Joint Peer Review Group Assessment of Southern California Edison's Proposed 2006 – 2008 Energy Efficiency Portfolio

Submitted to the California Public Utilities Commission

Prepared by the
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Executive Summary

The Joint Southern California Edison (SCE)/Southern California Gas Company (SCG) Peer Review Group (PRG) respectfully submits to the California Public Utilities Commission (Commission) its assessment of SCE's proposed 2006-08 Energy Efficiency Portfolio of Programs Plan.

This Joint SCE/SCG PRG's assessment is based on draft versions of SCE's proposed 2006-08 Portfolio of Energy Efficiency Programs Plan provided to the group by SCE as of May 18, 2005. It contains an extensive summary of the information provided by SCE portfolio administrators during the last three months of the energy efficiency planning process. Since then, SCE continued to revise its portfolio beyond the date that the PRG began its assessment. Some of the observations or recommendations included in this assessment may not reflect SCE's revisions to its portfolio after May 18, 2005 that SCE's files on June 1, 2005.

We have attempted to include language in this assessment that reflects a consensus opinion, however, due to time constraints in writing this report, all members retain their right to submit individual comments to the Commission, or to provide recommendations to the Commission that are either outside of the scope of this assessment, or that differ from certain items or recommendations included herein.

During our discussions, we decided to create a placeholder or bin for recommendations drafted by PRG members that were not supported by all of the PRG members. Appendix G contains a listing of these recommendations that in some cases are designed to shake up the status quo and stimulate new lines of thought.

The PRG believes that in the near-term, for the 2006-08 cycle, SCE's proposed portfolio is likely to cost-effectively meet the Commission's targets. We find that SCE has maintained an adequate emphasis on measures and programs with a proven track record of delivering savings. In addition, SCE has most likely built an adequate margin of error into its forecasted energy savings, although the margin of error for average demand is not large enough to make us entirely confident in SCE' ability to meet the demand goals, or address reliability and critical load issues in Southern California.

Achieving the long-term (2009 and beyond) savings goals will require the utility to increase its annual savings by roughly a factor of 2.5 relative to 2003. During the planning process, SCE presented an initial vision and strategy for attaining its energy efficiency goals. However we are not confident that this initial effort will be sufficient to meet the Commission's long-term savings goals. In part, this is because SCE has not had sufficient time to forge a consensus among the key stakeholders whose help is needed to make the vision a reality. SCE, and most probably the other program administrators, have not had sufficient time to think systematically about the future and create a complete vision. SCE can develop a robust vision and strategy to

get there by continuing to work on strengthening its program strategies and building a coalition of supporters over the next few months. To achieve and sustain an increase in savings of this magnitude, this PRG makes several recommendations that SCE administrators should consider within their planning process and portfolio plans. Upon a review of the information available to the PRG at the time of our assessment, we expect that SCE will be able to meet the Commission's near-term and, with some additional efforts in the next few month, long-term savings targets.

One area that may have been shortchanged in the planning process was the exchange of information related to utility plans for running statewide programs with similar but not identical program designs. In D.05-01-055, the Commission directed the IOUs to form subgroups of their PAG members to closely collaborate and coordinate on statewide programs that cut across the IOU service territories. As part of statewide coordination, the Commission instructed PAGs and IOUs to collaborate on statewide program designs and implementation strategies that increasingly integrate energy efficiency with demand response and distributed generation offerings to end-users. While the IOUs have begun the process of addressing statewide coordination issues, the PRG believes that the process is far from complete. Generally speaking, the four IOUs appear to be developing two rather different approaches to IOU-implemented EE in their respective proposed portfolios. This may have lead to some of the confusion and inability to focus sooner and more clearly on statewide matters. Given the lack of discussion in coordinating statewide program designs, the PRG is unable to provide a meaningful assessment at this point. We recommend that the Commission direct the IOUs to continue the discussion with their PAG members and among themselves related to achieving similar designs and qualifying criteria for statewide programs.

The PRG reviewed SCE's proposed budget for competitive solