commission intends to correct the misalignment for future program cycles.[75]

Accordingly, the Commission must either freeze the goals with the per-unit benefit and measure cost assumptions needed to achieve those goals (as presented herein) or allow the goals to proportionately "float" to address the constantly changing assumptions proposed through DEER and other updates. Continual changes to the rules of the game make it exceedingly difficult and expensive for Utilities and third parties to effectively plan and implement energy efficiency programs to meet the energy savings goals. Furthermore, changes to per-unit measure and cost assumptions between program adoption and evaluation compromise SCE's ability to focus on the Strategic Plan since proven, cost-effective portfolio measures cannot be used to balance new, non-cost-effective efforts for both the cost-effectiveness and energy saving achievement calculations. Thus, SCE requests that the Commission adopt and maintain the per-unit benefit and cost assumptions, as proposed herein, throughout the program cycle to meet the Commission's energy savings goals as established in D.04-09-060.

New Process Needed for Measures in Proposed Framework

In light of the proposed framework, SCE requests that the existing process for adding new measures, as adopted in D.05-09-043, be altered to allow for proper, formal, on-the-record review of benefit and measure costs proposed by the Energy Division. The new measure information would be provided to SCE's local peer review group (PRG) for informal review as required by the Energy Efficiency Policy Manual, Version 4.0, Table 8. Upon receipt of such information, the Energy Division would then be given 15 calendar days to resolve any issue. The Executive Director of the Energy Division would then send a letter to the local PRG and SCE on their recommended benefit and measure cost values. If the Energy Division does not resolve the values that should be used and inform SCE of such resolution by the 15th calendar day, then the SCE-proposed benefit and measure cost data will be

[75] D.08-07-047, dated August 1, 2008, p. 33.

used for portfolio reporting and evaluation. If SCE does not support the Energy Division's recommendation, SCE would have the opportunity to file an Advice Letter for full Commission review and resolution. SCE believes this proposed process provides the local PRGs ongoing information and the Energy Division ample opportunity to review proposed benefit and measure cost values while facilitating the inclusion of new measures through a timely and transparent process.

Savings assumptions should include limited SCE-proposed revisions to the DEER update issued by the Energy Division in December 2008 and should be adopted by the Commission for portfolio planning and evaluation. SCE's Proposed Program Plans include limited modifications to the proposed values from the DEER database, as supported by the workpapers in Second Amended Exhibit SCE-8, dated July 2, 2009. The Proposed Program Plans are based upon updated cost-effectiveness metrics that SCE maintains are more appropriate for the portfolio than those currently included in the Energy Division's proposed 2008 DEER Update (December 2008). The values utilized in the Proposed Program Plans represent values which are based upon supportable assumptions and studies of the resource benefits and measure costs of the portfolio. These values are also consistent with the goals of the Commission and the State.

The updated DEER numbers proposed by the Energy Division significantly reduce the amount of energy efficiency savings available from utility programs, but without commensurately reducing the energy efficiency savings goals. SCE firmly supports the use of estimates based on Commission studies that adhere to the Commission's evaluation, measurement, and verification (EM&V) protocols and that have gone through the proper vetting process. SCE rejects unsupported savings estimates proposed by Energy Division (or any party) that are developed outside of the Commission's protocols and that lack transparency. SCE maintains, and has submitted evidence[76] to support the conclusion that certain revised DEER estimates (December 2008) are flawed and thus inappropriate for use in this proceeding, as demonstrated in Second Amended Exhibit SCE-8, dated July 2, 2009.

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[76] Southern California Edison Company's (U338-E) Comments On the Review Draft Of The Energy Efficiency 2006-2007 Verification Report, dated December 15, 2008.

In this chapter, the four California investor-owned utilities (Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas and Electric Company, and Southern California Gas Company, known as the Joint IOUs) regulated by the California Public Utilities Commission (Commission or CPUC) propose key policy modifications that are absolutely necessary to enable the success of California's energy efficiency programs in the 2009-2011 period and beyond. This amended proposed policy testimony supersedes the policy testimony submitted by the Joint IOUs on July 21, 2008. This Testimony is being submitted to the Commission pursuant to Decision 07-10-032, the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) Decision 08-09-040 adopted on September 18, 2008, the Order Instituting Rulemaking 09-01-019 on the Energy Efficiency Risk Reward Incentive Mechanism issued February 4, 2009, and other rulings and orders.[77] The Joint IOUs propose policies that are essential to be decided within the context of the 2009-2011 proceeding and fit into two general policy categories. The first category of policy requests is needed in order for the IOUs to each build well-balanced portfolios that meet the sum of the Commission's annual 2009-2011 energy efficiency goals cost-effectively. Changes required for cost-effective energy efficiency portfolios that meet these goals are:

1. Benefit and measure cost assumptions that are used for planning the adopted 2009-2011 Energy Efficiency Portfolio (ex ante) should also be used for portfolio reporting and evaluation. These assumptions should include limited IOU-proposed revisions to the Database for Energy Efficiency Resources (DEER) update proposed by the Energy Division in December 2008;
2. Cumulative savings should be defined as the sum of the annual savings goals for the three-year portfolio period upon which the proposed budgets are based; and
3. Residential interactive effects and commercial heating interactive effects should be removed from energy efficiency calculations.

[77] *See also* Administrative Law Judge (ALJ) Ruling dated October 31, 2008, Scoping Memo dated November 25 2008; Guidance Ruling dated December 12, 2008 and Ruling Revising Proceeding Schedule dated February 10, 2009.

The second category of policy requests is essential to achieve both near and long-term goals of the State of California and the Commission. These include:

1. Certain costs in direct support of the Strategic Plan should be exempt from the shareholder risk-reward incentive mechanism;
2. IOUs should receive credit for energy efficiency actions taken by customers who may be motivated in part by other influences; and
3. To encourage long-term measure installations, the maximum effective useful life (EUL) should be extended to 30 years.

The IOUs also discuss a third set of policy requests that are important to successful energy efficiency programs. The IOUs acknowledge that these will be addressed in a subsequent R.09-01-019 by the CPUC. The Joint IOUs constructed their respective Proposed Program Plans anticipating that this third set of policy requests will be adopted by the Commission. In the event these policy requests are not granted in a subsequent rulemaking, the IOUs may need to revise their 2009-2011 Proposed Program Plans.

1. Gross metrics should be used for the calculation of performance toward the minimum performance standard (MPS) and performance earnings basis (PEB) under the RRIM; and
2. Mid-cycle funding augmentation rules should be revised.

The Commission has indicated a desire to consider policy revisions to the energy efficiency process.[78] The Joint IOUs recognize that the Commission intends to address energy efficiency policy issues and the risk/reward incentive mechanism in upcoming rulemakings and their instant applications. The Joint IOUs assert it is essential that these policy matters are resolved in order for the Commission to adopt successful utility 2009-2011 energy efficiency portfolios. The Joint IOUs' proposal focuses on cost-effectively maximizing the total energy savings necessary to meet California's aggressive vision for energy efficiency. These requests allow the IOUs to focus on execution of energy efficiency portfolios

[78] R.09-01-019. *See also* D.08-12-059.

that support all of the State's energy efficiency goals articulated in the Strategic Plan, including the Big, Bold Energy Efficiency Strategies; AB 32 – The California Global Warming Solutions Act of 2006; and the State's Energy Action Plan (EAP).

The IOUs' Proposed Program Plans for 2009-2011 are contingent upon Commission adoption of the above-described policy changes. The energy savings and cost effectiveness of the Proposed Program Plans are summarized in each of the IOUs' individual amended testimony and tables. The individual IOU testimony and tables also includes results for a mandated scenario required by the ALJ that employs the full December 2008 DEER updates proposed by the Energy Division and other current policies mandated in Commission Decisions and Rulings. The IOUs are not able to develop and implement reasonable and well-balanced portfolios that meet all the Commission-adopted energy savings goals cost-effectively based on the mandated scenarios (*i.e.*, if the IOU-recommended policies are not adopted). Accordingly, to ensure that IOUs are able to implement portfolios that maximize energy efficiency and greenhouse gas reductions and support the Commission's long-term vision for efficiency as presented in the Strategic Plan and elsewhere, the Joint IOUs urge the Commission to quickly adopt the proposed policy changes upon which such portfolios are built.

C. Changes Needed For Cost-effective Portfolio That Meets Commission Goals

1. Per-Unit Benefit And Cost Assumptions Should Be Adopted For 2009-2011 Portfolio Planning (*Ex Ante*) And Also Used For Portfolio Evaluation

The IOUs' 2009-2011 Proposed Program Plans support the Commission's goals for both short-term and long-term resource benefits to the State, focusing on a mix of both existing and emerging technologies and programs. Energy efficiency is the premier resource in California's loading order, and as such deserves and demands a reliable and reasonable planning and implementation environment. Such an environment allows the IOUs, and the energy efficiency industry, to focus on producing savings and not continually be concerned about responding to shifting assumptions. It allows the State, the Commission, and ratepayers to receive the benefits the utilities are proposing.

The benefits and measure costs supporting the IOUs' amended Proposed Program Plans are based on the DEER data, with limited IOU modifications as discussed herein. Failure to adopt the

per-unit benefit and cost assumptions (including but not limited to kWh, kW, EUL, and measure costs) for portfolio planning, reporting, and evaluation jeopardizes achievement of the CPUC's and State's energy goals, as currently established. The Commission has acknowledged the inconsistency in the per-unit benefit and cost assumptions underlying goal development and new assumptions being released, such as the 2008 December DEER update proposed by the Energy Division. The following sequence describes the Commission's actions:

a) The goals for the period 2004-2013 set forth in the 2004 Decision D.04-09-060 were created using a set of facts regarding benefits and measure costs available at that time. The energy savings potential, from which the goals are derived, exists as previously stated only when the underlying inputs (*e.g.,* energy savings, costs, EULs, *etc.*) remain consistent. Variations in the underlying inputs call into question whether the energy savings potential, upon which the goals are based, continues to exist.

b) In 2008, the Commission stated confirmed that the 2009-2011 goals are gross goals, citing D.04-09-060 and new analysis showing "that the currently-adopted numeric goals for 2009-2011 are consistent with, and in most cases higher than, recent analysis of maximum achievable utility gross savings potential during these years."[79]

c) In D.08-07-047, the Commission found that 2009 and beyond goals were "now out of date. Key assumptions embedded in the current goals do not resemble trends visible in the overall energy efficiency market today. For example, the net-to-gross and expected useful life assumptions in the 2009-2011 goals are about ten years old."[80]

d) The Energy Division then updated key assumptions through the 2008 DEER update, most recently updated in December. The Commission declined to reflect these assumption changes in the goals for 2009-2011 adopted in D.08-07-047, even though the Commission intends to correct the misalignment for future program cycles.[81]

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[79] D.08-07-047, dated August 1, 2008, p. 29.

[80] *Id.*, p. 28.

[81] D.08-07-047, dated August 1, 2008, p. 33.

Accordingly, the Commission must either freeze the goals with per-unit benefit and measure cost assumptions needed to achieve those goals (as presented herein) or allow the goals to "float" to address the constantly changing assumptions proposed through DEER and other updates. Continuous changes to the rules of the game will make it vastly more difficult and expensive for utilities and third parties to effectively plan and implement energy efficiency programs to meet the energy savings goals. Furthermore, changes to per-unit measure and cost assumptions between program adoption and evaluation compromise the Joint IOUs' ability to focus on the Strategic Plan since proven, cost-effective portfolio measures cannot be used to balance new, non-cost-effective efforts for both the cost-effectiveness and energy saving achievement calculations. Thus, the Joint IOUs request that the Commission adopt and maintain the per-unit benefit and cost assumptions, as proposed herein, throughout the program cycle to meet the Commission's energy savings goals as established in D.04-09-060.

New Process Needed for Measures in Proposed Framework

In light of the proposed framework, the Joint IOUs request that the existing process for adding new measures, as adopted in D.05-09-043, be altered to allow for proper, formal, on-the-record review of benefit and measure costs proposed by the Energy Division. The new measure information will also be provided to the Joint IOUs' various local peer review groups (PRGs) for informal review as required by the Energy Efficiency Policy Manual, Version 4.0, Table 8. Upon receipt of such information, the Energy Division will then be given 15 calendar days to resolve any issue. The Executive Director of the Energy Division should send a letter to the local PRG and the IOU on their recommended benefit and measure cost values. If the Energy Division does not resolve the values that should be used by the 15th calendar day, then the IOU-proposed benefit and measure cost data will be used for portfolio reporting and evaluation. If the IOU does not support the Energy Division's recommendation, the IOU will have the opportunity to file an Advice Letter for full Commission review and resolution. The Joint IOUs believe this proposed process provides the local PRGs ongoing information and the Energy Division ample opportunity to review proposed benefit and measure cost values while facilitating the inclusion of new measures through a timely and transparent process.

Savings assumptions should include limited IOU-proposed revisions to the database for energy efficient resources (DEER) update issued by the Energy Division in December 2008 and should be adopted by the Commission for portfolio planning and evaluation.

The IOUs' Proposed Program Plans include limited modifications to the proposed values from the DEER database, as supported by the workpapers in Exhibit SCE-8/PG&E-Appendix E/ SDG&E/SoCalGas Exhibits. The Proposed Program Plans are based upon updated cost-effectiveness metrics that the IOUs maintain are more appropriate for the portfolio than those currently included in the Energy Division's proposed 2008 DEER Update (December 2008). The values utilized in the Proposed Program Plans represent values which are based upon supportable assumptions and studies of the resource benefits and measure costs of the portfolio. These values are also consistent with the goals of the Commission and the State.

The updated DEER numbers proposed by the Energy Division significantly reduce the amount of energy efficiency savings available from utility programs, but without reducing the energy efficiency savings goals. The Utilities support the use of estimates based on Commission studies that adhere to the Commission's evaluation, measurement, and verification (EM&V) protocols and that have gone through the proper vetting process. The Utilities reject unsupported savings estimates proposed by Energy Division that are developed outside of the protocols and lack transparency. The Joint IOUs maintain, and have submitted evidence[82] to support the conclusion that certain revised DEER estimates (December 2008) are flawed and thus inappropriate for use in this proceeding, as demonstrated in Exhibit SCE-8/PG&E-Appendix E.

2. Cumulative Savings Should Be Defined As The Sum Of The Annual Savings Goals For The Three-Year Portfolio Period

Cumulative savings goals for the IOUs should be defined as the sum of the annual goals for the three-year portfolio cycle. Defining cumulative savings to include a longer-term period, such as back to 2004, cannot be implemented by the IOUs, as it is inconsistent with Commission goal

[82] Southern California Edison Company's (U338-E) Comments On the Review Draft Of The Energy Efficiency 2006-2007 Verification Report, dated December 15, 2008.

development and is not technically feasible from a timing perspective. 2006-2008 evaluation results would not be available until December 2010 well after the 2009-2011 portfolio has been budgeted and adopted. Further, there are no reliable studies that can quantify the amount, if any, of savings that do not still persist from installations back to 2004. The Commission's existing policy on cumulative savings makes the unsupported assumption that savings from decayed energy efficient measures have not been replaced with like measures and/or code advances.

Accordingly, the Joint IOUs recommend reconsideration of the current definition of cumulative savings such that cumulative be defined as the sum of the annual savings goals for the three-year portfolio period (2009-2011).

Defining Cumulative Savings To Be Beyond The Three-year Period Is Not Consistent With Commission Goal Development And Policy

The Commission created goals for the 2004-2013 period in 2004 based on then available potential and energy savings data. To create cumulative goals, the Commission merely added the individual annual goals. No party did an assessment or adjustment for decay, an assessment of the change in energy savings due to ex post measurement, or an assessment of whether the cumulative goals were defined as net or gross. Such an assessment would have resulted in a reduction of the cumulative goals or an increase in the annual goals to replace such savings that would "fall away."

The potential study may have assumed that customers would replace efficient measures with measures just as efficient. It is unclear whether the potential study assumed these customers would participate in IOU energy efficiency programs for their next efficient measure installation and thus, whether IOUs should be held responsible for re-creating these savings that may already exist in the utility's load forecast.

The potential study underlying the Commission's goals also has not incorporated the increased stringency of appliance and building standards, in addition to manufacturer production of more efficient technologies outside of standards and IOU programs. The Commission acknowledged this by stating "the model for current goals assumed there would be no further improvements in Title 24

or state and federal appliance standards."[83] Change to efficiency baselines produces real energy savings and lowers the amount of potential available for IOU programs. However, there is no way to reasonably track or report such savings through IOU programs, and it would be unreasonable, if not impossible, for IOUs to make up for savings that have been addressed by other sectors in the marketplace. For example, Codes and Standards (C&S) programs produce effective and far-reaching energy savings, but valuing credit for such savings in goal accomplishment has not been consistent at least since 2004. The IOUs were not allowed to count C&S savings in their 2004-2005 accomplishments. The IOUs were then allowed to count 50 percent of the pre-2006 and 100 percent of their post-2006 C&S savings, for which they could show attribution, in their 2006-2008 energy efficiency portfolios.

In addition to the changes in policy as to whether to count some or all of C&S savings, there have also been other changes to policy for counting savings, including the variation from commitments to actual installations and from net goals to gross goals. In the 2004-2005 cycle, the Commission required the IOUs to count savings based on "commitments" from customers. In the 2006-2008 period, the Commission requested that savings from "actual" installations only be counted toward the goals. Unfortunately, this inconsistency creates a problem in implementing cumulative savings for a period longer than any particular three-year program cycle. For instance, the IOUs offer daylighting (also referred to as de-lamping) measures, which have a 15-year effective useful life according to the Commission's protocols. According to the Commission's policy for cumulative, the IOU would need to make up savings after the measure died in the 15th year. The daylighting savings are not lost, but they must be "replaced" when the effective useful life is exceeded. With the Commission's current definition of cumulative goals, the Commission ignores the fact that the savings may no longer be available to be replaced after a measure's useful life and thus, orders the IOU to find savings to replace those that still exist.

The change to gross from net in 2009-2011 creates an additional layer of uncertainty and arbitrariness in assessing cumulative savings. In its Decision on 2009-2011 goals and 2012-2020 goals,

[83] D.08-07-47, dated August 1, 2008, p. 28.

~~the Commission states that "2009-2011 savings will be measured as ex-post gross and layered on top of 2004-2008 savings to measure cumulative savings…."[84] This means that the Commission will mix ex post net achievements for 2004-2008 (including commitments) with ex post gross achievements for 2009-2011. Layering net and gross achievements further complicates the identification of cumulative savings and any counting of such savings towards cumulative savings goals, as it ignores the cumulative savings that are no longer available for IOU programs (since these savings were not incorporated in the accomplishments during the 2004-2008 period which was defined as "net"). Any cumulative savings goals beyond the three-year period need to reflect whether those energy savings are, in fact, available for IOU programs or have been adequately addressed through other developments in the marketplace (*e.g.*, rising baselines, Codes and Standards, *etc.*).~~

~~As discussed above, defining cumulative savings back to 2004 is inconsistent with Commission goal development and policies on counting savings. Savings reaching the cumulative goals may exist, but the IOUs cannot monitor or report such savings. Accordingly, the Joint IOUs request cumulative savings for which the IOUs are responsible be defined as the sum of the annual goals for the 2009-2011 period.~~

~~3. Residential Interactive Effects And Commercial Heating-Related Interactive Effects Should Be Removed From Energy Efficiency Calculations~~

~~The Commission goals were adopted under 2002 assumptions of market potential and savings assumptions. Subsequent DEER updates proposed by the Energy Division were not used to modify the potential estimates nor the goals derived from those estimates. Furthermore, the CPUC's potential study never considered interactive effects from electric measures on gas usage in its assessment.~~

~~However, current DEER updates proposed by the Energy Division include assumptions for "interactive effects" which produce substantial increases in gas usage resulting from electric savings.~~

~~84 D.08-07-047, dated August 1, 2008, p. 29.~~

~~Any interactive electric savings effects would undermine gas savings accomplishments making it impossible for gas and gas/electric utilities to achieve both gas and electric goals under existing rules.~~

~~The Joint IOUs have strong concerns about the validity of DEER on residential interactive effects and commercial heating-related interactive effects due to conclusions from a CFL Energy Impact Study dated January 2009 done by San Diego State University (the study is presented in SDG&E's Appendix C). San Diego State University examined 2,800 low income homes in San Diego which had interior CFLs installed and for which SDG&E had 12 months of pre-and post installation energy usage and hourly weather data. The study then used various regression models to test whether electricity and gas effects could be correlated to the CFL installations. The study found that there is strong statistical evidence that CFLs save electricity in residences, as one would expect. Furthermore the magnitude of the electrical savings corresponds with the electricity savings estimated by the DEER model (actually the study result is slightly higher). The study goes on to determine residential heating-related interactive effects are insignificant, and therefore that there is no statistical evidence to support a negative therm heating interactive effect due to the installation of CFLs in residences regardless of the regression model used. The Joint IOUs agree with the analysis performed and the conclusion that negative heating interactive effects in residences are overstated in DEER. Therefore, the 2008 DEER update proposed by Energy Division for this situation cannot be supported and, residential interactive effects and commercial heating-related interactive effects should be removed.~~

~~D. Other Policy Requests Essential In Supporting The Commission's Guidance (Support For Strategic Plan, Collaboration, Long-Life Measures)~~

~~1. Activity Costs In Direct Support Of The California Long-Term Energy Efficiency Strategic Plan Should Be Exempt From The Shareholder Risk/Reward Incentive Mechanism~~

~~In D.07-10-032, the Commission stated that "all parties will agree that California (and likely other regions as well) will achieve far greater savings if the IOUs and Commission actively~~

~~engage in coordinated, long-term planning."[85] On June 2, 2008, the Joint IOUs jointly filed a Strategic Plan.[86] On September 18, 2008 the Commission adopted and issued the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan).[87] The Strategic Plan contains various goals for California, both near and long-term. To realize the achievement of the Strategic Plan goals, California will need support from a vast number of market actors. To a large extent, the IOUs' energy efficiency activities will play a significant part in supporting California's energy efficiency goal achievement.~~

~~However, many of the Strategic Plan oriented items may not produce identifiable or measurable energy savings, and/or may produce only minimally or even non-cost-effective energy savings in the near-term. The Strategic Plan oriented items include market characterization reports, research, convening of stakeholders to discuss visionary energy efficiency, support of the California Energy Commission or local government activities, pilots, and workforce development, among other things. While the IOUs look forward to helping implement the Strategic Plan for California consumers, the Strategic Plan may not receive adequate financial support in light of existing policy rules.~~

~~Given this policy challenge, the Joint IOUs support specialized treatment of these costs for these discrete Strategic Plan activities. The Joint IOUs believe that activities should be exempt from the risk/reward incentive mechanism[88] if:~~

~~a) The activity explicitly supports a Strategic Plan Strategy; and~~

~~b) The activity will produce minimal or no cost-effective, measurable savings in 2009-2011.~~

~~85 D.07-10-032, dated October 18, 2007, p. 20.~~

~~86 California Energy Efficiency Strategic Plan And Appendices And Joint Application Of Pacific Gas And Electric Company (U 39 M), Southern California Edison Company, San Diego Gas & Electric Company And Southern California Gas Company Submitting The California Energy Efficiency Strategic Plan, June 2, 2008, Docket No. R.06-04-010.~~

~~87 California Long-Term Energy Efficiency Strategic Plan, dated September 2008.~~

88 This reference is to the existing RRIM. IOUs recognize that the Commission has instituted R.09-01-019 to evaluate and modify the existing RRIM. Although the design of any new or modified RRIM is not known at this time, the IOUs underlying premise would also apply to any modification of the RRIM (*i.e.*, any RRIM should facilitate and not hamper IOUs support for the long-term goals in the Strategic Plan.)

~~The Commission's concurrence with this exemption will ensure there is a policy framework that would support the long-term, innovative activities necessary to achieve the vision in the Strategic Plan. The current risk/reward mechanism bases performance on the portfolio net benefit that is a comparison of savings achieved to costs incurred, thereby placing a premium on delivery of measurable savings within the energy efficiency program cycle and within a specific budget. Strategic Plan activities should be treated similarly to Emerging Technologies costs, which were exempted from risk/reward mechanism calculations, pursuant to D.07-09-043.~~

~~To ensure that costs for the Strategic Plan do not remove the more wide-scale energy efficiency benefit from utility customers, each of the IOUs will include all the savings and costs, including those from exempted programs, in its cost-effectiveness calculation for their 2009-2011 portfolios. Each of the IOUs will ensure that their respective portfolios, including exempted programs, also remain cost effective to ensure that utility customers continue to receive a positive benefit from energy efficiency programs.~~

~~There are a number of areas in which the Strategic Plan calls for studies, market characterization, research, local government initiatives, and development of training materials, among other things, that will not result in cost-effective energy savings in 2009-2011. The IOUs cannot predict whether and how cost-effective energy savings will materialize in the future from these activities. The IOUs propose that costs with a significant commitment to Strategic Plan-related activities not producing measurable and/or cost-effective savings in the 2009-2011 period be removed from the shareholder earnings mechanism (*i.e.*, performance earnings basis) in order to avoid a perverse disincentive for the utilities engaging in such activities. However, the Joint IOUs propose to include the costs within the portfolio cost-effectiveness calculation to ensure that the portfolio as a whole delivers positive benefit to customers.~~

~~The IOUs look forward to furthering the Strategic Plan and working with stakeholders to achieve the long-term vision, but want to ensure that the Strategic Plan receives the appropriate, discrete resources and funding on a going-forward basis to ensure the success that the Commission envisions. The table below showcases the programs and corresponding costs that SCE requests be outside of the~~

shareholder earnings mechanism (*i.e.*, performance earnings basis). The Joint IOUs recognize that the Commission has instituted R.09-01-019 to evaluate and modify the existing RRIM. Accordingly, the Joint IOUs recommend that that evaluation and modification of the RRIM consider the above issue so that it facilitates, and not hampers, IOU activities that advance the long-term goals of the Strategic Plan.

Table II-6
Program and Costs Outside the RRIM

SCE Program/Activity	Budget ($ in millions)
Workforce Education and Training – EARTH Education & Training Program [1]	$12.535
Statewide Marketing, Education and Outreach	$20.214
Emerging Technologies [1]	$22.901
Sustainable Communities Program	$14.254
California New Homes Program	$24.894
Manufactured Housing New Construction Program	$3.516
Codes and Standards Program	$11.080
Financial Solutions	$23.978
Total Budget	$133.372
Total Portfolio Budget	$1,344.000
% of Total Portfolio Budget	10%

[1] Includes WE&T Centergies and Planning

2. IOUs Should Receive Energy Efficiency Savings Credit For Energy Efficiency Actions Taken By Customers Who May Be Motivated In Part By Federal And State Policies Or Legislation, Local Codes And Ordinances, Or Multiple Sources Of "Green" Messaging Supported By IOUs

In D.07-10-032, the Commission made visionary statements about the future direction of energy efficiency. The Commission acknowledged that programs need to be leveraged and integrated to ensure maximum energy savings for the State. D.07-10-032 states:

> "In the past, we have emphasized utility programs, utility funding and utility customers. This is logical given the limits of our legal jurisdiction, but this approach has resulted in fractured energy efficiency program development and delivery. Cost-effective use of resources for maximum reductions in energy demand will require the commitment of the most influential decision-makers who can affect comprehensive change. In order to reach a goal of making energy efficiency an integral part of "business as usual," we need a pronounced commitment from business and government leaders and a more collaborative approach that involves all key stakeholders. We emphasize the need for enhanced cooperation and collaboration and commit to a leadership role in reaching out to key leaders to engage participation in this effort and direct the IOUs to do likewise."[89]

Unfortunately, the traditional regulatory framework, in which savings can only be applied to the Commission's goals if they are both attributable to the IOU's energy efficiency program and specifically identified by the customer as the reason for engaging in the activity, does not motivate increased cooperation and collaboration. In fact, the current framework does the opposite as the utilities "compete" with other entities to have energy savings attributable to their programs. To maximize energy savings in support of the State's aggressive GHG goals, the Commission should explicitly recognize energy efficiency savings credit for energy efficiency actions taken by customers who are supported by IOU programs and who may be motivated by federal and state policies or legislation (including that from the recent federal Economic Stimulus package), federal funding or loans, local codes and ordinances, or multiple sources of "green" messaging. These energy efficiency savings credits should be recognized as part of the Commission's goal achievement. For example, local code enhancements (including reach codes) and compliance improvement programs, as described in the Codes and Standards Program Implementation Plan, done in partnership between an IOU and a local government should be recognized as part of energy efficiency accomplishments towards the Commission's goals.

Incorporation of energy savings from customers who may be motivated in part by federal and state policies or legislation, local codes and ordinances, *etc.* is consistent with the Commission's goals for 2009-2011, as adopted in D.04-09-060. The potential study upon which the goals are based did not envision other state initiatives and exclude those customers' potential savings. Thus, the

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[89] D.07-10-032, dated October 18, 2007, p. 7.

potential savings from those customers are included in the Commission's goals. Removing the IOUs' ability to count savings from these customers hampers the IOUs' ability to design and implement a portfolio that meets Commission's adopted 2009-2011 goals, and does not promote the Commission's important vision of increased collaboration in the State. The Joint IOUs request the same treatment the Commission provided for the Governor's Green Building Initiative in D.05-09-043 in which the Commission found that utility support for this state initiative would not be reduced by free ridership reductions.[90] An extension of such treatment for other state initiatives, including GHG reduction, allows for increased and essential collaboration in making energy efficiency a way of life in California.

3. To Encourage Long-Term Measure Installations, The Maximum Effective Useful Life (EUL) Should Be Extended To 30 Years

Maximum Effective Useful Lives (EUL) should be extended to 30 years to better reflect the true lifetime of certain measures. Currently the EULs of all energy efficiency measures are subject to an arbitrary 20-year ceiling, regardless of the true lifetime of measures. This practice biases the portfolio toward shorter-term measures whose savings are accumulated within that 20-year term span of time. However, the Commission and the IOUs are looking to expand energy efficiency portfolios to implement more long-term efforts such as comprehensive residential retrofits and new construction. Eliminating years of savings for these measures reduces their ostensible cost-effectiveness and thus limits the IOUs' ability to pursue them. Moreover, the 20-year limit contradicts the effort to put energy efficiency on a level playing field with traditional supply-side options, which have longer lives. The Joint IOUs thus believe that the arbitrary ceiling of 20 years for measures should be extended to accurately reflect savings achievements and promote longer-term measures.

[90] D.05-09-043, dated September 22, 2005, p. 9.

E. Policies That Need To Be Adopted In The CPUC's Subsequent Proceeding To Ensure The Success Of Energy Efficiency

1. Gross Metrics Should Be Used For The Calculation Of Performance Toward The Performance Earnings Basis (PEB) Under The RRIM

The Joint IOUs support the consistent use of gross metrics to calculate the achievement of goals, the Minimum Performance Standard (MPS), and the Performance Earnings Basis (PEB). In addition, Joint IOUs support the development of goals which are based upon the best available information on the potential for energy efficiency and which align with the Commission's key policies – including the use of energy efficiency as a reliable energy resource, as an important factor in reducing greenhouse gases from electricity generation, and in support of the Commission's long-term, "big, bold" strategies for energy efficiency.

The use of gross goals for 2009-2011, as ordered by the Commission in its July 31, 2008 Decision,[91] appropriately promotes three key Commission objectives: (1) maximizing energy efficiency in California; (2) underscoring Commission-set targets for the IOUs to aim for in the development of portfolios in this proceeding and in the implementation of these portfolios in 2009-2011; and (3) enhancing collaboration among all stakeholders, including the IOUs, to meet these and other important goals. The utilization of goals at the gross level better reflects the "big, bold" policies being promoted by the Commission. The use of gross goals properly aligns the estimates of energy efficiency program results with the real impacts of reduced load from these programs on the utility systems. This alignment of focus should include the performance basis used to calculate performance incentives for the administrators. It is unnecessary and inappropriate to de-link the use of gross goals from the performance basis, which is utilized to calculate shareholder earnings for meeting these goals. The Commission should continue to align the objectives of the programs – delivery of energy savings to customers – with the performance incentive mechanism. In fact, neither procurement planners nor

[91] D.08-07-047, dated July 31, 2008, OP#4, p. 39.

~~greenhouse gas reduction calculations need consider net-to-gross ratios. This concept should be extended to the performance metrics for energy efficiency.~~

~~Utilizing both gross goals and a gross performance earnings basis calculation for the 2009-2011 period can open up the opportunity for more program options that support the long-term goals for energy efficiency than the use of net goals. The use of gross goals should allow for parties to focus less on the attribution of savings and more on cost-effectively maximizing the energy savings potential of energy efficiency programs in California. This focus on customer savings will encourage collaboration among all stakeholders to develop and deliver the most effective and efficient energy savings to California customers.~~

~~The continued use of a net performance basis does not embody the "big, bold" concepts being promoted in this proceeding. Currently, successful energy efficiency programs that increase customer awareness are penalized with after-the-fact changes to attribution. This penalizes the utilities for success in increasing customer awareness of energy efficiency and energy efficient measures, which should not be the object of goal-setting and performance basis calculations. In order to focus on the overarching policies for energy efficiency, including "big, bold" ideas, it is appropriate to remove this inherent penalty included in the use of net-to-gross ratios. The utilities support the adoption of a gross performance basis calculation for 2009-2011 which supports the development and delivery of expanded program options, and support the long-term policy goals for energy efficiency in California. To do otherwise could adversely affect the Commission's effort to promote and implement maximum levels of energy efficiency in the state.~~

~~Ultimately, it is gross savings impacts delivered to customers that affect future resource needs and GHG emissions levels. The use of gross savings and benefits as a metric will align the utility program results with the system impacts and reduced GHG emissions. Consequently, the use of gross savings and benefits is also appropriate to align with resource planning and GHG reduction perspectives. The Joint IOUs acknowledge that the adoption of gross goals may warrant changes to the RRIM, including the shared-savings rates, and look forward to addressing this issue in the new incentive mechanism Rulemaking R.09-01-019.~~

2. Mid-Cycle Funding Augmentation Rules Should Be Revised

The Joint IOUs propose to modify the 2006-2008 mid-cycle funding policy rule for 2009-2011 to allow each of the IOUs to count all installed energy efficiency results towards the Commission's aggressive energy savings and demand reduction goals. In D.07-10-032, the Commission set a policy rule (Rule 12, Section IV) that did not allow IOUs to claim energy savings and demand reductions results towards the achievement of the Commission energy efficiency goals on the premise that mid-cycle funding augmentation provides a "bonus" to utilities without any undue risk bestowed upon them.[92] D.07-10-032 also indicates that "in effect, mid-cycle funding augmentations provide the utilities with additional funding to accomplish a goal that was set with a lower budget."[93] As a result of this rule, the IOUs are now discouraged from pursuing all cost-effective energy efficiency even though there may be energy efficiency funds available from prior years. The utilities propose the elimination of the 2006-2008 mid-cycle funding augmentation rule for 2009-2011 as it: (1) creates a disincentive to propose new programs with augmented funding; (2) punishes, unnecessarily, IOUs when market conditions change that may require additional funds to incent customers in order to achieve the Commission energy efficiency goals (as is currently the case due to the recession and credit crunch); and (3) works against the California's Energy Action Plan[94] and Commission policy to pursue all cost-effective energy efficiency.

An IOU's inability to record results from mid-cycle funding may stifle program innovation and ignore the creation of promising programs. This is contrary to the Commission's desire to promote innovation and test new program designs. Another key fault of the 2006-2008 mid-cycle funding augmentation rule is it assumes that during the program implementation cycle the marketplace remains static and acts just as assumed during the planning process. The marketplace is dynamic with many actors and unforeseen influences which can foreclose expected opportunities as well as create new opportunities.

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92 D.07-10-032, dated October 18, 2007, OP# 7, p. 143.

93 *Id.,* Section 6.7.3. Mid-Cycle Program Funding Augmentations, p. 100.

94 2008 Updated Energy Action Plan, dated February 2008.

III.

SCE'S PORTFOLIO REFLECTS STATE ENERGY POLICIES AND THE STRATEGIC PLAN

A. State Energy Policy And Initiatives

1. Portfolio Meets The Objectives Of The Energy Action Plan

The joint Energy Action Plan 2008 Update builds upon the previous Energy Action Plans, as well as recent statutes and gubernatorial directives, while maintaining energy efficiency and demand-side management as its foundation. The Energy Action Plan Update notes that:

> "…it will not be enough to replicate current strategies for delivery of energy efficiency options to consumers. To meet the AB 32 goals, we will need to employ new and innovative approaches not yet tried. Toward this end, the Public Utilities Commission launched a strategic planning process to develop comprehensive, long-term strategies for sustainable energy efficiency savings to achieve the ultimate goal of making energy efficiency a way of life for Californians."[95]

SCE's Proposed Program Plan is focused on meeting the objectives of the Energy Action Plan. As noted elsewhere in this Testimony, this portfolio is intended to go well beyond existing efficiency efforts and begin a new phase of more strategic, coordinated, and effective activities. These activities are designed to face California's enormous energy and environmental challenges and over time, change the nature of the utility efficiency activities as envisioned in the Energy Action Plan.

SCE's portfolio is designed to maximize cost-effective energy savings and demand reduction through a combination of market transformational and resource acquisition initiatives that address each consuming sector. This portfolio is designed to build upon and further improve upon the course of existing programs by increasingly influencing the actions of key non-utility actors, such as the federal and local governments, the California Energy Commission (CEC) and manufacturers, builders, and retailers of energy-consuming applications.

The Energy Action Plan Update, like D.07-10-032, the CEC's 2007 Integrated Energy Policy Report (IEPR),[96] and the Strategic Plan, notes the essential role of publicly owned utilities in

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[95] Energy Action Plan: 2008 Update, State of California, February 2008, p. 2.

[96] "2007 Integrated Energy Policy Report," California Energy Commission, 2007, CEC-100-2007-008-CMF.

meeting California's energy and environmental goals. SCE is committed to working with the California publicly-owned utilities to mutually improve our efforts and results.

2. AB 32 Goals And Efforts

a) Environmental Benefits Projected

The passage of AB 32 is arguably the most significant recent change in SCE's regulatory and business environment. The Energy Action Plan Update states:

> "The most important development in California energy policy in the past two years, if not the past several decades, is the arrival at consensus that California must act to decrease its greenhouse gas emissions to reduce the impact of climate change."[97]

Additionally, as required by D.07-10-032, this Application includes Second Amended Exhibit SCE-7, AB 32 Status Report, which includes a report on "the status of AB 32's implementation and proposed program changes that would complement rules and policies, if adopted, including and in particular programs targeting energy efficiency measures in the industrial sector."[98]

While AB 32's implementation has not yet been finalized, SCE is aware of the nexus between energy efficiency programs and carbon emitters' obligations, and is taking steps to integrate the two. SCE's portfolio is replete with initiatives that leverage the energy efficiency portfolio to achieve greenhouse gas reductions. Specifically, the Cool Planet Program is designed to work with SCE's industrial customers to help them better understand the ramifications of AB 32 in their operations and value their potential emissions reductions.

b) AB 32 Status Report

SCE's report on the status of AB 32's implementation and proposed program changes that would complement rules and policies is attached as Second Amended Exhibit SCE-7, dated July 2, 2009, to this Testimony. As the California Air Resources Board (CARB), the California Energy Commission (CEC), the Commission, and other AB 32 decision makers are in the midst of key decisions regarding AB 32 (final rules are due January 1, 2011 and scheduled to take effect January 1, 2012);

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97 Energy Action Plan: 2008 Update, State of California, February 2008, p. 2.

98 D.07-10-032, dated October 18, 2007, OP# 13, pp. 144-145.

implementation by SCE and other utilities is only in its earliest stages. It is worth noting that SCE's energy efficiency programs put forward in this Proposed Program Plan complement and support the goals of AB 32.

3. Governor's Green Building Initiative

a) Energy Savings Projected Towards GBI Goals

SCE's Proposed Program Plan provides numerous programs and opportunities for local, federal and state agencies, departments, and other government buildings, as well as commercial buildings entities under the direct executive authority of the Governor to take measures to help meet their obligations under the Green Building Initiative (GBI) to reduce grid-based energy purchases for state-owned buildings through the installation of cost-effective efficiency measures. Second Amended Exhibit SCE-2, Tables 2.4 and 2.4a, dated July 2, 2009, contains an illustration of SCE's programs and sub-programs that will contribute to the GBI.

B. Coordination With Statewide Energy Efficiency Strategic Plan

1. Portfolios Reflect Regional And Local Variations Complementing The Strategic Plan

The proposed portfolio strongly reflects the Strategic Plan which, among other goals, robustly integrates the energy efficiency activities of the four IOUs as well as non-IOU statewide actors. Nonetheless, as D.07-10-032[99] recognizes, there are – and should be – regional and local variations in program activities. Even within a single IOU's service territory, there are regional and local factors that may warrant targeted program activities. These include climate, building stock, building ownership and rental patterns, grid performance issues, local leadership and interest, and commercial and industrial consumer types.

Examples of proposed activities that retain regional and/or local variations, even while remaining a component of a statewide, integrated energy efficiency strategy include:

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[99] D.07-10-032, dated October 18, 2007, OP# 12, p. 144.

- Sustainable Communities Program – this program coordinates with localized non-energy offerings such as water agencies and AQMD incentives, if any.
- Local Government Partnerships – the partnerships vary based upon local conditions including climate, building stock, community leadership, *etc.* The new Energy Leader model[100] is designed to create energy partnerships with local governments that will vary based upon local effectiveness. Partnerships also include a tiered incentive structure that offers higher levels of support as the city and its community achieves higher levels of installed energy savings.
- SCE's SmartConnect™ (AMI) deployment – the deployment of SCE's advanced metering infrastructure will produce data to more specifically target energy efficiency and DSM measures based on local factors.

2. Portfolios Contain Appropriate Strategies And Program Designs For The Three Statewide Initiatives

The proposed ~~2009-2011~~ 2010-2012 portfolio contains numerous appropriate strategies and program designs designed to help achieve three BBEES Statewide Initiatives (residential ZNE, commercial ZNE, and transformed HVAC).

a) Residential New Construction

~~The 2009-2011 program cycle begins the first three year increment of the 12-year time period covered by the Strategic Plan.~~ To support the market-transforming goals of the Strategic Plan and its implementation, and to begin to advance residential new construction toward the BBEES, SCE plans robust, and multifaceted, residential new construction offerings as part of the California Advanced Homes (CAHP),[101] Zero Net Energy Homes, and Sustainable Communities (SCP ZNEH) programs/sub-programs.

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[100] The Energy Leader Partnership model was previously referred to as the "Affinity" model during the planning phase.

[101] Referred to as the California New Home Program (CANHP) in the July filing.

CAHP encourages single and multi-family builders of all production volumes to construct homes that exceed California's Title 24 standards by a minimum of 15%, reducing energy usage through a combination of incentives, technical education, design assistance, and verification.

The pay-for-performance incentive structure for the ~~2009-2011~~ 2010-2012 CAHP is modified from the previous three-tiered structure to a graduated incentive model closely modeled on Savings By Design's whole building approach. Starting from 15% better than Title 24 and ramping up through 45%, projects are paid on an ascending scale per annualized kilowatt hour, kilowatt, and therm saved; this structure incentivizes a wide range of technology development and deployment, thereby accelerating penetration while letting the market find the most cost-effective route to success.

Similarly, CAHP is working to integrate DSM offerings to builders. CAHP will explore coordinating with DR offerings to reward builders for installing programmable communicating thermostats, and is proposing that air conditioning cycling controllers be installed during the construction of new homes. CAHP will also look to leverage SmartConnect™ meters as they are deployed.

In addition to the direct energy savings incentives, builders will also be eligible for additional "kickers" including:

- ENERGY STAR homes;
- Homes that meet green building standards;
- Homes that install solar thermal hot water systems;
- Homes whose PV systems reduce peak load;
- Smaller homes (where the total square footage is 10% less than the median home by climate zone and building type); and
- Homes with solar thermal systems.

Each increase is discrete and independent of the others.

For ~~2009-2011~~ 2010-2012, SCE will explore offering a "carpool lane" to builders who participate in CAHP to expedite their project through SCE's planning process. However, due to the slowdown in building in SCE's territory, the effect of this incentive is expected to be *de minimis*.

Nevertheless, CAHP is looking at ways to partner with the Service Planning side of the utility to reward builders who participate in energy efficiency programs.

SCE is also working with the Metropolitan Water District to promote water conservation in our shared service territory. If the water-energy pilot[102] is successful, SCE intends to facilitate the offer of additional incentives in this area.

The Zero Net Energy Homes Program (ZNEH)[103] is the offering for projects that seek to go beyond 35 percent reduction in T24 usage to explore zero net energy performance. The program will work with the Emerging Technology (ET) Program to demonstrate technologies and to provide technical assistance to project teams looking to achieve ZNE performance. The program will write up case studies, design briefs, and lessons learned to promote successful approaches. ZNEH offers educational opportunities to builders, architects, and other residential construction stakeholders seeking knowledge about emerging technologies and new home design.

In addition to CAHP and ZNEH, SCE continues to offer the Sustainable Communities Program (SCP) which seeks to expand the traditional focus of utility programs from energy efficiency in "vertical construction," that is, the individual building on a lot such as CAHP or Savings By Design currently do, to "horizontal construction:" the planning of communities, layout of streets, infrastructure design, and civil engineering. This gives the utility a voice in numerous decisions affecting energy use such as solar orientation. In addition, when working with "vertical construction," SCP will promote sustainable development, addressing commercial and residential construction practices that affect occupant health and environmental quality. This includes energy use as well as non-traditional sources of energy savings, such as water efficiency.

Utility programs have traditionally had an energy focus, but – as discussed in D.07-10-032 and the Strategic Plan – the increased awareness and pursuit of green benefits have created significant new market opportunities to pursue not only energy efficiency but to expand our emphasis

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[102] D.07-12-050, dated December 20, 2007, OP#2, p. 100.

[103] Referred to as the Advanced Home Program or (AHP) in the July filing.

upon materials and distributed generation to include an integrated approach to energy efficiency and demand side measures.

D.07-10-032[104] also orders the development of the Strategic Plan and calls out a BBEES goal specifically relevant to the residential new construction industry.

- 100 percent of the residential new construction market will be zero net energy by 2020.
- 50 percent of the residential new construction market will be 35 percent better than the 2005 Title 24 by 2011.
- 10 percent of the residential new construction market will be 55 percent better than 2005 Title 24 by 2011.

The concerted and coordinated efforts of many stakeholders, including the IOUs, will be necessary to make measurable progress towards the realization of the BBEES and advanced market penetration of ZNE-related technologies and practices. SCE recognizes that the integration of DSM approaches and integrated design is important to achieving ZNE new construction. This can better be accomplished when the entire suite of DSM offerings is at the table (including demand response, energy efficiency, SmartConnect™/AMI, and distributed generation). Further, these offerings can only be maximally effective when they are part of an integrated design that ideally includes the Sustainable Communities intervention in the layout of streets and optimizing for solar orientation.

SCE plans to use CAHP to contribute to the achievement of the 2011 milestones of the Strategic Plan, while leveraging SCP to lay the groundwork for the ~~**2012-2014**~~ 2013-2015 program cycle to contribute to the 2020 milestones of the Strategic Plan.

b) Commercial New Construction

To implement the Strategic Plan strategies and begin to advance commercial new construction toward the BBEES for the commercial sector, SCE plans a robust, multifaceted commercial new construction program.

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[104] D.07-10-032, dated October 18, 2007, pp. 42-43 as finalized in the Strategic Plan, dated September 2008, pp. 11-17.

SCE will continue to offer the statewide Savings By Design (SBD) sub- program, which reduces the electric energy needs of new and expanding commercial, industrial, governmental, and institutional facilities throughout SCE's service territory. SBD will help building owners, architects, engineers, consultants, and other key actors throughout SCE's service territory to achieve optimum energy and resource efficiency in their design projects through offerings such as multi-level design and technical and financial assistance.

The program's rationale is to intervene early and aggressively to minimize lost opportunities that may result when a building's energy performance is not a primary design consideration. SBD promotes energy efficiency in new construction or major remodel/renovation projects through three complementary and coordinated components – Whole Building Approach, Systems Approach, and the Simplified Approach for Small Projects.

The Whole Building Approach (WBA) is the preferred method of promoting energy savings because it enables a design team to consider integrated, optimized, energy efficiency solutions. The Systems Approach (SA) is a performance-based method that uses a more limited set of savings variables to optimize efficiency choices for projects later in design or with simpler building systems. The Simplified Approach for Small Projects (SPA), is for small retail and commercial spaces typically too small to warrant the iterative approach of SA, but which still have lighting or HVAC units to optimize.

For the ~~2009-2011~~ 2010-2012 program cycle, SBD offers new financial incentives (beyond direct kilowatt hour and kilowatt) to WBA and SA projects that achieve green building certification, perform building commissioning during design and construction, and/or establish and follow a building measurement and verification plan after occupancy. These sustainability incentives are designed to encourage buildings to be well designed, well built, and well operated. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) green building rating system, Build It Green's GreenPoints, and Collaborative for High Performance Schools (CHPS™) sub-program represent several ratings systems for which certification can earn the customer the green building certification incentive; others will be used subject to SCE consideration and approval.

In addition, SBD offers extensive technical support to design firms to enhance their in-house energy modeling capability. This assistance is intended to help design firms overcome the initial learning-curve and cost barriers to energy modeling for measure alternatives analysis when programming buildings. By forming alliances with design firms to ramp up their internal energy-modeling resources, SCE will achieve increased market penetration for the WBA and encourage the design community to consider energy efficiency as a top-tier component of every building's programming, in support of the long-range vision of the Strategic Plan.

In addition to SBD, SCE continues to offer the Sustainable Communities Program (SCP), which seeks to expand the traditional focus of utility programs from energy efficiency in "vertical construction," that is, the individual building on a lot such as Savings By Design has traditionally done, to "horizontal construction": the planning of communities, layout of streets, infrastructure design, and civil engineering. This gives the utility a voice in numerous decisions affected energy use such as solar orientation. In addition, when working with "vertical construction," SCP will promote sustainable development addressing residential and commercial construction practices that affect occupant health and environmental well-being. This includes sub-program energy use as well as non-traditional sources of energy savings, such as water efficiency.

As in the residential sector, utility programs in the nonresidential sector have traditionally had an energy focus, but the increased awareness and pursuit of green benefits has created significant market opportunities to not only pursue energy efficiency but to expand their emphasis upon materials and distributed generation to include an integrated approach to energy efficiency and demand side measures.

D.07-10-032[105] also orders the development of the Strategic Plan and calls out the following BBEES goal specifically relevant to the nonresidential new construction industry.

100 percent of the nonresidential new construction market will be zero net energy by 2030.

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[105] D.07-10-032, dated October 18, 2007, p. 46.

50 percent of the nonresidential existing stock will be zero net energy by 2030.

The concerted efforts of many stakeholders, including the IOUs, will be necessary to make significant progress towards the realization of the BBEES. SCE recognizes that- as laid out in the Strategic Plan- the integration of DSM approaches and integrated design is extremely important to achieving zero net energy new construction. This can better be accomplished when the entire suite of DSM offerings is at the table (including demand response, energy efficiency, SmartConnect™, and distributed generation). Further, these offerings can only be maximally effective when they are part of an integrated design.

SCE also intends to leverage other existing offerings, internal and external to SCE, to assist projects that desire a cohesive sense of sustainability beyond the traditional aspects of electric energy efficiency. Such offerings may include coordination with LEED™ certification and ENERGY STAR ratings, connections with demand response, self-generation, and water conservation programs and sub-programs, partnerships with industry organizations to promote acceptance of new program approaches by design professionals, and others as applicable. SCE will leverage SBD and SCP to make progress towards the milestones of the Strategic Plan.

c) Heating, Ventilation And Air Conditioning (HVAC) Industry

The HVAC market is an extremely diverse, complex, and fragmented market, which presents many challenges to energy efficiency adoption and impedes market transformation. These challenges include a low level of knowledge among market actors (*i.e.*, contractors and end users) about the energy performance benefits of quality installation and maintenance, inconsistent compliance with energy regulations by building departments and contractors, and market distortions that force contractors to sell their services based on first price, which often encourages a sub-optimal installation in order complete the job with a reasonable profit margin. In addition, federal standards preempt California's ability to impose requirements to install equipment that better reflects the performance characteristics of California's hotter inland locations further impact the energy performance of HVAC

systems.[106] Due to the number of market barriers facing this industry, reshaping this market requires a variety of creative strategies, a broad and engaged stakeholder community, statewide coordination, and a high level of program entrepreneurship.

SCE continues to help drive the transformation of California's HVAC market to ensure the realization of the Strategic Plan's HVAC vision that "[t]he residential and small commercial heating, ventilation, and air conditioning (HVAC) industry will be transformed to ensure that technology, equipment, installation, and maintenance are of the highest quality to promote energy efficiency and peak load reduction in California's climate."[107] SCE proposes building towards this vision by implementing a variety of downstream, midstream, and upstream strategies designed to affect a positive and persistent influence on the overall behavior of all stakeholders.

Because energy savings and peak reduction are modest on a per unit basis, a number of comprehensive strategies will address increased market penetration, quality installation and maintenance (QI/QM), advancing equipment solutions, and load reduction; these strategies are discussed in detail in the Strategic Plan.[108]

Recent data indicate that as a result of the recession and severe downturn in the buildings market, increased equipment efficiency standards and other factors, unitary equipment sales have dropped and repairs to existing systems have increased. SCE will work with industry partners to induce a measurable increase in the shipments of energy efficient and peak demand-reducing HVAC systems (and ensure that those systems are installed and maintained properly) using a variety of market-based financial and non-financial incentives designed to stimulate the unique needs of each market actor. The goals of this market penetration strategy include:

- Increasing the market penetration of above code HVAC systems by offering financial incentives designed to motivate market actors to specify, purchase, and install such equipment;

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[106] Recent federal legislation does, however, authorize the U.S. DOE to set regional HVAC standards.

[107] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 58.

[108] *Id.*, pp. 58-65.

- Developing comprehensive quality installation and maintenance approaches that provide reliable energy and demand savings while offering contractors a profitable business environment;
- Supporting marketing, education, and outreach strategies using a variety of mass appeal tactics to enhance customer awareness (*e.g.,* statewide HVAC efficiency branding and mass promotion through statewide marketing and outreach efforts and other channels);
- Leveraging existing HVAC industry channels to deliver a coordinated workforce education and training effort based on quality standards that lead to increased technician certification and widespread adoption of business practices that support energy efficiency;
- Addressing many technical and policy issues that have remained unaddressed or unresolved for years through a comprehensive advocacy program delivered in partnership with the Western Cooking Efficiency Center; and
- Increasing collaboration with industry participants and other key HVAC actors through the establishment of an HVAC Industry Leadership Task Force.

Increases in QI/QM will be achieved through a concerted training effort using existing industry channels and by requiring documented compliance with appropriate HVAC industry standards as those published by the Air Conditioning Contractors of America (ACCA), Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) and Title 24. Effective code compliance activities will require and receive increased coordination with the IOUs' Statewide Codes & Standards efforts. As discussed in the Strategic Plan,[109] desired outcomes include:

[109] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 58-65.

- Measurably raising the level of awareness of energy efficiency, peak demand reduction, and QI/QM within the HVAC manufacturer and distributor community through coordinated marketing activities;
- Measurably raising the level of awareness of energy efficiency, peak demand reduction, and QI/QM within the HVAC contractor community by supporting contractors who demonstrate quality practices and industry sponsored QI/QM training activities;
- Measurably raising the level of awareness of energy efficiency, peak demand reduction, and QI/QM with end users by participating in California and national QI branding efforts such as ENERGY STAR and linking customers with these quality brands and contractors;
- Increasing energy code compliance to 100 percent of all systems influenced by the sub-program by requiring all new equipment installations to meet Title 24 and ANSI approved standards for QI, and exploring new methods to ensure effective code compliance that provides a level playing field for contractors; and
- Promoting ongoing system maintenance by partnering with the contractor community to develop comprehensive equipment maintenance and commissioning strategies that ensure existing equipment is operating optimally.

The majority of equipment sold today is standard efficiency unitary equipment that performs inefficiently in California's hot/dry climate. The Strategic Plan's HVAC strategy[110] is to develop new California-oriented HVAC technologies and system diagnostics and accelerate their penetration in the marketplace recognizes that opportunities exist for accelerating the deployment of better equipment choices. Desired outcomes include:

[110] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 58-65.

- Affecting measurable increases in product shipments of innovative residential and commercial HVAC equipment solutions that are designed for optimal efficiency performance in California's hot/dry climate zones;
- Increasing coordination with SCE's ETP and the CEC's Public Interest Energy Research (PIER) Program and supporting the commercialization of advanced equipment solutions through coordinated statewide industry and utility HVAC programs and sub-programs; and
- Resolving numerous technical and policy issues that have hampered wider adoption of energy and peak-efficient equipment by partnering with the Western Cooling Efficiency Center to take a strong regional leadership position in the HVAC arena.

HVAC systems are a major contributor to peak load, but are typically unconnected to comprehensive load reduction strategies. SCE plans to more closely align load efficiency and demand reduction activities by:

- Implementing innovative service-area strategies to achieve significant market penetration of peak efficient equipment, increasing QI/QM practices (including right-sizing), and leveraging building performance activities and load reduction strategies, and
- Leveraging opportunities, actors, and activities to more closely deliver HVAC solutions in concert with demand response initiatives.

The proposed ~~2009-2011~~ 2010-2012 HVAC program approach tackles several long-standing market barriers:

- Organizational and market practices have impeded the typical HVAC contractor from fully embracing the value proposition of a high quality, energy efficiency-centered business model. The program addresses this barrier by providing training and sales support to help contractors to actively

promote quality services and employ quality trained technicians to provide these services.

- Increased transaction costs result from the requirement that all new equipment is installed to Industry QI standards and complies with Title 24. This program offers significantly increased incentives to overcome the customer's hesitance to contract for higher cost options. Additionally, mass market tactics address the benefits of QI and the customer's perception that code compliance has negative consequences.
- The high first cost of purchasing energy efficient equipment interferes with end users making sound decisions related to retiring old or purchasing new HVAC systems. The program uses a market-based incentive approach that reduces the initial impact of first cost and educational tactics to promote the value of life-cycle cost decisions.
- Performance uncertainties exist as the energy benefits of QI/QM are neither well documented nor well understood. The program addresses this by actively working with the industry to benchmark and standardize QI/QM practices and methods, assessing the energy benefits of these practices and implementing industry-delivered solutions that provide reliable energy and demand savings.

While these strategies will help reshape HVAC, full partnership with the HVAC and building industries and the wider stakeholder community is essential. SCE, in concert with the Commission, the CEC and the other California IOUs, is facilitating the formation of an HVAC Industry Leadership Task Force consisting of industry stakeholders, as laid out in the Strategic Plan.[111] This group should build from the active participation and successes of the strategic planning process and is chartered to provide a program advisory function and leverage existing industry efforts to encourage

[111] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 58-65.

desired change in the marketplace. Membership is focused on industry, utility, and stakeholders that can represent a variety of points of view and be in a position to effect change within their community.

In order to accomplish the Commission and Strategic Plan objective[112] of profoundly transforming the HVAC market in California, sufficient resources and activities *(e.g.,* labor, education, marketing, *etc.*) are required. However, many of these do not produce direct energy benefits. The importance of these activities cannot be overstated as the program objectives cannot be achieved without SCE's full commitment to these activities. Program management and coordination with measurement and evaluation efforts must be aligned with the program's market transformation approach to ensure the desired market outcomes are achieved.

C. Strategic Plan Vision For All Sectors

1. Existing Residential

The Strategic Plan sets forth the following vision for the Residential sector (both new construction and existing homes):

> "Residential energy use will be transformed to ultra-high levels of energy efficiency resulting in Zero Net Energy new buildings by 2020. All cost-effective potential for energy efficiency, demand response, and clean energy production will be routinely realized on a fully integrated, site-specific basis."[113]

SCE's residential portfolio includes many programs and sub-programs that directly support the Strategic Plan – including the Comprehensive Home Performance Program (CHPP), the Business and Consumer Electronics Program, and the On-line Buyer's Guide – and its goals of coordinated, aggressive, and permanent market transformation.

The CHPP delivers comprehensive improvement packages tailored to the needs of each existing home and its owner. The sub-program solicits, screens, trains, and mentors qualified residential repair, renovation, and HVAC contractors. Contractors learn to assemble capable contracting teams and perform whole-house diagnostics of energy-related deficiencies, propose comprehensive energy-saving

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[112] D.07-10-032, dated October 18, 2007, p. 2, *see also* California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 6-1.

[113] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 9.

improvement packages, and complete the renovations. The CHPP also includes marketing activities to help educate customers about sub-program services and provide additional customer leads to the trained contractors, in addition to comprehensive energy efficiency measures, whole house solutions, performance standards, local government opportunities, and DSM integration. This program supports the Strategic Plan's residential sector strategy to transform home improvement markets to apply whole-house solutions to existing homes.[114]

As a sub-program of the Statewide Residential Energy Efficiency Program, the Business and Consumer Electronics Program's rationale is to bring about midstream market transformation by providing incentives to retailers to increase the stocking and promotion of highly efficient electronic products including computers, computer monitors, cable and satellite set-top boxes, televisions, smart power strips, and additional business and consumer electronics as they become available to the market. This sub-program supports the Strategic Plan's residential and commercial sector' transformation, including the strategic goal of revolutionizing the energy efficiency and management of plug load devices by consumers.[115]

The Business and Consumer Electronics Program also takes an active leadership role by engaging stakeholders such as the Department of Energy (DOE), the Environmental Protection Agency (EPA), ENERGY STAR, manufacturers, and retailers to address the energy use issues associated with the increasing demand of plug load devices such as cell phones, small appliances, entertainment (*e.g.*, televisions, cable/satellite boxes), and information technology (*e.g.*, computers).

This program advances the implementation of the Strategic Plan strategy to revolutionize the energy efficiency and management of plug load devices by consumers[116] by addressing policy issues with the DOE and the EPA and working with retailers through active rebate programs to influence manufacturers to supply energy efficient plug load devices. The sub-program will also advance small systems performance standards and local government opportunities, and will advance comprehensive

[114] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 15-19.

[115] *Id.*

[116] *Id.*

energy visual monitoring and displays by leveraging opportunities provided by SmartConnect™ (advanced metering).

The On-line Buyer's Guide is a new service designed to provide residential consumers with instant on-line access (via sce.com) to information and tools designed to overcome barriers to purchasing energy efficient equipment and/or participating in utility programs.

The Guide consists of a (an):

- Interactive technology "experience" that introduces consumers to energy efficiency equipment;
- Database that draws product recommendations from many established sources including the CEC, CEE, AHRI, and ENERGY STAR;
- Calculation tool to support energy efficiency investment decisions;
- Shopper's guide to efficiency;
- Comprehensive guide to rebate and incentive programs; and
- List of retailers.

The On-Line Buyer's Guide supports several Strategic Plan residential sector strategies,[117] as well as those in the commercial and HVAC sectors, by expanding the penetration of more efficient products.

2. Existing Commercial

SCE's analysis of the commercial market segment indicates that commercial buildings are one of SCE's largest consumers of electricity, offering a substantial potential market for energy efficiency. This portfolio includes programs and sub-programs that target existing commercial buildings and proposes how to best address this high potential during the ~~2009-2011~~ 2010-2012 program cycle, while still achieving a cost-effective balance of measures.

The Strategic Plan's vision for the Commercial Sector (both new construction and existing buildings) is that:

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[117] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 15-19.

> "Commercial buildings will be put on a path to zero net energy by 2030 for all new and a substantial proportion of existing buildings. Innovative technologies and enhanced building design and operation practices will dramatically grow in use in the coming years through a combination of technology development, market pull, professional education, targeted financing and incentives, and codes and standards."[118]

The following new programmatic concepts and methods are designed to motivate commercial customers to meet energy efficiency and climate mitigation reduction goals, while directly implementing the Strategic Plan:

- Continuous Energy Improvement – this new sub-program for ~~2009-2011~~ 2010-2012 is a statewide offering that assists customers in the development of the necessary business practices to facilitate the adoption of energy management as a normal course of business operation. This will occur by engaging senior leadership to ensure that such practices are embraced at all levels of management. In addition, continuous feedback mechanisms will be put into place to provide the necessary data and information required for making informed business decisions.
- Retrocommissioning – An increased emphasis on retrocommissioning (RCx) of commercial building space and the addition of energy efficiency operation, maintenance, and repair incentives and aims to increase market penetration of RCx. Additionally, it educates building operators and owners about running their facilities more efficiently and leverages enhanced core energy efficiency program offerings including the WE&T's Centergies Building Operator Certification (BOC) offering. In addition, two new third-party programs provide an integrated process towards continuous commissioning that allow ongoing operations to be evaluated, in addition to RCx activities. This program supports multiple Strategic Plan strategies, including the commercial sector's strategy to align commercial building

[118] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 30-41.

benchmarking, labels, and operations and maintenance practices to address energy efficiency.[119]

- Office of the Future – SCE's calculated and deemed incentive sub-programs will be aligned to support the 25 percent Solution recently proposed by the Office of the Future Coalition. In addition, SCE will continue its leadership position in this coalition as it works towards the 50 percent Solution and 75 percent Solution over the ~~2009-2011~~ 2010-2012 program cycle. This approach is in direct support of the Strategic Plan by outlining a clear path for commercial office space to reach the goal of net zero energy.
- Financial Solutions Program – this program includes enhancement of the existing on-bill financing sub-program, development of a new energy efficiency loan sub-program, and solicitation of innovative financing mechanisms to augment the current incentive offerings and encourage increased program participation by removing a key market barrier. This program supports multiple Strategic Plan initiatives, including the commercial sector strategy of "targeting financing and incentives to support meeting commercial sector goals."[120] By forming a working group to consider new options for the residential market, the program also complies with Commission orders to assess on-bill financing for the residential market.[121]
- Comprehensive approach – the Statewide Commercial Energy Efficiency Program and other commercial third party solicitations include a comprehensive approach to existing commercial space. This approach minimizes lost opportunities, and increases energy efficiency adoption. In addition, coordination at the statewide level

[119] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 30-41.

[120] *Id.*

[121] R.06-04-010 "Interim Order On Issues Relating To Future Energy Savings Goals And Program Planning For 2009-2011energy Efficiency And Beyond." Order 9: "...(3) proposals for continuing or creating on-bill financing programs for small business customers and institutional customers, and an evaluation of the prospects for on-bill financing programs for residential customers, as set forth herein..."

with the other IOUs will ensure a consistent delivery approach to common customers.

- Sub-segment Solutions – due to the dispersed nature of SCE's commercial customers, there are numerous third-party program and sub-program offerings delivering niche solutions for this sector that leverage standard core programs. This process provides bundled solutions at the customer sub-segment level. Services will also integrate with other DSM offerings. This service supports multiple Strategic Plan strategies, including the commercial sector's strategy to align commercial building benchmarking, labels, and operations and maintenance practices to address energy efficiency.[122]
- Savings Calculation Tool Development – SCE proposes the development of tools that will help support the quantification of savings for program related purposes and support the sales and marketing messaging aimed at selling energy efficiency savings to potential customers. This is an augmentation and consolidation of existing tools, with new enhancements for measures not currently included. This strategy, by itself, will not yield direct savings; however, it is important because the lack of tools is a key cost issue for RCx and other programs. Additionally, by making these tools more readily available, SCE expects that customers will be able to make better informed decisions, which should encourage them to implement more energy efficiency measures.

Numerous Strategic Plan crosscutting activities are also key to transforming this sector in an integrated and long-lasting way, including HVAC, local government initiatives, workforce education and training, emerging technologies, and codes and standards.

Implementation of these actions requires the identification of key technologies through the CEC's PIER Program, universities, and the national labs, in coordination with the statewide

[122] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 30-41.

Emerging Technologies Program. New technologies are also supported by the new Technology Resource Incubator Outreach (TRIO) program and the Innovative Designs for Energy Efficiency Activities (IDEEA) program, designed to incubate, pilot, and quickly mainstream successful technologies into the California marketplace.

Coordination within this sector includes statewide planning and program coordination to ensure consistency in incentives, offerings, and services across all IOUs, a key Strategic Plan approach. Accordingly, Commercial Energy Efficiency has been designated by the IOUs as a Statewide Core Program. In addition, common marketing and outreach for statewide and other related programs is coordinated to improve cost-effectiveness and to deliver a common message. Coordination also includes additional outreach that aligns with major sub-segment elements with specific needs and/or barriers. Sub-segments are addressed through a comprehensive team approach which may include stakeholders such as building owners, PIER, Building Owners and Managers Association, CEC, CARB, POUs and others, as identified in the Strategic Plan.

3. Industrial

SCE's industrial sector strategy will build upon the 2006-2008 Industrial Energy Efficiency Program and advances comprehensive energy efficiency including integrating approaches to overcome well-understood barriers (or limits) to the adoption of energy efficiency. The industrial sector strategy is aligned with the Strategic Plan's vision that:

> "California industry will be vibrant, profitable, and exceed national benchmarks for energy and resource management."[123]

SCE's vision for the industrial sector is focused on a partnership between customer and utility in which the utility supports the ongoing profitability of the consumer through energy management assistance in exchange for energy and demand savings. SCE's industrial strategy is to position energy efficiency and SCE as resources to help industrial customers manage cost and operational risks, enhancing their economic and environmental sustainability. In addition, SCE's delivery of integrated approaches to energy efficiency provides a direct linkage with GHG emissions so

[123] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 42.

that customers can quantify and track their contribution towards AB 32 targets. Customers will be provided the opportunity to achieve long-term GHG reductions by participation in the Industrial Continuous Energy Improvement sub-program – which partners with customers to develop and implement a sustainable approach to energy management – and then measure, monitor, and establish a state-recognized baseline of GHG emissions through participation in the third-party Cool Planet Program.

The program targets energy efficiency opportunities in industrial processes and systems (although cost-effective building measures will be bundled along with process improvements to prevent lost opportunities), which have historically had low energy efficiency adoption rates. The program is structured to reflect the industrial customer's reluctance to alter elements of a working production process for reasons other than product output or quality. These customers understandably do not think of their business as a collection of end uses of energy, but rather as a process that transforms commodity inputs into products. As industrial customers think in terms of processes, so should utilities, in order to maximize the industry's awareness and uptake of energy efficiency, demand response, and renewable self-generation opportunities.

SCE's industrial sector strategy builds on and incorporates other energy efficiency programs and sub-programs that focus on systems and processes and on key end-use applications such as motors and variable speed drives. In addition, industrial integrated audits that focus on the full range of DSM programs and retrocommissioning are elements of the program. The Industrial Energy Efficiency Statewide program offers the calculated and deemed elements, industrial pump tests, and Continuous Energy Improvement element that will result in a more complete integrated review of energy efficiency options. As outlined in the Strategic Plan, the industrial strategy targets improvements that address energy and business needs across:

- Customers' operational and business objectives;
- Energy-related DSM programs;
- Marketing and delivery channels;

- Enabling partners (financial institutions, trade associations, service providers, *etc.*); and
- Value propositions from the customers' perspective (energy, water, materials management, recyclables, corporate citizenry, *etc.*).

In addition to the barriers that limit adoption rates of energy efficiency measures across all customer groups, there are additional barriers that affect the decisions of process industries' management. This program is designed to mitigate those barriers through a systems approach to identifying energy efficiency potential and by presenting those opportunities within a comprehensive business context.

Recent evaluations of the 2004-2005 Standard Performance Contract (SPC) Program[124] provide significant insight into the issues that affect decisions about installing energy efficiency measures within industrial process facilities. The issues tend to vary by firm size and by industry type,[125] however they include:

- First, costs associated with increasing energy efficiency;
- Uncertainty over project savings;
- Time commitment required to get informed about energy efficiency opportunities and projects;
- Time and cost associated with selecting implementation contractors for projects; and
- Uncertainty about the savings information provided by energy efficiency firms.

Most energy efficiency programs are designed around direct (investment) costs and are aimed at reducing simple payback, or increasing return on investment for projects that may be just short of a company's threshold for investment. Given that time has economic value, and that undue delay is a key market barrier, energy efficiency programs for industrial customers need to incorporate elements to reduce the cost and time commitment associated with energy efficiency decisions.

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[124] 2004-2005 Statewide Nonresidential Standard Performance Contract Program Measurement and Evaluation Study: Impact, Process and Market Evaluation-Final Report, March 19, 2008.

[125] *Id.*

The industrial energy efficiency program is one of the IOUs' statewide core programs, ensuring full coordination among the other IOUs to drive towards consistent incentive levels and information. In addition, the utilities are coordinating to offer a joint audit and recommendation package to facilities that share service territories.

The program is built on the same principles that form the Strategic Plan vision and strategy for the industrial sector and aligns with multiple Strategic Plan strategies,[126] including leveraging the marketing and comprehensive benefits of energy efficiency branding, certification, and continuous improvement methods. The program also supports the Strategic Plan strategies related to DSM Integration and Coordination by providing integrated facilities/process audits and project proposals that offer integrated solutions to maximize participant value and are cost-effective.

4. Agricultural

SCE's targeted approach to the agricultural and water systems sector includes food production enterprises, crop production enterprises, and public and private water system enterprises.

The Strategic Plan sets forth the following vision for the Agricultural Sector:

> "Energy efficiency will support the long-term economic and environmental success of California agriculture."[127]

SCE's ~~2009-2011~~ 2010-2012 agricultural strategy supports the Strategic Plan vision through various strategies, as outlined in the segment's implementation plan. Specifically, SCE's portfolio supports the Strategic Plan's strategy of market characterization and goal setting,[128] which focuses on establishing and maintaining a sufficient knowledge base for the sector to support the development of energy efficiency and demand reduction resources. SCE supports this goal by dedicating resources to an analysis and review of the segment's electricity usage, peak demand, and electricity use/intensity within SCE's service territory, and providing targeted strategies for specific sub-segment customer groups. This characterization effort supports more targeted and cost-effective

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[126] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 42-49.

[127] *Id.*, pp. 51-56.

[128] *Id.*

delivery of energy efficiency programs and sub-programs, by better identifying customers with similar business models, level of technological sophistication, and similar energy consumption patterns. This, in turn, will drive a more customized and effective delivery of energy efficiency solutions to unique agricultural market sub-segments.

SCE's portfolio supports the Strategic Plan's strategy of fostering advances in best management practices and equipment efficiency.[129] This is accomplished through the statewide Agricultural Energy Efficiency Program, which follows up on pump testing audit findings (in the industrial and commercial sectors, as well as agricultural) to implement tailored, customized solutions for enhancing operating efficiencies of water treatment and distribution systems. Additionally, the agricultural strategy dedicates resources for the assessment of energy usage benchmarks and energy cost metrics within the sub-segments. This information is valuable in identifying energy efficiency opportunities and enhancing the operations and profitability of the customer.

The agricultural strategy supports the Strategic Plan's goal of accelerating the emergence of energy efficiency technologies by providing seed capital for energy efficiency research and development and early stage energy efficiency technologies, such as through the IDEEA solicitations. Emerging technologies will also be assessed and, where applicable, demonstrated at SCE's Energy Centers. Furthermore, this sector is a good opportunity to focus on integrated DSM efforts. In particular, the agricultural strategy plans for continued work and program development around reduced water usage which has reduced electricity use as a secondary benefit; lessons learned from the water-energy Pilot[130] may also be used in designing new customized programs or sub-programs. SCE's efforts in this sector will be mindful of and focus on these opportunities.

5. Emerging Technologies

The development, enhancement, deployment, and operation of energy efficiency related technology is fundamental to achieve California's energy efficiency vision – "Technology advancement

[129] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 50-56.

[130] D.07-12-050, dated December 20, 2007.

related to energy use and demand will match – or even eclipse – the consumer electronics industry in innovation, time to market, and consumer acceptance"[131] – and goals to successfully implement the Strategic Plan. The Strategic Plan looks to technology advancement in general and the statewide Emerging Technology Program (ETP) in particular to support these overall efforts, as described in the Research and Technology chapter.[132] The ETP delivers information, insights, analytical tools, and resources to help enable expedited adoption of innovative technologies and support the promotion of new applications of existing technologies. The ETP will support energy efficiency program efforts to accelerate the adoption of promising measures, products and services.

Strategically focused activities in the ETP include working with integrated demand side activities, enhancing market intelligence efforts, engaging and leveraging other stakeholders in the ET process, and accelerating technology transfer and adoption activities. Reducing perceived risk in new technologies through performance assessments is one tactic which the ETP will continue to utilize, as will be the tactic of developing innovative tools that enable more consumers to explore, purchase, and use energy efficiency related products at all stages of technology and marketplace deployment. Integrated Demand Side Management activities are included in the ETP and encompass the integration of appropriate energy efficiency renewables, demand response, permanent load shifting strategies, carbon mitigation measures, and other sustainability activities.

Several new concepts are introduced in ~~2009-2011~~ 2010-2012 including limited ETP efforts in the following areas:

- Scaled Field Placements - These projects consist of placing a number of measures at customer sites as a key step to gain market traction and possibly gain market information. A very simple example of a scaled field placement would be to give 50 office managers an LED task light.

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[131] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 83.

[132] *Id.*, pp. 83-88.

- Demonstration Showcases - These projects will expose measures to various stakeholders utilizing *in situ*, real-world applications and installations. A key attribute of a demonstration showcase is that it is open to the public or to an interest group.
- Market and Behavioral Studies - These projects involve targeted research on customer behavior, decision making, and market behavior. Market and behavioral studies will contribute to increased measure awareness, market knowledge and reduced performance uncertainties for ETP stakeholders and IOU customers.
- Technology Development Support - Product development is best performed by private industry. There are opportunities, however, where the IOUs are well qualified or in a strong position to undertake very targeted, cost-effective activities which provide value in support of private industry product development efforts. Examples of activities may include providing customer contacts for field evaluations, making lab testing facilities available to companies without this capability, or developing standard testing protocols.
- Business Incubation Support - TRIO (Technology Resource Incubator Outreach) is a statewide program that focuses on providing training and networking for entrepreneurs and companies providing energy saving technologies.

The TRIO and Technology Development Support program will be aimed at contributing to increased technology supply through influencing the ease and attractiveness of energy efficiency technology investment and development in California. Assessments, Scaled Field Placements, Demonstration Showcases, and Market and Behavioral Studies are aimed at supporting increased market demand for energy efficiency measures.

A strong focus of the ETP will be contributing to zero net energy technology advancement. The ETP filing includes a new Zero Net Energy (ZNE) Technology Test Center aimed both at evaluating ZNE technologies (including capacity for detailed testing and instrumentation) and increasing public and professional awareness of these technologies through showcasing and

demonstration (as do the other SCE Technology Test Centers). The ZNE Technology Test Center is designed to accelerate the commercial (and subsequently widespread) availability of ZNE products and practices.

The ETP will also work closely with the CEC's PIER Program and the RD&D communities through the Emerging Technology Coordinating Council (ETCC) to assure these research portfolios are aligned with the IOU's demand side activities and the Strategic Plan so that ET resources can be leveraged, potential energy savings can be maximized, and technology transformation can be broad-based and long-lasting.

The ETP aligns with the Strategic Plan research and technology sector strategies[133] to enhance market intelligence, expand activities to create market pull for efficient technologies, support private industry, drive product improvement, and focus on the leading edge.

6. Codes & Standards

The Codes & Standards (C&S) program directs initiatives to enhance state and federal building and appliance standards to codify cost-effective, reliable, verifiable, and persistent demand side measures. The program's goal is to maximize portfolio energy savings, demand reduction, and demand response, consistent with the Strategic Plan's overall philosophy and C&S vision:

> "A broad range of aggressive and continually improving minimum and higher voluntary sets of energy codes and standards will be adopted to greatly accelerate the widespread deployment of zero-net and highly efficient buildings and equipment. The effectiveness of codes and standards will be enhanced by improved code compliance as well as coordinated voluntary efficiency activities."[134]

It is not an exaggeration to state that the aggressive development of (and compliance with) energy codes and standards is fundamental to California's market transformation goals and essential for the Strategic Plan's success; in fact, the Commission and others, appropriately, often define adoption into codes and standards as the end point for market transformation.

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[133] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 83-88.

[134] *Id.*, p. 67.

Comprehensive Codes and Standards Enhancement (CASE) studies for energy efficiency improvements are performed for promising design practices and technologies and are presented to standards and code-setting bodies. The goal is to reduce energy use (*e.g.*, better building envelopes, regulation of plug loads, higher efficiency air conditioning systems, *etc.*) and increase on-site renewable energy generation by developing more comprehensive whole building approaches, concentrating on new areas of appliance regulation, developing "reach" codes, and better integrating demand response, water use, and renewable energy.

Following the adoption of new codes or standards, the program supports their successful and long-term implementation through activities designed to maximize compliance, as described in the Strategic Plan,[135] by increasing training to local code officials, conducting research to determine key areas of non-compliance, simplifying codes, and improving acceptance testing procedures. The C&S statewide core program closely coordinates among the IOUs, local government partnerships, energy efficiency programs, the CEC, other state agencies, and other stakeholders to develop and implement codes that appropriately address government, customer, and industry needs, and legislative initiatives and mandates. In alignment with the Strategic Plan,[136] C&S coordinates with the local government partnerships to train staff and support code development efforts with the U.S. Department of Energy. The C&S Statewide Program strongly supports the zero net energy BBEES by advocating for Title 24 building energy standards and Title 20 appliance regulations that will help meet the zero net energy requirements for residential new construction by 2020 and commercial buildings by 2030.

7. Local And State Governments

SCE's energy efficiency partnership program portfolio consists of partnerships with local and state government organizations as well as with institutional customers. SCE acknowledges that these governments and institutions provide a number of key functions relating to demand side management and efficiency. Additionally, SCE embraces the vision of the Strategic Plan to strengthen

[135] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 67-71.

[136] *Id.* pp. 67-71.

and capitalize upon the capacity of governments and institutions to encourage community outreach, leadership by example, and enforcement of state and local codes and standards in support of California's aggressive energy savings goals. The Strategic Plan's vision for local governments[137] is that:

> "By 2020, California's local governments will be leaders of in using energy efficiency to reduce energy use and global warming emissions both in their own facilities and throughout their communities."[138]

Energy leadership is one of the very important roles that governments and institutions can play. SCE believes that governments and institutions will be motivated to improve energy efficiency in their facilities and communities as part of their larger interests in reducing carbon emissions and managing energy costs.

SCE's ~~2009-2011~~ 2010-2012 partnership programs provide opportunities for institutional and local government partners to lead by example, enhancing efficiency-related market transformation while delivering cost-effective energy savings. Following the guidance of the Strategic Plan,[139] these programs provide assistance for partners to identify energy efficiency retrofit projects, enhanced incentives, audits, and other technical assistance to help overcome barriers to implementation of energy efficiency projects.

Many governments and institutions are working to develop local ordinances or programs to build a sustainable environment. SCE's partnership programs will work with these partners, with support from other demand side management programs such as the Sustainable Communities, Codes and Standards, and new construction programs. These resources support the governments and institutions segment to simplify and standardize relevant policies and codes as well as create model ordinances or programs to facilitate adoption locally and statewide. The role of local governments in this key area is discussed extensively in the Strategic Plan.[140]

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[137] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp, 89-91.

[138] *Id.*, pp. 89-97.

[139] *Id.*

[140] *Id.*

Governments and institutions provide venues for the piloting of new technologies that could potentially be scaled up across the state. The Statewide Emerging Technologies considers partnerships a high priority in the selection of test sites and also links with CEC's PIER program. Codes and Standards and the Workforce Education and Training Synergies program support and leverage local governments' Title 24 enforcement activities with energy code training for plan checkers, inspectors, and the trades.

Peer-to-peer support is considered a key part of SCE's partnership strategy, and is outlined in the Strategic Plan.[141] Forums will be created for partners to share best practices and to support each other. In addition, SCE's partnership portfolio includes partnerships with local government organizations such as Councils of Government and other joint powers authorities representing groups of cities/counties in the partnership portfolio.

SCE has developed a strong history of working closely with a variety of institutional and local government partners to implement demand side management. These partnerships enable the customers to focus on, learn about, and implement energy efficiency, conservation, demand response, load shifting, and renewable energy within their own facilities.

SCE's ~~2009-2011~~ 2010-2012 partnership programs include a greater focus on coordination with demand response and other DSM activities. Different levels of demand response offerings have been defined and partners are encouraged to establish progressively higher goals for participation in demand response activities. In addition, the partnerships also utilize an integrated approach that encourages participation in the California Solar Initiative, Self-Generation Incentive Program, and Low Income Energy Efficiency Program, as laid out in the Strategic Plan.[142] Although the funding for the integrated portion of the program comes from the dedicated funding source for the respective integrated measure, the partnership makes this as seamless as possible to the partner and its constituents.

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[141] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 89-97.

[142] *Id.*

SCE's partnership program approach stipulates that the type of support available to partners can be a combination of enhanced energy efficiency incentives, technical support, strategic plan support, and marketing, education and outreach, depending on the specific needs of the partner and its community. However, to enhance cost efficiency, additional non-resource components are leveraged from other portfolio programs. For example, Sustainable Communities, Codes and Standards, and WE&T have all made provisions for supporting Local Government Partnerships.

The partnerships continue the progress made with the establishment of a statewide approach to training on energy efficiency technologies that are applicable to improving building operation. This fosters and facilitates long-term and persistent energy efficiency savings. The training and education component of the partnership involves training of design staff, project managers, energy managers, and others in using best energy practices in the construction, retrofit, RCx, and monitoring-based commissioning of buildings and central plant infrastructures. The partnerships will also collaborate with higher education institutional partners to support the development of energy curriculum to support the workforce development initiatives of the Strategic Plan.

8. DSM Integration

In alignment with the Strategic Plan and in collaboration with the Energy Division, as well as the other IOUs, SCE proposes an Integrated Demand-Side Management (IDSM) strategy. SCE's strategy shares the vision and addresses the strategies of the Strategic Plan. The strategy has several elements, each of which addresses the Strategic Plan.

SCE, with the other IOUs, propose a new Statewide IDSM Task Force (see Statewide DSM Coordination and Integration Program Implementation Plan for detail). The Task Force will meet regularly to identify and promote best practices, track and assess IDSM pilots, address foundational issues such as cost-effectiveness, develop further measurement and evaluation protocols, *etc.* Membership in the Task Force will include the CPUC Energy Division, dedicated IDSM staff from the IOUs, and stakeholders from marketing, emerging technologies and other areas. This Task Force will take full advantage of the opportunity for statewide coordination and should lead to pilot and regular program offerings in the future, in addition to those proposed in SCE's Proposed Program Plan.

In alignment with Commission guidance, and to further the IDSM knowledge base, SCE will conduct a series of pilots during ~~2009-2011~~ 2010-2012. The pilots are discussed in detail both in Exhibit SCE-6 as well as in the individual PIPs for each pilot. Conducting pilots directly aligns with Strategic Plan Strategy 8.4.1 "Pilot Programs."[143] These pilots will advance the market by providing valuable insights at a manageable scale into customer reaction to integrated offers. Additionally, the pilots integrate a number of different areas including application of emerging technologies, and involve newer stakeholders such as institutional partners to provide insight into better promoting integrated DSM. Incorporating knowledge from the pilots will help reduce barriers to the adoption of DSM. IDSM involves stakeholder coordination, and this matches with Strategic Plan Strategy 8.4.2.[144] As noted, the Task Force will bring together IDSM stakeholders – as will the pilots themselves.

Strategic Plan Strategy 8.4.3 is New Technology development for IDSM.[145] This strategy is addressed in several ways in the IDSM strategy and in the portfolio in general. The Emerging Technologies Program Implementation Plan discusses integrating DSM. In turn, emerging technologies experts will be invited to participate in the Task Force, providing a point of promotion and integration, and the Task Force will assess the promise of new technologies.

As noted in Strategic Plan's Strategy 8.4.4,[146] Coordinated DSM Marketing is critical to the success of Integrated DSM. SCE's Marketing, Education & Outreach program will be fully integrated to ensure that customers are receiving valuable outreach information about energy efficiency, demand response, and self-generation. The Task Force will work with ME&O staff on future campaigns to maintain this integration.

For further discussion of IDSM, see Exhibit SCE-6, and note that in addition, most program implementation plan have a section addressing integrating IDSM.

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[143] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 71-73.

[144] *Id.*

[145] *Id.*

[146] *Id.*

9. Marketing, Education, And Outreach

The Strategic Plan sets forth a clear vision for Marketing, Education, and Outreach (ME&O): "Californians will be engaged as partners in the state's energy efficiency, demand-side management and clean energy efforts by becoming fully informed of the importance of energy efficiency and their opportunities to act."[147]

Consistent with the Strategic Plan, and coordinated with the other IOUs as a Statewide core program, SCE's marketing, education, and outreach efforts seek to maximize energy savings and move customers towards permanent adoption of an energy-efficient lifestyle. Integrated DSM marketing and outreach – a cornerstone of SCE's marketing approach – will continue to leverage both the statewide brand and other market actors to drive program participation, market transformation, and behavior change. SCE's integrated DSM marketing and outreach campaigns will continue to utilize segmentation research to better understand customers and provide them with a wide range of action-oriented solutions to maximize energy savings. Segmentation also enables SCE to customize the characteristics of its offerings, providing customers with solutions that are relevant to their needs.

Given the diversity of SCE's customer base, SCE uses multiple layers of integrated marketing to effectively reach customers and motivate them to action.

The first layer – statewide branding – builds awareness of the benefits of an energy efficient lifestyle and is designed to affect customer attitudes. SCE plans to leverage and coordinate the statewide branding efforts, but will not duplicate them.

The second layer – IOU bundled or integrated marketing – provides customers with bundled solutions to move them from awareness to action. Integrated marketing is an important element of D.07-10-032 and the Strategic Plan's call for integrating DSM[148] that involves pulling together relevant energy efficiency, conservation, demand response, low income energy efficiency, California Solar Initiative, and SmartConnect™ (AMI) enabled rates and offerings. Integrated marketing helps

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[147] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 79.

[148] D.07-10-032, dated October 18, 2007, pp. 29-32, *see also* California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 71-73.

deliver awareness of relevant offerings, so that customers will both appreciate and accept holistic energy management solutions. For example, SCE may use residential segmentation to develop a bundled marketing effort to promote a SmartConnect™ enabled rate, like Time of Use, Domestic Tier (TOU-DT) with DSM solutions like Critical Peak Pricing and Comprehensive HVAC (A/C Tune Up) for residential customers.

Additionally, SCE plans to conduct up to three integrated marketing campaigns each year that feature integrated DSM solutions to common consumer issues, like managing cooling costs. SCE will promote participation in energy efficiency programs and sub-programs such as Residential/Light Commercial HVAC, Home Energy Efficiency Surveys, and Low Income Energy Efficiency, as well as other demand-side management programs, such as the Air Conditioning Cycling demand response program. Providing integrated product bundles encourages customers to change behavior and motivates them toward salient and long-lasting solutions.

The third layer – highly targeted, customized marketing – provides SCE the opportunity to promote specific DSM programs to customers who are identified through market research as individuals who would be most likely to participate. These highly targeted marketing efforts would be conducted to help specific programs reach their participation goals. As such, SCE's targeted marketing campaigns would include a mix of both traditional (*i.e.*, direct mail and advertising) and non-traditional (*i.e.*, grass-roots and ethnic outreach) marketing activities. For example, SCE could work with its city partnerships to promote participation in Online Home Energy Efficiency Surveys, while at the same time sending out a direct mail to targeted customers and obtaining a booth at an ethnic event that would provide customers with the opportunity to immediately take the Home Energy Efficiency Survey.

In addition, this third layer provides SCE the opportunity to explore a one-to-one or behavior-based marketing approach. This one-to-one marketing approach includes a personalized energy report with measure-specific tips providing customers with relevant demand side management solutions for their specific energy management needs. SCE will be monitoring the results associated with the behavior-based marketing pilot being conducted by Positive Energy for SCE's Palm Desert

Energy Efficiency Partnership. Based upon the pilot's results, SCE will determine strategies and goals for future efforts.

As SCE continues to conduct marketing efforts for its key DSM programs, an integrated mix of traditional and non-traditional marketing channels will be utilized. Specifically, SCE's marketing efforts could include grass-roots outreach, Events Outreach, the Mobile Energy Units (MEUs), in-language communications, behavior-based marketing, point-of-sale, direct response, outbound calling, trade journals, sce.com, on-line and electronic advertising, social networking bill messaging, inserts, outreach through the Mobile Education Unit (MEU) and partnerships with community-based and faith-based organizations, as well as with other market actors.

Accomplishing the long term goal of maximizing energy savings and changing consumer behavior requires a marketing effort across many stakeholders with responsibility for energy efficiency in all sectors. SCE coordinates with the other IOUs and market players and leverages best practices to move customers to take action through:

- Statewide branding;
- Utilizing a spectrum of market actors, including –
    - Retailers
    - Businesses
    - Cities, counties, and local governments
    - Trade associations
    - Non-profit/faith-based organizations

Additionally, in alignment with the Strategic Plan,[149] the Statewide Marketing and Outreach Program includes exploration of a statewide EE/DSM brand for California, utilization of statewide segmentation and social marketing techniques to develop marketing campaigns and messaging that facilitates awareness and long-term behavior change, and development of a statewide EE/DSM web portal.

[149] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 10-7 to 10-8.

10. Workforce Education and Training

Workforce Education & Training (WE&T) is an increasingly important crosscutting activity that educates and trains current and future workers to successfully perform the jobs needed to reach California's clean energy goals. The economic conditions facing southern California (and well beyond) demand vigorous new approaches to successful and tangible green collar job creation. SCE will, among other actions, expand needed training curricula and educational and training facilities, and leverage other resources, including our existing facilities (such as CTAC and AgTAC) and various parties' funds, such as new federal economic stimulus funds, low income energy efficiency funds, other demand-side management funds, and union and other training budgets. The Strategic Plan's vision[150] for WE&T is that:

> "[b]y 2020, California's workforce is trained and fully engaged to provide the human capital necessary to achieve California's economic energy efficiency and demand-side management potential."

To that end, WE&T strategies require a comprehensive, collaborative, and highly leveraged approach to education and training – one that focuses on developing new jobs that currently do not exist, expanding outreach methods for new and existing programs, providing supplemental training, and increasing awareness of and interest in green careers.

SCE's ~~2009-2011~~ 2010-2012 WE&T Program is a statewide program and includes three important core delivery sub-programs: 1) WE&T Planning; 2) WE&T Centergies; and 3) WE&T Connections. Each sub-program is designed to target specific market segments, and contribute significantly to the Strategic Plan's larger education and training goals and objectives.

The WE&T Planning sub-program supports the accomplishment of the four key WE&T Strategic Plan activities identified in the Plan as necessary to drive long-term WE&T development. WE&T Planning provides project management and execution to these activities, and ensures coordination is occurring on a statewide basis with the IOUs, CPUC, as well as with the various stakeholders identified in the Strategic Plan. The four key WE&T Planning activities include:[151] 1)

[150] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 75.

[151] *Id.,* p. 75-79.

conducting a statewide needs assessment of green jobs, training and education resources to identify education and training programs and opportunities; 2) creating a WE&T-specific web portal that serves as a repository for demand-side management and energy efficiency training, education, and career opportunities; 3) Identifying and implementing specific programs for the educational sectors, including K-12, adult education and community colleges, technical training, colleges and universities, and minority, low income and disadvantaged communities; and 4) forming an administrative WE&T Task Force to manage the scoping study and needs assessment, and facilitate the ongoing development of statewide WE&T activities.

The WE&T Centergies sub-program utilizes SCE's Energy Centers, Technology Test Centers, and other information and training venues and program implementation strategies, to provide comprehensive education and training offerings to a variety of customers across all market sectors. This sub-program is dynamically designed with the ability to focus training to accommodate specific market sector training needs. This sub-program specifically supports the Strategic Plan's WE&T strategy of assisting with the current need for technically trained installers, energy auditors, and building energy operators through training.[152] In ~~2009-2011~~ 2010-2012, WE&T Centergies will employ a variety of strategies to respond to market sector training needs including delivering high-quality integrated educational seminars to train members of the energy efficiency workforce, provide technical consultations and equipment demonstrations to practitioners, facilitating on-and-off site outreach programs to disseminate technical energy efficiency information and programs to all levels of building professionals, expand and integrate the tool lending library programs, and expand energy efficiency educational partnerships.

The WE&T Connections sub-program supports the Strategic Plan vision for educating and training California's workforce for green careers by targeting and partnering with California's educational sector. WE&T Connections is a three-fold program that 1) promotes green careers to K-12 and university students through energy and environmental curriculum, relevant degree programs,

[152] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 75-79.

courses, and internships; 2) educates students on energy, efficiency, renewable energy, demand response, water management, climate and the environment, with the goal of influencing day-to-day decisions of students and their households; and 3) informs schools on energy efficiency and demand response programs[153] and benefits and leverages utility offerings to help incentivize schools to achieve immediate and long-term energy savings and demand reduction in their facilities.

The WE&T Program promotes energy efficiency to a variety of customer segments and supports market penetration through disseminating information about efficient technologies and practices to electric, natural gas, and water utility customers and providing services to a variety of midstream and upstream market actors (*e.g.*, architects, engineers, distributors, technicians, and contractors) who use information and tools to design more efficient buildings or processes, and to conduct efficient energy and water system retrofits and renovations.

WE&T also supports the Commission's BBEES by educating the residential and nonresidential new construction industries on ways to achieve the zero net energy new commercial buildings and residential new construction targets. Education includes focused workshops and training that brings the specific design and technical knowledge needed to facilitate the achievement of the BBEES.

In addition to statewide coordination, the WE&T Program plays a significant role in coordinating DSM offerings by providing education and training that provides meaningful and effective education and training to communicate DSM messages to a broad spectrum of customers.

11. Low Income Energy Efficiency

The low income residential segment section of the Strategic Plan identifies several strategies to ensure maximum realization of the Commission's programmatic initiative, "[t]o provide all eligible customers the opportunity to participate in the LIEE programs and to offer those who wish to participate in all cost-effective energy efficiency measures in their residences by 2020."[154]

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[153] Funding for these demand response activities is identified in A.08-06-001.

[154] D.07-12-051, dated December, 20, 2007, p. 4.

SCE's Low Income Energy Efficiency (LIEE) program for 2009-2011 will include cost-effective measures for all eligible customers. The portfolio of cost-effective measures is augmented by measures that produce long term and enduring savings, such as cooling measures, which help promote the comfort, health and safety of eligible low-income customers. SCE's LIEE program and budget, as adopted by the Commission in D.08-11-031, are designed to achieve one-fourth of the Programmatic Initiative by December 2011, and provide enduring savings. To achieve the Programmatic Initiative, SCE's authorized three-year program budget is $185.2 million. The increased program budget over 2007-2008 funding levels, together with leveraging the resources of other entities, and improving integration with SCE's energy efficiency and demand-side programs, enables SCE to provide the measures and reach the number of homes required to achieve one fourth of the Programmatic Initiative by year-end 2011.

D. Strategic Plan Outlook For Ten Years And Beyond

1. Application Includes A Program Line Item And Budget For Strategic Planning Personnel

Due to the importance and magnitude of California's "next generation" strategic planning and the Strategic Plan, SCE has established a dedicated Strategic Planning Team. The primary purpose of the team is to ensure that SCE's ~~2009-2011~~ 2010-2012 Second Amended Application and the short- and medium-term activities that flow from the proposed portfolio work toward the achievement of the long-term goals of the Strategic Plan. The team represents an increase in current staffing, as this additional capacity is needed to collaborate and coordinate with the Commission, other IOUs, and third parties to reach the Commission's long-term vision for energy efficiency and DSM. SCE proposes a budget of $10.213 million for the ~~2009-2011~~ 2010-2012 cycle to support this new organization which includes both current and planned staffing.

SCE's Strategic Planning Team will serve several key roles that range from analysis to coordinating implementation and helping design new offerings. Following the outline provided by the Commission in its April 29, 2008 ACR, the team focuses on the following:

- Information gathering on existing state, regional, and private/public sector demand-side initiatives for potential application by SCE following the outline provided by the Commission in its April 29, 2008 ACR. The team will assemble information on DSM potential as well as current initiatives to establish new directions for SCE's energy efficiency portfolios by segment. The strategic planning function serves as important role between DSM potential forecasts and program planning to ensure that the actual programs continue in a strategic direction. Working with Commissioners and the Commission staff regarding implementation of the current Strategic Plan; research and analysis needed for future strategic planning; and the substantive and logistical development of future Strategic Plans.
- Ongoing work to review and update implementation of the Strategic Plan and ~~2009-2011~~ 2010-2012 programs. The team is fully engaged in this activity already, collaborating with SCE Energy Efficiency Regulatory Group to coordinate and prepare the ~~2009-2011~~ 2010-2012 Application and providing direction to SCE program staff on aligning program implementation plans with the Strategic Plan, including goals for integrated DSM, workforce training, marketing, market transformation and emerging technology. Going forward, the team will be collaborating with program staff, marketing staff, DSM forecasting staff, as well as Account Management and technical support groups on aligning future activities with the Strategic Plan. This includes specifying program content, assisting the design of integrated DSM program applications, and supporting SCE's Long-Term Procurement Plan. In addition, the team has the SCE lead on the proposed new Integrated DSM Statewide Taskforce (see Exhibit SCE-6 and Program Implementation Plan) in collaboration with the Energy Division.
- Working closely with SCE management and staff with relevant responsibilities. They include energy efficiency staff responsible for implementing programs called for in the Strategic Plan, such as Savings by Design and California Advanced Homes

Program, and with other DSM groups, such as demand response, CSI, and SmartConnect™.

- Collaboration with the other key actors and stakeholders described in the Strategic Plan, including not only the Commission and the other IOUs but the CEC, CARB, builders, developers, manufacturers, consumer organizations, demand-side providers, efficiency organizations, environmental advocates, low-income advocates, the financial industry, publicly owned utilities, *etc.*

In summary, SCE proposes a substantial dedication of personnel, budget, and other resources-beyond current levels and staff capacity – so that we can strongly maintain ongoing strategic planning efforts, and do so without being unduly distracted by "day to day" events. Our new energy efficiency Strategic Planning Team includes leadership and staff that is simultaneously analytic and action-oriented undertaking the multiple goals of rigorous planning, innovative program development, spirited problem solving, robust implementation of market transformative activities, and strategic thinking.

2. New ~~2009-2011~~ 2010-2012 Pilot Project Programs, Based On The Strategic Plan

SCE's ~~2009-2011~~ 2010-2012 portfolio includes numerous pilot programs in support of the Strategic Plan's specific goals and strategies for both residential and nonresidential consumers, including the commercial, industrial, and agricultural sectors, as well as to advance the Strategic Plan's broader market transformation goals. These include:

Continuous Energy Improvement

The Resource Energy Manager (REM) pilot will be evaluated for consideration and cost effectiveness as a pilot in the ~~2009-2011~~ 2010-2012 program period. REMs are essentially energy managers who are placed at the customer's facility to be a project champion and shepherd energy efficiency projects through to completion. Their salary is typically paid for through the energy savings they generate. REMs have been successfully used by IOUs in the government sector (typically military bases) in past program cycles and a similar program has been available for commercial customers in the Pacific Northwest. The concept of using REMs in the commercial segment will be explored to

determine the viability and cost effectiveness of such an approach. An appropriate EM&V plan will also be developed as part of the REM pilot such that the effects of the pilot on achieving higher levels of energy efficiency can be determined easily and confidently.

Agricultural IDSM

The statewide Agricultural Energy Efficiency Program will support the pilot proposed by the California League of Food Processors tentatively labeled the Integrated Demand Side Management for Food Processing Program. The pilot forms an alliance between the food industry, the Commission, the IOUs, and other state and national stakeholders and promotes integrated energy management solutions to end-use customers in the food processing segment.

The end result is creating a model for food processors that ultimately will reduce, reuse and recycle water resources; limit air emissions; capture solid and liquid waste streams to generate bio-energy products; and continuously achieve energy efficiency through best practices and self actualization. The reward will be energy efficiently-made products with low impacts on natural resources and the environment.

~~Commercial Offices~~

~~During the course of the three-year program period, pilots may be created based on the needs of the commercial customers. For example, the Leased Office Space Energy-Efficiency Retrofit sub-program targets non-owner occupants of commercial office buildings, specifically medium and large office buildings in the Los Angeles basin. The program features efficiency and DR audits; financial analyses to help customers choose; innovative financing arrangements for the selected measures; turn-key measure installation; post-installation inspection to verify performance; and customer satisfaction research and resolution.~~

Emerging Technologies

TRIO (Technology Resource Incubator Outreach) is a statewide program that identifies upstream technologies at universities, VC firms, incubators, and manufacturers that can be integrated into existing utility programs; in doing so TRIO provides training, networking and utility-related business development assistance for entrepreneurs and companies providing energy-saving technologies.

TRIO will, among its other key objectives, advance technologies for next generation homes that are ZNE or consume extremely low amounts of energy.

Comprehensive Industrial Energy Efficiency

SCE's industrial sector strategy will advance comprehensive energy efficiency in this sector including integrating approaches to minimize lost opportunities, planning and recruiting sites for a pilot energy efficiency certification program in industrial facilities, analyzing and identifying resulting process improvements, investigating financing options, benchmarking, and promoting advances in equipment efficiency and operations through process improvements.

LED Street Lighting for Local Government

The local government partnership program will implement a pilot in Santa Ana to evaluate the possible replacement of city-owned LS2 and LS3 street lights with new LED street lights. This pilot will be dependent on readiness of this new emerging technology. The pilot will be targeted in distinct circuits to accurately evaluate energy efficiency and cost savings. Depending on the evaluation results energy savings achieved in this pilot, the Partnership will make a determination on whether to replace 1,000 city-owned LS2 and 270 LS3 street lights.

More broadly, SCE anticipates working closely with local governments in our service area to pilot and test new approaches to energy efficiency that, if successful, can be expanded throughout southern California and even beyond.

3. Methodologies to Address Programs With Long Term Savings

The proposed portfolio is intended to provide both short-term and long-term energy efficiency solutions, including the ability to work with market participants to affect changes ten years or more into the future. SCE's portfolio – strongly coordinated on a statewide basis with the other IOUs – is designed to support various long-term ventures, such as the Big, Bold Energy Efficiency Strategies discussed above: Residential New Construction, Commercial New Construction, and driving the transformation of California's HVAC market. The portfolio also continues to support the development of codes and standards, as well as identifying and assessing emerging technologies. There is no distinct regulatory treatment required beyond the adoption of the recommended budget levels, the fund-shifting

proposal set forth by SCE in this Proposed Program Plan and the ability to encumber funds in the ~~2009-2011~~ 2010-2012 cycle which can be funded from the subsequent program cycles. SCE's recommended funding in this Application, concurrent with its proposed fund-shifting rules and the ability to use funding from future cycles, will allow SCE to fund the commitments for installation forecast in this Proposed Program Plan.

IV.

SCE'S PROPOSED ENERGY EFFICIENCY PORTFOLIO

A. The Proposed Portfolio Meets Or Exceeds The Energy Efficiency Goals

1. Portfolios Meet Or Exceed ~~2011~~ 2012 Cumulative Energy Savings Goals

SCE's Proposed Program Plan meets the cumulative savings goals for the three-year cycle. As discussed in Chapter II (policy section), SCE recommends a cumulative goal be adopted which reflects cumulative savings beginning in ~~2009~~ 2007 and ending in ~~2011~~ 2012. SCE calculates these savings based on the following:

(1) 2007, and 2008 net energy savings and demand reduction results as estimated using DEER 2008 version 2008.2.04 and the 2006-2007 Energy Efficiency Verification Report; ~~and~~

(2) 2009 gross energy savings and demand reduction results as estimated using DEER 2008 version 2008.2.04; and

(3) ~~2009-2011~~ 2010-2012 gross energy savings and demand reduction results as forecast in this proceeding.

SCE also provides a calculation scenario which follows the direction of ~~D.07-10-032~~ D.09-05-037, calculating the expected cumulative savings of the portfolio plans using ~~2004~~ 2006 as the base year (see Second Amended Exhibit SCE-2, dated July 2, 2009). ~~The calculation of these savings is based upon the following:~~

- ~~2004 and 2005 net energy savings and demand reduction results as reported in draft or final program impact evaluations, where available;~~
- ~~2004 and 2005 net energy savings and demand reduction results from SCE savings reports, where impact studies are not available;~~

These scenarios do not include the cumulative impacts for savings occurring during this period for programs implemented prior to ~~2004~~ 2006, or other items which were not explicitly included in the studies or forecasts of savings. ~~It is unclear as to whether impact evaluations for the 2004-2005 programs included all of the programs that SCE implemented or the full commitments made during the~~

~~program cycle. Such inclusions may alter the analysis performed for this Application. SCE would expect to see the cumulative effect of these savings continue over time as participants continue to install the measures which were installed previously, particularly as codes and standards improve over time. SCE looks forward to further addressing this analysis in order to ensure that the appropriate calculation is performed which allows the IOUs to meet the Commission's policy and resource goals while providing cost-effective portfolios to customers.~~ Second Amended Table IV-6 below illustrates SCE's forecast of accomplishments towards the ~~2009-2011~~ 2010-2012 cumulative CPUC goal.

~~Table IV-6~~
~~Forecasted Energy Savings and Demand Reduction Towards~~
~~2009-2011 Cumulative Goal~~

	2009	2010	2010	2009 - 2011 Total	CPUC Goal	% of Goal
Energy Savings (Gross GWh)	1,501	1,962	1,857	5,320	3,529	151%
Demand Reduction (Gross MW)	286	379	362	1,026	741	138%
Gas Savings (Gross MMTh)	-	-	-	-	-	-

Note: Includes forecast of Low Income Energy Efficiency and Codes and Standards impacts from the 2009-2011 program cycle.

Second Amended Table IV-6
Forecasted Energy Savings and Demand Reduction Towards
~~2009-2011~~ 2010-2012 Cumulative Goal

	2010	2011	2012	2010 - 2012 Total	CPUC Goal	% of Goal
Energy Savings (Gross GWh)	1,605	2,096	1,522	5,222	3,013	173%
Demand Reduction (Gross MW)	300	395	316	1,011	621	163%
Gas Savings (Gross MMTh)	-	-	-	-	-	-

Note: Includes forecast of Low Income Energy Efficiency and Codes and Standards impacts from the 2010-2012 program cycle.

2. Portfolios And Funding Levels Appropriately Balance Short-Term And Long-Term Savings

The Proposed Program Plan is intended to provide both short-term and long-term energy efficiency solutions, including implementation of the Strategic Plan, which is intended to affect changes ten years or more into the future. Short-term savings are supported by the implementation of the full set

of resource programs, designed to focus on immediate savings for customers, the immediate replacement of supply-side resources, and the immediate reduction of greenhouse gases. SCE's portfolio is also designed to support various long-term ventures, such as those discussed above: Residential New Construction, Commercial New Construction, and driving the transformation process of California's HVAC market. In addition, the portfolio includes substantial contributions to programs such as Marketing Education and Outreach, and Workforce Education and Training, each with a significant focus on long-term benefits to the state. The portfolio also continues to support the development of codes and standards, as well as identifying and assessing emerging technologies.

The average useful life of SCE's portfolio proposed in this Application is approximately 11 years, increased from approximately 9.8 years in SCE's 2006-2008 Application. SCE proposes a diverse portfolio of approaches and measures to address the short-term and long-term needs of all customers through a multitude of delivery channels and program implementers. SCE will focus on the identified potential of savings and look to new and emerging technologies, promising program designs, and codes and standards to build the future for energy efficiency. A full discussion of the programs and their short-term and long-term strategies can be found throughout this Proposed Program Plan and throughout the Strategic Plan issued September 2008.

3. Portfolios Reasonably Allocate Funding Among Market Sectors & Applications With Respect to Potential Studies

In planning SCE's Second Amended ~~2009-2011~~ 2010-2012 program portfolio, SCE made judicious use of studies of energy efficiency potential to inform their planning process. SCE used the results of both the 2006 California Energy Efficiency Potential Study[155] and the California Energy Efficiency Potential Study 2008[156] to guide their decision-making regarding SCE's program offerings.

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[155] California Energy Efficiency Potential Study 2006, Itron, Inc., KEMA, Inc., RLW Analytics, Inc., and Architectural Energy Corp., May 2006.

[156] California Energy Efficiency Potential Study 2008, Itron, Inc., September 18, 2008, http://www.calmac.org/publications/PGE0264_Final_ReportES.pdf

Since 2001, multiple Commission-funded studies of energy efficiency potential in California have been performed. These studies have been conducted by consulting firms recognized internationally as experts in the assessment of energy efficiency potential. The studies have used similar, but not identical, methodologies and data sources. Results of the studies have generally been similar, but have varied somewhat over time based on these differences in methodology and data, and changes in the energy efficiency marketplace.

SCE broadly attempts to align portfolio planning with estimates of energy efficiency potential by sector for the four customer sectors identified in the Strategic Plan: residential, commercial, industrial, and agricultural. The 2006 and 2008 Itron studies of energy efficiency potential provide a significant amount of useful information for program planning for the residential, commercial, and industrial sectors. For the agricultural sector, SCE used the data available, which is summarized into the industrial sector results.

SCE used the energy efficiency potential studies to align programs with the available potential by sectors. In addition, SCE considered other factors such as cost-efficiency in determining the allocation across sectors. Second Amended Table IV-7 below compares SCE's ~~2009-2011~~ 2010-2012 Energy Efficiency Portfolio with the results of the California Energy Efficiency Potential Study 2008 for SCE's service territory.

~~Table IV-7~~
~~Energy Efficiency Potential by Sector 2009-2011~~

	~~SCE Portfolio~~		~~SCE Potential - 2009-2011*~~	
~~Sector~~	~~kWh~~	~~kW~~	~~kWh~~	~~kW~~
~~Residential~~	~~31%~~	~~25%~~	~~43%~~	~~30%~~
~~Commercial~~	~~48%~~	~~58%~~	~~38%~~	~~57%~~
~~Industrial~~	~~17%~~	~~13%~~	~~19%~~	~~14%~~
~~Agriculture~~	~~4%~~	~~5%~~	~~-~~	~~-~~
~~Total~~	~~100%~~	~~100%~~	~~100%~~	~~100%~~

***Second Amended** Table IV-7*
Energy Efficiency Potential by Sector 2010-2012

	SCE Portfolio		SCE Potential - 2010-2012*	
Sector	kWh	kW	kWh	kW
Residential	31%	25%	37%	25%
Commercial	49%	57%	44%	62%
Industrial	17%	13%	19%	13%
Agriculture	4%	5%	0%	0%
Total	100%	100%	100%	100%

* Results based on California Energy Efficiency Potential Study 2008, Itron (Full Restricted Scenario)

SCE also used data regarding potential by end use to guide the type and mix of measures included in the portfolio. Second Amended Table IV-8 compares SCE's proposed portfolio with the results of the 2008 Itron energy efficiency potential study for SCE's service territory.

~~***Table IV-8***~~
~~***Comparison of SCE's Portfolio***~~

	~~SCE Portfolio~~		~~SCE Potential - 2009-2011*~~	
~~**End Use**~~	~~**kWh**~~	~~**kW**~~	~~**kWh**~~	~~**kW**~~
~~HVAC~~	~~18.5%~~	~~32.2%~~	~~15%~~	~~42%~~
~~Lighting~~	~~46.9%~~	~~37.9%~~	~~55%~~	~~39%~~
~~Refrigeration~~	~~8.6%~~	~~6.5%~~	~~15%~~	~~10%~~
~~Misc/Other~~	~~18.2%~~	~~17.1%~~	~~2%~~	~~2%~~
~~Compressed Air~~	~~0.9%~~	~~0.5%~~	~~3%~~	~~2%~~
~~Drives~~	~~2.8%~~	~~1.8%~~	~~2%~~	~~1%~~
~~Fan~~	~~0.1%~~	~~0.1%~~	~~2%~~	~~1%~~
~~Pumps~~	~~4.0%~~	~~3.9%~~	~~6%~~	~~4%~~
~~Total~~	~~100.0%~~	~~100.0%~~	~~100%~~	~~100%~~
~~*Results based on California Energy Efficiency Potential Study 2008, Itron Inc. (Full Restricted Scenario)~~				

***Second Amended** Table IV-8*
Comparison of SCE's Portfolio

	SCE Portfolio		SCE Potential - 2010-2012*	
End Use	kWh	kW	kWh	kW
HVAC	19%	33%	16%	40%
Lighting	45%	36%	44%	28%
Refrigeration	9%	7%	15%	8%
Misc/Other	19%	18%	14%	17%
Compressed Air	1%	0%	3%	2%
Drives	3%	2%	1%	1%
Fan	0%	0%	2%	1%
Pumps	4%	4%	6%	3%
Total	100%	100%	100%	100%

* Results based on California Energy Efficiency Potential Study 2008, Itron (Full Restricted Scenario)

A precise comparison of SCE's portfolio to the Itron energy efficiency potential study is difficult because of somewhat different mapping of measures into end uses**.** In general, Itron used fewer end use categories and, as a result, their end use definitions were more highly aggregated. To achieve a "lowest common denominator," SCE mapped its measures into Itron's end use categories. These mapping differences are particularly apparent in the Miscellaneous/Other category which represents a "catch all" for a variety of relatively small end uses, or measures that do not fall neatly into other end use categories. Overall, SCE's portfolio aligns well with identified potential by end use when these factors are considered, especially in the major end uses, lighting, HVAC, and refrigeration.

4. Portfolio's Proposed Cost-effectiveness Takes into Account Uncertainty

SCE's energy efficiency portfolio is consistent with the Commission's goal of procuring all available cost-effective energy efficiency. Through a diverse set of program offerings, SCE's energy efficiency portfolio is focused on strategies articulated in the Strategic Plan that harvest cost-effective energy efficiency savings and demand reductions while looking beyond the ~~2009-2011~~ 2010-2012 planning cycle to ensure energy efficiency remains a reliable and robust resource.

The Energy Efficiency Standard Practice Manual outlines the methodologies and indicators used to perform a dual-test cost-effectiveness evaluation, which consist of the Total Resource

Cost (TRC) test and the Program Administrator Cost (PAC) test. The E3 Calculator, which is the Commission-approved tool to run cost-effectiveness calculations, contains the aforementioned methodologies and indicators. SCE used the E3 Calculator to develop the portfolio and calculate cost-effectiveness. The portfolio is in compliance with the April 21, 2008 Assigned Commissioner's Ruling requiring the IOUs to use the updated 2007 generation cost values adopted in Resolution E-4118, dated October 4, 2007. SCE presents its prospective showing of cost-effectiveness of its ~~2009-2011~~ 2010-2012 energy efficiency portfolio in the tables below.

~~Table IV-9~~
~~Total Resource Cost (TRC)~~

~~Total Costs~~	~~$2,423,160,961~~
~~Total Savings~~	~~$4,420,971,830~~
~~Total Benefits~~	~~$1,997,810,869~~
~~Benefit/Cost Ratio~~	~~1.782~~
~~Levelized Cost per kWh Saved (cents/kWh)~~	~~$0.072~~
~~Levelized Cost per therm Saved ($/therm)~~	~~--~~

Second Amended Table IV-9
Total Resource Cost (TRC)

Total Costs	$2,092,703,736
Total Savings	$3,011,739,816
Total Benefits	$919,036,079
Benefit/Cost Ratio	1.44
Levelized Cost per kWh Saved (cents/kWh)	$0.091
Levelized Cost per therm Saved ($/therm)	--

~~Table IV-10~~
~~Program Administrator Cost (PAC)~~

~~Total Costs~~	~~$1,259,193,820~~
~~Total Savings~~	~~$4,420,971,830~~
~~Total Net Benefits~~	~~$3,161,778,010~~
~~Benefit/Cost Ratio~~	~~3.51~~
~~Levelized Cost per kWh Saved (cents/kWh)~~	~~$0.037~~
~~Levelized Cost per therm Saved ($/therm)~~	~~--~~

***Second Amended* Table IV-10**
Program Administrator Cost (PAC)

Total Costs	$1,249,555,589
Total Savings	$3,011,739,816
Total Net Benefits	$1,762,184,226
Benefit/Cost Ratio	2.41
Levelized Cost per kWh Saved (cents/kWh)	$0.055
Levelized Cost per therm Saved ($/therm)	--

The cost-effectiveness tests are derived to calculate the benefits and costs associated with the implementation of energy efficiency programs. The benefit and cost calculations are driven by specific key parameters, including Expected Useful Lives (EUL), Net-to-Gross Ratios (NTG), Measure Costs, and measure energy use impacts. SCE, in compliance with Commission direction, has used the DEER 2008, version 2008.2.05, released on December 16, 2008 with specific changes discussed in Chapter II. The DEER 2008 updated included measure-level estimates used to calculate the ex-ante energy savings, demand reduction, and cost-effectiveness forecasts. Current measurement and evaluation protocols establish a process over the course of the program cycle to evaluate the ex-ante impacts in order to determine the proper ex-post evaluation of the portfolio. This process creates an inherent uncertainty in program planning because it subjects the impacts of the portfolio to change four years removed from the beginning of the program cycle.

The Commission required the IOUs to investigate whether increased avoided costs values in the form of a higher carbon value would effect the portfolio composition. The Assigned Commissioner's and Assigned Law Judge's Ruling dated April 21, 2008, defined the carbon adder as an increase from $12.50 per tonne to $30 per tonne. It is SCE's conclusion that the carbon adder is not significant enough to alter the diversified and balance mix of programs that SCE offers to its customers. SCE presents its prospective showing of cost-effectiveness using a higher $30/ton carbon adder value in the tables below.

~~***Table IV-11***~~
~~***Total Resource Cost (TRC)***~~
~~***With Higher Carbon Adder***~~

~~Total Costs~~	~~$2,423,160,961~~
~~Total Savings~~	~~$4,742,064,878~~
~~Total Benefits~~	~~$2,318,903,917~~
~~Benefit/Cost Ratio~~	~~1.96~~
~~Levelized Cost per kWh Saved (cents/kWh)~~	~~$0.072~~
~~Levelized Cost per therm Saved ($/therm)~~	~~--~~

Second Amended Table IV-11
Total Resource Cost (TRC)
With Higher Carbon Adder

Total Costs	$2,092,703,736
Total Savings	$3,221,231,104
Total Benefits	$1,128,527,368
Benefit/Cost Ratio	1.54
Levelized Cost per kWh Saved (cents/kWh)	$0.091
Levelized Cost per therm Saved ($/therm)	--

~~***Table IV-12***~~
~~***Program Administrator Cost (PAC)***~~
~~***With Higher Carbon Adder***~~

~~Total Costs~~	~~$1,259,193,820~~
~~Total Savings~~	~~$4,742,064,878~~
~~Total Benefits~~	~~$3,482,871,058~~
~~Benefit/Cost Ratio~~	~~3.77~~
~~Levelized Cost per kWh Saved (cents/kWh)~~	~~$0.037~~
~~Levelized Cost per therm Saved ($/therm)~~	~~--~~

***Second Amended* Table IV-12**
Program Administrator Cost (PAC)
With Higher Carbon Adder

Total Costs	$1,249,555,589
Total Savings	$3,221,231,104
Total Benefits	$1,971,675,514
Benefit/Cost Ratio	2.58
Levelized Cost per kWh Saved (cents/kWh)	$0.055
Levelized Cost per therm Saved ($/therm)	--

SCE has planned its ~~2009-2011~~ 2010-2012 energy efficiency portfolio to account for the uncertainty around evaluating its portfolio using two sets of different assumptions: Effective Useful Life and Measure Costs. SCE has conducted the following scenarios, based upon the key parameters influencing cost-effectiveness, which illustrate the effects on its portfolio's energy savings, demand reduction, and cost-effectiveness.

~~*Table IV-13*~~

~~*Scenarios Based on Key Parameters Influencing Cost-effectiveness*~~

Scenario	Adjustment Factor	Energy Savings (kWh)	Demand Reduction (MW)	Cost-Effectiveness
SCE 2009-11 Proposal	None	5,553,400,515	1,077,907	1.82
Gross Measure Costs Adjustment	Increase by 10%	-	-	1.70
Gross Measure Costs Adjustment	Increase by 20%	-	-	1.60
Effective Useful Life	Decrease by 10%	-	-	1.70
Effective Useful Life	Decrease by 20%	-	-	1.56
Gross Measure Costs Adjustment / Effective Useful Life	Increase by 10% / Decrease by 10%	-	-	1.58
Gross Measure Costs Adjustment / Effective Useful Life	Increase by 20% / Decrease by 20%	-	-	1.36

***Second Amended* Table IV-13**

Scenarios Based on Key Parameters Influencing Cost-effectiveness

Scenario	Adjustment Factor	Energy Savings (GWh)	Demand Reduction (MW)	Cost-Effectiveness
SCE's 2010-12 Proposal	None	5,457	1,063	1.44
Gross Measure Costs Adjustment	Increase by 10%	-	-	1.36
Gross Measure Costs Adjustment	Increase by 20%	-	-	1.29
Effective Useful Life	Decrease by 10%	-	-	1.34
Effective Useful Life	Decrease by 20%	-	-	1.24
Gross Measure Costs Adjustment / Effective Useful Life	Increase by 10% / Decrease by 10%	-	-	1.27
Gross Measure Costs Adjustment / Effective Useful Life	Increase by 20% / Decrease by 20%	-	-	1.10

5. Portfolios Are Designed to Overcome Barriers to Market Transformation And To Advance Integration

In D.07-10-032, the Commission made several key changes to the previous regulatory framework for efficiency programs, including embracing market transformation initiatives and placing an imperative on integration – across utility service areas, utility ownership types, state agencies, and demand side programs. SCE is supportive of these changes and has worked jointly with the other IOUs to ensure they permeate the Strategic Plan.

This Proposed Program Plan advances that agenda. With respect to market transformation, SCE's portfolio includes proposed activities that address each major component of the market transformation continuum and their respective barriers. These include:

- Emerging Technology Program – the important and ambitious goals of the State cannot be met without the development and commercialization of new energy efficiency and demand-side management technologies. This Proposed Program Plan proposes enhancing and expanding the statewide Emerging Technology program to better mine innovation, understand consumers, assess market exposure, and support climate and environmental efforts. Specific actions include participating in upstream technology development, conducting scaled field placement activities on selected technologies, increasing market intelligence, studying consumer behavior with regard to emerging technologies, and performing product or technology incubation activities, through the Technology Research Incubation Outreach (TRIO) Program.
- Education and outreach – overcoming informational and motivational barriers by educating customers about the merits of choosing efficiency and the options available to help them implement it is at the heart of voluntary market transformation. This Proposed Program Plan significantly contributes to this effort in many ways – as put forward in numerous sections of the Strategic Plan[157] – by offering the Home Energy

[157] The Strategic Plan's discussion of, and recommendations for, education and outreach can be found primarily in Chapter 10, "Marketing, Education and Outreach" including ME&O's four strategies. Significant additional discussion of (*Continued*)

Efficiency Survey (sub-program with surveys available in multiple languages), the On-line Buyer's Guide, new HVAC quality installation/quality maintenance branding, and increased benchmarking for commercial buildings.

- Financial incentives – voluntary market transformation often relies heavily on providing financial incentives to overcome the barriers of high first costs and/or discomfort with new products. This not only enables immediate purchase of efficiency resources, but also accelerates the adoption and declining production cost curves of efficient products, weakening these barriers. This portfolio contains a broad array of incentives for qualifying consumers, including home energy efficiency rebates, business and consumer electronics incentives, multifamily energy efficiency rebates, new construction incentives, and incentives for businesses across all key market sectors, including commercial, industrial, and agricultural markets. In addition to traditional rebates/incentives, the Financial Solutions Element sub-program also offers various loan options for financing energy efficiency projects.
- Workforce Education & Training – although not typically part of the market transformation continuum, vigorously responding to the shortage of trained energy efficiency workers is now widely recognized as essential if markets are to be transformed thoroughly and quickly, especially in light of the economic conditions we face. This Proposed Program Plan supports the Strategic Plan's strategies in this area – by providing technical training, assisting with the need for technically trained energy auditors and building operators, and working with education providers to collaboratively identify goals and strategies to build the workforce through 2020. Efforts will be expanded and relevant resources (such as education and training

Continued from the previous page
education and outreach can be found throughout the CEESP, including in the chapters on the four end-use sectors (chapters 2 through 5), HVAC (chapter 6), Workforce Education and Training (chapter 9), and Local Governments (chapter 12).

facilities and federal economic stimulus funds) will be leveraged to succeed here, while recognizing the IOUs' finite resources in this arena.

- Codes & Standards – D.07-10-032 and the Strategic Plan appropriately place great emphasis on the most powerful market transformation tool: the adoption of and improved compliance with aggressive energy codes & standards. Codes & Standards are an essential element to reach the zero net energy building targets, HVAC transformation, peak management, and other goals of the Commission and SCE. This Proposed Program Plan proposes enhancing and expanding the statewide Codes & Standards Program to place greater emphasis on code compliance and to strategically and progressively increase the stringency of Title 24 commercial and residential building codes toward zero net energy goals, while simultaneously pursuing voluntary "stretch" and/or green building codes. Additionally, SCE's portfolio supports research and analysis to transform the code to a zero net energy-based approach, and expands Title 24 and 20 to address significant end uses (*e.g.*, plug loads, server farms, *etc.*). Furthermore, Codes & Standards plan to increasingly focus on using codes & standards to promote related DR, SmartConnect™ (AMI), clean self-generation, water, and related goals.

Additionally, SCE proposes activities that support market transformation in an over-arching way, including proposing of policy changes that SCE believes will better enable market transformation and the long term goals of the Strategic Plan.

This Application also advances the integration agenda. Integration is primarily used in the Decision and Strategic Plan to indicate coordination among DSM options, but it also refers to coordination across utilities (preferably statewide) and coordination between utilities and government agencies. Proposed integration and coordination actions in this Application include:

- Those that coordinate across utility companies, such as ME&O, Emerging Technologies, California Advanced Homes, and others;

- Utility-agency coordination, such as working more closely with the CEC, the Commission, and local governments on codes & standards development and compliance, and jointly developing, promoting, and improving the ENERGY STAR labels and benchmarks (including potential development of a new label/brand for HVAC quality installation and maintenance) with U.S. EPA, DOE, and others, and
- For integration and coordination among demand-side resources, there are a wide array of activities planned as described in Exhibit SCE-6, Demand Side Management Integration and Coordination, and in the Statewide Integrated Demand Side Management Program Implementation Plan.

B. Program Design Achieves Savings Objectives

1. Strategies To Reduce Critical Peak Loads And Improve System Load Factors

SCE's Second Amended ~~2009-2011~~ 2010-2012 Proposed Program Plan produces energy savings across all hours of the year, and de facto reduces critical peak loads; SCE's ~~2009-2011~~ 2010-2012 Proposed Program Plan places appropriate emphasis on measures and strategies that serve to reduce costly peak demand and provide system stabilizing relief. Strategies include the specific targeting of measures that have substantial peak impact and new incentive levels for ~~2009-2011~~ 2010-2012 that will reflect higher values based on the measure's ability to deliver peak demand reduction.

As shown in section IV.A.3, SCE's ~~2009-2011~~ 2010-2012 energy efficiency portfolio includes measures that encompass all major end uses. The portfolio is structured across end uses to provide both energy and demand savings, creating a complete energy efficiency resource, as directed by D.07-10-032 and the Strategic Plan.[158] SCE's proposed ~~2009-2011~~ 2010-2012 energy efficiency portfolio has a peak-to-energy ratio of ~~0.192~~ 0.193.[159] By comparison, the peak-to-energy ratio for

[158] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 58-65, 66-70, and 89-97.

[159] SCE's peak-to-energy ratio described here is based on the "conversion factor" used by the CEC to convert GWh savings to MW peak savings in CEC Staff Report 100-03-021, "Proposed Energy Savings Goals for Energy Efficiency Programs in California." This methodology was used by Joint Staff to develop the MW targets adopted in D.04-09-060. The peak-to-energy ratio is calculated by dividing demand reductions in MW by energy savings in GWh.

SCE's 2006-2007~~8~~ energy efficiency programs was approximately ~~0.165~~ 0.181. Overall, SCE has increased the on-peak reductions of its proposed ~~2009-2011~~ 2010-2012 energy efficiency portfolio from historic levels. These results demonstrate that SCE has focused on improving system load factor in designing its ~~2009-2011~~ 2010-2012 EE portfolio.

For SCE, the Itron California Energy Efficiency Potential Study shows a peak-to-energy ratio of 0.1896 for the analysis period examined in the study, 2007-2026.[160] The study results imply a peak-to-energy ratio for ~~2009-2011~~ 2010-2012 of ~~0.2005~~ .1900. Thus, SCE's ~~2009-2011~~ 2010-2012 EE portfolio exceeds the long-term peak-to-energy ratio estimated in the Itron EE potential study, and it is consistent with the peak-to-energy ratio during the ~~2009-2011~~ 2010-2012 period.

About ~~19~~ 20 percent of the energy savings and ~~32~~ 34 percent of the demand reductions in SCE's EE portfolio come from HVAC measures with a peak-to-energy ratio of ~~0.3378~~ 0.3225. Approximately 41 percent of the energy savings and ~~53~~ 70 percent of the demand reductions in SCE's EE portfolio come from measures with peak-to-energy ratios of 0.1800 or greater. These result shows that a significant percentage of SCE's portfolio is focused on measures with higher than average peak-to-energy savings. Measures with high peak-to-energy ratios reduce critical peak loads and improve system load factors.

2. Strategies To Minimize Lost Opportunities

SCE's portfolio planning and development process included careful consideration of minimizing and/or avoiding potential lost opportunities across all program areas, which is one of the Strategic Plan's goals.[161]

SCE's ~~2009-2011~~ 2010-2012 portfolio of residential programs is generally designed to avoid lost opportunities through a strategy of "comprehensiveness". That is, programs are promoted and designed to encourage projects with a scope of measures not limited to only the most cost-effective measures. In the residential sector, lost opportunities are most likely to arise when a consumer elects to

[160] California Energy Efficiency Potential Study, Itron, Inc., September 2009, p. 4-38 (GWh) and 4-58 (MW). Peak-to-energy ratio based on Itron's Full Restricted Scenario.

[161] California Long-Term Energy Efficiency Strategic Plan, dated September 2008.

upgrade equipment in isolation. An example is replacing an HVAC compressor with one of equal size without first exploring ways to reduce the cooling load through duct sealing, weather stripping, insulation, and similar efforts. In fact, the savings from reduced HVAC system tonnage can offset much of the cost of delivering a tighter building envelope, depending on the measures selected.

If the cost and inconvenience of performing additional upgrades later is considerably more than the cost of doing them at the same time, the likelihood of later upgrades is decreased. However, if there is no incremental cost to stage upgrades over time due to cash flow limitations, then a lost opportunity is less likely to occur. Nevertheless, if the utility doesn't "make the sale" when the buyer is most highly engaged and motivated, declining interest and the customer's other priorities put the execution of said improvements at risk.

SCE's comprehensive approach encourages consumers to look at the complete picture of managing energy and demand. Where programs are targeted to specific end-uses or equipment, care is taken to select equipment that does not create lost opportunities in most circumstances (*e.g.,* refrigerator replacement, light bulb exchanges). In addition, SCE's programs are supported by general advertising and educational campaigns, and program brochures, web sites, the residential energy guide, energy saving tips, survey tools, and application material all offer multiple measures and suggestions for savings. That is, even a customer applying for just a $50 rebate on her refrigerator will see available rebates on whole house fans, room air conditioners, and the like. These campaigns encourage residential consumers to pursue all cost-effective opportunities energy efficiency improvements.

SCE's implementation strategy for the nonresidential portfolio also emphasizes comprehensiveness in its commitment to reaching all market segments and to its integrated services for each customer.

This focus on comprehensiveness assures that programs are designed to meet the needs of hard-to-reach market segments, not just the most lucrative industries. As an example, the industrial segment has significant savings potential concentrated in just a few customers for large portfolio impacts at a low transaction cost. The small retail segment on the other hand, with a large number of decision-makers each affecting a relatively small amount of savings, is a more challenging segment. This also

assures that individual customer projects consider all available measures, not simply those that are easiest to install or most cost-effective. Additionally, third party solicitations for energy efficiency programs include specific criteria for comprehensiveness, rewarding proposals that include multiple-measure scopes and penalizing those that offer just single measures.

Taking this approach with individual customers further, SCE recognizes each business customer audit as an opportunity to expand beyond just energy efficiency to include demand response, tariff optimization, self-generation, and greenhouse gas impacts. SCE will allocate the costs of servicing customers in an integrated way to each DSM area as appropriate. SCE also routinely reviews existing audit findings to determine whether any recommendations were missed, and directs field staff to identify fresh opportunities for these customers. Similarly, whether the project is new construction or existing renovation, SCE seeks to maximize cost savings for each customer across the DSM portfolio regardless of which program was originally contacted.

In addition to residential and business programs, both Local Government Partnerships and Institutional Partnerships promote a comprehensive approach to minimize lost opportunities in the facilities of their customers. In general, this market segment has high potential for lost opportunities, as there are inherent barriers that prevent these entities from adopting energy efficiency, including constrained budgets and resources, limited technical expertise to develop or manage projects, restricted funding, and procurement constraints, and capital project decision-makers isolated from operations and maintenance (O&M) department and the capital improvement department have different management with different budgets. The capital improvements department designs and constructs a project to minimize cost; the O&M department inherits the higher cost of operating and maintaining the inefficient equipment or building. Lost opportunities occur when project teams' bid documents don't require energy efficient equipment or expertise, when those teams fail to identify efficient options, or where present, "value engineer" them out due to lack of funds or lack of management support. Energy efficiency opportunities are lost due to this lack of collaboration.

SCE minimizes these lost opportunities by leveraging its relationships to engage key decision makers at each agency or government institution. SCE facilitates collaboration among the

project stakeholders, including O&M, and has technical resources available at every stage to assist in engineering reviews of project elements. SCE's relationships and "feet on the street," in concert with our statewide IOU peers, allow us to identify projects and expand our influence to fundamentally change the way our government partners manage their physical plant. To help bridge the gap between capital budgets (project procurement) and O&M (operational expenses) budgets identified above, SCE will make on-bill financing available to qualifying local governments and institutions in ~~2009-2011~~ 2010-2012. This allows O&M to pay for the capital improvements from which it will directly benefit.

SCE continues to provide the same comprehensive audits, RetroCommissioning consulting, and retrofit incentives as our other business customers. However, government partners receive additional technical assistance and project management support to assist partners in completing the work. Finally, to overcome budget constraints specific to the public sector, SCE offers enhanced incentives over and above the standard business incentive rates.

3. Successful And Cost-Effective Programs Have Been Continued

SCE proposes to continue successful 2006-2008 programs in the ~~2009-2011~~ 2010-2012 cycle. SCE has taken the opportunity to further enhance these successful programs to increase comprehensiveness, increase integration, and to align with the Strategic Plan.

SCE's overarching goal for energy efficiency programs is to procure cost-effective energy savings. SCE's portfolio continues to rely on proven programs and sub-programs such as the Calculated and Deemed Incentives Programs and the Residential Lighting Incentive Program for Basic CFLs, which have successfully demonstrated the ability to achieve cost-effective energy and demand savings over the near term. SCE also continues to place emphasis on those programs that have a proven ability to set the framework for longer term energy savings such as California Advanced Homes, Savings By Design, and Sustainable Communities. Additionally, SCE proposes to incorporate several successful 2006-2008 IDEEA programs and measures into its core energy efficiency offerings, such as the Automatic Energy Review for Schools Program (formerly named the Modernization and New Construction Efficiency Enhancement Program for Schools), and the Healthcare Energy Efficiency Program. Some measures that were piloted in IDEEA or InDEE programs during 2006-2008 are now

included as standard offerings in mainstream programs, such as pool pumps - which were piloted in the Innovative Pool Pump Program and are now offered as a standard measure through the Home Energy Efficiency Rebate sub-program of the Statewide Residential Energy Efficiency Program.

4. Program Design Reflects Cumulative Savings

As discussed in more detail above, SCE's Proposed Program Plan meets the cumulative savings goals for the three-year cycle. This is performed through a focus on both long-term and short-term measures, combined with the full support of the Strategic Plan.[162] The quantification of the long-term impacts of the Strategic Plan is difficult, but the efforts in support of the Strategic Plan are throughout this Application and are focused on cumulative savings from both short-term strategies being implemented today and the impact of the Strategic Plan in the long term.

SCE proposes a diverse portfolio of approaches and measures to address the short-term and long-term needs of all customers through a multitude of delivery channels and programs. This portfolio is designed to focus on continuing to pursue long-term savings and allow SCE to address the need for long-term, cumulative savings to meet the resource needs of California. A full discussion of the programs and their short-term and long-term strategies can be found throughout this Proposed Program Plan and throughout the Strategic Plan.

5. How The Potential Inclusion Of Energy Savings From "Spillover" Activities Has Been Reflected In Program Design

Current policy rules[163] still do not allow energy savings from either participant or non-participant spillover activities to be counted towards energy savings goals. Consequently, SCE's portfolio is designed to be cost-effective without counting spillover effects.

SCE's portfolio includes opportunities to create both participant and non-participant spillover effects that can be generated on top of clearly countable savings. For example, SCE's Savings By Design program offers a stipend to building design teams to participate in an integrated design

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[162] California Long-Term Energy Efficiency Strategic Plan, dated September 2008.

[163] Energy Efficiency Policy Manual, v.3.1, dated January 8, 2008, p. 6.

process. This process encourages teams to work with Savings By Design's consultant architects on up to three projects to learn whole building analysis approaches. While the initial projects generate countable savings, the intent is that trained design teams will then use the integrated design approaches they've learned to produce more efficient buildings in future projects, without receiving further incentives. In this as in many other SCE ~~2009-2011~~ 2010-2012 programs, the free ridership rates that will be measured by *ex post* impact evaluations of future-year programs will in fact be reflecting spillover effects of the ~~2009-2011~~ 2010-2012 programs, because initial rounds of program participation enable customers to gain experience with the value of particular new technologies and practices promoted by the programs.

However, given the Strategic Plan, the social value and the Commission's interest in generating savings beyond direct program participation, SCE is also including in its portfolio some nominally non-cost-effective programs focused on spillover effects. A prime example of this is the new voluntary code compliance initiatives incorporated into the Code & Standards Program. SCE expects these initiatives to create significant non-participant spillover effects as building designers, engineers, builders and owners will become increasingly aware of energy code requirements, their value to the owner, and whether they are being met. This will lead to the providers becoming more accountable for their work, being pushed to improve their performance relative to code, and perhaps ultimately finding a value proposition in code compliance that can be sold to customers.

The adoption of a focused, multi-channel marketing approach to nonresidential market segments is a second example. It was developed based on both a need to drive program penetration deeper into specific customer groups and a desire to get to the point of word-of-mouth promotion of efficient technologies among customers within some key segments. SCE hopes that this will lead not only to greater program participation, but also to participant and non-participant spillover and, ultimately, to market transformation for particular technologies.

6. How Utilities Propose That Potential Energy Savings From Market Transformation Programs Should Be Measured, And How This Will Lead To The Phase Out From Utility Programs Of The Transformed Measures

For market transformation measurement methods, SCE highly recommends the following two nationally-praised works developed with California Public Goods Charge funds and overseen by statewide advisory groups including regulatory and utility evaluation personnel:

- A Framework for Planning and Assessing Publicly Funded Energy Efficiency (2001, http://www.calmac.org/events/20010301PGE0023ME.pdf); and
- The California Evaluation Framework, (http://www.calmac.org/events/California_Evaluation_Framework_June_2004.pdf).

The CFL direct installation and rebate programs represent one of the most impressive energy efficiency market transformation examples to date. It provides a prime example of monitoring energy savings potential and achieved energy savings, to work towards the goal of transforming a market and enabling the phasing out of support for a technology.

The CFL programs took an obscure technology, demonstrated its efficacy, and have gradually built increasing demand for it year after year. Problems with the technology were identified and program efforts sought to overcome these. The result has been a continuing reduction in cost and an increase in the number of manufacturers, available lamp varieties, and the number and types of retail outlets. At each phase of the growth, new customers have been drawn into the market to install more CFLs for a wider variety of uses.

While the CFL programs can cost-effectively expand CFL installations beyond what market forces alone would accomplish, the programs will continue. In large part due to the years of product development and increased customer acceptance enabled by energy efficiency programs, a national standard for lighting efficiency is now on the horizon. As this draws close, and as solid evidence develops that program support can no longer cost-effectively increase the installation of basic CFLs, these CFLs will be phased out of energy efficiency programs. SCE expects that the next generation of even more efficient lighting will soon develop to the stage of commercially viable

installation for initially ready applications, which could be followed by energy efficiency programs designed to speed development and market share of a broader range of applications.

As long as a program is able to cost-effectively broaden the penetration of the measure by these means, promotion of the measure will continue. In general, borderline cost-effectiveness among certain uses or groups because of rising free ridership is a signal of two things. One, that the program needs to be refocused to more effectively target users or groups and, two, expanded to include measures of greater market potential until doing so no longer produces results and therefore warrants the trimming or eventual phase out of the program.

Some kinds of programs need to stay in the market even when they aren't cost-effective, in order to satisfy long-term objectives. Residential new construction programs are a good example of this. These programs are often critical to building a record of builder experience, acceptance, and proper installation/setup of measures that are candidates for eventual code requirements. These are initial stages of market transformation. The builders are a test market that provides important information for the code development process, and the program creates sufficient market change to enable proposed new codes to meet the requirements for code adoption.

7. Emerging Technologies That Are Anticipated To Increase Savings Potential

The statewide Emerging Technology Program (ETP) seeks to influence savings potential through contributing to the acceleration and improvement of technology adoption, as articulated in the Strategic Plan.[164] This is accomplished by delivering information, insights, analytical tools, and resources to help enable expedited adoption of innovative technologies and support the promotion of new applications of existing technologies.

Several new concepts are introduced in ~~2009-2011~~ 2010-2012, including limited ETP efforts in the following areas:

- Scaled Field Placements – These projects consist of placing a number of measures at customer sites as a key step to gain market traction and possibly gain market

[164] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, p. 84-88.

information. A very simple example of a scaled field placement would be to give 50 office managers an LED task light.

- Demonstration Showcases – These projects will expose measures to various stakeholders utilizing *in situ*, real-world applications and installations. A key attribute of a demonstration showcase is that it is open to the public or to an interest group.
- Market and Behavioral Studies – These projects involve targeted research on customer behavior, decision making, and market behavior. Market and behavioral studies will contribute to increased measure awareness, market knowledge and reduced performance uncertainties for ETP stakeholders and IOU customers.
- Technology Development Support – Product development is best performed by private industry. There are opportunities, however, where the IOUs are well qualified or in a strong position to undertake very targeted, cost-effective activities which provide value in support of private industry product development efforts. Examples of activities may include providing customer contacts for field evaluations, making lab testing facilities available to companies without this capability, or developing standard testing protocols.
- Business Incubation Support - TRIO (Technology Resource Incubator Outreach) is a statewide program that focuses on providing training and networking for entrepreneurs and companies providing energy saving technologies.

The TRIO and Technology Development Support program will be aimed at contributing to increased technology supply through influencing the ease and attractiveness of energy efficiency technology investment and development in California. Assessments, Scaled Field Placements, Demonstration Showcases, and Market and Behavioral Studies are aimed at supporting increased market demand for energy efficiency measures.

Reducing perceived risk in new technologies through performance assessments is one tactic which will continue to be utilized by the ETP. In ~~2009-2011~~ 2010-2012, the ETP will continue to

increase efforts around supporting the transfer of high potential ET assessment findings into the utility portfolio, as well as to other audiences including –but not limited to- allies, strategic partners, financial institutions, investors, ratepayers, and the public. Developing innovative tools that enable more consumers to purchase and use the IDSM products is another tactic carried forward by the ETP.

The information generated by the ETP is primarily disseminated to customers and other program stakeholders through energy efficiency program, including the technology centers. The ETP program also disseminates information directly through seminars, workshops, technical conferences, professional journals, and the Emerging Technology Coordinating Council (ETCC) website. Assessment reports and other information on the latest technologies are posted to the ETCC website and are accessible to the public.

8. Portfolios Contribute To The Green Building Initiative

In December 2004, Governor Schwarzenegger signed Executive Order S-20-04, which was accompanied by the Green Building Action Plan. Together they became known as the state's Green Building Initiative (GBI). Also important is Assembly Bill 2160,[165] which requires a Green Building Report, which was submitted in January 2008 by the CEC to the Governor's Green Action Team.[166] GBI places great attention on buildings owned by the State, but also addresses furthering green buildings that are owned and managed by other public, institutional, and for-profit commercial entities.

SCE's portfolio provides numerous programs and opportunities for State agencies, departments, and other entities under the direct executive authority of the Governor (as well as local, federal, and commercial buildings) to implement measures to reduce grid-based energy purchases for state-owned buildings through the installation of cost-effective efficiency measures. In fact, the CEC cites in its Green Building Report the "formal partnership between the state and investor-owned utilities

[165] Lieu, Chapter 742, Statutes of 2006.

[166] CEC January 2008, CEC-400-2008-005-CMF.

to provide energy audits and coordinate incentive program funds to help pay for energy efficiency retrofit projects."[167]

Furthermore, as embodied in the Strategic Plan and throughout this Proposed Program Plan, SCE proposes several important activities that facilitate the GBI and address many of the major obstacles to furthering green building projects as identified by the CEC in the Green Building Report. These include developing consistent benchmarking of facilities, supporting RCx, expansion and ongoing tightening of Titles 24 and 20 codes & standards, developing voluntary tiers for green buildings beyond Title 24, coordinating with the PIER program to deploy emerging technologies in state buildings, promoting integrated building design and training, developing California-oriented HVAC technologies, and supporting various related activities by local governments.

Additionally, SCE plans to coordinate directly with state agencies (as well as local governments, Architecture 2030, the United States Green Business Council and other key parties) on green building initiatives.

C. Proposed Portfolio Design Reflects Market Strategies, Integration, And Delivery Channels To Enhance Customer Participation In Demand-Side Resources

1. Summary Of Proposed Programs

This section provides an overview of SCE's proposed program offerings for program years ~~2009-2011~~ 2010-2012. Each of the programs in SCE's portfolio is described in detail in the Program Implementation Plans in Amended Exhibits SCE-3 (A&B), SCE-4, SCE-5 and new Exhibit SCE-10, dated July 2, 2009. SCE's portfolio incorporates the successful elements of previous program designs while making innovative changes to maximize the resource benefits derived from the programs and to align with the long-term Strategic Plan.

[167] AB 2160 Green Building Report: For Submission to the Governor's Green Action Team", California Energy Commission, January 2008, CEC-400-2008-005-CMF, p. 1

a) Residential Programs

SCE's residential customer base constitutes one of the largest and most challenging groups of electricity consumers in the nation, due to its diversity, complexity, and size. SCE's residential energy efficiency portfolio delivers a wide array of programs and services to increase awareness of energy efficiency and to provide relevant energy management solutions. SCE's residential portfolio greatly advances the implementation of the BBEES, the Strategic Plan, and California's EAP for the benefit of all customers.

(1) Statewide Residential Energy Efficiency Program

The Residential Energy Efficiency Program is designed to promote comprehensive energy solutions to residential electricity consumers. The residential portfolio employs a variety of strategies and tactics to advance the goals of the Strategic Plan:

- To facilitate, sustain, and transform the long-term delivery and adoption of energy-efficient products and services for single and multi-family dwellings.
- To cultivate, promote and sustain lasting energy-efficient behaviors by residential customers through a collaborative statewide education and outreach mechanism.
- To meet consumers' energy efficiency adoption preferences through a range of offerings including single-measure incentives and more comprehensive approaches.

The Program is comprised of seven sub-programs:

1. Home Energy Efficiency Survey Program – The Home Energy Efficiency Survey Program (HEES) is a continuation of the existing program. In accordance with goals of the Strategic Plan, the HEES Program will work towards advancing whole-house energy solutions. HEES will also pursue innovative initiatives to reverse the growth of plug load energy consumption though behavioral solutions, and, as

warranted, DSM integration opportunities. The HEES Program is used to reach out to customers in multiple languages through different delivery channels to perform a variety of energy audits. The program provides survey results to enable participants to understand how their energy use varies throughout the year and how their household compares with similar households. This multi-language approach enhances the program's ability to reach California's diverse culture and provides efficiency recommendations based on a whole-house system approach. Additionally, HEES provides information and referrals to other energy efficiency programs, water conservation efforts, demand response and low-income programs, as applicable.

2. Residential Lighting Incentive Program for Basic CFLs – The Residential Lighting Incentive Program for Basic CFLs provides customers with incentives in the form of discounts that greatly reduce the cost of energy-efficient lighting products. It introduces energy-efficient lighting products to the market and strives to influence future purchasing behaviors of customers.

3. Advanced Consumer Lighting program – The Advanced Consumer Lighting Program guides the implementation and assessment of lighting technology activities within IOU portfolios. This Program provides customers with incentives in the form of discounts that greatly reduce the cost of energy-efficient lighting products, and introduces energy-efficient lighting products to the market and strives to influence future purchasing behaviors of customers. A broad array of product types, models, and technologies are available for this program's incentives. Typical technologies include specialty CFLs,

hardwired or plug-in fixtures, LEDs, cold cathode, and high-efficiency incandescents.

4. Home Energy Efficiency Rebate Program – The Home Energy Efficiency Rebate (HEER) Program is a continuation of the existing HEER program. In accordance with the Strategic Plan, this program advances comprehensive energy efficiency measures, including: whole house solutions, plug load efficiency, performance standards, and integration opportunities with local government and DSM. HEER meets the need of consumers either in need of a single measure or multiple devices by encouraging the adoption of energy-efficient choices when purchasing and installing household appliances and equipment. It does this by offering customers educational materials on energy efficiency options and on rebate and other incentive offerings. In addition to influencing efficient purchases, the program educates customers on how to use products correctly and guides customers to explore other DSM opportunities, including demand response, as appropriate. In addition to an on-line rebate application process, the program offers immediate (point-of-sale) rebates for many measures at the retailer's cash register.

5. Appliance Recycling Program – The Appliance Recycling Program (ARP) is a continuation of the existing ARP. The program picks up operable but inefficient appliances from residential dwellings and businesses and prevents their continued operation by recycling them in an environmentally safe manner. In accordance with the Strategic Plan, this program advances several comprehensive energy efficiency measures including: whole house solutions, plug load efficiency, performance standards, local government and DSM integration

opportunities. ARP produces cost-effective energy savings and peak reduction in residential and nonresidential market sectors.

6. Business and Consumer Electronics Program – The Business and Consumer Electronics Program (BCEP) is a new addition to the ~~2009-2011~~ 2010-2012 residential energy efficiency portfolio. The BCEP provides midstream incentives to retailers to increase the stocking and promotion of high-efficient electronic products including computers, computer monitors, cable and satellite set-top boxes, televisions, smart power strips and additional business and consumer electronics as they become available to the market. The program continues to expand the point-of-service rebate delivery method and provides field support services to update marketing materials in retail stores and support education to the retailer sales force. The BCEP includes a linkage to an online information system designed to identify the most energy-efficient and environmentally friendly products available in the market for multiple categories, including televisions, appliances, and computers. This program supports the Strategic Plan by motivating retailers to stock more efficient products, which, in turn, can drive manufacturers toward the development and introduction of more efficient products into the market. Since the midstream incentives are offered on measures that have been identified as "plug load" products, BCEP addresses the "plug load" efficiency strategy identified in the Strategic Plan.

7. Multifamily Energy Efficiency Rebate Program – The Multifamily Energy Efficiency Rebate (MFEER) Program is a continuance of the existing Residential Multifamily Energy Efficiency Rebate Program. The program promotes energy efficiency and provides equipment

rebates to owners and tenants of multifamily properties, including residential apartment buildings, condominium complexes, and mobile home parks.

(2) Comprehensive Mobile Home Program

SCE's Comprehensive Manufactured/Mobile Home Program (CMHP) is a continuation of the existing program. CMHP is a direct install program designed to provide a comprehensive suite of energy management solutions to mobile home customers in collaboration with local communities. The program provides for the installation of energy efficient products in the dwellings and common areas of mobile home parks, starting with the warmer climate zones. CMHP is delivered through a third party responsible for implementing all aspects of program marketing, participant enrollment, and product installation.

(3) Comprehensive Home Performance Program

The CHPP provides incentives and other support to promote comprehensive improvement packages tailored to the unique needs of homes and home owners. The CHPP solicits, screens, and trains qualified residential repair, renovation and HVAC contractors so it can assemble a capable contracting team to perform whole-house diagnostics, develop a comprehensive improvement package, complete the recommended improvements, and verify and report overall results. The program also includes marketing activities to help educate customers on other DSM programs and services to motivate homeowners towards deeper energy savings.

(4) Efficient Affordable Housing

The program will use a performance-based approach to encourage the owners of affordable housing properties to employ energy efficiency measures to achieve a 20 percent energy improvement over existing building conditions. The program is designed to transform the affordable housing retrofit market away from a prescriptive, one-size-fits-all approach, towards a comprehensive building analysis approach. This approach includes energy consultants and California Home Energy Rating System (C-HERS) raters to evaluate the energy efficiency improvement options for rehabilitating properties. In addition, energy education workshops will provide information

regarding the retrofit and knowledge about energy efficiency for tenants and owners. The program also refers customers to other SCE energy efficiency programs, including low-income programs, as applicable.

(5) On-line Buyer's Guide

The On-line Buyer's Guide is a new service to provide residential customers with one web-based source of information and tools to support energy efficiency practices and program participation. The guide will include technical information, a product database, a savings calculation tool, a shopping guide, rebate program information, and retailer information for products.

(6) Community Language Efficiency Outreach (CLEO)

The Community Language Efficiency Outreach Program (CLEO) is a highly targeted residential energy efficiency marketing, outreach, education and training program specifically targeted to the low and middle income Vietnamese, Indian, Chinese and Korean speaking SCE customers. The program strategy is unique in that it is an in-language strategy, which serves a key role in overcoming language barriers.

b) Nonresidential Programs

SCE's ~~2009-2011~~ 2010-2012 nonresidential portfolio is designed to reach a broad spectrum of customers in each of the major sectors- commercial, industrial, and agriculture and water systems, and to align with the strategies and goals of the Strategic Plan.

To achieve delivery of targeted energy efficiency and other integrated DSM solutions to specific market segments and customers, as laid out in the Strategic Plan, SCE proposes a nonresidential program portfolio that better tailors offerings to the markets while leveraging a common infrastructure. This approach recognizes the need to assemble individual offerings and services into segment- and customer- specific solutions.

This approach allows integrated customer solutions to be developed and targeted to specific market segments and sub-segments, while leveraging a standardized menu of offerings and services and a common program infrastructure. Such an approach enables SCE to integrate the full

range of DSM offerings into solution bundles that are customized and targeted to both the level of the market segment and individual customer.

Under this hybrid approach, traditional statewide and local energy efficiency programs, such as Standard Performance Contract, Express Efficiency, and Savings By Design, will continue. However, they will be managed as elements of a menu of offerings and services, provided through the statewide sector-based programs, as a means to overcome the various market barriers to adoption of energy efficiency measure at retrofit and/or new construction phases of a building's life cycle.

(1) Industrial Energy Efficiency Program

The Industrial Energy Efficiency Program offers California's industrial segment a statewide-consistent suite of products and services designed to meet customer needs, overcome market barriers to optimized energy management, enhance adoption of integrated demand-side management (IDSM) practices, and advance the industry toward achieving the goals of the Strategic Plan. The program overcomes barriers through strategies that provide an integrated solution to the customer; create heightened awareness through education and outreach; and foster continuous energy improvement (CEI). The program also promotes use of commonly accepted standards – such as those established by the International Organization for Standardization (ISO), Department of Energy (DOE) and State Energy Program (SEP) to document a facility's attainment of high resource management levels – and branding and certification to garner market recognition for this achievement. In addition, it supports training to create a highly skilled energy efficiency workforce that is accessible to industry.

The four sub-programs described below – Industrial Energy Audits, Calculated Energy Efficiency, Deemed Energy Efficiency, and Continuous Energy Efficiency – comprise the core product and service offerings for the Industrial market. Each utility also offers local program elements that complement and enhance these core offerings in their region. As described below, as well as in complete detail in the sub-program descriptions, these offerings together are designed to not only overcome the traditional market barriers to energy efficiency, but also use

efficiency to advance demand response and distributed generation opportunities (including solar and renewables) uniquely suited to the Industrial segment.

1. Industrial Energy Audit program, including basic audits, Integrated Audits, and Retrocommissioning (RCx) audits, provide an inventory of technical project opportunities and financial analysis information that can populate a customer's short- or long-term energy plan, as well as overcome informational and technical customer barriers.
2. The Industrial Calculated Energy Efficiency Program provides standardized incentives – as well as comprehensive technical and design assistance – for customized and integrated energy efficiency/DR initiatives in new construction, retrofit, and RCx projects. This sub-program overcomes information, technical, and financial barriers, and because it presents a calculation method that can consider system and resource interactions, will become the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.
3. The Industrial Deemed Energy Efficiency Program provides utility representatives, equipment vendors, and customers an easy-to-use mechanism to cost-effectively subsidize and encourage adoption of mass market efficiency measures through fixed incentive amounts per unit/measure for installed energy-saving projects.
4. The Industrial Continuous Energy Improvement Program consists of a collection of strategic planning tools and resources that lay the groundwork for long-term integrated energy planning and serve as a launching platform for other utility and non-utility programs and services. Through analysis, benchmarking, long-term goal setting, project implementation support, performance monitoring, and

potentially energy management certification offered through evolving US DOE and ISO efforts, Improvement Program aims to transform the market from a "project-to-project" approach toward a continuous improvement pathway. In support of the Strategic Plan, this approach also sets the stage for non-energy resource integration, such as greenhouse gas reduction, water conservation strategies, and regulatory compliance.

(2) Agricultural Energy Efficiency Program

The Agricultural EE Program offers California's diverse agricultural customers a statewide-consistent 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, and financial support through rebates and incentives. The Program adopts and supports the strategies and actions of the Agriculture and Industrial chapters of the Strategic Plan. The Program includes five sub-programs:

1. Agricultural Energy Audit Program including basic audits, Integrated Audits, and Retrocommissioning (RCx) audits, provide an inventory of technical project opportunities and financial analysis information that can be used to support a customer's short- or long-term energy plan, and overcome both informational and technical customer barriers.
2. Agriculture Calculated Energy Efficiency Program provides standardized incentives for customized and integrated energy efficiency/DR projects in new construction, retrofit, and RCx projects, and offers comprehensive technical and design assistance for each. It overcomes information, technical, and financial

barriers. As a more customized calculation method that can consider system and resource interactions, it will also be the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.

3. Agriculture Deemed Energy Efficiency Program provides utility representatives, equipment vendors, and customers an easy-to-use mechanism to cost-effectively subsidize and encourage adoption of mass market efficiency measures through fixed incentive amounts per unit/measure for energy saved/projects installed. While deemed rebates lend themselves well to penetrating the small and medium customer market, they are also a cost effective and efficient way to process large customer projects targeted through large customer strategies.
4. Agriculture Continuous Energy Improvement (CEI) Program consists of a collection of strategic planning tools and resources that lay the groundwork for long-term integrated energy planning and serve as a launching platform for other utility and non-utility programs and services. Through analysis, benchmarking, long-term goal setting, project implementation support, performance monitoring, and potentially energy management certification offered through evolving US DOE and ISO efforts, CEI aims to transform the market from a "project-to-project" approach toward a continuous improvement pathway. In support of the Strategic Plan, the CEI approach also sets the stage for non-energy resource integration, such as greenhouse gas reduction, water conservation strategies, and regulatory compliance.

5. Pump Test Services Program: The Pump Test Services sub-program is designed by overcome key informational, technical, and financial barriers to this pump optimization by offering pump tests, repair incentives, and targeted education, training and technical support for customers and pump companies. Each IOU's database of pump test results will be used in the near-term to target pumps in need of repair as a means to capture savings. However, in the mid-term, this pump performance data aggregated at the statewide level will contribute to the development of metrics and targets for pump improvements, in support of the pumping focus in the Strategic Plan.

(3) Commercial Energy Efficiency Program

The Statewide Commercial Energy Efficiency Program offers California's commercial customers a statewide-consistent suite of products and services to overcome the market barriers to energy management and to promote actions to pursue the Commission's ZNE goal for existing commercial buildings. 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, calculation and design assistance, and financial support through rebates and incentives. The Program adopts and supports the strategies and actions of the Commercial chapter of the Strategic Plan. The Program includes the following sub-programs:

1. Nonresidential Audits, including basic audits, Integrated Audits, and Retrocommissioning (RCx) audits, provide an inventory of technical project opportunities and financial analysis information that can be used to support a customer's short- or long-term energy plan, and overcome both informational and technical customer barriers.

2. Calculated Incentives Program provides standardized incentives for customized and integrated energy efficiency/DR projects in new construction, retrofit, and RCx projects, and offers comprehensive technical and design assistance for each. It overcomes information, technical, and financial barriers. As a more customized calculation method that can consider system and resource interactions, it will also be the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.
3. Deemed Incentives Program provides utility representatives, equipment vendors, and customers an easy-to-use mechanism to cost-effectively subsidize and encourage adoption of mass market efficiency measures through fixed incentive amounts per unit/measure for energy saved/projects installed. While deemed rebates lend themselves well to penetrating the small and medium customer market, they are also a cost effective and efficient way to process large customer projects targeted through large customer strategies.
4. The Commercial Direct Install Program delivers free energy efficiency hardware retrofits through installation contractors to reduce peak demand and generate energy savings for commercial customers with monthly demand of less than 100 kW. The program targets such businesses in a staged delivery approach that provides program services in specific geographic areas at different times, allowing for a more concentrated and directed, yet comprehensive program.
5. Continuous Energy Improvement (CEI), a non-resource sub-program, describes a collection of strategic planning tools and resources that lay the groundwork for long-term integrated energy planning and serve as a launching platform for other utility and non-utility programs and

services. Through analysis, benchmarking, long- term goal setting, project implementation support, performance monitoring, and potentially energy management certification offered through evolving Department of Energy (DOE) and International Organization for Standardization (ISO) efforts, CEI aims to transform the market from a "project-to-project" approach toward a continuous improvement pathway. In support of the Strategic Plan, the CEI approach also sets the stage for non-energy resource integration, such as greenhouse gas (GHG) reduction, water conservation strategies, and regulatory compliance.

6. Energy Efficiency for Entertainment Centers sub-program helps facilities with highly variable occupancy such as movie theaters, amusement parks, and auditoriums realize energy savings in a cost-effective manner. The program includes energy audits, maintenance training, and low-cost/no-cost measures, with an emphasis on demand control ventilation technology.
7. Private Schools and Colleges sub-program provides comprehensive energy efficiency services to private preschools, K-12 schools, colleges, universities, and trade/technical schools, including benchmarking and energy audits, comprehensive direct installation of no-cost/low-cost measures, and incentives and installation assistance. The program leverages SCE's programs to provide financial incentives for qualifying projects.
8. California Preschools Program targets public and private preschool facilities or preschool contractors, including stand-alone and shared-space facilities. The sub-program delivers cost-effective energy and demand savings through a comprehensive energy efficiency strategy

that includes detailed audits, technical assistance, financial analysis, and implementation of measures (including lighting, HVAC, and food service measures).

(4) Financial Solutions

SCE's Financial Solutions offers the participants of energy efficiency projects additional options for financing energy efficiency access to capital funds, helping customers to overcome barriers related to project financing. This element will advance the Strategic Plan's strategy of using targeted and innovative financing for energy efficiency.[168] Financial Solution's offerings include:

- On-Bill Financing Program – offers zero-interest financing for qualifying energy efficiency installations of lighting, refrigeration, and HVAC measures to commercial customers and governmental institutions;
- Energy Efficiency Loan Program – provides third-party asset-based lease and/or project financing to nonresidential customers who are implementing energy efficiency projects for which they have out-of-pocket costs greater than $25,000.

(5) Private College Campus Housing

The Private College Campus Housing Program offers energy efficiency measures, training, and financing to qualifying private college campus housing facilities, including campus dining facilities or common area kitchens. The program includes a comprehensive offering of installations, retrofits, and RCx and building optimization to improve efficiency and recruits and trains students on some campuses to conduct lighting energy surveys.

[168] California Long-Term Energy Efficiency Strategic Plan, dated September 2008.

(6) Management Affiliates Program

The Management Affiliates Program (MAP) primarily focuses on managing energy efficiency projects for commercial office buildings, retail department stores, and other commercial buildings (from participating property management companies) to help realize the Strategic Plan's goals for this sector. MAP provides assistance to cities with specific energy efficiency program management needs. City assistance is delivered in collaboration with other organizations, such as joint power agencies and local governmental councils, while coordinating with local government partnerships as part of this collaboration.

(7) Healthcare Energy Efficiency Program

The Healthcare Energy Efficiency Program (HEEP) is a retrofit program that provides comprehensive whole building/system technical audits and other services and establishes a permanent framework for a sustainable, long-term, comprehensive energy management program for medical office buildings. HEEP addresses this industry's hesitancy to adopt energy efficiency measures and initiate facility upgrades, while achieving cost-effective energy savings. The program provides a comprehensive approach to energy efficiency measures, including lighting and lighting controls, HVAC systems and controls, and other equipment.

(8) Integrated DSM Pilot for Food Processing

The Integrated Demand Side Management (IDSM) Pilot for Food Processing is a non-resource program in which industry, trade allies, and other partners promote integrated energy management solutions to end use customers in the food processing and refrigerated warehouse segments. Targeted customers include agricultural post-harvest processors and food processing, fruit and vegetable processors (canners, dryers, and freezers), prepared food manufacturers, wineries and other beverage manufacturers. The program's integrated approach aligns with the Strategic Plan; it includes joint audits that offer both energy efficiency and demand response recommendations, and also includes collaboration with trade and other industry associations to align program offerings with current industry drivers.

(9) Sustainable Portfolios

The Sustainable Portfolios program obtains commitments from real estate owners, investors and major tenants to "green" their portfolios of leased commercial office space through energy efficiency. Participants are offered a comprehensive set of "one-stop" turn-key services including strategic implementation plan development, and comprehensive installations including HVAC retrofits, conversion to variable flow for air and water systems, hybrid central plants, real-time ventilation controls, standard RCx, and lighting upgrades.

The program also utilizes the Green Leasing Toolkit, which includes strategies recommended by real estate owners, tenants, and brokers for promoting, developing, and managing green leases. It also addresses both real and perceived barriers, including split incentives.

(10) Monitoring-Based Commissioning

The Monitoring-Based Commissioning (MBCx) Program combines RCx and continuous commissioning activities with ongoing, technology-based monitoring to ensure persistent savings. The program advances the Strategic Plan by exclusively targeting commercial customers that are eligible to participate in or are currently participating in demand response programs, with the goal of helping commercial customers:

- Learn about energy use at their facilities;
- Participate in a comprehensive energy audit;
- Implement cost-effective measures with help from incentive funds; and
- Engage in an ongoing, monitoring-based commissioning process.

~~(11) Leased Office Space Retrofit Program~~

~~The Leased Office Space Retrofit Program provides non-owner occupants of commercial office buildings a comprehensive package of audits and installations of energy efficient lighting, computer load management software, and HVAC equipment in their leased office space. The program is proposed as a hybrid direct install program (*i.e.*, some measures will be installed at no cost to~~

~~the customer, while others will include a partial incentive/rebate) that initially targets medium to large office buildings.~~

(12) Data Center Energy Efficiency Program

The Data Center Energy Efficiency Program (DCEEP) is an incentive-based program that promotes retrofit, RCx, and virtualization offerings to significantly reduce the energy and demand use of data centers across multiple market segments. DCEEP is a key example of Strategic Plan's implementation in the application; it uses a combination of traditional technologies combined with emerging technologies to offer comprehensive solutions and will take a holistic approach towards data centers including establishing metrics for data center energy intensity, creating tools and guidelines to drive continuous improvement, supporting third party certification processes, and providing recognition for data centers to achieve a high level of energy savings.

(13) Monitoring-Based Persistence Commissioning Program

The Monitoring-Based Persistence Commissioning Program (MBPCx) provides marketing, technical assistance, and financial incentives to facilities including office buildings, hotels, hospitals, and colleges and universities (except UC/CSU Energy Efficiency Partnership and Local Government Partnerships). The program offers implementation of traditional RCx measures as well as more comprehensive energy efficiency upgrades and retrofits for HVAC, lighting, and hot water systems. MBPCx combines a comprehensive evaluation of HVAC and lighting retrofit energy saving opportunities with a rigorous RCx approach that facilitates the continuous reporting and correction of deviations from optimal performance.

(14) Data Center Optimization Program

The Data Center Optimization Program (DCOP) targets – as guided by the Strategic Plan – a variety of electric end uses such as facility site infrastructure loads (cooling, fans, pumps, lighting, and uninterruptible power supplies), network, storage, and servers. Program scope includes a comprehensive facility audit and report, project management support for implementation, financial incentives for energy savings reductions, and verification services. DCOP aims to deliver persistent savings through its detailed engineering audit, which benchmarks the data center, gives the

customer instruction and a methodology to replicate the benchmarking over time, and generates a systems manual. This manual includes a schedule for the data center market actors to check settings in order to maintain optimized conditions.

(15) Cool Planet

The program targets large commercial and industrial customers with installation of energy efficient measures in existing facilities. It encourages participants in SCE energy efficiency programs to join the California Climate Action Registry (Registry). The Registry is a voluntary GHG non-profit, public-private partnership that promotes benchmarking and reductions in GHG emissions. The Registry assists participants in measuring, monitoring and establishing a state-recognized baseline of GHG emissions. Registry members are responsible for measuring, verifying and publicly reporting their GHG emissions using Registry-developed GHG reporting standards and tools.

(16) Livestock Industry Resource Advantage

The Livestock Industry Resource Advantage Program targets agricultural facilities, focusing on dairies, poultry production, egg production, hog and pig farming, and aquaculture.

(17) Comprehensive Beverage Manufacturing and Resource Efficiency

The Comprehensive Beverage Manufacturing and Resource Efficiency Program is a new turnkey program for the ~~2009-2011~~ 2010-2012 cycle, which will deliver reliable and persistent electric savings, demand reduction, and demand response opportunities for the beverage manufacturing industry throughout the SCE service territory. The program will offer facility audits and incentives for the installation of energy efficiency measures that address every major electric end-use in beverage manufacturing facilities. A hands-on "systems approach," which examines each beverage manufacturing facility to deliver optimal electricity savings, results in greater savings than mere component replacement, and provides the customer with step-by-step assistance through the program process. The program includes a comprehensive approach to energy savings, demand reduction, and demand response, including both low cost improvements, and capital changes to all systems at beverage manufacturing facilities.

(18) Solid Waste Energy Efficiency Program

The purpose of the program is to deliver reliable and persistent electric savings, demand reduction, and demand response opportunities by offering facility audits and incentives for the installation of energy efficiency measures to qualifying waste management firms served by SCE.

(19) Lodging Energy Efficiency Program

The Lodging Energy Efficiency Program (LEEP) is a comprehensive energy efficiency retrofit program that delivers multi-measure retrofits and retro-commissioning (RCx) to small, medium and large lodging facilities. Target facilities include existing hotels and motels as well as spas and resorts, especially those with central plants and in-house laundry service.

(20) Food & Kindred Products Program

The program targets 800 facility owners in the Food & Kindred Products industry, ranging from small food companies (consuming under one million kWh per year) to large food companies (over ten million kWh/year). The companies represent a broad spectrum of food producers, from bread and breakfast cereals to starch and sugar producers.

(21) Primary And Fabricated Metals

This program will conduct energy audits and project studies to show the total impacts of proposed projects in terms of energy efficiency, productivity, and environmental improvements to the customer.

(22) Industrial Gases

This program will conduct energy audits and project studies to show the total impacts of proposed projects in terms of energy efficiency, productivity, and environmental improvements to the customer.

(23) Non-Metallic Minerals and Products

The purpose of the program is to provide energy efficiency and demand reduction services to cement production plants, primary cement distribution terminals and large ready-mix plants throughout SCE's service territory. Cement plants are part of a classification of

manufacturers producing non-metallic minerals and products. This also includes bricks, ceramics, glass and glass products.

(24) Comprehensive Chemical Products

The program is centered on a comprehensive approach to energy savings and permanent demand reduction. The program addresses the full range of efficiency opportunities from low-cost improvements to entire system upgrades at chemical facilities.

(25) Chemical Products Efficiency Program

The Chemical Products Efficiency Program helps industrial chemical production customers achieve long-term, cost-effective electrical energy savings by promoting comprehensive retrofits and new construction projects for all industrial processes and process support systems.

(26) Comprehensive Petroleum Refining

The proposed program will implement a comprehensive set of calculated and itemized measures to address major electric operation within these end use categories. These measures include process optimizations, such as compressed air and pumping systems; electric motors; drives; fans; lighting and space conditioning.

(27) Oil Production

The main objective of the program is to assist these producers to become more energy-efficient, which in-turn improves their operational productivity.

(28) Refinery Energy Efficiency Program

The purpose of the program is to provide energy efficiency and demand reduction services in the petroleum refining industry. Target facilities include:

- Petroleum refineries
- Asphalt paving mixture and block manufacturing
- Asphalt shingle and coating materials manufacturing
- Petroleum lubricating oil and grease manufacturing
- All other petroleum and coal products manufacturing

(29) High Performance Hospitals

Target customers include existing private hospitals and public hospitals, including government hospitals. The contractor intends to target midsize and large hospitals with energy use above approximately 18,000,000 kWh/year. Smaller hospitals may be included depending on the specific opportunities that exist for delivering energy savings. Eligible facilities include hospital buildings, administration buildings, service buildings, and central plants.

Program services include:

- Comprehensive energy audits covering all key end-uses and measures for energy efficiency
- Analysis for opportunities in demand management and demand response, including self-generation
- Technical assistance, including support for measures specification, procurement, and project management
- Retrocommissioning for large space conditioning systems
- Post-installation inspection to verify performance
- Workforce training and education of facility staff
- Incentives coordination with programs of SCE
- Availability of third party financing

(30) Cool Schools

Incentives from SCE and financing from Energy Conservation Assistance Accounts (ECAA) from the California Energy Commission (CEC) are expected to stimulate significant participation by the schools. Participating schools with receive a detailed energy audit and recommendations for action. Recommendations will focus on evaporative pre-coolers on make-up air intakes, upgrading of chillers with variable speed drives, lighting, energy management systems, and variable speed motors.

(31) Public Pre-Schools, Elementary Schools and High Schools

Target customers include public schools, including pre-schools, elementary schools, middle or junior high schools, and senior high schools. Existing facilities, not new ones, are targeted, including administration and service buildings. All energy end-uses are targeted, including measures typically funded by operating budgets and measures typically funded by capital budgets. To reduce costs to the customer and encourage greater participation, SCE will provide financial incentives.

The program will feature:

- An energy audit covering energy efficiency and demand response opportunities
- Direct installation of no-cost/low-cost measures
- Technical assistance for large capital measures, including specifications assembly, procurement assistance and installation overview
- Retrocommissioning for large space conditioning systems
- Post-installation inspection to verify performance
- Funding assistance to identify sources and types of funding
- Financial assistance coordination and processing with SCE, and
- Customer satisfaction surveys and resolution.

(32) Retail Energy Action Program

The purpose of the program is to provide services that increase energy efficiency and demand management in retail facilities. Target customers will be owners of retail buildings, including tenant-occupied buildings. The program will be delivered through a coordinated effort with professional property managers and real estate companies.

The program will feature:

- An energy audit covering energy efficiency and demand management opportunities

- A performance contract that includes specification, procurement and installation of recommended measures
- Verification of performance
- Financial incentives from SCE
- Financing of remaining costs by the performance contractor to be repaid out of savings in energy bills
- Customer satisfaction surveys and resolution

(33) Commercial Utility Building Efficiency (CUBE)

The program reviews the building owner's monthly energy bills to identify average and peak demand frequency and consumption levels. Next, the program will conduct comprehensive energy and equipment audits at each candidate site to determine how best to mitigate poor building energy performance. From this review, the program gives the customer a needs assessment with well-defined, state-of-the-art alternatives, including carefully calculated estimates of monthly energy use and cost savings resulting from installation of the new equipment. Next, a custom computerized building energy model is prepared for each potential site. The model identifies existing HVAC, controls, and lighting equipment currently in use at the site, and the feasible energy savings opportunities from HVAC equipment and motor replacement, controls upgrades, and lighting retrofits. After the customer reviews and approves the plan, the program contractor or a third-party contractor installs the accepted measures, including reliable and comprehensive energy efficiency technologies that achieve energy savings.

c) Partnerships

SCE continues to support collaborative energy efficiency partnerships with institutions and government customers. These partnerships leverage the skills and knowledge of each organization to overcome operational, technical, financial, political and cultural barriers to energy efficiency. The partnerships will implement cost effective energy efficiency programs that will result in both immediate and long-term energy savings and demand reduction.

(1) Energy Leader Partnership Program

SCE's Energy Leader Partnership Program (ELPP) will leverage the considerable power and influence of California's local governments by first helping them to adopt as much energy efficiency, demand response, and renewable onsite generation as possible. Next, the program is designed to support local government efforts to encourage their residential and business constituents (and other key stakeholders such as local developers) to do the same. The program provides financial incentives, technical assistance, and education and outreach. As well, the level of support is keyed to the level of local government commitment and performance; that is, the higher the performance, the higher the incentive.

~~2009-2011~~ 2010-2012 Local Government Partnerships include:

- Community Energy Leader
- Beaumont Energy Leader
- Desert Cities Energy Leader
- Eastern Sierra Energy Leader
- Kern County Energy Leader
- Long Beach Energy Leader
- Orange County Cities Energy Leader
- Redlands Energy Leader
- Ridgecrest Energy Leader
- Santa Ana Energy Leader
- Simi Valley Energy Leader
- Ventura County Energy Leader
- South Santa Barbara County Energy Leader
- South Bay Energy Leader
- South Gate Energy Leader
- San Gabriel Valley Energy Leader
- San Joaquin Valley Energy Leader

- Palm Desert Demonstration Partnership

Furthermore SCE will offer a new ELPP Strategic Support sub-program that will support ELPP's efforts. Through ELPP Strategic Support, SCE is offering assistance, funding and shared knowledge, to help local governments reduce their carbon footprint through increased energy efficiency.

(2) Institutional and Government Core Energy Efficiency Partnership Program

The Institutional Partnership portfolio is proposing seven partnerships. These partnerships consist of three educational institutions (UC, CSU and CCC), one state agency (CDCR), one with the State of California and three county governments (Los Angeles, Riverside and San Bernardino). Most of these partnerships were existing partners that participated in the last program cycle, with the new addition of the County of San Bernardino.

~~2009-2011~~ 2010-2012 Institutional Partnerships include:

- California Community Colleges Energy Efficiency Partnerships
- California Department of Corrections and Rehabilitation
- County of Los Angeles Energy Efficiency Partnership
- County of Riverside Partnership
- UC/CSU Energy Efficiency Partnership
- County of San Bernardino Energy Efficiency Partnership
- State of California Energy Efficiency Partnership

d) Crosscutting Programs

SCE's crosscutting programs were designed and structured based on the guidance in the Strategic Plan and on CPUC Energy Division staff input.

(1) New Construction Program

The New Construction program is a suite of activities designed to promote integrated energy management design and systems into new buildings. The program comprises three sub-programs:

1. California Advanced Homes (CAHP) – encourages single and multi-family builders, of all production volumes, to construct homes that exceed California's Title 24 energy efficiency standards by a minimum of 10 percent. This goal will be achieved through a combination of incentives, technical education, design assistance, and verification. CAHP supports the ambitious goals of the Strategic Plan, and works in close coordination with the Advanced Homes component of the Sustainable Communities Program to raise plug load efficiency and focus on whole-house solutions, in-home monitoring and visual display tools, and green building standards. CAHP is also coordinated with demand response programs.
2. Energy Star Manufactured Homes – promotes the construction of new manufactured homes in SCE's service territory that comply with ENERGY STAR® energy efficiency standards. The program targets manufacturers, retailers, and homebuyers of new manufactured homes. The current baseline for manufactured homes is the Housing and Urban Development (HUD) standard specification. The program encourages manufacturers to install "right-size" heating, cooling, and ventilation equipment (HVAC), install high-efficiency HVAC equipment, and evaluate homes on a whole-building basis covering windows, insulation levels, and quality installation inspections. The program works in coordination with the Advanced Home component of the Sustainable Communities Program, and also includes an education and outreach component.
3. Savings By Design – overcomes customer and market barriers to designing and building high performance facilities, while incorporating new approaches for ~~2009-2011~~ 2010-2012 to advance

integrated design and green building certification, in support of the Strategic Plan. SCE will use SBD to provide the nonresidential new construction industry with a broad palette of technical and financial resources to aid them in designing new facilities to the most cost-effective energy and resource efficiency standards.

(2) Residential And Commercial HVAC Program

The Residential and Commercial HVAC Program is a statewide program that will continue the transformation process of California's HVAC market to ensure that:

- HVAC technology, equipment, installation, and maintenance are of the highest quality;
- Quality installation and maintenance practices are easily recognized and requested by customers;
- The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and
- The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.

Market transformation, direct energy savings and demand reductions will be achieved through six sub-programs:

1. ENERGY STAR Residential Quality Installation – installations of central air conditioning (CAC) systems and air-source heat pump systems, with a rated capacity up to 65,000 BTU/hr. Through this sub-program, a financial incentive will be available to homeowners who have a system installed in accordance with the EPA HVAC Quality Installation Guidelines. The installation requirements are illustrated in detail in *ANSI/ACCA 5 QI-2007: HVAC Quality Installation*

Specification. In addition to this incentive, homeowners will also receive an ENERGY STAR certificate for their qualifying installation. Contractors will be actively recruited into the sub-program by offering them the opportunity to receive performance incentives such as utility co-branding opportunities and diagnostic equipment for reaching specific performance milestones.

2. Commercial Quality Installation – installations of packaged HVAC systems, with a rated capacity up to 760,000 BTU/hr. Through this sub-program, a financial incentive will be available to contractors who complete a system installation in accordance with the appropriate industry standards (*e.g.,* ACCA, SMACNA, and ASHRAE). Contractors will be actively recruited into the program by offering them the opportunity to receive financial and performance incentives such as utility co-branding opportunities, diagnostic equipment for reaching specific performance milestones and assistance aligning with the Energy Star Service & Product Provider program.
3. Upstream HVAC Equipment Incentive – incentives to distributors who sell qualifying high efficiency HVAC equipment. The logic that underscores this sub-program's design is that a small number of distributors and manufacturers are in a position to impact hundreds of thousands of customers and influence their choice of equipment by increasing the stocking and promotion of high efficiency HVAC equipment. The upstream model cost-effectively leverages this market structure and existing relationships. The sub-program also provides an online rebate application system to facilitate distributor sales and invoice tracking, which further reduces administrative costs as compared with paper application processing.

4. Residential Quality Maintenance and Commercial Quality Maintenance Development – quantify potential savings and, if cost-effective, develop both a residential and a small commercial program to implement a comprehensive, continuously improving O&M activity that captures savings and provides a high ROI to end-users thus driving the market transformation of the HVAC industry.
5. HVAC Technologies and System Diagnostics Advocacy – a coordination and advocacy program that addresses the need for immediate and comprehensive actions to increase, optimize and maintain the energy and peak electricity efficiency performance of direct expansion vapor-compression–based cooling equipment and accelerate the market introduction of a range of advanced evaporative-based cooling technologies. In addition, a continuous program improvement process will be introduced to provide an active, real-time means for improving program effectiveness and incorporating results in between planning cycles.
6. HVAC Workforce Education and Training – deliver a dedicated industry-specific effort that offers education and training opportunities targeted at all levels of the HVAC value chain. Prior to starting such an activity, and as outlined in the Strategic Plan, the sub-program will conduct a comprehensive training needs-assessment to determine industry skill gaps, identify opportunities for collaboration with existing HVAC education and training infrastructure, and implement recommendations needed to close gaps at all levels of the industry.

(3) Emerging Technologies

The mission of the Emerging Technologies Program (ETP) is to support increased energy efficiency market demand and technology supply (the term supply encompassing

breadth, depth, and efficacy of product offerings) by contributing to development and deployment of new and underutilized energy efficiency measures (*e.g.*, technologies, practices, and tools), and by facilitating their adoption as measures supporting California's aggressive energy and demand savings goals. The ET program includes the following sub-programs:

1. Technology Assessments – Energy efficient measures that are new to a market or under-utilized for a given application will be evaluated for performance claims and overall effectiveness in reducing energy consumption and peak demand using data from customer or field sites, laboratory testing, or paper studies.
2. Scaled Field Placements – These projects consist of placing a number of measures at customer sites as a key step to gain market traction and possibly gain market information. The measures will typically have already undergone an assessment or similar evaluation to reduce risk of failure.
3. Demonstration Showcases – These possibly large-scale projects will expose measures to various stakeholders utilizing real-world applications and installations. Monitoring activities on demonstration showcases will be determined, as appropriate.
4. Market and Behavioral Studies – These projects involve targeted research on customer behavior, decision making, and market behavior to gain a qualitative and quantitative understanding of customer perceptions, customer acceptance of new measures, and market readiness and potential for new measures. Studies may involve primary research, such as studies of potential measure impacts and barriers, market segment needs and gaps, technology performance gaps, pre-studies to qualify potential measures and sites for scaled

field placements and demonstration showcases, measure usability studies, long-term market potential studies for the ETP, and the like.

5. Technology Development Support – The ETP will look for targeted opportunities to support energy efficiency product development. Product development is the process of taking an early-stage technology or concept and transforming it into a saleable product.
6. Business Incubation Support – Technology Resource Incubator Outreach (TRIO) is a statewide program that focuses on providing training and networking for entrepreneurs and companies providing energy saving technologies.
7. Technology Test Centers – (TTC's) SCE's TTCs provide unique capabilities for evaluating performance of new technologies. The TTC are comprised of three test facilities focused on distinct end uses: Refrigeration, Air Conditioning, and Lighting. In the ~~2009-2011~~ 2010-2012 program cycle, a fourth test facility will be added to the portfolio to help meet California's new ZNE goal for residential construction, with potential to also address commercial needs. This facility, the ZNE Test Center, will be used to investigate the viability of energy efficiency, demand response, smart meters, and on-site renewable generation in ways that meet the needs of builders and occupants.

(4) Codes & Standards Program

The Codes and Standards (C&S) Program saves energy on behalf of ratepayers by directly working with standards and code-setting bodies 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 US DOE in setting national energy policy that impacts California. C&S contains four sub-programs:

1. Building Codes and Compliance Advocacy and Appliance Standards Advocacy – these components work together, and develop baselines for building and appliance advocacy activities. If the objective of a code proposal is to update an existing standard, the baseline is simply the existing standard. If the objective is a new standard, which expands the scope of building or appliance efficiency regulations, the baseline is established through market characterization studies prior to or during the development of the CASE study unless a recent preexisting market characterization study can be found. Hence, baselines for new standards often do not exist until a draft CASE study is complete. Program component also includes support for CEC code upgrade cycles to improve industry awareness and understanding of California regulations and extension-of-advocacy efforts, which are carried out to improve the rate-of-compliance with Title 24 and Title 20.
2. Compliance Enhancement – The primary purpose of this program component is to increase the number of customers complying with code. Program includes a measure-specific element that includes measures for existing regulations not adopted as a result of the program. Program also includes a holistic element that supports proactive building departments that seek general improvements to operations and compliance improvement processes. The IOUs will document training and process improvement efforts employed per

jurisdiction, administer pre- and post-tests to gauge training participants' knowledge swing, and gather and measure implementation of action plans from participating building departments.

3. Reach Codes – The Reach Codes sub-program will develop and/or support the development of reach codes, or locally adopted ordinances, that exceed statewide minimum requirements. The reach code sub-program is designed to facilitate mutual support from the utilities and local governments to realize the full savings potential from codes, both statewide, and at a local level.

(5) Sustainable Communities Program

The Sustainable Communities Program (SCP) is a pilot to encourage the inclusion of sustainable elements and energy efficient features in campus projects, mixed-use complexes, residential new construction, multi-family and transit-oriented developments, and other projects whose scope exceeds traditional SCE programs. The SCP provides financial incentives and customized technical assistance. The Sustainable Communities program supports the Strategic Plan by stimulating demand for lower energy, and eventually, zero net energy new homes and buildings. In addition to the traditional energy measures of current utility programs, such as building shell, HVAC, and lighting and controls, the SCP seeks to address sustainable development and energy savings related to water efficiency and other non-traditional energy saving measures. SCP staff will coordinate with other programs to help streamline program participation, to integrate DSM services (demand response, energy efficiency, smart meter, distributed generation) and to facilitate the most appropriate package of services.

(6) Workforce Education And Training

The Statewide Workforce Education and Training (WE&T) Program is a coordinated portfolio of IOU programs that provide education, training and workforce development planning and implementation. WE&T establishes a comprehensive training platform that leverages the

potential of key stakeholders with the resources, knowledge and access to implement education and training strategies that focus on integrating existing workforce skills with new workforce needs, as well as expand outreach efforts to increase awareness and demand for green careers.

The Program comprises three sub-programs:

1. WE&T Centergies – organized around market sectors and cross-cutting segments to facilitate workforce education and training appropriate to achieve the energy savings, demand reductions and related energy initiatives required of the IOUs. Centergies employs a variety of methods and outreach strategies to disseminate high-quality programs, and provide WE&T curriculum and related deliverables – training courses, seminars, workshops, clean energy technology demonstration, equipment efficiency testing, interactive training exhibits and lectures through the Statewide Energy Education and Testing Centers located in the IOU service territories, and Statewide Building Operator Certification & Training programs.
2. WE&T Connections – downstream and upstream IOU relationships with the educational sector, entry and intro-level community-based training efforts that support workforce development in energy efficiency, energy management and new emerging green careers. This sub-program emphasizes education curricula and related activities that inspire interest in energy careers, new and emerging technology, as well as future skills development to advance the energy initiatives and goals of the state. IOUs will work with education institutions, labor and communities to nurture interest in green careers by K-12, community college, occupational, vocational, and major university students, as well as assist in growth of low-income and transitional workforce targeted clean energy training programs.

3. WE&T Planning – management and execution of several strategic statewide planning tasks and resulting project implementation actions initiated by the Strategic Plan. The tasks and projects are seen as instrumental to delivering mechanisms and protocols that facilitate the on-going momentum and focus on long-term goals for workforce education and training. The WE&T Planning Sub-Program facilitates implementation and completion of the four key strategic tasks identified in the Strategic Plan to drive long-term WE&T development:

- Form an IOU/CPUC WE&T Task Force
- Conduct a Needs Assessment
- Create a WE&T Specific Web Portal
- Bi-Annual WE&T Public Workshops

(7) Marketing, Education And Outreach

The purpose of Marketing, Education and Outreach (ME&O) is to increase consumer awareness of and participation in cost-effective energy-saving activities offered by the utilities, as well as to promote behavior changes that result in energy management efforts that save energy, and reduce greenhouse gas emissions, in coordination with demand response and renewable self-generation options. The program is comprised of two sub-programs:

1. Statewide Marketing, Education & Outreach – the goal of statewide marketing and outreach is to educate California's diverse ratepayers about how they can take action on energy efficiency by giving them the necessary tools and information on how to do so. Overall the campaign focuses on providing information resources on purchasing energy efficiency products and services, as well as behavior changes that include conservation and efficiency actions.

2. ME&O Strategic Plan – the goal of strategic planning is to create a culture in California that practices energy efficiency and other demand side management options as a way of life resulting in both short term and long-term behavior change. The foundational activities encompassing strategic planning are uniquely designed to address and overcome barriers to participation. The development of a recognizable and trustworthy brand for California, segmentation analysis, behavior/attitudinal research, and message development will provide a framework for customers to better understand and participate in energy efficiency and conservation behavior. Targeted, relevant messages that are firmly rooted in an understanding of the various demographic, psychographic and cultural differences that comprise California's diverse population will be deployed. Behavioral/attitudinal research will be undertaken to identify additional motivators that drive permanent behavior change. A statewide, 'best-in class' web portal will be developed to allow energy efficiency practitioners and consumers to exchange information and solutions on implementing energy efficiency programs and measures.

(8) Integrated Marketing and Outreach

SCE's DSM marketing efforts will be expanded and formalized within the Integrated Marketing and Outreach program. This local program will provide funding to collect and maintain market intelligence, enhance SCE's website, Mobile Energy Units, and other means to ensure customers receive integrated solutions, adapt behavior-based marketing methods, and allow the utility to generate awareness of its integrated demand side management solutions through the use of ongoing seasonal marketing campaigns.

(9) Integrated DSM

In addition to their individual IDSM activities and pilots, the IOUs are proposing a statewide IDSM effort that will establish a statewide integration task Force (Task Force). The work of the Task Force will encompass activities that promote, in a statewide-coordinated fashion, two specific IDSM strategies identified in the Strategic Plan, *i.e.*, stakeholder coordination (Strategy 1.3) and new technologies (Strategy 1.4). The IOUs believe that Strategy 1.1, "Carry out integrated marketing of DSM opportunities across all customer classes", should be coordinated with the statewide Marketing, Education and Outreach efforts (see ME&O PIP) and implemented at the local level by the IOUs focused on particular segment and customer-specific strategies. The Statewide DSM Integration Task Force will coordinate closely with the Marketing and Outreach statewide team to ensure a consistent approach and to gain knowledge from statewide and local marketing and outreach efforts.

(10) Statewide Lighting Market Transformation Program

The Statewide Lighting Market Transformation Program (LMT) establishes processes through which the IOUs can develop and test market transformation strategies for emerging lighting technologies (products, systems and design strategies) as well as for technologies already incorporated into their energy-efficiency programs. These LMT activities augment and leverage the existing IOU programs for evaluating and testing the market transformation needs for short and long term activities to get to the zero net energy goals in the Strategic Plan. The LMT program includes market research and coordination activities as well as an educational component aimed toward improving the information available to consumers, contractors, and other market actors regarding new and existing lighting technologies. The Program also formalizes a process by which the IOUs can rapidly introduce advanced lighting solutions and emerging technologies to the marketplace, continually improve the IOUs' current lighting programs across all market sectors, and develop innovative new program strategies to continually advance the lighting market.

This program includes three program activities:

1. Lighting Technology Advancement – formalizes a process by which the IOUs can rapidly introduce advanced lighting solutions and

emerging technologies to the marketplace, continually improve their current lighting programs across all market sectors, and develop and test innovative new program strategies to advance market transformation in the lighting sector;

2. Lighting Education and Information – addresses the pressing need for more accessible information on lighting technologies across all market sectors and among IOU staff and installation contractors; and
3. Lighting Market Transformation – enables the IOUs to identify gaps in strategies for different technologies and to create data-driven solutions. These solutions will inform and leverage energy-efficiency program efforts to fill the gaps in market transformation strategies for each lighting technology.

(11) Third Party Solicitations Program

SCE's third party solicitation process is designed to enable successful solicitation, selection, and implementation of third party programs. In preparation for the ~~2009-2011~~ 2010-2012 program cycle, SCE conducted third party solicitations between November 2007 and June 2008; these will be supplemented by additional solicitations throughout the ~~2009-2011~~ 2010-2012 cycle. SCE's third party solicitation process utilizes a multi-faceted solicitation approach which includes the following elements:

- Local Targeted Program Solicitation Support (~~2009-2011~~ 2010-2012)
- Statewide General Program Solicitation Support (~~2009-2011~~ 2010-2012)
- Local Solicitation – Innovative Design for Energy Efficiency Activities (IDEEA)
- Local Solicitation – IDEEA 365 Future Solicitations (~~2009-2011~~ 2010-2014)

- Technology Resource Incubator Outreach (TRIO) (~~2009-2011~~ 2010-2012)
- Local Solicitation – Demand Side Management (DSM) Integration Solicitation Support (~~2009-2011~~ 2010-2012)

SCE's third-party solicitation process targets and promotes new and innovative energy efficiency technologies and program designs in preparation for and throughout the ~~2009-2011~~ 2010-2012 program years. The results of SCE's ~~2009-2011~~ 2010-2012 third party program solicitations, including SCE's selected programs are shown in Second Amended Exhibit SCE-2, dated July 2, 2009.

For the ~~2009-2011~~ 2010-2012 program cycle, SCE conducted the third party program solicitations beginning November 2007, to allow sufficient time for program ramp up in late 2008 with program implementation targeted for January 2009. SCE also proposes to conduct additional local targeted and statewide general solicitations during the ~~2009-2011~~ 2010-2012 program cycle. Furthermore, SCE proposes to move away from annual solicitations and allow bidders to submit local innovative proposals on a more frequent basis (*e.g.*, quarterly) during the three year program cycle under SCE's new IDEEA 365 solicitation process. This will enable SCE to continue to identify and test the latest program concepts and technologies in order to constantly improve and enhance the overall program portfolio for the long term.

Additionally, SCE proposes TRIO as part of the Emerging Technologies Program, which will nurture new technologies that may not be ready for the marketplace, and eventually move successful technologies into the IDEEA solicitation process.

For ~~2009-2011~~ 2010-2012, SCE also proposes to seek, as part of its third party solicitations process, creative program ideas centered around technologies applications that can serve energy efficiency and demand response needs. This coordination attempts to further leverage potential technologies to integrate energy efficiency with other DSM offerings. SCE may extend the

solicitation to include solar end-use technologies that can cost-effectively[169] replace inefficient electric technologies.

(12) Automatic Energy Review for Schools

The program will increase the energy performance of new and modernized school buildings by utilizing the Department of State Architects (DSA) review and approval process. The program will work with DSA staff to flag and refer projects that just marginally exceed the state energy code. The projects will be referred to the automatic plan review technical assistance team of the consultant to SCE. The program targets public schools in SCE's territory. New facilities are eligible, as well as existing facilities with substantial additions or repairs that require compliance with California's Title 24. Also eligible are related school facilities such as administration and service buildings.

e) General And Administrative Costs

The General and Administrative (G&A) elements for ~~2009-2011~~ 2010-2012 consists of various types of indirect administrative costs that are general in nature; these costs are allocated over the entire program portfolio or subgroup of programs. G&A support costs include: regulatory and reporting, finance and accounting, engineering, marketing, procurement, information and tracking systems, memberships, internal communication, job skills training, operations management, audit, internal review, quality assurance, planning, and legal support. The G&A allocation is based on programs' budget, which represents the scope of work for the program receiving the G&A support.

2. Third-Party Contracts

a) Process, Criteria, and Statewide Consistency

(1) Overview

While SCE's energy efficiency program portfolio includes a variety of programs addressing a broad range of market segments, SCE recognizes that there may be new opportunities that have not yet been identified, new markets that can be more effectively targeted, and market players who can leverage their relationships or expertise within an industry very effectively.

[169] Per the Energy Efficiency Policy Manual, Version 3.1, dated January 8, 2008, Section IV.1 through 7, pp. A-6 to A-8 and D.07-11-004, OP# 4, p. 12.

Consistent with Commission direction to conduct a competitive bid "for the purpose of soliciting new ideas and proposals for improved portfolio performance,"[170] SCE's third party competitive solicitation process is a comprehensive and multi-faceted approach that draws from the skill, experience, and creativity of the energy efficiency community with the goal of enhancing current program design and uncovering new approaches to capturing cost-effective energy efficiency. Additionally, the program solicitations promote comprehensive energy efficiency approaches, and focus on new ways to integrate demand side management offerings. SCE's ~~2009-2011~~ 2010-2012 third party programs include a combination of continuing programs from the 2006-2008 cycle and newly selected programs from the solicitations held between November 2007 and June 2008.

SCE offers two unique categories of solicitations for ~~2009-2011~~ 2010-2012: general and targeted. General solicitations allow bidders to design and submit their own program proposals to help SCE fill gaps within its energy efficiency program portfolio and develop newer methods or program designs. Targeted solicitations support identified markets and program needs. SCE offered local targeted solicitations for identified market sector needs, and also participated in a statewide targeted solicitation.

Within the general and targeted solicitation categories there are two approaches: local and statewide. Local solicitations are those focused on receiving proposals for program implementation only within the IOU service territory. Statewide solicitations seek proposals for programs to be implemented in all applicable IOU service territories.

The following are the various combinations of general, targeted, local, and statewide solicitations SCE conducted, and plans to conduct, in support of the ~~2009-2011~~ 2010-2012 program cycle. The results of these program solicitations are shown in Second Amended Exhibit SCE-2, dated July 2, 2009.

[170] D.05-01-055, Section 5.2.1, p. 94.

(2) Statewide General Solicitation

The Statewide General Solicitation offered bidders the opportunity to propose their own program ideas and strategies to enhance SCE's existing programs, and also offered bidders the option to propose a statewide program within some or all four IOU service territories, depending on the bidder's proposal.

For ~~2009-2011~~ 2010-2012, the IOUs' coordinated Statewide General Solicitation was a two-stage solicitation process. The IOUs developed a common Call for Abstracts requesting short program concepts from bidders. From these abstracts, the IOUs independently selected the program concepts that best supplemented in their portfolio of programs and showed significant potential; these bidders were invited to submit a full proposal. This two-stage approach allows SCE to capture proof of concept before requiring a bidder to submit a full proposal. The two-stage approach also helps bidders with limited resources to invest only a minimal amount in responding to the program solicitation unless selected for full proposal submittal.

(3) Local General Solicitation

SCE offered a Local General Solicitation named IDEEA. The purpose of the IDEEA solicitation is to find, fund, and field test the best new and innovative program delivery ideas from the marketplace and to provide the opportunity to "mainstream" them into the overall SCE-managed portfolio of proven, successful, and reliable programs. While the Statewide General Solicitation emphasized reliable and proven components, SCE's local IDEEA two-staged solicitation focused on innovative program ideas to capture energy savings and demand reduction. Although these newer program approaches may be unproven in the marketplace, SCE believes searching and investing in these programs are necessary to help find the next generation of cost-effective energy efficiency programs.

(4) Targeted - Statewide and Local Solicitations

Three of SCE's Targeted Requests for Proposals (RFPs) were coordinated with the other IOUs. The coordinated RFPs gave bidders the opportunity to submit proposals to offer their program in one, multiple, or all IOU service territories. These Statewide Targeted Solicitations

were single stage because the RFP defined the broad program scope, eliminating the need for screening the proof of concept. Statewide Targeted RFPs[171] were issued for the following three program areas on a statewide basis:

- Manufactured Housing New Construction
- Energy Efficiency for Entertainment Centers
- Private Schools and Colleges Program

(5) Local Targeted Solicitations

SCE also identified various program areas within its portfolio that would benefit from the focused efforts of a third party implementer. Thus SCE issued an RFP for each targeted area that included broad program expectations, target market sector, technologies but looked to the bidder to propose a program design and implementation plan. The objective of the local Targeted Solicitations was for the winning proposals to contribute improvements to program implementation and design through new and innovative approaches.

The Local Targeted Solicitations were single stage because the RFPs[172] defined the broad program scope, eliminating the need for screening the proof of concept.

(6) Solicitation Process

SCE grouped several individual RFPs into a single "flight." SCE had several groupings or "flights" as part of its program solicitation process. These "flights" were released over time during November 2007 through April 2008. This is a new approach adopted by all IOUs for the 2009-2011 cycle, allowing bidders greater opportunity and more time to respond to multiple RFPs instead of releasing all RFPs at one time. The flight schedules were coordinated and adopted by all IOUs, with the longest two-stage RFPs released in earlier flights, and the shorter solicitations positioned in the later flights. Flight #1 included the Statewide General and SCE's local IDEEA Solicitations, Flights #2-4 included Statewide and Local Targeted RFPs, SCE did not participate in Flight #3, as these

[171] The results of these programs solicitations are shown in Amended Exhibit SCE-2.

[172] The results of these programs solicitations are shown in Amended Exhibit SCE-2, Table 3.4.

solicitations were moved to Flight #5 in order to provide more time to develop SCE's RFPs for this flight. SCE launched Flight #5 in late April 2008, which was primarily designed to support SCE's new approach (*i.e.*, vertical market segmentation) to the nonresidential sectors, through a local targeted solicitation.

(7) Proposal Evaluation

The proposal review process involved an extensive evaluation of each proposal based on scoring criteria jointly developed by the IOUs and reviewed by the Peer Review Groups ("PRG"). To ensure a thorough, fair and consistent evaluation of all aspects of the proposals, SCE established the following evaluation process:

- Overall Program Scoring – Each proposal was scored by a team consisting of the SCE market sector lead or program manager.
- Technical Review – A technical review was performed of each proposal's technical documentation and E3 calculator to ensure that consistent review protocols were followed.
- Supplier Responsibility – SCE reviewed each proposal's supplier responsibility including a supplier diversity component and calculated a supplier responsibility score based on SCE's established protocol.
- Portfolio Review – Once scored, the proposals were ranked from high to low within each RFP. SCE, then, assessed the strengths and weaknesses of each program design and how it may or may not coordinate with the overall portfolio. SCE optioned to rank proposals higher if they were deemed to fit a portfolio gap and/or improve the overall portfolio offering.
- Peer Review Group Review – SCE's proposal scoring process and results were presented to SCE's local PRG for its review. The PRG and SCE discussed each selection recommended by SCE and how it contributed to the overall energy efficiency policy objectives.

(8) Criteria

The IOUs developed joint evaluation criteria for the Targeted[173] and General Solicitations. The two sets of criteria slightly differed as follows:

- The Targeted Solicitations were single-stage and did not need abstract evaluation criteria because the program description area of the Targeted Solicitations was defined in each RFP. As the program scope was outlined in the RFP, it was not necessary to include portfolio fit as a scoring criteria.
- For the two-stage General Solicitation, the abstract evaluation criteria were similar to the scoring criteria for the full proposal except that the abstract stage did not require the submission of an E3 Calculator, so a full cost-effectiveness showing could not be evaluated. From past experience, requirement of a full E3 Calculator showing, in the abstract stage, is too costly and burdensome for bidders and typically reduces the number of potential bidders. Instead, the IOUs developed a more streamlined cost efficiency worksheet which approximated cost-effectiveness for the purposes of the abstract evaluation.
- The following scoring criteria and corresponding weights were used for all SCE General and Targeted Solicitations:

[173] SCE applied the Statewide Targeted Solicitation criteria to its Local Targeted Solicitations.

2009-2011 Scoring Criteria- General

Stage 1
Part 1: Abstract Responsiveness (Pass/Fail)

Part 2: Abstract Evaluation

A. Program Implementation and Feasibility	50%
B. Cost Efficiency	30%
C. Skill and Experience	20%
Total	100%

Stage 2
Part 1: Proposal Responsiveness (Pass/Fail)

Part 2: Proposal Evaluation

A. Program Implementation and Feasibility	50%
B. Cost-effectiveness	30%
C. Skill and Experience	10%
D. Supplier Responsibility, Diversity & Miscellaneous	10%
Total	100%

2009-2011 Scoring Criteria- Targeted[174]

Part 1: Proposal Responsiveness (Pass/Fail)

Part 2: Proposal Evaluation

A. Program Implementation and Feasibility	35%
B. Cost-effectiveness	30%
C. Skill and Experience	25%
D. Supplier Responsibility, Diversity & Miscellaneous	10%
Total	100%

(a) Statewide Consistency

For 2009-2011, SCE, in coordination with the IOUs, streamlined the solicitation process to solicit and accept bids on a statewide level. This process was designed to provide bidders with an opportunity to respond to one statewide RFP for each statewide program,

[174] SCE applied the Statewide Targeted Solicitation criteria to its Local Targeted Solicitations.

thereby improving the quality of the proposals, streamlining the utilities' process, and simplifying the bidders' process. The IOUs developed common outreach, solicitation process, flight schedule, scoring process and criteria, and developed a statewide on-line portal (PEPMA – Proposal Evaluation and Proposal Management Application) that included all IOU solicitation information for bidders, IOUs, and the PRGs. The submission, review, and scoring of proposals were handled individually by each IOU. Additionally, the IOUs issued three statewide targeted bids for common programs, utilized one common RFP for each, and jointly issued a Statewide General RFP. This is the first time IOUs have created a process by which potential bidders had an opportunity to respond to a common RFP for program implementation throughout all IOU service territories.

To ensure selected programs offer a consistent statewide program, the IOUs will form statewide teams assigned to each statewide program to ensure consistent implementation across IOU service territories. In support of the 2009-2011 statewide solicitation process, the following steps were taken by the IOUs as part of the collaborative planning process:

- IOUs jointly developed a shared timeline for all key milestones, flights, and bidder deadlines.
- IOUs compiled a master list of all 2006-2008 third party implemented energy efficiency programs.
- IOUs cross-referenced the 2006-2008 third party implemented programs, discussing program scopes to understand which programs were similar across utilities.
- IOUs jointly developed a set of criteria, in consultation with the combined PRG (*i.e.*, participating members of all three PRGs), to identify 2006-2008 third party programs to be renewed for the 2009-2011 program cycle.

- Per. D.07-10-032,[175] IOUs analyzed current program status of existing third party programs, and determined which were eligible for renewal.
- Of the remaining programs, other successful program designs were adopted statewide where feasible[176] but RFPs were only issued in IOU service territories which did not have the program as part of the 2006-2008 portfolio. These program designs were sought through Local Targeted Solicitations. In three cases, the IOUs identified programs where there was a need to issue an RFP in all four IOU service territories. These three programs were sought through Statewide Targeted solicitations.

Each statewide solicitation was coordinated by a lead IOU that was responsible to coordinate the development and release of the RFP in close coordination with the other IOUs. Bidders had the option to bid into any number of service territories, and were not required to respond with a bid proposing a program that covers all four IOU territories. The IOUs implemented other mechanisms that facilitated common statewide solicitation, including:

- Statewide Call for Abstracts and RFP – The IOUs used the same call for abstracts and RFP documents for the two-stage Statewide General Solicitation.
- Statewide Targeted RFPs – The IOUs used the same RFP documents for the Statewide Targeted RFPs.
- Local Targeted RFP Templates – The IOUs agreed to the same program, cost, and technical submission

[175] D. 07-10-032, dated October 18, 2007, OP# 15, p. 145.

[176] Certain programs targeted discrete market segments which did not exist in all service territories (*e.g.*, no dairy farms in SDG&E's service territory).

requirements. Each IOU used their targeted solicitation requirements into the statewide RFP template.

- Statewide Portal – The IOUs developed a statewide web-based solicitation portal (PEPMA) that allowed bidders to register on-line to receive RFP notifications, upload proposals electronically, and store electronic versions of solicitation documents in each IOU's "virtual room." Bidders were required to submit hard copy proposals to satisfy SCE's Procurement requirements, however the portal provides a common interface for the IOUs, PRG members, and bidders.
- Statewide Bidder's Training – The IOUs required all bidders to attend a mandatory training via webinar to review the work paper and E3 calculator requirements. The IOUs jointly offered training in support of each flight unless an IOU did not have an RFP within a particular flight.
- Statewide Scoring Criteria – D.07-10-032[177] directed the IOUs to use the 2006-2008 third party scoring criteria, and combined components of each into one set of scoring criteria. The IOUs jointly developed a common scoring criteria for all statewide solicitations.

b) Third-Party Programs Continued From 2006-2008

Consistent with D.07-010-032, SCE proposes to extend its successful third party programs that were selected as part of the competitive solicitation for the 2006-2008 program cycle into

[177] Finding of Fact No. 23, p. 132.

~~2009-2011~~ 2010-2012.[178] In an effort to further expand successful third party programs, SCE and the other IOUs shared their lists of 2006-2008 successful programs. In order to facilitate the identification of successful programs, the IOUs agreed upon success criteria to be used to determine whether a program and/or implementer was successful and should be continued into 2009-2011. During the development of the review criteria, drafts were shared with the local PRG members for their insight. The criteria for evaluating success of the programs included:

- Program Goals and Achievements – includes commitments – is program at or ahead of contracted/revised forecast? If not, does implementer have a solid plan to meet goals?
- Program Cost – Is the program's actual levelized cost (Program Administrator Cost test) equal to or less expensive than original forecast? If not, did program change substantially from forecast to increase comprehensiveness or incorporate new delivery strategies?
- Cost-effectiveness – Is the program's actual Total Resource Cost greater than or equal to original forecast? If not, did program change substantially from forecast to increase comprehensiveness or incorporate new delivery strategies?
- Actual Installed Measure Mix – Does the actual measure mix vary substantially from the forecasted measure mix? Particularly, is the actual mix less comprehensive, or does the end-use split vary dramatically from forecast?
- Customer Satisfaction/Program Quality – Does program have outstanding complaints from customers or other implementers, or outstanding inspection failures, excluding very recent issues that implementer has not had reasonable opportunity to resolve yet?

[178] D.07-10-032, dated October 18, 2007, pp. 74-75.

- Coordination/Vendor Relationship – Is existing coordination agreement working well? Is implementer proactively coordinating with other programs and stakeholders, including utility account representatives and programs, other third party programs, and local government partnerships? Is the vendor cooperative, responsive, and meeting needs? Are their responses timely?
- Regulatory and Reporting Compliance/Audits – Are implementer's reports accurate and on-time? Is implementer in compliance with all regulatory requirements? Is the implementer responsive to audit data requests? Are audit requests accurate and on-time?
- Energy Savings Claims – Are program/project savings claims clear, well documented and defensible?

Additionally, per D.07-10-032,[179] only programs that were competitively bid in 2006-2008 could be considered for renewal to be included in the 20 percent requirement.

c) Efforts To Expand Third-party Programs And Results Of Competitive Bid Selection Process

To find and fund the most promising third party programs and expand the number of potential offerings, SCE worked with the other IOUs to expand the reach of potential responders to the Call for Abstracts/RFPs. The IOUs shared outreach techniques including mailing lists with other IOUs, trade associates, and service lists, to inform a greater number of potential bidders about upcoming program solicitations. As a result, SCE sent email pre-notification of the various Calls for Abstracts to over 2,700 potential bidders. SCE's efforts to expand third party programs included: (1) expanding targeted RFPs to incorporate program designs from other IOU's 2006-2008 energy efficiency portfolio; (2) expanding SCE's 2006-2008 IDEEA program to statewide programs in ~~2009-2011~~ 2010-2012; and

[179] D.07-10-032, dated October 18, 2007, pp. 74-75.

(3) developing IDEEA 365 as a non-traditional method to expand SCE's open solicitation offering and to provide additional outreach during 2009-2011.

SCE's successful 2009-2011 program solicitation process yielded several new and promising program offerings, as shown in Second Amended Exhibit SCE-2, dated July 2, 2009. These selected programs were a result of the successful implementation of a statewide general solicitation, locally innovative solicitation, statewide targeted solicitation, and local targeted solicitation. SCE reached out to thousands of potential bidders, received several hundred abstracts and proposals, and selected more than 28 program implementers as a result of these competitive solicitations.

d) Review with Peer Review Group (PRG)

In D.07-10-032,[180] the Commission continued the role of the local PRGs for 2009-2011. Specifically, for SCE, the Commission continued the role of the combined SCE and SCG PRG. The PRG role is to:

> "(1) review the IOUs' submittals to the Commission and assess the IOUs' overall portfolio plans, including their plans for bidding out pieces of the portfolio per the minimum bidding requirement, and (2) review the bid evaluation utilized by the IOUs and their application of that criteria in selected third-party programs. In addition, the three PRGs are expected to meet and assess the statewide portfolio in terms of its ability to meet or exceed short and long-term savings goals in compliance with the Rules."[181]

To support the Commission's vision for the PRG, SCE engaged its local PRG during the portfolio planning process. PRG activities included:

- Identifying the Energy Division as a liaison between SCE and the PRG to facilitate and manage communications;
- Developing tracking mechanisms for monitoring and resolving PRG related issues;
- Attending regular PRG meetings and conference calls;

[180] D.07-10-032, dated October 18, 2007, OP# 30, p.149.

[181] D.05-01-055 and Policy Rule VII.4

- Soliciting feedback from PRG members on third party abstracts, RFPs, and selection criteria, and
- Collaborating with the other IOU PRG liaisons to coordinate on statewide efforts.

Throughout the planning process, the PRG has provided recommendations and insights to refine and improve the development of the third party program solicitation process. Key PRG recommendations that SCE adopted in the solicitation process include:

- IOUs should use the Statewide PRG's recommended definition of innovation to be used in the RFPs.
- SCE should report on the reasons for technical failures.
- SCE should report on reasons for failures due to non-responsive RFPs. PRG also recommended that for technical failures, reliability of savings and cost-effectiveness criteria categories should be zeroed out.
- SCE should develop a PRG summary sheet for each solicitation to include measure mix by percentages, with scoring variation comments (for low and high scores).
- SCE should report back to the PRG after negotiations on contract status, changes to contracts, and/or programs that fell out of negotiations.
- SCE should develop a PRG library in the on-line web portal (*i.e.*, PEPMA) to facilitate sharing and transferring of PRG documents.
- SCE should develop a PRG view to allow the PRG to see all proposals submitted in PEPMA.

SCE meets with the PRG during each phase of the third party program solicitation process including: (1) initial scope and schedule; (2) development of RFPs and scoring criteria; and (3) scoring and selection of the program proposals. SCE appreciates the insights and contributions of its PRG during this very involved and lengthy process and looks forward to their continuing support during the 2009-2011 program solicitations.

e) Implementer Contracts

SCE has gained valuable experience over the past several years in developing and administering third party contracts. Based on this experience, SCE proposes to create third party contracts that: (1) promote a "pay for performance" approach while minimizing reliance on "time and material" contracting; (2) allow for immediate execution of third party contracts upon Commission approval of ~~2009-2011~~ 2010-2012 program portfolio; (3) emphasize greater comprehensive approaches (*e.g.*, multiple end uses); (4) promote greater DSM integration and coordination; and (5) allow for increased funding for successful installation of energy efficiency projects while providing for program closure for non-performing programs. Reliance on these sound contracting approaches will allow successful programs to continue to play an integral role in achieving SCE's ~~2009-2011~~ 2010-2012 energy efficiency goals.

(1) Pay For Performance Contracting

In order to limit exposure to investments in programs that do not achieve or marginally achieve contract milestones (*e.g.*, installed energy efficiency projects), SCE proposes to award contracts with a not-to-exceed cap of 25 percent (of non-incentive funds) for time and materials work, and a 75 percent fixed unit price component, based on "pay-for-performance." Depending on the program circumstances, SCE may modify these proposed caps. In addition to energy savings goals, other milestones may be included in the contract to track each program's progress toward meeting its energy savings targets. In this way, limited funds and valuable time are not compromised by contracts that allow funds to be expended over a significant period of time without realizing program results.

(2) Timely Execution Of Contracts

SCE proposes to complete negotiations and execute contracts immediately upon Commission approval of the ~~2009-2011~~ 2010-2012 program portfolio. This will allow for timely implementation of the third party programs. SCE will work with the implementers during contract negotiations to substantiate each program energy saving's estimates and update the E3 Calculators. However, SCE and the third party may agree not to execute a contract for variety of reasons (*e.g.*,

energy savings assumptions flawed, technology unavailable, *etc.*). In such cases, funds will be used for future ~~2009-2011~~ 2010-2012 "in-cycle" program solicitations and/or other areas of the portfolio.

As for contract completion, depending on the program design, program implementation will extend through the end of ~~2011~~ 2012 with "wrap-up" work (*e.g.*, final reporting, final invoicing/payment, installations, inspections, *etc.*) possibly continuing through mid-~~2012~~ 2013. However, implementation activities (*e.g.*, new customer commitments, marketing/outreach, *etc.*) are planned to conclude by end of ~~2011~~ 2012.

(3) Emphasize Greater Energy Efficiency Comprehensiveness

As the energy efficiency goals increase over time, cost-effective energy savings and demand reduction opportunities become more difficult and costly to harvest. In response, SCE will encourage third party implementers to offer more comprehensive approaches to customers, where feasible and reasonable. SCE will strive to have contracts that include provisions for adding new measures during the course of the program implementation. The ability to add new measures during program implementation will help facilitate a comprehensive approach at a customer site. In addition, contracts will require program implementers to be familiar with the other program offerings within SCE's portfolio, including other third-party programs and local government partnerships, where appropriate. Contracts will also require that program implementers refer customers to these other programs, as appropriate and practicable. This approach will typically limit the number of visits to customer sites, thereby potentially reducing lost opportunities and costs.

(4) Promotion Of DSM Coordination And Integration

SCE proposes to design contracts that allow for greater coordination and/or integration of DSM offerings. Typically this will include capturing "leads" for other DSM offerings (*e.g.*, demand response) to increase participation in those programs.

(5) Mid-Cycle Program Funding Augmentation And Program Cancellations

At times, third party programs may experience greater demand than originally planned. Conversely, programs may experience little to no demand. SCE will create

contracts that are designed to allow for such occurrences. In these cases, SCE will augment funding during the cycle (*i.e.*, mid-cycle) to better react to market demand.

3. Partnerships

a) Proposed Local Government Partnership Structure And Statewide Consistency

SCE's partnership portfolio addresses energy efficiency with many of our public sector customers to more effectively respond to the specific barriers that this sector must address in implementing energy efficiency. This sector faces particularly difficult issues with respect to limited budgets, complex and hierarchical energy decision making processes, insufficient energy efficiency training, and limited staff resources that warrant the added attention and support afforded through the partnership approach.

SCE's partnership portfolio includes both local government partnerships as well as institutional partnerships. In both cases, SCE works in closely with the partner organization to identify the unique issues that the partner faces, determine how the partnership can help to resolve those issues to drive a long term energy efficiency strategy and implementation plan, and provide the necessary support to assist the partner in reaching their energy efficiency goals.

In the ~~2009-2011~~ 2010-2012 cycle, the partnership program will build upon many successful processes from the 2006-2008 cycle. In that cycle, strong partner relationships and streamlined communication channels were developed. In the ~~2009-2011~~ 2010-2012 cycle, the partnership program will continue to leverage the strengths of the past cycles as well as adapt to new processes based on lessons learned. Specific areas of change include a stronger integration of energy efficiency with demand side management programs, including: (1) demand response; (2) a focused effort to guide the partners in addressing the goals of the Strategic Plan (improvement of code compliance, adoption of reach codes, and the development of strategic guidance documents); and (3) helping our local government partners to lead through example by first addressing the energy efficiency potential in their own facilities. These enhancements will be applied to both the local government partnerships and institutional partnerships.

The description below will provide further details on the program rationale and approach for both the statewide partnerships as well as the local government partnerships.

b) Proposed Institutional Partnership Structure

SCE and the other IOUs have developed collaborative energy efficiency partnerships with institutions and government customers. These partnerships will leverage the skills and knowledge of each organization to overcome unique operational, technical, financial and cultural barriers and other external influences (including the Strategic Plan, AB 32, salient Executive Orders and other mandates). The partnerships will address the hurdles to implement cost effective energy efficiency programs that will result in both immediate and long-term peak energy savings and demand reduction. These institutional and government customers consume vast quantities of energy and make up a large portion of the electric and natural gas load in the State of California. They are large, complex organizations with a broad set of goals, stakeholders, processes and constituencies. Each is diverse from a geographic, climate, and operational needs standpoint. But with this size and diversity also comes a considerable opportunity to save energy and reduce operational cost that benefits both utilities and California.

The Institutional Partnership portfolio is proposing seven partnerships. These partnerships consist of three educational institutions (UC, CSU and CCC), one state agency (CDCR), one with the State of California and three county governments (Los Angeles, Riverside and San Bernardino). Most of these partners participated in the last program cycle, with the new addition of the County of San Bernardino.

Some local county government partners are included in the Institutional Partnership portfolio because the program has a strong emphasis on the implementation of energy efficiency in county municipal facilities. SCE is cognizant of the CPUC objectives to direct local government partnerships to work with communities in developing strategies that align with the Strategic Plan. At this juncture, some of our county governments have indicated they are not yet ready to fully participate in broader strategic initiatives, including community outreach and training activities. During this program cycle, the teams will strive to build the capacity for developing a community outreach and

development plan for these local governments, and support other objectives as articulated in the Strategic Plan (code compliance, reach codes and other local government strategies).

Each partnership has a management team comprised of representatives from each partner organization. For instance, for the UC/CSU Energy Efficiency Partnership, the management team consists of representative from each of the investor owned utilities (SCE, SCG, SDG&E and PG&E), the UC Office of the President, CSU chancellor's office and other representatives from selected campuses statewide. This management team will provide oversight for the partnerships to coordinate and deliver an integrated program that will align to the Strategic Plan where applicable.

The objectives of the Institutional Partnerships are to:

- Direct a stronger focus on helping partners lead by example through addressing energy efficiency opportunities in their own facilities. Additional savings will be achieved by working in the early stages of new construction projects to assure the most energy-efficient design acceptable to the customer (and to increase the desire to make highly energy-efficient designs "acceptable"). Specifically, the partnerships will provide technical assistance in identifying energy efficiency retrofit and retro-commissioning (RCx) projects, design assistance for New Construction, financial assistance to help overcome barriers to implementation of these projects, and an integrated approach for EE/DR audits.
- For Local Government/County partnerships, the Partnership will build the foundation and implement a plan to address local government objectives responsive to the Strategic Plan.
- Influence energy decisions by demonstrating the successful implementation of energy efficient measures and achieving energy management goals. This approach includes the delivery of results through integrated partnership activities. These activities will integrate Energy Efficiency, Demand

Response (DR), California Solar Initiative (CSI), Self Generation Incentive (SGIP) Programs as applicable to each partnership's needs.

- The partnership will facilitate enhanced compliance with codes and standards (AB 32, LEED, exceeding Title 24 standards, *etc.*) that will result in reduction in greenhouse gas emissions in California through a reduction in electricity and gas consumption.
- Leverage Partners' internal communication structure to bring IDSM information to internal departments more effectively.
- Encourage executive management support for energy efficiency. Create opportunities to save energy, reduce operating costs, and improve occupancy comfort.
- Demonstrate cost-effective implementation of energy projects by supplementing the customers' project funding with the incentives offered by the utilities.
- Evaluate the value of energy efficiency activities and the benefits associated with retrocommissioning.
- Exhibit the potential for future public/private partnership efforts.
- Construct a long-term plan for retrofit and retrocommissioning projects to be implemented throughout the program cycle. Plan will include an integrated EE/DR audit of customer facilities, identification and implementation of eligible energy efficiency measures and demand response strategies.
- Share best practices and achievements from partnership activities in public forums such as: CPUC workshops, industry events, and peer-to-peer interactions.
- Increase awareness of energy efficiency among government officials, agency managers, operating staff, and the general public.

c) Proposed Local Government Partnership Structure

SCE has refined and strengthened SCE's ~~2009-2011~~ 2010-2012 partnership portfolio to enhance partner benefits, increase cost-effectiveness, and improve the consistency and transparency of the selection of local government partnerships (LGPs). The major change in SCE's partnering strategy has been the selection and development of LGP programs.

SCE's new Energy Leader (EL) model for local governments improves the current local government partnering strategy – and supports the Strategic Plan directions – by establishing a disciplined approach for local agencies to lead by example and realize energy savings. Partners demonstrate leadership and environmental stewardship by taking action in their own facilities as well as engaging local business and residential customers to participate in DSM programs.

The model provides clarity to local governments regarding their levels of energy use (both in their own facilities and in their communities) so they can make informed decisions and take steps to realize their energy efficiency potential. The partnership works with them to identify specific retrofit opportunities within the local government's own municipal facilities and works hand in hand to determine the most effective outreach channels and methods to improve energy efficiency in the community. Using this approach, local governments take leadership within their own facilities as well as fully engage in playing a proactive and valuable role in outreaching to their communities.

- The model includes the following specific operational characteristics:
- The level of support that the utility provides will be tiered based on the level of energy efficiency achieved in municipal facilities and throughout the community. The purpose of this is to give partners recognition for taking aggressive and bold steps as a leader in energy efficiency and to motivate higher levels of participation.
- The type of support available to local governments can be a combination of incentives, technical support including Strategic Plan support, marketing, outreach, and education, depending on the specific needs of the community. However, the amount available for support is commensurate with a city's

energy savings commitment, using a consistent calculation methodology, again to recognize them for achievements.

- The incremental tiered support provided must be cost-effective.

Additionally, SCE partnerships support local governments in the establishing of community-wide goals and strategies. The program:

- Co-brands program offerings and provides joint outreach to communities. The partners will leverage their local infrastructure to initiate outreach of energy efficiency and deepen the reach of energy efficiency programs and services;
- Acts as an outreach portal for energy services (*e.g.*, energy efficiency, demand response, self-generation, solar, low income energy efficiency, *etc.*);
- Synchronizes with future green community concepts supported by the Commission and the utilities statewide, and
- Assists local governments in improving compliance with energy codes and regulations, providing assistance and templates to support the development of guidance documents such as climate action plans and energy action plans as well as other strategic plan activities.

The new Energy Leader model's goal is to stimulate greater engagement by local governments in energy efficiency activities while maintaining compliance with all CPUC criteria, including cost effectiveness. All interested SCE cities pursuing a long-tem sustainability strategy qualify as Energy Leader Partners. Joint Powers Authorities and non-profits representing groups of cities can also qualify for partnerships.

The model is established to accommodate local governments at all levels of readiness, from the valued partner level, which begins to educate and guide local governments in understanding and implementing energy efficiency to the most experienced and progressive partners at the platinum level.

Partnership levels are:

- Valued Partner Level – this level is the entry level for partners to develop knowledge and establish goals towards the Silver Level. A budget is available for marketing, education, Strategic Plan support and outreach to the community, and for technical assistance toward the partners' facilities. Although there would be no enhanced incentives, the partner is expected to generate verifiable energy savings in their own facilities and in the community using the marketing and outreach funds.
- Silver Level – this level recognizes the partner for past participation in energy efficiency programs requires the development of an energy action plan, sets community and city energy reduction goals, and targets city facilities to complete energy efficiency upgrades and participate in demand response. An enhanced incentive is paid at the Silver Level.
- Gold Level – this level offers higher incentives for energy efficiency projects at the partner's facilities. To qualify for this level, the partner demonstrates higher past participation in energy efficiency programs, establishes higher city and community program participation and energy savings goals, and demonstrates a higher level of participation in demand response.
- Platinum Level – this level offers the highest incentives for partner energy efficiency projects at partner facilities, and offers additional incentives for community energy efficiency projects. To qualify for this level, the partner demonstrates even higher past participation in energy efficiency programs, is innovative, and takes specific actions to support the Strategic Plan, including Energy Action Plan implementation, compliance improvement, and the development of reach codes and innovative ordinances, *etc.* All facilities are targeted for energy efficiency upgrades and the partner makes a higher commitment to participate in demand response.

d) Statewide Consistency

The Commission hosted workshops on January 29 and 31, 2008, to jointly solicit existing local government partner input on partnerships moving forward into the new cycle. The IOUs drafted 2009-2011 partnership selection criteria to reflect this input and improve statewide consistency. With input from members of the PRG, the IOUs also jointly developed a Call for Abstracts (CFA), a CFA schedule, and a pre-announcement notice.

Additionally, the IOUs worked together to develop a similar evaluation process and document to capture the evaluators' scores. SCE scored each proposal independent of the other IOUs.

After the July filing, the Commission encouraged a statewide approach to the local government partnerships and hosted a workshop on December 17, 2008 with IOU Partnership staff and local governments' representatives to discuss the Strategic Plan. Several conference calls were later held with IOU staff, Energy Division staff and their consultants resulting in the development of three core program elements for local government programs. The Commission provided the guidance below for the statewide elements of the local government program implementation plans:

4-6 A: Government Facilities

4-6 A.1 Retrofit of county and municipal facilities

4-6 A.2 Retrocommissioning (of buildings or clusters of buildings)

4-6 A.3 Integrating Demand Response into the audits

4-6 A.4 Technical assistance for project management, training, audits, *etc.*

4-6 A.5 On-bill financing

4.6 B: Strategic Plan Support

4-6 B.1 Code Compliance Support

4-6 B.2 Reach Code Support

4-6 B.3 Guiding Document(s) Support

4-6 B.4 Financing for the Community

4-6 B.5 Peer to Peer Support

4-6 C: Core Program Coordination

4-6 C.1 Outreach and Education

4-6 C.2 Residential and Commercial Direct Install

4-6 C.3 Third-Party Program Coordination

4-6 C.4 Retrofits For Just-Above LIEE-qualified Customers

4-6 C.5 Technical assistance for program management, training, audits, *etc.*

e) Government And Institutional Partnership Opportunities

As the awareness and success of the government and Institutional Partnerships grow, more government agencies and institutional customers may wish to form partnerships. SCE proposes to reserve a budget for these partnerships should they materialize during the course of the three-year program cycle.

In order to create a new partnership, the government agency would develop an abstract similar to those used in the initial program planning for original 2009-2011 program cycle. If the partnership is with SCE only, the abstract would be submitted to SCE. SCE would then review the abstract and evaluate according to the original evaluation criteria, as well as the availability of remaining funds. If the proposed partnership appears viable and there are sufficient funds remaining, SCE will work with the partner to create a formal partnership. If the partnership is statewide, the development will be coordinated with the participating IOUs to ensure consistency in program development, program implementation plan, incentive rates, management, and reporting.

f) Partnership Selection Criteria And Process

D.07-10-032 gave the PRG oversight over the selection of local government partnerships.[182] The development of selection criteria for the 2009-2011 Local Government Partnerships was a collaborative process that included the local governments themselves, the IOUs, and PRG members. These criteria were used in the selection of both local and statewide partnerships at SCE.

[182] D.07-10-032, dated October 18, 2007, p. 103

On January 29 and 31, 2008, the Commission held a workshop with existing local governments to discuss strategic planning and potential criteria for 2009-2011 partnerships. Local governments suggested several criteria that would leverage the uniqueness of local governments to create change. The IOUs used these suggestions to develop a draft document for review by the PRG. The IOUs and the PRG met in February 2008 to discuss and refine the criteria. The IOU's final list of criteria included:

- Cost Efficiency
- Skill and Experience
- Demonstrated Commitment
- Municipal Facility Buildings
- Feasibility
- Integrated Approach
- Comprehensiveness
- Innovation and Reflects Strategic Plan

A pre-announcement was sent to all cities, counties, and local government organizations, and appropriate non-profit organizations on February 11, 2008, alerting them that the Call for Abstract (CFA) would be released on February 21, 2008. SCE and existing partners supported the distribution of the abstract in SCE's service territory.

Eligibility requirements to become a partner were also developed among the IOUs, with input from PRG members. For ~~2009-2011~~ 2010-2012, new partnerships will be with government or non-profits that work directly with government entities, government associations, and joint powers authorities. A CFA was drafted by the IOUs, with review and input from members of the PRG. The CFA was issued on February 21, 2008, and required interested partnerships to submit their abstracts by March 10, 2008.

Abstract evaluations consisted of two parts – the responsiveness of the Abstract and its scoring (for Abstracts that meet the minimum threshold requirements). The IOUs first evaluated

whether the Abstract met the threshold requirements on a pass/fail basis. Only Abstracts that received a "pass" were further scored according to the criteria and weights listed below:

Table IV-14
Abstract Evaluation Criteria

Item	Criteria	Weights
Part 1: Threshold Requirement		
A.	Abstract Responsiveness	Pass/Fail
Part 2: Proposal Scoring		
A.	Cost Efficiency	20%
B.	Skill and Experience	10%
C.	Demonstrated Commitment	10%
D.	Municipal Facilities	15%
E.	Feasibility	10%
F.	Integrated Approach	10%
G.	Comprehensiveness	10%
H.	Innovation and Reflects Strategic Planning Process	15%

g) Review With Peer Review Group

Scores for each partnership were recorded in the summary sheet submitted to PRG members on March 19, 2008 along with the actual abstract. SCE and the PRG members reviewed and discussed evaluation scores together on March 27, 2008.

PRG members provided formal feedback by way of a memorandum to government agency staff proposing local government partnership programs and to IOU staff regarding PRG member input on LGP programs. The purpose of the memorandum was to ensure that local government partnership programs embody the spirit of the new paradigm of the Strategic Plan. SCE continues to work with the partners to improve and align the program plans.

h) PRG Recommendations And Responses

The PRG members provided suggestions on the development of the selection criteria including:

- The definition of a quasi government partnership and that meeting the definition of Partnership should be a threshold criteria;
- Threshold criteria would include meeting the definition of "partnership";
- The addition of the "innovation and reflects strategic planning" criteria;
- Clarifications to the criteria definitions and sub-criteria descriptions (*e.g.,* incorporated suggestion to clarify "skill and experience", criteria to include experience with "related projects", *etc.*);
- Criteria weighting should look similar to the third party weighting;
- Specific changes to the weighting of the criteria (*e.g.,* increased weighting for "innovation and reflects strategic plan" and decreased weighting for "feasibility"), and
- Recommendation to send out the draft criteria to existing partners and obtain feedback.

Listed below are the key suggestions from PRG members that were incorporated into the CFA document and process:

- Existing partners would need to submit abstracts, comply with CFA criteria, and be scored;
- Private sector firms and others who did not fit the new definition of partner would need to change their structure to comply;
- Edits to CFA language and format (*e.g.,* length of partners abstracts and further clarity to criteria definitions);
- Pre-announcement should be sent out to local governments and agencies; and
- Local government abstracts would be sent to the PRG for review.

i) Partnerships Comply With Energy Efficiency Policy Manual

The IOUs and PRG members developed criteria that could be supported by the existing energy efficiency policies with two exceptions- "integration" and "innovation and reflects strategic plan." Currently, the Energy Efficiency Policy Manual states that the partnership arrangements

"should in no way diminish or dilute the responsibility and accountability of Program Administrators to meet the Commission-adopted savings goals."[183] Therefore, potential partners were asked to identify those innovative and strategic plan elements separately, along with the applicable budgets.

Although integration of other energy programs including demand response and solar were a criterion, incremental funding to support these activities would need to come directly from the appropriate program.

Additionally, SCE intends to use the 2006-2008 Partnership Agreement as the basis for ~~2009-2011~~ 2010-2012 partnerships. The ~~2009-2011~~ 2010-2012 contract templates will be substantially similar to 2006-2008 templates that were developed to meet policy requirements that address the rights and responsibilities of the partners, program flexibility, information sharing, intellectual property ownership, reimbursement turn-around, and dispute resolution. Modifications may be made to reflect the individuality of the different partnerships and clarification of existing language.

j) Palm Desert Demonstration Partnership

Although integration of other energy programs including demand response and solar were a criterion, incremental funding to support these activities would need to come directly from the appropriate program.

Results from operations in year one of this five-year project show that participation in energy efficiency increased by more than a factor of four since the partnership launched its program.

The project seeks to develop an energy management system for residential and small commercial customers and pioneer methods to both affect and measure energy savings associated with behavioral changes. Additional ordinance changes will be considered to build upon the successes of the city-wide energy ordinance launched in January of 2007. A new method of financing energy efficiency projects is under development for launch in 2009. AB 811, passed by the state legislature and pending senate vote, may allow local governments to provide energy efficiency loans to its businesses

[183] Energy Efficiency Policy Manual v.3.1, dated January 8, 2008, Rule 5, p.A-13.

and residents and collect the payments through property taxes. This financing mechanism will be available for any community in California and is expected to result in a substantial increase in program participation. A full program implementation plan for the Palm Desert Demonstration Project is in Exhibit SCE-4, dated March 25, 2009 as amended in part by SCE-10, dated July 2, 2009.

4. Summary Of Market Transformation Strategies

Key market transformation strategies are summarized in Section IV.A.5, "Portfolios are designed to overcome barriers to market transformation and to advance integration." Additional details are also discussed in the Program Implementation Plans in Amended Exhibits SCE-3 (A&B), SCE-4, ~~and~~ SCE-5 and SCE-10, dated July 2, 2009.

5. Proposals For On-Bill Financing

a) Nonresidential And Institutional Customers

As guided by the Strategic Plan, SCE proposes to build on the experience of the On-Bill Financing (OBF) Pilot conducted during the 2006-2008 program cycle as part of a coordinated Financial Solutions program effort. In this cycle, OBF was offered to qualified convenience store and small grocery store customers electing to participate in a direct install energy efficiency program. The pilot program required a minimum loan amount of $5,000 and a maximum loan term of five years.

The Strategic Plan[184] identified OBF as an option in many customer segments, provided that adequate eligibility standards and enforcement mechanisms are in place to limit risk to ratepayers. SCE proposes to extend OBF as a financing option to qualified small commercial and institutional customers (including governmental) undertaking approved efficiency improvements. Loans would be:

- zero percent interest for qualifying energy efficiency installation of lighting, refrigeration, and air conditioning measures to commercial customers and governmental institutions;

[184] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 30-41, 51-56 and 89-97.

- typically up to five-year term for commercial customers and typically up to seven-year term for governmental ones, based upon the customer segment and measure life; and
- for commercial customers ranging from $5,000 to approximately $50,000; for governmental institutions be capped at approximately $250,000 (subject to further research).

OBF is a standardized non-resource offering designed to be leveraged by multiple resource programs, rather than a targeted resource program as in 2006-2008. SCE proposes to offer an OBF financing option for the nonresidential retrofit energy efficiency programs and sub-programs under Financial Solutions program, as well as for many of the market segment programs implemented by third party contractors that will deliver calculated and deemed measures to specifically targeted market sub segments. OBF, traditional third-party financing, and alternative financing vehicles are an important element in implementing the Strategic Plan and deploying energy efficiency, especially considering the ferocious credit crunch facing many businesses and homeowners in southern California.

The proposed ~~2009-2011~~ 2010-2012 OBF program, an element of the Financial Solutions program, is a significant expansion of the 2006-2008 pilot. In order to facilitate appropriate controls and tracking, SCE plans to set up a separate balancing account for the purpose of tracking the loans. However, all loans will be funded through energy efficiency funding, as set out in this proposed portfolio. The operation of this account is described more fully in Chapter VII, Revenue Requirements and Cost Recovery.

b) Proposal For On-Bill Financing For Residential Customers

In response to D.07-10-032 and the Assigned Commissioner's and Administrative Law Judge's Ruling[185] to further analyze residential on-bill financing to residential customers,[186] SCE supports renewed evaluation of all residential financing options, including residential on-bill financing.

[185] Assigned Commissioner's and Administrative Law Judge's Ruling Requiring Supplemental Filings of 10-30-2008 in response to SCE's Application 08-07-021 Section 2. Required Revisions, subsection H Program Specific Gaps, p. 17.

[186] D.07-10-032, dated October 18, 2007, OP# 13, p. 144.

SCE proposes to expand its evaluation in collaboration with the other IOUs through direct participation and support of a Statewide Task Force (as recommended by the Strategic Plan[187]).

SCE is also presently seeking qualified consultants and advisors to provide an up-to-date evaluation of best practices in the financing of residential DSM projects, the current market for traditional third party financing of residential DSM projects, and alternative, creative financing vehicles for residential DSM projects.

Currently, SCE does not offer OBF loans to residential customers, but SCE has had direct experience dating as far back as the early 1980s in providing residential on-bill financing for energy efficiency projects.

SCE's past experience in residential on-bill financing along with our continued internal evaluation and study of this service has resulted in findings similar to what is found in the current literature. In general, SCE's experience, analysis, and available research have identified several challenges to implementing fiscally responsible residential on-bill financing. One recent study conducted by CIEE[188] identified the following limitations, especially for residential on-bill financing programs for DSM projects:

- Limited applicability of the programs to the households most in need:
- A certain segment of the residential population that is educated, motivated, and credit-worthy avails the opportunity of OBF when available. Conversely, OBF historically has been unable to get participation from segments of the population most in need of financing.
- Low market penetration rates:
- Traditionally, only a small fraction (less than 0.1%) of the potential residential population takes advantage of the OBF option. However, due to limited

[187] CLTEESP, September 2008, p. 20.

[188] Enabling Investments in "Energy Efficiency- A Study of energy efficiency programs that reduce first cost barriers in the residential sector, prepared for CIEE Financing Team, September 2008.

participation data, studies have not been able to fully assess the reasons for such a low penetration rate.

- Difficulty assuring that savings will exceed payments:
- The average loan term for residential home improvement loans is five to seven years, which for some retrofits is not long enough to achieve positive cash flow (*i.e.*, energy cost savings are greater than loan payments). This issue also limits support for comprehensive energy retrofits where energy savings are realized over a term greater than five to seven years
- Programmatic issues for a residential OBF program:
- An OBF program needs to work with other programs that offer additional incentives in the form of rebates or direct install to get wider participation from the residential population. On the implementation side, changing billing systems to allow for OBF can be difficult and administratively burdensome. Also, repayment allocation becomes an issue when customers "short-pay" bills, as the utility is placed in the position of covering its energy expenses first, thereby increasing its credit exposure.

Historical data on various incentive mechanisms to finance residential retrofits suggest that the perceived value of OBF to residential customers has been very low compared to other incentive offers and that the credit risk to the lending utility has been very high. This behavior also is in direct contrast with the behavior of sizeable commercial establishments that can plan their physical plant maintenance and improvements in a rationalized, incremental way and can make use of OBF options offered by utility. A residential customer decision study[189] modeled customers' willingness to trade off appliance price reductions (as affected by rebates) and/or financing against the value of energy savings. All other things being equal, including the monthly or other regular payment involved in energy efficiency changes, decision makers "consider $1 of financing to be equivalent to about a third of a

[189] Residential Customer Decision Study – Analysis of Residential Equipment Purchase by Ken Train, Cambridge Systematics 1994 www.calmac.org SCE0033.01; 501

dollar lower price for the high efficiency appliance."[190] This may be viewed as the net effect of the simple obligation to pay back funds. The analysis also determines that as financing amounts increase the monthly payment, the relative attractiveness of financing suffers further in the householder's preferences: "if the monthly payment rises with extra financing, then the financing becomes less attractive, and it takes more than $3 of extra financing to be equivalent to $1 of extra rebate."[191] Illustrating the apparently greater persuasive efficacy of rebates over financing, the study used its calibrated preference model to determine that the efficient refrigerator share of purchases achievable through an existing utility rebate program could only be matched through financing with draconian arrangements – for example 90 percent five-year financing of the purchase price at 2 percent interest.[192] This is fairly strong evidence for the relative efficacy (three to one, or more) of approaches in the residential sector that draw down the upfront purchase price for energy efficiency as opposed to spreading that price over several years of finance payments.

It is not SCE's intent nor is it consistent with our fiduciary responsibility or relevant regulatory requirements to absorb greater or less credit risk than would be absorbed using prudent credit analysis and lending standards. This guiding principle also pertains to residential OBF. SCE's ongoing evaluation of residential OBF as a value-added service is further impacted by the current credit crisis which has resulted in higher electricity bill payment delinquency rates – thereby leading SCE to conclude that residential OBF may be even more challenging today than ever.

The potential role of residential OBF is also likely to be shaped by the recently enacted AB 811[193] which, as the Strategic Plan describes "authorizes cities to provide low-interest loans

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[190] Residential Customer Decision Study – Analysis of Residential Equipment Purchase by Ken Train, Cambridge Systematics 1994 www.calmac.org SCE0033.01; 50, p. 4-10

[191] Residential Customer Decision Study – Analysis of Residential Equipment Purchase by Ken Train, Cambridge Systematics 1994 www.calmac.org SCE0033.01; 50, p. 4-10

[192] Residential Customer Decision Study – Analysis of Residential Equipment Purchase by Ken Train, Cambridge Systematics 1994 www.calmac.org SCE0033.01; 50, Table 4-5 p. 4-20

[193] Assembly Bill 811 (Levine, 2008) Streets and Highway Code, §§ 5898 et seq. Available at: http://info.sen.ca.gov/pub/07-08/bill/asm/ab_0801-0850/ab_811_bill_20080721_chaptered.pdf

to property owners with long-term repayments added to their annual property tax bills to help finance energy efficiency improvements and distributed generation installations."[194]

SCE, while recognizing the fiscal challenges local jurisdictions are currently facing, will work with cities and local jurisdictions in its service territories to help them implement AB 811, as relevant. In essence, cities will be able to use their new authority to designate areas within which a willing property owner could enter into contractual assessments to finance the installation of energy efficiency improvements and clean distributed renewable generation that are permanently fixed to the property. SCE will advise and inform municipalities about the opportunity provided by AB 811 and help them develop their AB 811 programs. Additionally, SCE will coordinate and integrate its AB 811 support efforts with other DSM programs, such as surveys, rebates, home performance contracting, and California Solar Initiatives. Furthermore, SCE is pursuing loan guarantees through the U.S. Department of Energy's (DOE) Federal Loan Guarantees for Projects That Employ Innovative Technologies in Support of the Advanced Energy Initiative program, to backstop banks who may feel this new type of municipal bond is too great a risk in today's credit climate. If our application is successful, the DOE Federal Loan program would guarantee the loan, should the city default on repayment of the bond.

SCE is optimistic that AB 811, integrated with utility financing and innovative third-party financing efforts can help provide energy efficiency financing for many of SCE residential customers and serve them in a way that IOU – loans (*e.g.*, OBF) cannot.

6. Proposed Program Delivery And Market Outreach

a) Proposed Marketing And Outreach Program

Accomplishing the long-term goal of integrating demand side management programs, maximizing energy savings, and changing customer behavior requires a multi-layered marketing effort across all stakeholders with responsibility for energy efficiency in all sectors. An

[194] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 96-97.

effective marketing effort will move consumers through a continuum from awareness, to attitude change, to action, as is articulated in the Strategic Plan.

To advance customers through this continuum will require integrated and targeted marketing campaigns. While targeted marketing efforts will be funded exclusively by the program being promoted, the integrated campaigns will receive funding from multiple programs, such as the California Solar Initiative, Demand Response, SmartConnect™, Energy Efficiency and Low-income Energy Efficiency. Below is a summary of SCE's approved, proposed, or anticipated marketing budgets (budgets exclude labor):

~~***Table IV-15***~~
~~***Summary of Marketing Budget***~~

~~**PROGRAM**~~	~~**2009 to 2011 MARKETING BUDGET (non-labor)**~~
~~AMI (SmartConnect™)~~	~~$37,058,929~~
~~California Solar Initiative (CSI)[195]~~	~~$1,500,000~~
~~Demand Response~~	~~$25,503,950~~
~~Energy Efficiency~~	~~$40,043,842~~

Second Amended Table IV-15
Summary of Marketing Budget

PROGRAM	**2010 to 2012 MARKETING BUDGET (non-labor)**
AMI (SmartConnect™)	$37,058,929
California Solar Initiative (CSI) [1]	$1,500,000
Demand Response	$25,503,950
Energy Efficiency [2]	$40,043,842

[1] 2009-2011 CSI marketing budget is estimated, based on actual 2008 CSI budget allocation.
[2] Marketing budget for Energy Efficiency represents the 2010 to 2012 budget cycle.

~~195~~ 2009-2011 CSI marketing budget is estimated, based on actual 2008 CSI budget allocation.

By coordinating and integrating demand side management programs, as appropriate, SCE expects to increase energy efficiency participation, avoid lost opportunities that may result from siloed communications, and provide simple and intuitive solutions for customers. Integrated bundled efforts are used to maximize delivery and gain more widespread awareness of our offerings, while targeted marketing efforts will continue in order to persuade high-potential customers to participate in key program activities, enabling the utility to meet program goals. These efforts will help the Strategic Plan succeed. Marketing, education, and outreach efforts will:

- Integrate DSM programs to provide holistic solutions;
- Leverage SCE's customer segmentation and market intelligence;
- Make it easy for customers to participate (easy to find information, easy to determine best course of action, easy to take action);
- Create interactive "self-service" tools to enable informed choices by customers;
- Leverage partnerships to extend reach (*i.e.,* retailers, cities, community agencies);
- Communicate with customers at the right time and channel throughout their individual deployment lifecycle;
- Conduct pilots to test innovative programs and outreach tactics;
- Utilize the Mobile Energy Units and Events Outreach to reach underserved communities and hard-to-reach customers;
- Leverage advanced meter (SmartConnect™) technology to further educate and inform customers on the benefits associated with the integrated DSM programs, and
- Cross-sell to customers as appropriate.

b) Discussion Of Context And Funding Integration

(1) Demand Response And Advanced Metering Infrastructure (AMI)

As articulated extensively in the Strategic Plan,[196] SCE plans to actively pursue integrated DSM goals, and will evolve our goals even further in ~~2009~~ 2010 and beyond as a result of SCE's SmartConnect™ (AMI) technologies, equipment, and offerings. With the implementation of SmartConnect™, SCE will be able to provide real time information to customers that can help them make more informed decisions about their energy usage. Programs will be developed that give customers both an incentive to save energy and help them reduce energy costs with varying levels of participation.

As SmartConnect™ is rolled out, SCE will integrate bundled DSM solutions into its marketing and communications efforts to customers about SmartConnect enabled rates and offerings. An integrated, multi-media approach will be used to reach SCE's diverse customer base. SmartConnect™ technology will enable SCE to help customers better understand their energy usage and its impact to their bill and the environment. Additionally, SmartConnect™ will provide the utility with an opportunity to conduct an integrated marketing campaign that shows customers how DSM programs combined with SmartConnect™ rates and offerings can help them manage their energy costs. Throughout the SmartConnect™ rollout, SCE will continue to leverage and integrate demand response offerings, such as the Air Conditioner Cycling Program, Base Interruptible Program, *etc.*, into its marketing campaigns and materials. These activities will advance the Strategic Plan implementation.

(2) California Solar Initiative, Including Commission And CEC Programs

SCE will continue to promote the California Solar Initiative (CSI) program to residential and business customers to increase awareness, participation, and application submissions. For cost efficiency and maximum reach, CSI messaging will be included in 'bundled' marketing communications that present customers with the broad array of SCE's energy efficiency and DR solutions. Bill inserts, fact sheets, and training and educational materials will be developed to

[196] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 72-74.

promote the program. Vertical marketing efforts will be implemented to drive participation from customers with the highest propensity to respond to the 'go solar' call to action.

Because a well-trained and appropriately resourced installer community is critical to the ongoing success of the CSI program, SCE will continue to offer monthly installer workshops covering a variety of solar-related topics including interconnection, net metering, shading, *etc.* Training classes geared towards educating residential and business customers about the basics of solar are currently under development. SCE will also utilize the internet as a cost-effective channel to deliver web-based solar training to installers and customers.

SCE will work in partnership with the Commission to provide input leading to the development of a long-term strategic plan (including budget requirements) for marketing the CSI in ~~2009~~ 2010 and beyond. SCE will also identify opportunities to educate builders, new home buyers, trade organizations, and other stakeholders about the New Solar Homes Partnership program (NSHP) which provides incentives to homebuilders that incorporate high levels of energy efficiency and high performing solar systems into new construction.

Providing customers with viable options to manage their energy use and creating a culture that understands the importance of energy efficiency as a long-term investment is the key to achieving market transformation. SCE will leverage the CEC's ongoing effort to educate customers about the importance of asking for high levels of energy efficiency and high performing solar systems when making a new home purchase.

(3) Low Income Energy Efficiency

As extensively discussed in the Strategic Plan's section on the Low Income Residential segment,[197] SCE will continue to reach out to low-income customers using direct mail, bill inserts, outreach events, fact sheets, savings guides, seasonal campaigns, brochures, and sce.com to increase program enrollment, and will expand energy efficiency and LIEE in-home education to leverage information on green house gas and SmartConnect™. SCE will work to identify program

[197] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 25-29.

design gaps between energy efficiency and LIEE and evaluate solutions to ensure that all customers have the opportunity to accelerate adoption of energy efficiency. SCE's activities ~~will be coordinated in 2009 to ensure consistency with the developing single statewide ME&O program, and~~ will be integrated with the statewide program in 2010 and 2011, as directed by the Commission in D.08-11-031.

(4) Distributed Generation

SCE continues to administer the Self Generation Incentive Program (SGIP) that provides economic incentives to customers using clean, renewable, and efficient distributed generation technologies such as fuel cells and wind turbines. SCE will continue to facilitate and promote the use of cost and energy efficient distributed generation applications by it customers. SCE will also participate with the Commission, CEC, and other research organizations to simplify and streamline interconnection processes for Distributed Generation and to develop rates and tariffs that fairly allocate costs while reducing perceived barriers to the use of customer owned and operated distributed generation facilities.

7. Proposed Training Programs

a) Overview

The Workforce Education and Training (WE&T) Program promotes energy efficiency through a variety of training and educational programs across residential and nonresidential customer segments. WE&T overarching goals is not only educate and train current workers, but to prepare future workers to be able to successfully perform the jobs needed to help achieve increased energy savings targets for the SCE and California's clean energy goals.

b) Proposed Strategies and Training Programs

As identified in the Strategic Plan,[198] the WE&T Program achieves its goals by contributing to the success of the following Strategic Plan initiatives:

- Initiate and drive long-term WE&T development and strategic planning, including identification of funding streams and market sector specific needs.

[198] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 75-79.

- Develop K-12 curriculum to include energy efficiency fundamentals (*e.g.,* math, science, behavior) and identify career options in energy related fields.
- Support the community college and adult education efforts to support students to develop their education based on visible career paths in energy efficiency and related fields. Ensure that there are appropriate linkages with the K-12 educational sector.
- Incorporate energy efficiency and demand side energy management into traditional contractor and technician training, such as plumbers and electricians, and expand training resources to produce target numbers of trained workers.
- Create or expand college and university programs with energy efficiency and demand side energy management focus and foster green campus efforts to apply this knowledge in clear view of students and faculty (*e.g.,* establish partnerships with K-12 stakeholders, support community colleges, assist with need for technically trained installers, *etc.*).

Each of these strategies will be further defined and reviewed through a collaborative effort of stakeholders as identified in the Strategic Plan.

SCE also plans to initiate a needs assessment study, which will act as the foundation for the ~~2009-2011~~ 2010-2012 program moving forward. The study will be used to guide the development of new workshops and seminars, determine key technical and non-technical subject matter, and design effective ways to deliver educational messages, all aligned with WE&T strategic goals and the BBEES.

After the needs assessment has been completed, the WE&T stakeholders will prioritize the strategies and determine which WE&T sub-program would be most effective in addressing each. As laid out in the Strategic Plan,[199] under the guidance of the needs assessment report, SCE anticipates WE&T will provide training and workforce development opportunities through:

[199] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 76-77, *see also* pp. 25-29.

- Outreach to more participants in its education activities. Workshops and training classes will focus on specific technologies and tools that can assist customers in saving energy.
- Integration of comprehensive energy efficiency and DSM technology training. SCE integrates information from other programs and services offered by outside entities; these include the CEC, EPA, DOE, universities and colleges, trade associations, labor unions, manufacturers, and others.
- Collaboration with statewide IOU program groups. This includes sharing workshop/seminar curriculum, instructors, and class schedules.
- Partnerships with the CEC and other organizations that can contribute technical resources. SCE will tap into work done by the CEC's PIER projects and with other programs such as 2007's Water Conference conducted in partnership with the University of Wisconsin.
- Initiate and facilitate ongoing dialogue with a broad group of education sector (community colleges, trade colleges, and the UC/CSU system) and market sector stakeholders. This will leverage their technical expertise and established structure to support WE&T's goal to define, introduce and drive long-term WE&T development and solutions to establish energy efficiency and demand side management education and training.
- Exploration of the use of webinars and on-line training options.
- Leveraging of SCE's process for integrating emerging technology products into training materials, communication mediums, and displays for use by the energy centers and customer contact representatives.
- Training for designers, engineers, and other industry participants, focused on energy regulation changes. Code change education is important to ensure industry participants are informed of the impact the code changes will have, and more importantly what design strategies, technologies, and IOU program

services and incentives can be used to meet and surpass the code requirements. This activity will be coordinated with the Codes & Standards Program.

c) Outreach to Moderate Income, Minorities and Disadvantaged Communities

SCE's WE&T Connections, CLEO and MEUs bring their services to schools, school districts, and communities in areas where moderate income, minorities, and disadvantaged community constituents can be reached. In alignment with the Strategic Plan, these activities will be coordinated with LIEE workforce training. The programs' activities and services teach students and residents to keep energy efficiency practices in mind throughout their day whether at school, work, or at home. In addition, to further one's ability to continue learning about energy efficiency, SCE plans to disseminate information on available training and where additional energy efficiency resources can be found. This approach is described in the Strategic Plan.[200] Examples include:

- Leveraging the Governor's Career Technical Education Initiative (CTE). CTE integrates core academics with technical and occupational courses to give students a pathway to post-secondary education and careers.
- Conducting professional development workshops for all new school teams annually. The purpose of the workshops is to orient teams to the program and providing instruction and guidance in planning and implementing their Green Schools activities.
- Conducting Student Energy Audit Training (SEAT) programs in at least three high schools and/or middle schools each year. Students will make presentations to the school board or other district-level administrators that include recommendations for energy efficiency improvements, including SCE's programs for assistance.

[200] California Long-Term Energy Efficiency Strategic Plan, dated September 2008, pp. 74-79, *see also* pp. 10-29 and 43-49.

- Offering teacher lessons plans. Through this service, teachers submit lesson plans that align with California lesson plans content standards and/or case studies to SCE that directly supports energy education activities. Select lesson plans will be made available and shared with any interested party via a public website or websites.
- Publicizing "Students Leading the Way Success Stories" each academic year to capture success stories and best practices.
- Scheduling MEU events in targeted communities and leveraging the MEU with WE&T Connections activities.
- Utilizing SCE programs offering multi-language speaking representatives to deliver energy efficiency messages to residential and small commercial customers.
- Developing training classes (based on the needs assessment study) in a joint effort with public and private entities to provide the right type of training to develop "Green Collar" opportunities for specific target markets.

V.

PROPOSED FUNDING REQUESTS AND FUND-SHIFTING PROPOSALS ARE REASONABLE

A. Funding Request Is Reasonable

1. Proposed Overall Funding Levels And Administrative Budgets Are Reasonable And Should Be Adopted

SCE's proposed ~~2009-2011~~ 2010-2012 energy efficiency program portfolio budget supports both the achievement of the Commission's aggressive ~~2009-2011~~ 2010-2012 energy efficiency goals as well as supports progress towards the realization of the long-term goals and specific strategies and actions identified in the Strategic Plan. The proposed ~~2009-2011~~ 2010-2012 budget is an increase from SCE's 2006-2008 energy efficiency portfolio budget. The proposed increase in funding over previous program cycles is attributable to several factors including: (1) increased energy efficiency goals[201] set forth by the Commission; (2) reduced estimates for energy savings and demand reduction resulting from measurement and evaluation work; (3) increased codes and standards; (4) increased incentive levels to encourage customers to adopt the latest energy efficiency technologies; and (5) increased resources needed to support the Commission's big, bold energy efficiency strategies and the other elements of the Strategic Plan. SCE's proposed ~~2009-2011~~ 2010-2012 energy efficiency budget summary, by program, is presented in Second Amended Exhibit SCE-2, dated July 2, 2009.

In response to the Assigned Commissioner and ALJ Rulings,[202] SCE provides additional information on the proposed budget, including administrative levels, that complies with the required budget templates, as shown in Second Amended Exhibit SCE-2, dated July 2, 2009. The Rulings indicate that SCE's original filing included a proposal with high administrative costs. This statement is inaccurate. SCE Application, filed July 21, 2008, SCE's First Amended Plan, filed March 2009, and

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[201] D.04-09-060, Table 1B.

[202] Assigned Commissioner's And Administrative Law Judge's Ruling Requiring Supplemental Filings, dated October 12, 2008 and Assigned Commissioner And Administrative Law Judge's ruling Modifying Schedule And requiring Additional Information For 2009-2011 Supplemental Filings, dated December 12, 2008.

this Second Amended Application include reasonable administrative cost proposals. Our proposed ~~2009-2011~~ 2010-2012 energy efficiency administrative budget (SCE administrative budget only) is approximately ~~11.9~~ 10.9 percent of the total program budget.

After review of SCE's July 21, 2008 energy efficiency Application and discussion with the Energy Division staff during the September 2008 workshops, it is apparent that the administrative cost referred to in the Rulings were not administrative costs but rather costs inputted into the Commission's E3 calculator, labeled administrative budget. The E3 administrative budget represents all program (IOU and third party) budget including all direct implementation, marketing/outreach, EM&V and incentives with the exception of rebates. This is a far different figure than the SCE-only administrative budget based on the Commission's reporting requirements (the breakout of third party administrative budget is provided on Second Amended Exhibit SCE-2, Table 4.2). SCE's proposed administrative budget is reasonable and consistent with levels approved by the Commission in the prior funding cycle.

2. Certain Costs Not Included In Cost-Effectiveness Calculations Per The Strategic Plan And Commission Direction

SCE proposes to include all forecasted costs associated with supporting the long-term Strategic Plan activities into the cost-effectiveness showing in SCE's Application to ensure ratepayers are funding a cost-effective energy efficiency portfolio. The Strategic Plan includes both near and long term goals for California. To realize the achievement of the Strategic Plan goals, California will need support from a vast number of market actors. To a certain extent, the IOUs' energy efficiency activities will play a part in supporting California's energy efficiency goal achievement. Many of these long-term IOU investments will not realize near-term (*i.e.*, ~~2009-2011~~ 2010-2012) benefits to ratepayers but will be vital in providing energy efficiency solutions in the long-term to these ratepayers. Nevertheless, it is important to clearly demonstrate the overall cost-effectiveness of these ratepayers' complete investment in energy efficiency during the ~~2009-2011~~ 2010-2012 cycle. SCE recognizes the Assigned Commissioner and Administrative Law Judge's intent for the Commission to address this issue as part

of Rulemaking R.09-01-019;[203] however, SCE offers this recommended policy change in this proceeding in order to highlight how integral this issue is to SCE's Second Amended proposed ~~2009-2011~~ 2010-2012 energy efficiency program plan.

B. Proposed Fund Shifting And Program Flexibility Proposals Are Reasonable

The fund shifting guidelines proposed in this Application for the ~~2009-2011~~ 2010-2012 program cycle (Proposed Guidelines) are in response to the fund-shifting guidelines issued as part of the post-2005 Energy Efficiency Policy Manual issued on August 6, 2008.[204] For the 2006-2008 program cycle, the Commission recognized and approved the need for IOU program administrators to have flexibility "to make decisions, without undue restrictions or delays, so they can effectively manage their portfolios to meet or exceed the Commission's savings goals cost-effectively."[205] SCE's Proposed Guidelines extend this flexibility into the ~~2009-2011~~ 2010-2012 funding cycle. The Proposed Guidelines are consistent with the current post-2006 Energy Efficiency Policy Manual (Energy Efficiency Policy Manual) with the exception of key modifications, as shown in Second Amended Table V-16, Proposed ~~2009-2011~~ 2010-2012 Energy Efficiency Fund-shifting Guidelines attached hereto.[206]

SCE proposes selective modifications to the current EE Policy Manual to: (1) clarify language to make it applicable to ~~2009-2011~~ 2010-2012; ~~and (2) change to the current treatment of mid-cycle portfolio funding augmentation~~. The proposed modification to the 2006-2008 guidelines are shown in bold (additions) and strikethrough (deletions).

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[203] Scoping Memo And Ruling Of Assigned Commissioner And Administrative Law Judge Determining The Scope, Schedule And Need For Hearing In This Proceeding, dated November 25, 2008, p. 13.

[204] Assigned Commissioner's And Administrative Law Judge's Ruling On Revision 4.0 Of The Energy Efficiency Policy Manual, dated August 6, 2008.

[205] D.05-09-043, dated September 22, 2005, Section 8.9 Fund Shifting Guidelines, p. 144.

[206] Dated January 8, 2008, Attachment A, Table 8: Adopted Fund Shifting Rules, p. A-2.

~~*Table V-16*~~
~~*Proposed 2009-2011 Energy Efficiency Fundshifting Guidelines*~~

~~Category~~	~~Shifts Among Budget Categories, Within Program~~	~~Shifts Among Programs, Within Category~~	~~Shifts Among Categories~~
~~Resource / Non-resource Programs~~ ~~(includes multiple program categories – see definitions below)~~	~~Yes, no formal Commission review/approval triggered.~~	~~• Yes, no formal Commission review/approval triggered.~~ ~~• However, 15 day PRG notification and comment required if shifts exceed 25% on an annual basis or 50% on a cumulative basis.~~ ~~• Adding a new program outside the competitive bid process triggers Advice letter process.~~ ~~• Advice letter required if allocation to third-party implementers is expected to fall below 20%.~~	~~• Yes, up to 25% on an annual basis or 50% on a cumulative basis. Advice letter required for larger shifts.~~ ~~• Adding a new program outside the competitive bid process triggers Advice letter process.~~ ~~• Advice letter required if allocation to third-party implementers is expected to fall below 20%.~~
~~C&S / ET / Statewide M&O~~	~~Yes, same as above~~	~~Advice letter required for shifts that would reduce any of these programs by more than 1% of budgeted levels.~~	~~Advice letter required to shift funds OUT of any program more than 1% of budgeted levels.~~
~~EM&V~~	~~Yes, within utility portion. Fund shifting between the utility and ED portions only with Assigned Commissioner or ALJ approval, in consultation with Joint Staff.~~	~~Not Applicable – Single Program~~	~~Assigned ALJ or Commissioner ruling required to shift funds OUT of EM&V by any amount.~~

~~For purpose of these fund-shifting rules, the Resource/Non-Resource program categories are as follows:~~

- ~~Resource / Non-Resource Program categories for **SCE, SDG&E**, and **SoCalGas** are: (1) Residential; (2) Nonresidential; (3) Crosscutting (except C&S, ET, SW Marketing and Outreach, EM&V).~~
- ~~Resource / Non-Resource Program categories for **PG&E** are: (1) Mass Market (residential/small commercial cross-cutting); (2) Residential targeted market sectors within Targeted Markets and (3) Non-Residential targeted market sectors within Targeted Markets.~~
- ~~Utility program administrators may carryover/carryback funding during the 2006-2008 **2009-2011** program cycle without triggering a review/approval process. Authorization for utilizing 2006 funding in 2005 for specific purposes is described in this decision.~~
- ~~Changes to incentive levels or modifications to program design (such as changes to customer eligibility requirements) will not trigger Energy Division or formal Commission review, except as indicated below. We expect that the results of EM&V studies, **and** statewide coordination efforts and ongoing consultation with advisory groups will enable utility program administrators to identify the best practices and program designs for portfolio implementation.~~
- ~~If the proposed incentive level change impacts as statewide offering, *e.g.*, is included in the deemed and calculated measure list presented in the statewide PAG meeting on August 2-3, 2005, and is less **or more** than 50% of the original incentive level on a cumulative basis over the three-year program cycle, the utility administrator will need to inform and solicit comment from the joint PRGs prior to the change taking place.~~
- ~~If the proposed incentive level change impacts a statewide program offering and is more than 50% of the original incentive level on a cumulative basis, the utility administrator will follow the advice letter process described in these rules.~~
- ~~The program administrator will notify the PAG Commission **through the quarterly reporting process** of all incentive level changes that take place.~~
- ~~For all significant shifts in funding or modifications to program design, the utilities should seek informal review with their PAGs/PRG members as part of the ongoing exchange of information during program implementation. Where an advice letter is required under these rules, absent a protest or written data request by Energy Division for additional information by the end of the 20-day protest period, the request will become effective on the twentieth day after filing. If Energy Division staff issues a data request before the end of the protest period, the response time requirements and other procedures applicable to our normal advice letter procedures, as updated by D.05-01-032, will take effect. All advice letters required for fund shifting shall be served on the **energy efficiency** service list in A.05-06-004 and R.01-08-028, or its successor rulemaking, unless otherwise specified by the assigned ALJ. The assigned ALJ, in consultation with the Assigned Commissioner, may provide further clarification on implementing these fundshifting rules, or consider modifications to these rules during the 2006-2008 **2009-2011** program cycle, as appropriate.~~
- ~~**Adding new programs not part of a competitive solicitation will require an Advice Letter, however, a full Resolution may not be required per the Commission's advice letter approval process.**~~

Second Amended Table V-16
Proposed ~~2009-2011~~ 2010-2012 Energy Efficiency Fundshifting Guidelines

Category	Shifts Among Budget Categories, Within Program	Shifts Among Programs, Within Category	Shifts Among Categories
Resource / Non-resource Programs (includes multiple program categories – see definitions below)	Yes, no formal Commission review/approval triggered.	• Yes, no formal Commission review/approval triggered. • However, 15 day PRG notification and comment required if shifts exceed 25% on an annual basis or 50% on a cumulative basis. • Adding a new program outside the competitive bid process triggers Advice letter process. • Advice letter required if allocation to third-party implementers is expected to fall below 20%.	• Yes, up to 25% on an annual basis or 50% on a cumulative basis. Advice letter required for larger shifts. • Adding a new program outside the competitive bid process triggers Advice letter process. • Advice letter required if allocation to third-party implementers is expected to fall below 20%.
C&S / ET / Statewide M&O	Yes, same as above	Advice letter required for shifts that would reduce any of these programs by more than 1% of budgeted levels.	Advice letter required to shift funds OUT of any program more than 1% of budgeted levels.
EM&V	Yes, within utility portion. Fund shifting between the utility and ED portions only with Assigned Commissioner or ALJ approval, in consultation with Joint Staff.	Not Applicable – Single Program	Assigned ALJ or Commissioner ruling required to shift funds OUT of EM&V by any amount.

For purpose of these fund-shifting rules, the Resource/Non-Resource program categories are as follows:

- Resource / Non-Resource Program categories ~~for **SCE, SDG&E, and SoCalGas**~~ are: (1) Residential; (2) Nonresidential; (3) Crosscutting (except C&S, ET, SW Marketing and Outreach, EM&V).
- ~~Resource / Non-Resource Program categories for **PG&E** are: (1) Mass Market (residential/small commercial cross-cutting); (2) Residential targeted market sectors within Targeted Markets and (3) Non-Residential targeted market sectors within Targeted Markets.~~
- Utility program administrators may carryover/carryback funding during the ~~2006-2008~~ ~~2009-2011~~ 2010-2012 program cycle without triggering a review/approval process. ~~Authorization for utilizing 2006 funding in 2005 for specific purposes is described in this decision.~~
- Changes to incentive levels or modifications to program design (such as changes to customer eligibility requirements) will not trigger Energy Division or formal Commission review, except as indicated below. We expect that the results of EM&V studies~~,~~ **and** statewide coordination efforts ~~and ongoing consultation with advisory groups~~ will enable utility program administrators to identify the best practices and program designs for portfolio implementation.
- If the proposed incentive level change impacts a~~s~~ statewide offering~~, *e.g.*, is included in the deemed and calculated measure list presented in the statewide PAG meeting on August 2-3, 2005,~~ and is less **or more** than 50% of the original incentive level on a cumulative basis over the three-year program cycle, the utility administrator will need to inform and solicit comment from the joint PRGs prior to the change taking place.
- ~~If the proposed incentive level change impacts a statewide program offering and is more than 50% of the original incentive level on a cumulative basis, the utility administrator will follow the advice letter process described in these rules.~~
- The program administrator will notify the ~~PAG~~ Commission **through the quarterly reporting process** of all incentive level changes that take place.
- For all significant shifts in funding or modifications to program design, the utilities should seek informal review with their ~~PAGs/~~PRG members as part of the ongoing exchange of information during program implementation. Where an advice letter is required under these rules, absent a protest or written data request by Energy Division for additional information by the end of the 20-day protest period, the request will become effective on the twentieth day after filing. If Energy Division staff issues a data request before the end of the protest period, the response time requirements and other procedures applicable to our normal advice letter procedures~~, as updated by D.05-01-032,~~ will take effect. All advice letters required for fund shifting shall be served on the **energy efficiency** service list ~~in A.05-06-004 and R.01-08-028, or its successor rulemaking,~~ unless otherwise specified by the assigned ALJ. The assigned ALJ, in consultation with the Assigned Commissioner, may provide further clarification on implementing these fundshifting rules, or consider modifications to these rules during the ~~2006-2008~~ ~~2009-2011~~ 2010-2012 program cycle, as appropriate.
- **Adding new programs not part of a competitive solicitation will require an Advice Letter, however, a full Resolution may not be required per the Commission's advice letter approval process.**

1. Provide Additional Clarity To Prior Year's Fund Shifting Guidelines To Reduce Confusion

SCE's Proposed Fund Shifting Guidelines include clarifying language to the current fund shifting guidelines that we believe will reduce confusion. For example, in proposing to add a new program (outside the competitive bidding process)[207] the IOUs are required to file an advice letter. We recommend that the current fund-shifting guidelines be modified to clarify that a full Commission resolution may not be required if the Commission deems the proposal acceptable, as filed.

Also, the post-2005 Energy Efficiency (EE) Policy Manual provides the IOUs ability to carry funds from a future funding cycle to a current cycle.[208] However, we recommend the following clarifying language be incorporated into the current fund-shifting guidelines in order to make it applicable to the ~~2009-2011~~ 2010-2012 cycle:

> 12. Bridge Funding. Programs continuing from the ~~2006-2008~~ ~~**2009-2011**~~ 2010-2012 program cycle into the ~~2009-2011~~ ~~**2012-2014**~~ 2013-2015 cycle may use ~~2009-2011~~ ~~**2012-2014**~~ **2013-2015** funding **to keep programs from shutting down prior to the end of the implementation cycle**, once the ~~2009-2011~~ ~~**2012-2014**~~ 2013-2015 portfolio has been approved**. Additionally,** ~~and~~ start-up costs for ~~2009-2011~~ ~~**2012-2014**~~ **2013-2015** programs may use ~~2009-2011~~ ~~**2012-2014**~~ **2013-2015** funding once the ~~2009-2011~~ ~~**2012-2014**~~ **2013-2015** portfolio has been approved **although the previous implementation cycle has not concluded**~~. (D.07-10-032)~~. Unspent or uncommitted funds from previous program years, or ~~2006-2008~~ ~~**2009-2011**~~ 2010-2012 funds that will not be needed should be used prior to using ~~2009-2011~~ ~~**2012-2014**~~ 2013-2015 funds. Both continuing program funding and start-up cost funding, from ~~2009-2011~~ 2010-2012 or from previous program years, are limited to 15% of the current budget cycle without Commission approval. An Advice Letter is required for funding in excess of this percentage. An Advice Letter is required for funding in excess of this percentage.

~~2. Modify Treatment Of Mid-cycle Funding Augmentation~~

~~In D.07-10-032, the Commission set a policy rule (EE Policy Manual, rule 12, Section IV) prohibiting IOUs from claiming energy savings and demand reductions results towards the achievement of the Commission energy efficiency goals. Mid-cycle funding augmentation was~~

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[207] D.05-09-043, dated September 22, 2005, p. 149, allows for new programs to be introduced during the implementation if the new program was selected through a competitive bid process overseen by the local PRG.

[208] Energy Efficiency Policy Manual v.4.0, dated August 6, 2008, p. 6.

perceived to provide a "bonus" to utilities without any undue risk bestowed upon them.[209] D.07-10-032 also indicates that "in effect, mid-cycle funding augmentations provide the utilities with additional funding to accomplish a goal that was set with a lower budget."[210] As a result of this rule, IOUs are now discouraged from pursuing all cost-effective energy efficiency even though there may be energy efficiency funds available from prior years. SCE proposes the elimination of the 2006-2008 mid-cycle funding augmentation rule for 2009-2011 2010-2012 as it: (1) creates a disincentive to propose new programs with augmented funding; (2) punishes, unnecessarily, IOUs when market conditions change which may require additional funds to incent customers in order to achieve the Commission energy efficiency goals, and (3) creates a tension with the California's Energy Action Plan[211] and Commission policy[212] to pursue all cost-effective energy efficiency. SCE recognizes the Assigned Commissioner and Administrative Law Judge's intent for the Commission to address this issue as part of Rulemaking R.09-01-019;[213] however, SCE offers this recommended policy change in this proceeding in order to highlight how integral this issue is to SCE's proposed 2009-2011 2010-2012 energy efficiency program plan.

The inability to record results from mid-cycle funding sends the wrong signal to IOUs to stifle program innovation and creation of promising programs. This is contrary to the Commission's desire to promote innovation and test new program designs. Another key fault of the mid-cycle funding augmentation rule is it assumes that during the program implementation cycle the marketplace remains static and acts just as assumed during the planning process. This is unrealistic. The marketplace is dynamic with many actors and unforeseen influences which can foreclose expected opportunities as well as create new opportunities. Additionally, the mid-cycle rule works against California's Energy Action

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209 D.07-10-032, dated October 18, 2007, OP# 7, p. 143.

210 D.07-10-032, dated October 18, 2007, p. 98.

211 Energy Action Plan identifies specific goals and actions to ensure that adequate, reliable, and reasonably-priced electrical power and natural gas supplies are achieved and provided through cost-effective and environmentally sound strategies. A copy of the Energy Action Plan, including the 2008 Update, is posted on the Commission's website at http://www.cpuc.ca.gov/static/energy/electric/energy+action+plan/index.htm. *See also*, D.05-09-043, *mimeo*, p. 15 and Energy Efficiency Policy Manual Version 3.1, dated January 8, 2008, Rule II.2, p. A-2.

212 D.07-10-032, dated October 18, 2007, p. 2.

213 Scoping Memo And Ruling Of Assigned Commissioner And Administrative Law Judge Determining The Scope, Schedule And Need For Hearing In This Proceeding, dated November 25, 2008, p. 14.

~~Plan[214] which calls for the pursuit of all cost-effective energy efficiency. Specifically, the mid-cycle rule discourages IOUs to supplement their program portfolios with promising new/enhanced programs. Thus, for 2009-2011 2010-2012, SCE proposes to modify the mid-cycle funding policy rule to allow all utilities to count all installed energy efficiency results towards the Commission's aggressive energy savings and demand reduction goals.~~

[214] The Energy Action Plan identifies specific goals and actions to ensure that adequate, reliable, and reasonably-priced electrical power and natural gas supplies are achieved and provided through cost-effective and environmentally sound strategies. A copy of the Energy Action Plan, including the 2008 Update, is posted on the Commission's website at www.cpuc.ca.gov/static/energy/electric/energy+action+plan/index.htm. *See also,* D.05-09-043, *mimeo*, p. 15 and Energy Efficiency Policy Manual Version 3.1, dated January 8, 2008, Rule II.2, p. A-2.

VI.

PROPOSED EVALUATION, MEASUREMENT & VERIFICATION PLANS AND BUDGETS

A. Funding Principles And Overall Funding Request

Consistent with D.07-10-032,[215] SCE's budget proposal includes a set aside of eight percent of its total non-strategic planning portfolio funding for both utility and Commission-managed EM&V studies, policy support, and strategic planning projects.

The budget amounts and allocations for EM&V need to be regarded as placeholders at this time. As the utilities and the Energy Division found in the 2006-2008 cycle, it is not feasible to develop meaningful study plans until the program portfolio has been developed and can be analyzed to determine the key researchable issues. In addition, due to the substantially larger program budgets for ~~2009-2011~~ 2010-2012, eight percent of total program budgets may be an unnecessarily large fraction to fund EM&V activities.

In the 2006-2008 cycle, development of detailed budget allocations occurred after program plans had been submitted; a similar deferred process should occur for ~~2009-2011~~ 2010-2012. SCE has contacted the Energy Division to discuss this issue for ~~2009-2011~~ 2010-2012. We look forward to working with the Energy Division to develop appropriate EM&V plans and budget levels. The final EM&V budget can then be approved in the final decision or through a later advice letter or compliance filing.

This request is for a three-year budget. As in 2006-2008, unspent funds will be carried forward from year to year within the period as necessary, and may be carried over into years after ~~2011~~ 2012 in order to conduct and complete evaluations of ~~2009-2011~~ 2010-2012 programs and other ~~2009-2011~~ 2010-2012 studies as necessary.

In 2006-2008, 72.5 percent of the funding was reserved for Commission-managed studies, policy support, and strategic planning projects, and 27.5 percent of the funding was allocated for utility-

[215] D. 07-10-032, dated October 18, 2007, p, 107.

managed studies.[216] SCE proposes that this allocation be tentatively continued for ~~2009-2011~~ 2010-2012, until study budget estimates of the utilities and the Energy Division suggest that a different allocation is needed.

The proposed SCE study and activity budgets that comprise this funding request are described in the following sections. The specific studies, activities, and budget levels provided here are currently SCE's best estimates for the evaluation and analysis needs over the next three years. Past experience demonstrates that over such periods of time, study needs often change. Scope of work and related costs of specified studies may change, studies may need to be combined or separated, new studies may be identified, and work may be re-prioritized with changing and varied information needs. Budget flexibility is critical to allow for changing study and analysis priorities and needs. Consequently, SCE requests that the long-time practice of permitting full flexibility in the specific allocation of EM&V funding be continued for ~~2009-2011~~ 2010-2012 studies.

Quarterly and annual reporting on study status and budgets will allow for tracking of SCE's EM&V activity. Energy Division staff will also be informed by the utilities' submission of draft process evaluation plans, to allow for input by Energy Division and its consultants, as well as continuing coordination with the staff and their evaluation contractors.

B. Proposed SCE Studies And Activities

SCE's initial budget estimate for utility-managed EM&V activities is provided in overall budget allocation tables in Second Amended Exhibit SCE-2, dated July 2, 2009. Descriptions of various areas that would be included in the budget estimates are provided in the sections below. EM&V activities are divided into two major categories: program-specific and cross-cutting.

1. Program-Specific Analyses

a) Process Evaluations And Evaluability Assessments

Process evaluations review the design and operation of programs to determine their effectiveness and their efficiency and to provide recommendations for program improvements.

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[216] D.05-11-011, dated November 18, 2005, p. 7.

Many of the programs in SCE's ~~2009-2011~~ 2010-2012 portfolio are either new programs or programs that have significant modifications from their previous design. Consequently, SCE will conduct process evaluations for most of the programs in the portfolio, submitting annual evaluation plans to the Energy Division as mandated in the California Energy Efficiency Evaluation Protocols.[217] Some of these evaluations will analyze a group of related programs, in order to assess their linkages, explore their single and grouped impact on the markets they affect, compare their methods to find best practices, and reduce contracting and analysis costs.

Process evaluations will be particularly important for deciding whether to continue new programs and for providing some of the information needed to improve the design and operations of these programs. Examples of such programs include the new approaches to local government partnerships, the broader scope of activities included in the emerging technologies program, programs substantially affected by the need for DSM integration or workforce education, and pilot programs such as the programs selected through SCE's IDEEA Program.

Evaluability assessments are a related category of study, with a specific focus on assuring that programs are collecting the information that will be necessary to conduct effective impact, market effects, or process evaluations of the program. These are particularly important for new programs and programs implemented by organizations new to the Commission's evaluation requirements for Commission-regulated programs.

b) Program-Linked Market Analysis Studies

The budgets for market analyses related to SCE programs allow for analyses of particular markets central to the operation of specific SCE program and program components, such as emerging technologies, financing, building and industrial process maintenance services and practices, and structure and practices in the building construction, sale, and rental markets. With the increased focus on emerging technologies and codes & standards, analyses of the market potential of program candidate technologies will become more important.

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[217] California Public Utilities Commission, California Energy Efficiency Evaluation Protocols, April 2006, p. 134, first paragraph.

c) Early Measurement & Verification/Baseline Activities

A particular focus of not only SCE's evaluation, measurement and verification contracts, but also internal work in ~~2009-2011~~ 2010-2012 will be quality control and process improvement. Given the demanding goals and preeminent role that the state has established for energy efficiency programs, it is vital that programs efficiently deliver the full savings of which they are capable. Early, small-sample measurement and verification (M&V) efforts including collection of baseline data are needed to assure that ex ante energy savings estimates are being achieved, and if they are not, whether and how achieved savings can be increased. Funding in this area will cover internal staffing plus engineering contracts to conduct early measurement and verification and baseline analyses to provide early feedback to program managers on whether their program energy savings assumptions are being met.

2. SCE's Crosscutting EM&V Activities

a) Energy Efficiency Potential And Forecasting Analyses

Forecasting energy and peak demand savings from energy efficiency programs and the portfolio, modeling annual energy savings streams, and cost-effectiveness analysis will be part of SCE's market analysis activities. This work builds on the energy efficiency potential studies that will be managed by Commission staff. It provides SCE staffing for development of Commission- and CEC-required energy efficiency forecasts and for detailed, SCE-specific analysis that will help the portfolio and program designers to determine cost-effective levels of energy efficiency program activity, to identify the most promising program areas, and to decide on program budget levels. The data are also useful in helping program managers and customer account managers to identify the most promising energy efficiency upgrade areas for various customer segments. Some budget is reserved for continuing enhancement and updating of the modeling tools, both in terms of data inputs and analysis capabilities.

b) Market Segment Studies

These studies will gather data about market segments that will be targeted by the various programs. Surveys will gather data about customers' decision-making approach to energy efficiency investments, key factors that enable or inhibit their adoption of energy efficiency measures

and participation in energy efficiency programs, and their awareness, attitudes and knowledge regarding energy use, energy efficiency and conservation. They will also collect information on these customers' level of knowledge of energy efficiency, sources of information, demographic characteristics, and program participation. Analysis of key drivers of energy efficiency adoption by segment can be used to determine effective program offerings, messages and communication media for increasing customers' knowledge about and receptiveness to adopting efficiency measures. The results will be provided to the utility, partnership, and third party personnel involved in refining program design, marketing and outreach activities, to assist them in increasing the effectiveness of their program offerings, messages and delivery methods.

c) Basic Data Collection And Analysis: Demographic, Business, And Weather Data

Market analysis work includes the ongoing collection and maintenance of basic types of data needed for effective program design, targeting, analysis, and evaluation: demographic, business classification, and weather data. SCE will contract for enhanced demographic data as well as use packaged demographic data available from SCE's market research organization. Business classification data and software will continue to be provided by EM&V funding, since its primary uses are for energy efficiency and demand forecasting, energy efficiency potential analysis, and program design, targeting, and marketing. Additional customer-specific data available from external sources will be purchased as justified by cost and the value of the data for effective program targeting. For example, county assessors' data on property characteristics may allow individual customer targeting rather than uninformed mass marketing, leading to deeper program penetration.

SCE maintains a system of 24 weather stations that provide data used to estimate energy usage and energy savings of individual customers in multiple programs. It is the basis for the energy usage and energy savings analyses provided to customers through two of SCE's home energy efficiency survey programs. It provides input to building energy simulation models used in multiple nonresidential energy efficiency programs, in particular Savings By Design and technology assessments. These data have also been used in impact evaluations of SCE programs.

d) Portfolio Analysis

This funding allows both consultant and internal evaluation staff work to analyze coverage of markets, strategies, end uses, and technologies in SCE's program portfolio. It also funds exploration of optimal coordination among programs in delivery, marketing, and outreach. Its goal is to make recommendations for refining current program coverage and to provide input for the ~~2012-2014~~ 2013-2015 program cycle. The work builds on process evaluations and other SCE and utility market analyses, especially including those of SCE's IDEEA and Emerging Technologies programs. It will also gather information from other states and utilities and coordinate with the energy efficiency forecasting/potential work that informs program design.

e) Program Best Practices Updates

SCE will support selective updating of the statewide Best Practices Database using its Portfolio Analysis work as a primary source of information about new program reports and practices to be included.

f) Multi-Client Studies

Each year, several opportunities arise for SCE to participate in multi-client studies dealing with energy efficiency program issues. Costs range from $10,000 to $50,000. These studies provide a relatively low-cost option for gathering data. Usually they provide data on a national level that can be used as at least a rough representation for SCE's service territory or that allow for comparison with SCE's service territory. Often regional breakdowns are available, providing something closer to data representative of California. In some cases, over-sampling within a specific area can be provided for an extra fee, so that the client can compare results in their own territory with national results.

These studies cover topics as diverse as ENERGY STAR brand recognition, customer attitudes and preferences, energy efficiency issues in particular market segments, technology assessments, and program characteristics and funding. The American Council for an Energy-Efficient Economy, the Consortium for Energy Efficiency, and E-Source are examples of organizations that offer

high-value joint research opportunities. Market research and other consulting firms also occasionally offer useful options.

g) Conference And Organization Support

Support of conferences and conference attendance for national and regional conferences focused on energy efficiency programs and measurement and evaluation issues will be part of SCE's EM&V budget. Utility program management and evaluation staff members as well as Commission energy efficiency oversight staff need the information and professional development offered by these conferences to maintain their work at the premier level that California programs and evaluation work currently attain. Such conferences also provide access to studies completed by others that provide valuable information for California program planning. Organizations such as the International Energy Program Evaluation Conference, the Association of Energy Services Professionals, the Alliance to Save Energy, and the American Council for an Energy-Efficient Economy provide valuable opportunities for learning from energy efficiency activities and staff in other jurisdictions. Support for such organizations is often a low-cost way to gain continuing access to this value.

h) CALMAC Support And Website

The California Measurement Advisory Council (CALMAC) website makes publicly available electronic copies of all energy efficiency studies completed with Commission-authorized energy efficiency funding. The website also provides notification and access to the activities of CALMAC. CALMAC serves as a forum for soliciting input on and presenting results of EM&V studies. It also hosts meetings of Commission and utility EM&V staff to communicate and work together on EM&V issues. Funding and staffing support will be provided to enable CALMAC meetings, workshops, and forums and to maintain and enhance the website.

i) Statewide Saturation Surveys

The utilities are required by Title 20 of the California Code of Regulations to conduct periodic surveys of their residential, commercial, and industrial 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. In addition, they are

valuable sources of information for program managers to use in targeting programs to customer segments. Funding is need for each of the sectoral saturation surveys during the ~~2009-2011~~ 2010-2012 period. The budgets of these studies tend to be quite large, since they generally require detailed onsite surveys to gather data for representative samples needed to meet Title 20 requirements. The surveys provide greater value for use in energy efficiency portfolio planning if the data gathered are quite detailed and if the samples are large enough to allow for reliable tabulations by service territory, customer segment, and climate zone.

j) Web Portal Development

The Commission has authorized the use of 2009 EM&V bridge funds for the development of a statewide energy efficiency web portal. The utilities, with the concurrence of the Energy Division, are also using EM&V bridge funds to begin the Energy Efficiency Workforce Education and Training (WE&T) needs assessment study and the development of a related WE&T website that will serve as a central information source for energy efficiency WE&T.

There may be similar projects that do not fit clearly into any of the categories of EM&V work described in previous sections. The utilities propose that if the Energy Division and the utilities concur, similar information development and dissemination projects may also be undertaken with EM&V funds.

3. Quantitative Baseline and Market Transformation Information

Market Transformation has not been a major focus of the California energy efficiency programs since the energy crisis. Consequently, relatively little attention has been given in recent years to identifying and gathering data on indicators of change towards market transformation. For some programs or sub-programs that promote a single end use or measure, there may be some data available for this purpose, probably from industry sources, that we have not yet identified. For many of the programs, however, this kind of long-term, consistent, and expensive data collection has not been done in California.

The utility program planners have worked closely with their respective EM&V staffs and with each other to identify available information and propose potential metrics that can be used for the

program implementation plans. Each utility and each program has some data available, but attempts to distill the limited available information into a common set of agreed-upon metrics have proved far more difficult to accomplish at this time and instead suggest a means of developing meaningful indicators.

The utilities will develop meaningful baseline and market transformation concepts and metrics for programs that do not currently have them, and then propose to design and administer studies to gather and track consistent, reliable and valid baseline and market effects data. SCE would propose to use the program logic models and "The California Evaluation Framework (2004)" as guides, and to begin this work after approval of the Application using funding provided for Evaluation, Measurement & Verification.

SCE expects that the baseline studies (1) adequately describe the operation of markets that are targeted by a program, (2) confirm our tentative identification of measurable parameters that would indicate changes towards greater efficiency in the market(s) and that are likely to be affected by the program, and (3) gather the current values of those parameters, to serve as baselines against which future market movement can be tracked.

4. SCE EM&V Staffing

Specialized and experienced utility staffing is necessary for utility-administered EM&V activities and for support of the Commission's staff-administered activities. The appropriate activity budgets include funding for needed contract work and for the following EM&V staff functions.

- Managing SCE studies;
- Conducting analyses internally to support program design, targeting, and operations;
- Managing and/or supporting utility-managed statewide market analyses, including saturation surveys;
- Providing input as requested on research design, work in progress, and draft reports of program impact evaluations, cross-cutting studies, and strategic planning studies and projects managed by Commission staff;

- Providing program tracking data, customer billing data, and other customer data to evaluation contractors as needed for Commission-managed program impact evaluations and other Commission EM&V activities;
- Coordinating study coverage and timing with the Commission's evaluation contractors in order to avoid unnecessary overlaps in data collection and analysis, reduce potential customer burden from multiple contacts, and share collected data; that might be helpful to the other group's evaluation contractors;
- Working with the Commission's contractors and utility personnel to support the contractors' customer contact, survey, and measurement activities;
- Collecting data needed for operation, effective targeting, and analysis of programs and for analysis of energy demand and energy savings potential, including weather data and business classification data;
- Analyzing estimates of energy efficiency potential, energy savings streams, and forecasts of energy and demand savings from energy efficiency programs, and
- Gathering actionable study results and working with program managers to use these findings to improve programs.

5. SCE Strategic Planning Support

SCE proposes to continue its support of the Strategic Planning process set forth by the Commission. The Strategic Planning support will work towards the updated of the current Commission Strategic Plan. The current Strategic Plan was created through a collaborative process with SCE, other utilities, Commission staff, and other interested parties. This planning process is very intensive requiring a significant focus from SCE. The process includes a significant amount of coordination among all different types of stakeholders through public workshops. The appropriate activity budgets include funding for needed contract work and for the following EM&V staff functions.

VII.

REVENUE REQUIREMENTS AND COST RECOVERY

A. Overview

SCE is requesting an increase in its ~~2009-2011~~ 2010-2012 energy efficiency funding levels in this Application. Currently, SCE is authorized to recover costs associated with: (1) legislatively mandated energy efficiency programs PGC; and (2) Commission authorized procurement-related energy efficiency programs. As discussed in more detail later in this chapter, these two categories of energy efficiency funding (*i.e.*, PGC and procurement-related) have separate ratemaking treatment. Second Amended Table VII-17, shows the requested increase in energy efficiency program costs during the ~~2009-2011~~ 2010-2012 period from the currently authorized funding amounts for the 2006-2008 period.

~~Table VII-17~~
~~Requested Energy Efficiency Authorized Program Costs Increase~~
~~($000)~~

	2009-2011	2006-2008	Increase	Current Authority
PGC Energy Efficiency 1/	294,943	294,943	TBD	
Procurement Energy Efficiency	1,048,736	433,688	615,048	
Unspent/Uncommitted Funds 2/	(62,200)	-	(62,200)	
Total	1,281,479	728,631	552,848	D.05-09-043, D.05-11-011
Franchise Fees and Uncollectibles			6,251	D.06-05-016
Total Increase Reflected In Rate Levels over 3-year period			559,099	

1/ Will increase pursuant to PU Code Section 399.8. To the extent the PGC EE funding increases the Procurement EE funding will decrease equal and opposite so that the total EE funding is $1.344 billion over the 2009 - 2011 period.

2/ See Table 6.2 in Exhibit SCE-2.

Second Amended Table VII-17
Requested Energy Efficiency Authorized Program Costs Increase
($000)

	2010-2012	2006-2008	Increase	Current Authority
PGC Energy Efficiency 1/	294,943	294,943	TBD	
Procurement Energy Efficiency	1,048,736	433,688	615,048	
Est. Unspent/Uncommitted Funds 2/	(62,200)	-	(62,200)	
Total	1,281,479	728,631	552,848	D.05-09-043, D.05-11-011
Franchise Fees and Uncollectibles			6,407	D.09-03-025
Total Increase Reflected In Rate Levels over 3-year period			559,255	

1/ Will increase pursuant to PU Code Section 399.8. To the extent the PGC EE funding increases the Procurement EE funding will decrease equal and opposite so that the total EE funding is $1.344 billion over the 2009 - 2011 period.

2/ See Table 6.2 in Exhibit 2. This amount will be updated at the end of 2009 with actual unspent/uncommitted funds.

As set forth in Second Amended Exhibit SCE-2, dated July 2, 2009, SCE has included as a source of funding for the ~~2009~~ 2010 through ~~2011~~ 2012 energy efficiency programs the estimated unencumbered funds from pre-2009 energy efficiency cycles at the end of 2008. SCE is currently estimating the unencumbered funds recorded in the energy efficiency balancing accounts on December 31, 2008 is $62.200 million. SCE will update this amount ~~at the end of the year~~ once the actual unencumbered amount is known. In addition, SCE is not requesting to change the level of its PGC energy efficiency funding. Consistent with the provisions of Public Utilities (PU) Code § 399.8 and Resolution E-3792,[218] SCE will continue to submit an annual advice letter to the Commission to escalate this funding level.

Finally, as discussed in more detail below, SCE is requesting to establish the On-Bill Financing Loan Balancing Account (OBFLBA) to record differences between the On-Bill Financing loan funding included as part of the procurement energy efficiency program funding requested in this proceeding, the amount of actual loans provided to participating customers, and their loan repayments.

[218] Resolution E-3792, OP# 7.

B. PGC Energy Efficiency Ratemaking

SCE proposes no change to the currently-approved PGC energy efficiency ratemaking. SCE's current ratemaking associated with PGC energy efficiency includes: (1) the recovery of the authorized PGC energy efficiency revenue requirement as set forth in PU Code § 399.8 through the operation of the Public Purpose Programs Adjustment Mechanism (PPPAM); and (2) tracking the difference between the authorized PGC energy efficiency revenue requirement with actually incurred PGC Energy Efficiency expenses in the Energy Efficiency Programs Adjustment Mechanism (EEPAM) established in D.97-12-103. Unspent funds, recorded in the EEPAM, are refunded to customers upon approval by the Commission.

On a monthly basis, SCE records its actual PGC energy efficiency program expenses in the EEPAM. From this amount, SCE deducts one twelfth of the authorized PGC energy efficiency revenues to determine the monthly over- or under-collection recorded in the EEPAM.[219] Effective January 1, 2002, PU Code § 399.8 extended funding for the PGC energy efficiency program through January 1, 2012,[220] and set SCE's 2002 PGC energy efficiency funding level at $90 million. PU Code § 399.8 also required utilities to annually adjust the PGC target funding amounts at a rate equal to the lesser of the annual growth in electric commodity sales or the gross domestic product deflator (GDP).

The Commission further directed the utilities in Resolution E-3792 to file an annual Advice Letter by March 31of each year beginning in 2003 to determine the annual adjusted funding amounts set forth in PU Code § 399.8. Advice Letter ~~2229-E~~ 2335-E[221] established the Public Goods funding for ~~2008~~ 2009 to be ~~$99.293~~ $100.415 million, by applying SCE's annual sales increase of ~~0.9%~~ 1.13% to the ~~2007~~ 2008 Public Goods funding level.

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[219] Due to the one-way nature of the EEPAM, any under-collections (*i.e.,* excess expenditures) existing at the end of the authorized program cycle will not be eligible for recovery from customers.

[220] PU Code § 381, effective September 24, 1996 required the major electric utilities to establish a nonbypassable PGC rate component in order to fund certain public interest programs including SCE's energy efficiency programs through the year 2011.

[221] Advice Letter 2229-E, is pending approval. ~~approved June 11, 2008, effective May 1, 2008.~~

SCE will file an advice letter by March 31, 2010 to establish the ~~2009~~ 2010 authorized energy efficiency revenue by escalating the ~~2008~~ 2009 authorized level of ~~$99.293~~ $100.415 million by the lower of either the GDP or SCE's annual sales increase. Interest accrues monthly to the EEPAM by applying the three-month commercial paper rate to the average balance in the account.

C. Procurement Energy Efficiency Ratemaking

SCE's current ratemaking associated with procurement energy efficiency includes: (1) the recovery of the residually determined[222] procurement energy efficiency revenue requirement authorized in D.05-09-043 and D.05-11-011 through the operation of the PPPAM; and (2) tracking the difference between the authorized procurement energy efficiency revenue requirement with actually incurred procurement energy efficiency expenses in the Procurement Energy Efficiency Balancing Account (PEEBA) established in D.03-12-062.

On a monthly basis, SCE records its actual procurement-related energy efficiency program expenses in the PEEBA. From this amount, SCE deducts one twelfth of the authorized procurement-related energy efficiency revenues to determine the monthly over- or under-collection recorded in the PEEBA.[223] Interest accrues monthly to the PEEBA by applying the three-month commercial paper rate to the average balance in the account. Unspent funds are refunded to customers upon approval by the Commission.

Second Amended Table VII-18 below illustrates how SCE will determine the authorized procurement-related energy efficiency program funding each year.

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[222] As described in Preliminary Statement FF, PPPAM, the annual procurement energy efficiency revenue requirement is determined residually by subtracting the authorized PGC Energy Efficiency revenue requirement from the total annual authorized energy efficiency funding levels. *See also* Table VII-18.

[223] Due to the one-way nature of the PEEBA, any under-collections (*i.e.*, excess expenditures) existing at the end of the authorized program cycle will not be eligible for recovery from customers.

~~*Table VII-18*~~
~~*Procurement Energy Efficiency Authorized Program Funding (Illustrative (000)*~~

		2009	2010	2011	Total
1.	Total Authorized Energy Efficiency Funding 1/	326,584	461,554	493,341	1,281,479
2.	Less: PGC EE 2/	98,314	98,314	98,314	294,943
3.	Total Procurement EE Funding (Line 1 - Line 2)	228,270	363,240	395,027	986,536

1/ As adopted in this proceeding
2/ To be determined annually pursuant to PU Code 399.8 and Resolution E-3792. Therefore the authorized procurement EE funding will be determined residually.

***Second Amended** Table VII-18*
Procurement Energy Efficiency Authorized Program Funding (Illustrative (000)

		2010	2011	2012	Total
1.	Total Authorized Energy Efficiency Funding 1/	326,584	461,554	493,341	1,281,479
2.	Less: PGC EE 2/	98,314	98,314	98,314	294,943
3.	Total Procurement EE Funding (Line 1 - Line 2)	228,270	363,240	395,027	986,536

1/ As adopted in this proceeding
2/ To be determined annually pursuant to PU Code 399.8 and Resolution E-3792. Therefore the authorized procurement EE funding will be determined residually.

D. On-Bill Financing (OBF) Balancing Account

In compliance with D.07-10-032, SCE will continue the 2006-2008 OBF program as a part of the ~~2009-2011~~ 2010-2012 procurement energy efficiency program. Advice Letter 2066-E, established the 2006-2008 pilot program, effective December 30, 2006. SCE established the OBF loan program initially by funding the OBF loans from SCE's working cash. SCE currently records the OBF Pilot Program expenses in the PEEBA.

As discussed in Chapter IV, the Commission in D.07-10-032[224] requires SCE to continue to expand the OBF pilot program, increasing the customer base to include institutional customers. In order

[224] D.07-10-032, Ordering Paragraph #13.

to continue the expansion of this program, SCE proposes to create a new interest bearing balancing account to "upfront" fund the OBF loans, tracking the OBF authorized funding revenue (*i.e.*, requested in this proceeding) for the loans, actual loan disbursements and actual OBF loan repayments. SCE has included $16 million in energy efficiency funding requested in this proceeding over the ~~2009~~ 2010 through ~~2011~~ 2012 period to fund the loan portion of the program. SCE is requesting to begin to recover program funds through the Public Purpose Program Charge for use as the principal to fund loans to participating customers. The OBF Balancing Account will track only OBF loans and the repayments on all OBF loans. All other program expenses such as incentives, administrative expenses, and loan defaults will continue to be recorded in the Procurement Energy Efficiency Balancing Account. Upon approval to establish the OBF Balancing Account, SCE proposes to transfer the remaining loan balances from the 2006-2008 OBF pilot program from the PEEBA to the OBF Balancing Account.

E. Rate Recovery Of Energy Efficiency Program Costs

SCE recovers its currently authorized PGC energy efficiency and procurement energy efficiency costs through its existing non-bypassable Public Purpose Programs Charge (PPPC), which applies to all of SCE's retail customers. Upon receiving a final decision on this Application's funding request, SCE will increase its annual authorized energy efficiency revenue requirement by the amount approved by the Commission. As discussed above, assuming the Commission adopts SCE's energy efficiency funding request as filed, SCE's energy efficiency revenue requirement will increase by $552.8 million over the three year period (*i.e.*, ~~2009-2011~~ 2010-2012 to reflect energy efficiency revenue requirement of $1.281 billion).[225]

In order to reduce the number of rate changes, the Commission has established the annual Energy Resource Recovery Account (ERRA) Forecast proceeding as the proper place to consolidate all Commission-authorized revenue requirement changes into one rate level change. Therefore, SCE proposes to include the ~~2010~~ 2009 PGC energy efficiency funding level submitted by advice filing in March ~~2010~~ 2009 and procurement-related energy efficiency revenue requirement approved in this

[225] Subject to a year-end adjustment for any remaining unspent/uncommitted funds from pre-2009 funding cycle.

proceeding in PPPC rate levels on or after January 1, 2010 as part of its ~~2009~~ 2010 ERRA Forecast proceeding revenue requirement and rate consolidation. This rate consolidation will include the true-up of any undercollection that may accrue in the PPPAM due to the time lag between implementing a revised procurement-related energy efficiency revenue requirement and actually reflecting the revised revenue requirement in rate levels.

F. Rate And Bill Impact Analysis

In the Assigned Commissioner's and Administrative Law Judge's Ruling Regarding 2009-2011 Energy Efficiency Program Applications,[226] the Commission directed SCE to provide estimates of the net rate impacts and bill impacts associated with the proposed portfolio of programs designed to meet the Commission-adopted energy savings goals. The methodology should be consistent across utilities. The Commission also directed SCE to provide, separately, any available unspent, uncommitted funds from previous cycles that will be included in the budget. The aggregate increase resulting from the proposed increase to the Procurement Energy Efficiency revenue requirement is 1.6% over rates in effect today.

~~***Table VII-19***~~
~~***SCE Estimated Annual Revenue Impacts***~~
~~***From 2009-2011 Energy Efficiency Program Requests***~~
~~***(In Millions)***~~

Line No	Electric Customer Class	June 2008 Revenue	Revenue Change	Total 2009 Revenue	Total % Change
1	Domestic (Residential)	4,394.0	71.3	4,465.3	1.6%
2	Small & Medium Commercial	4,257.4	69.1	4,326.5	1.6%
3	Industrial	2,385.4	38.7	2,424.1	1.6%
4	Agricultural & Pumping	311.8	5.1	316.9	1.6%
5	Streetlights	134.7	2.2	136.9	1.6%
6	System	11,483.3	186.4	11,669.7	1.6%

[226] Assigned Commissioner's and Administrative Law Judge's Ruling R.06-04-010 Regarding 2009 to 2011 Energy Efficiency Program Applications dated February 29, 2008, Attachment A, p. 6.

~~Second Amended~~ Table VII-19
SCE Estimated Annual Revenue Impacts
From ~~2009-2011~~ 2010-2012 Energy Efficiency Program Requests
(In Millions)

Line No	Electric Customer Class	June 2009 Revenue	Revenue Change	Total 2010 Revenue	Total % Change
1	Domestic (Residential)	4,503.1	72.6	4,575.7	1.6%
2	Small & Medium Commercial	4,212.7	68.0	4,280.7	1.6%
3	Industrial	2,349.9	37.9	2,387.8	1.6%
4	Agricultural & Pumping	353.0	5.7	358.7	1.6%
5	Streetlights	135.2	2.2	137.4	1.6%
6	System	11,553.9	186.4	11,740.3	1.6%

SCE is requesting Energy Efficiency Program annualized funding of $186.4 million above the existing 2008 funding amounts, which compared to revenues at June 2008 rates, is an increase of approximately 1.6%.

~~Table VII-20~~
~~SCE Estimated Annual Rate Impacts~~
~~From 2009-2011 Energy Efficiency Program Requests~~
~~(¢/kWh)~~

Line No	Electric Customer Class	Average June 2008 Rate	Average Rate Change	Average 2009 Rate	Total % Change
1	Domestic (Residential)	14.88	0.24	15.13	1.6%
2	Small & Medium Commercial	13.95	0.23	14.18	1.6%
3	Industrial	9.22	0.15	9.37	1.6%
4	Agricultural & Pumping	10.87	0.18	11.04	1.6%
5	Streetlights	19.01	0.31	19.32	1.6%
6	System	12.83	0.21	13.04	1.6%

~~Second Amended~~ Table VII-20
SCE Estimated Annual Rate Impacts
From ~~2009-2011~~ 2010-2012 Energy Efficiency Program Requests
(¢/kWh)

Line No	Electric Customer Class	Average June 2009 Rate	Average Rate Change	Average 2010 Rate	Total % Change
1	Domestic (Residential)	15.48	0.25	15.73	1.6%
2	Small & Medium Commercial	14.26	0.23	14.49	1.6%
3	Industrial	9.29	0.15	9.44	1.6%
4	Agricultural & Pumping	10.92	0.18	11.10	1.6%
5	Streetlights	18.77	0.30	19.07	1.6%
6	System	13.15	0.21	13.36	1.6%

If the Commission approves SCE's electric request, the bill for the average bundled residential customer using 600 kilowatt hours (kWh) per month in ~~2009~~ 2010 would change from ~~$82.70~~ $84.70 at June ~~2008~~ 2009 rates to ~~$83.45~~ $85.49, an increase of 0.9%.

G. Revenue Requirements And Cost Recovery

On August 11, 2008, a prehearing conference was held to discuss the applications of SCE, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Gas Company (Utilities). Administrative Law Judge (ALJ) Gamson indicated that the Commission's final decision on the Utilities' applications would not be made before the end of 2008 and consequently, the ALJ directed the Utilities to submit a proposal, recommending approaches to funding for 2009, until a final decision could be issued on the 2009-2011 energy efficiency portfolios. On August 18, 2008, the Utilities filed a joint proposal for a bridge funding approach.[227]

On October 16, 2008, the Commission approved D.08-10-027, formally authorizing a bridge funding period for the Utilities beginning January 1, 2009, and ending no later than three months after the effective date of a final decision on the Utilities' 2009-2011 energy efficiency programs, or December 31, 2009, whichever comes first.[228] D.08-10-027 also requires each utility to file an Advice Letter within 10 days of the effective date of this Decision; this Advice Letter serves as SCE's compliance filing required by D.08-10-027.

D.08-10-027 authorized SCE to: (1) use $27.0 million in pre-2006 unspent, uncommitted energy efficiency funds to prevent the closure of four energy efficiency programs; (2) include $23.1 million of monthly bridge funding in Public Purpose Program rate levels on January 1, 2009; and; (3) establish the Energy Efficiency 2009-2011 Memorandum Account to track the difference between the revenue requirement adopted for the bridge period and the revenue requirement requested in SCE's 2009-2011 Energy Efficiency Portfolio Application (A.) 08-07-021.

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[227] Joint Utility Request for Funding and Authorization to Continue to Operate 2006-2008 Energy Efficiency Programs in 2009 Pending a Final Decision on Applications for Approval of 2009-2011 Energy Efficiency Programs.

[228] D.08-10-027, Section 4.2, p.10 and OP No. 5, p. 29.

Table VII-21 below shows the monthly bridge funding amount as set forth in D.08-10-027 and the amount including Franchise Fees and Uncollectibles that will be included in SCE's Public Purpose Programs Charge (PPPC) levels.[229] Consistent with D.08-10-027 the bridge period shall end no later than three months after the effective date of a final decision in A.08-07-021, or December 31, 2009, whichever comes first.[230]

Table VII-21
D.08-07-027 2009 Bridge Period Funding

D.08-10-027 2009 Bridge Period Funding

	Monthly	Annualized
Energy Efficiency[1/]	$8,274,417	$99,293,000
Procurement Energy Efficiency[2/]	14,816,202	177,794,428
Total	23,090,619	277,087,428
FF&U	261,072	3,132,863
Amount in Rates January 1, 2009	$23,351,691	$280,220,291

[1/]No change from 2008
[2/]Determined residually ($23,090,619 - $8,274,417)

Consistent with SCE's proposal in its 2009 Energy Resource Recovery Account Forecast proceeding (A.08-09-011), the energy efficiency authorized amounts will be consolidated along with other Commission authorized revenue requirement changes into rate levels on January 1, 2009, or soon after, once the Commission issues a final decision in A.08-09-011.

[229] Because SCE uses annual revenue requirements to determine rate levels, Table 1 also shows an annualized amount (*i.e.*, the monthly amount multiplied by 12) that will be used to determine PPPC rates.

[230] D.08-10-027, Section 4.2, p.10 and OP No. 5, p.29.

Appendix A

Witness Qualifications

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF GENE E. RODRIGUES

Q. Please state your name and business address for the record.

A. My name is **Gene E. Rodrigues**, and my business address is 6042 N. Irwindale Avenue, Irwindale, CA 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am presently the Director of Energy Efficiency for SCE. In that capacity, I have direct oversight of SCE's portfolio of energy efficiency programs, low income energy efficiency programs, the California Alternate Rates for Energy (CARE) program, the self generation incentives program, and the measurement & evaluation and regulatory support functions for these areas.

Q. Briefly describe your educational and professional background.

A. I received a Bachelor of Science degree in Education from Northern Arizona University in 1980 and a Juris Doctor degree from the University of California, Hastings College of Law in 1988. Before coming to SCE, I taught high school in Arizona and practiced law with a civil litigation firm in Los Angeles. In 1990, I joined SCE's regulatory law department, where I provided legal support for SCE's energy efficiency programs, among other things. Since moving to the business side of SCE, I have held various positions within the Customer Service Business Unit, managing energy efficiency policy, operations and regulatory functions. My current position is Director of Energy Efficiency. I have previously practiced law and testified before the Commission.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto, and Exhibits SCE-3 A&B, SCE-4, SCE-5 and SCE-6.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF DONALD P. ARAMBULA

Q. Please state your name and business address for the record.

A. My name is **Donald P. Arambula**, and my business address is 6042 N. Irwindale Avenue, Irwindale, CA 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am presently a Manager in the Regulatory group supporting energy efficiency and low income programs for SCE's Customer Solutions Business Unit. My present responsibilities include the preparation and/or review of various applications, advice letters, reports and other filings for submittal to the California Public Utilities Commission.

Q. Briefly describe your educational and professional background.

A. I graduated from Loyola Marymount University in 1986, with a Bachelor of Science degree in Business Administration.

I have been employed at SCE for over nine years in the Customer Solutions Regulatory Support group. Prior to joining SCE, I was a systems analyst at McDonnell Douglas Corporation conducting economic and lifecycle computer simulation modeling.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto, and Exhibit SCE-2.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF CHERYL WYNN

Q. Please state your name and business address for the record.

A. My name is **Cheryl Wynn**, and my business address is 6042 N. Irwindale Avenue, Irwindale, CA 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am presently the Manager of Residential Programs. My responsibilities include management of residential energy efficiency programs.

Q. Briefly describe your educational and professional background.

A. I received a Bachelor of Arts degree in Business Administration from the University of La Verne in 2005. I have more than 17 years in administrating residential energy efficiency programs, which include education and information programs, rebates/incentives for lighting, appliances and equipment and market transformation. For the last eight years, I have led a professional team responsible for designing and implementing residential energy efficiency programs, partnerships, and workforce, education and training initiatives.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF JILL HOLMES

Q. Please state your name and business address for the record.

A. My name is **Jill Holmes**, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am a Financial Analyst in the Revenue Requirements section of SCE's Regulatory Policy and Affairs (RP&A) Department. I am responsible for the monthly calculations and balances of various Balancing and Memorandum Accounts and the calculations of various fuel-related and DSM related filings.

Q. Briefly describe your educational and professional background.

A. I graduated from San Diego State University in 1980 with a Bachelors of Science Degree in Business, specializing in Marketing. I worked in the telecommunications industry from 1980 to 1984. In September of 1984, I went to work for Southern California Edison as a Telecommunication Specialist. I transferred to Regulatory Policy and Affairs in October of 1986 as a Regulatory Analyst. I have been responsible for revenue requirement and rate design calculations for resale customers. I have previously testified before the California Public Utilities Commission.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF NANCY JENKINS

Q. Please state your name and business address for the record.

A. My name is **Nancy Jenkins**, and my business address is 6042 N. Irwindale Ave Irwindale, California 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am presently the Manager of the Energy Efficiency Partnership Program at SCE. My responsibilities include management of both local government and institutional partnerships.

Q. Briefly describe your educational and professional background.

A. I attended the University of California at Berkeley, California Polytechnic State University, San Luis Obispo, and California State University of Sacramento. I graduated in 1980, with a Bachelor of Science in Civil Engineering. Prior to working at SCE, I managed the Public Interest Energy Research office for energy efficiency at the California Energy Commission.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the energy efficiency partnership portions of Exhibit SCE-1, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF GREGG D. ANDER

Q. Please state your name and business address for the record.

A. My name is **Gregg D. Ander**, and my business address is 6042 N. Irwindale Avenue, Suite B in Irwindale, CA 91702

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am currently the Manager of Design and Engineering Services for Southern California Edison (SCE). My responsibilities include the management and administration of the Emerging Technology Program, Codes and Standards Program, Energy Related Services, the Technology Test Centers, Program Engineering Support, Demand Response Emerging Markets Initiative, and third-party research contracts.

Q. Briefly describe your educational and professional background.

A. I was educated at the University of Wisconsin – Milwaukee and Arizona State University with a Bachelor of Science Degree in Architecture and a Masters in Environmental Planning. Prior to working at SCE, I was in private practice in Milwaukee, Wisconsin, and Scottsdale, Arizona and also worked at the California Energy Commission. During my tenure at SCE, I have held various engineering, program management, supervisory, and management positions.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF STEPHAN A. GALANTER

Q. Please state your name and business address for the record.

A. My name is **Stephan A. Galanter**, and my business address is 6042 N. Irwindale Avenue Irwindale, California, 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am presently the Manager of the Strategic Planning and Quality Assurance group within the Energy Efficiency Division. Residential Energy Efficiency and Low Income Programs for SCE. My responsibilities include management and administration of energy audit, rebate, lighting, refrigerator recycling, Low Income Energy Efficiency and the California Alternate Rates for Energy (CARE).

Q. Briefly describe your educational and professional background.

A. Steve holds a Bachelor of Science degree in Mechanical Engineering from California State University Northridge and a Master of Science degree from the University of California at Los Angeles. Previous positions at SCE have included Manager of Regulatory Planning, Manager of Technical Support, Manager of Technology Assessment and Application, and Supervisor of Load Management Programs. Steve has also worked for Edison Source, Edison International's unregulated affiliate, as the Director of Energy Engineering.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto, and SCE-7.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF DAVID JACOT

Q. Please state your name and business address for the record.

A. My name is **David Jacot**, P.E., LEED™ AP, and my business address is 6042A N. Irwindale Avenue, Irwindale, CA 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Manager of Offer Management for the Non-Residential Energy Efficiency Portfolio in the Customer Service Business Unit, at Southern California Edison.

Q. Briefly describe your educational and professional background.

A. I have a Bachelor's of Science in Mechanical Engineering from the University of Oklahoma, as well as over 10 years of experience designing high performance building systems, modeling building energy performance, and managing energy efficiency programs. Currently, I oversee all aspects of Southern California Edison's offerings and strategies designed to overcome market barriers to energy efficiency adoption by business, government, and institutional customers. This includes SCE's entire portfolio of New Construction energy efficiency programs, incentive programs and technical services offerings for non-residential retrofit projects, as well as innovative program offerings such as Comprehensive HVAC and Retrocommisioning. In addition, I oversee the integration of emerging technologies into the non-residential portfolio. I also manage the development and implementation of Edison's portfolio of pilot Water-Energy programs, which seek to save the energy embedded in water upstream and downstream of water users by directly promoting water conservation.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best

judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF MARIAN V. BROWN

Q. Please state your name and business address for the record.

A. My name is **Marian V. Brown**, and my business address is 6042 N. Irwindale Avenue Irwindale, California, 91702.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am the manager of Measurement and Evaluation. My primary responsibilities are planning, supervising staff, and supervising projects involving measurement, market assessment, and evaluation of energy efficiency, low income, and demand response programs.

Q. Briefly describe your educational and professional background.

A. I received a Doctor of Philosophy (Ph.D.) degree in Economics from Stanford University in 1979 and a Bachelor of Arts (B.A.) degree in Economics from Pomona College in 1968. Prior to joining SCE in 1986, I was an Assistant Professor of Economics at Pomona College from 1977 to 1986, a Visiting Scholar to the Social Security Administration in 1984-1985, and a Senior Research Analyst at the National Bureau of Economic Research--West from 1975-1977.

I have been SCE's witness for program measurement and evaluation issues in energy efficiency and demand response proceedings since the early 1990s. I am SCE's representative to the California DSM Measurement Advisory Committee (CADMAC) and the California Measurement Advisory Council (CALMAC), and I currently serve as chair of CALMAC. I am a life member and past president of the Association of Energy Services Professionals.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto, and Exhibit SCE-8.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF SETH KINER

Q. Please state your name and business address for the record.

A. My name is **Seth J. Kiner**, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Director of Customer Experience Management, in the Customer Service Business Unit, at Southern California Edison. I have responsibility for the development and implementation of customer communication and outreach efforts (collaborating with various parts of SCE) to all classes of customers, enhancement of delivery channels such as *sce.com* to meet customers' preferences, customer satisfaction management and employee communication within the Customer Service Business Unit.

Q. Briefly describe your educational and professional background.

A. I received a Bachelor of Science degree in Business Administration, with a major in Marketing, from Arizona State University in 1983. I have over 21 years of management experience leading marketing, product management and communications efforts to reach diverse audiences, working in a variety of industries including: utility, not-for-profit, financial services and telecommunications. My three most immediate positions prior to SCE were: Director of Marketing, KPMG, LLC; Vice President of Marketing, United Way of Greater Los Angeles; and Director of Marketing and Marketing Communications, Transamerica Life Companies.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of Exhibit SCE-1, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

Appendix B

SCE ~~2009-2011~~ 2010-2012 Energy Efficiency Program Plan

Abbreviations & Acronyms

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
AB 32	Assembly Bill 32 (Nunez, 2006)
AB 811	Assembly Bill 811 (Levine, 2008)
AC	Alternating Current
ACCA	Air Conditioning Contractors of America
ACEEE	American Council for an Energy Efficient Economy
ACR	Assigned Commissioner Ruling
AERS	Automatic Energy Review for Schools
AESC	Alternative Energy Systems Consulting
Ag MSP	Agricultural and Water Systems Market Segment Plan
AgEE	Agricultural Energy Efficiency Program
AGTAC	Agriculture Technology Application Center
AHP	Advanced Home Program
AHRI	Air Conditioning, Heating & Refrigeration Institute
AHU	Air Handling Unit
AIA	American Institute for Architects
ALJ	Administrative Law Judge
AMI	Advanced Metering Infrastructure
ANSI	American National Standards Institute
AQMD	Air Quality Management District
ARCA	Appliance Recycling Centers of America, Inc.
ARP	Appliance Recycling Program
ARRA	American Recovery and Reinvestment Act

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
ASHRAE	American Society of Heating, Refrigeration, & Air Conditioning Engineers
ATP	Authorization To Proceed
BAS	Building Automation System
BBEES	Big Bold Energy Efficiency Strategies
BCEP	Business and Consumer Electronics Program
BCS	Building Control System
BELP	Beaumont Energy Leader Partnership
BIE	Business Incentive Element
BIG	Build It Green
BIS	Business Incentives Services
BMS	Building Controls Management Systems
BOC	Building Operator Certification
BOMA	Building Owners Management Association
BOMI	Building Owners and Management Institution
BPI	Building Performance Institute
BSC	Building Standards Commission
BSE	Business Services Element
BTU™	Building Tune Up
BTU/H	British Thermal Units Per Hour
C&S	Codes & Standards
CAC	Central Air Conditioning

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
CADMAC	California DSM Measurement Advisory Committee
CAHP	California Advanced Homes Program (formerly California New Homes Program)
CALBO	California Building Code Officials
CALMAC	California Measurement Advisory Council
CARB	California Air Resources Board
CARE	California Alternate Rates for Energy
CASE	Codes And Standards Enhancement
CASH	Coalition for Adequate School Housing
CBIA	California Building Industry Association
CBO	Community Based Organization
CBPCA	California Building Performance Contractors' Association
CCC	California Community College
CDCR	California Department of Corrections & Rehabilitation
CDE	California Department of Education
CEC	California Energy Commission
CEE	Consortium for Energy Efficiency
CEEP	Commercial Energy Efficiency Plan
CEI	Continuous Energy Improvement
CEESP	(IOUs') California Energy Efficiency Strategic Plan
CEP	Community Energy Partnership
CFA	Call for Abstracts

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
CFL	Compact Fluorescent Lamps
CHA	California Hospital Association
CHEERS	California Home Energy Efficiency Rating System
C-HERS	California Home Energy Rating System
CHP	California Highway Patrol
CHPD	Comprehensive Home Performance Delivery
CHPP	Comprehensive Home Performance Program
CHPS™	Collaborative for High Performance Schools
CHSA	California Head Start Association
CIEE	California Institute for Energy Efficiency
CIRB	California Industry Research Board
CLEO	Community Language Efficiency Outreach
CMHP	Comprehensive Mobile Home Program
CNCQA	Commercial New Construction Quality Assurance
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COG	Councils of Government
CPEEP	California Preschool Energy Efficiency Program
CPEP	Chemical Product Efficiency Program
CPUC	California Public Utilities Commission
CRA	Community Reinvestment Act
CSHE	California Society of Healthcare Engineering

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Abbreviation/Acronym	**Definition**
CSI	California Solar Initiative
CSLB	California State Licensing Board
CSR	Customer Service Representative
CSU	California State University
CTAC	Customer Technology Application Center
CTE	Governor's Career Technical Education Initiative
CVAG	Coachella Valley Council of Governments
Cx	Commission
DA	Design Assistance
DAA	Design Assistance Agreement
DCEEP	Data Centers Energy Efficiency Program
DCELP	Desert Cities Energy Leader Partnership
DCOP	Data Center Optimization Program
DCV	Demand Control Ventilation
DDC	Direct Digital Control
DEER	Database for Energy Efficiency Resources
DG	Distributed Generation
DGS	Department of General Services
DHW	Domestic Hot Water
DMA	Dominant Market Area
DMV	Department of Motor Vehicles
DOE	(U.S.) Department Of Energy

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
DOF	Department of Finance
DR	Demand Response
DRA	Division of Ratepayer Advocates
DSA	Department of State Architects
DSM	Demand Side Management
DTI	Design Team Incentive
DX	Direct Expansion
E3	Energy and Environmental Economics, Inc.
EAP	(California) Energy Action Plan
EARTH	Educate Action Responsibility Teamwork Home
ECAA	Energy Conservation Assistance Accounts
ED	Energy Division
EDR	Energy Design Resources
EE	Energy Efficiency
EEM	Energy Efficiency Measure
EEMIS	Enterprise Energy Management Information System
EEPAM	Energy Efficiency Programs Adjustment Mechanism
EL	Energy Leader
ELP	Energy Leader Partnership
EM&V	Evaluation, Measurement & Verification
EMS	Energy Management System
EP	Efficiency Partnership

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
EP&QA	Engineering, Planning And Quality Assurance
EPA	Environmental Protection Agency
ERP	Enterprise Resource Planning
ERRA	Energy Resource Recovery Account
ESCO	Energy Services Company
ESP	Electrical Service Planning
ESPC	Energy Savings Performance Contract
ET	Emerging Technologies
ETCC	Emerging Technology Coordinating Council
ETP	Emerging Technologies Program
EUL	Expected Useful Lives
FSE	Financial Solutions Element
FSTC	Food Service Technology Center
FYP	Flex Your Power™
G&A	General & Administrative
GBI	Green Building Initiative
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HAN	Home Area Network
HCD	Housing and Community Development
HEEP	Healthcare Energy Efficiency Program

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
HEER	Home Energy Efficiency Rebates
HEERP	Home Energy Efficiency Rebate Program
HEES	Home Energy Efficiency Survey Program
HEI	High Efficiency Incandescents
HERS	Home Energy Rating Scale
HID	High-Intensity Discharge
HP	Heat Pump
HUD	Housing and Urban Development
HVAC	Heating, Ventilation and Air Conditioning
ICLEI	Local Governments for Sustainability (formerly the International Council for Local Environmental Initiatives)
ICLS	Integrated Classroom Lighting System
IDEEA	Innovative Design for Energy Efficiency Activities
IDSM	Integrated Demand Side Management
IEPR	Integrated Energy Policy Report
IFMA	International Facility Management Association
IGA	Investment Grade Audits
IGREEN	Institutional and Government Resource for Energy Efficiency Now
IHACI	Institute for Heating & Air Conditioning Industries
IID	Imperial Irrigation District
IndEE	Innovative Designs for Energy Efficiency

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Abbreviation/Acronym	**Definition**
IOS	International Organization for Standardization
IOU	Investor-Owned Utility
ISO	Independent System Operator, or International Organization for Standardization
ITP	Industrial Technology Program
JACO	an appliance recycling company
JLC	Journey of Light Construction
KCELP	Kern County Energy Leader Partnership
KEEP	Kern Environmental Education Program
KEMA	Energy efficiency consultant KEMA, Inc.
kW	kilowatt
kWh	kilowatt hour
LACMTA	Los Angeles County Metropolitan Transportation Authority
LACOE	Los Angeles County Office of Education
LADWP	Los Angeles Department of Water and Power
LAUSD	Los Angeles Unified School District
LED	Light Emitting Diode
LEED™	Leadership in Energy and Environmental Design
LEEP	Lodging Energy Efficiency Program
LG	Local Government(s)
LGI	Local Government Initiative
LGP	Local Government Partnership

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
LIEE	Low Income Energy Efficiency
LMT	Lighting Market Transformation Program
M&V	Measurement & Verification
MAP	Management Affiliates Program
MBCx	Monitoring-Based Commissioning
MBPCx	Monitoring-Based Persistence Commissioning Program
MDx	Measure Database
ME&O	Marketing, Education & Outreach
MEU	Mobile Energy Unit
MFEER	Multi-Family Energy Efficiency Rebate Program
MOU	Memorandum of Understanding
MPS	Master Production Scheduling
MT	Market Transformation
MW	Megawatt
MWD	Metropolitan Water District
MWh	Megawatt Hour
NAHB	National Association of Homebuilders
NAICS	North American Industry Classification System
NARI	National Association of the Remodeling Industry
NATE	North American Technician Excellence
NCS	New Construction Services
NEEP	Northeast Energy Efficiency Partnerships

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Abbreviation/Acronym	**Definition**
NGO	Non-Governmental Organization
NOx	Nitrogen Oxides (NO and NO_2)
NR	Non-Residential
NSHP	New Solar Homes Partnership
NTG	Net-to-Gross (Ratio)
O&M	Operations & Maintenance
OBF	On-Bill Financing
OBFLBA	On-Bill Financing Loan Balancing Account
OSHPD	Office of Statewide Health Planning & Development
PAC	Program Administrator Cost
PAG	Program Advisory Group
PCHEER	Private College Campus Housing Energy Efficiency Program
PEARL	Program for Evaluation and Analysis of Residential Lighting
PEB	Performance Earnings Basis
PEEBA	Procurement Energy Efficiency Balancing Account
PEPMA	Proposal Evaluation and Proposal Management Application
PG&E	Pacific Gas & Electric
PGC	Public Goods Charge
PIER	Public Interest Energy Research
PIP	Program Implementation Plans
PLEP	Plug Load Efficiency Program
PO	Purchase Order

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
POS	Point-of-Sale
POU	Publicly-Owned Utilities
PPPAM	Public Purpose Programs Adjustment Mechanism
PPPC	Public Purpose Programs Charge
PRG	Peer Review Group
PTAC	Packaged Terminal Air Conditioner
PU	Public Utilities
PV	Photovoltaic(s)
QA	Quality Assurance
QC	Quality Control
QI	Quality Installation
QM	Quality Maintenance
R&D	Research & Development
RCA	Refrigerant Charge Adjustment
RCC	Resource Conservation Commission
RCx	Retro-commissioning
RD&D	Research, Development and Demonstration (or Deployment)
RELP	Ridgecrest Energy Leader Partnership
REM	Resource Energy Manager
RFP	Request for Proposals
RFQ	Request for Qualifications
RLW	Roger L. Wright Analytics, a consulting firm

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
ROI	Return On Investment
RP&A	Regulatory Policy and Affairs
RRIM	Risk/Reward Incentive Mechanism
SA	Systems Approach
SAELP	Santa Ana Energy Leader Partnership
SAS	Statistical Analysis System
SBD	Savings By Design
SBELP	South Bay Energy Leader Partnership
SCE	Southern California Edison
SCELP	South County Energy Leader Partnership
SCG	Southern California Gas
SCP	Sustainable Communities Program
SDG&E	San Diego Gas and Electric
SEAT	Student Energy Audit Training
SEER	Seasonal Energy Efficiency Rating
SEP	Strategic Energy Plan
SGELP	South Gate Energy Leader Partnership
SGIP	Self Generation Incentive Program
SJVCEO	San Joaquin Valley Clean Energy Coalition
SJVELP	San Joaquin Valley Energy Leader Partnership
SM	Energy $mart
SMACNA	Sheet Metal and Air Conditioning Contractors' National

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
	Association
SMART	Subcontractor Management And Reporting Tool
SMUD	Sacramento Municipal Utilities District
SOW	Statement of Work
SPA	Simplified Approach for Small Projects
SPB	Simple Payback
SPC	Standard Performance Contract
SPEED	Statewide Partnership for Energy Efficiency Demonstrations
SVELP	Simi Valley Energy Leader Partnership
SW	Statewide
T24	Title 24
T&D	Transmission & Distribution
T&E	Training & Education
TA	Technical Assistance
TBD	To Be Determined
TDV	Time Dependent Valuation
TI	Technical Incentive
TMG	Total Market Gross
TOU DT	Time of Use Domestic Tier
TRC	Total Resource Cost
TRIO	Technology Resource Incubator Outreach
TTC	Technology Test Centers

SCE ~~2009-2011~~ 2010-2012 ENERGY EFFICIENCY PROGRAM PLAN ABBREVIATIONS & ACRONYMS	
Abbreviation/Acronym	**Definition**
UC	University of California
UCOP	University of California Office of the President
UESCO	Utility Energy Services Contracts
UPS	Uninterruptible Power Source
USA	United States of America
VAC	Volts-Alternating Current
VAV	Variable Air Volume
VEA	Voluntary Early Actions
VFD	Variable Frequency Drive
VSD	Variable Speed Drive
WACC	Weighted Average Cost of Capital
WBA	Whole Building Approach
WE&T	Workforce Education & Training
ZNE	Zero Net Energy
ZNEH	Zero Net Energy Homes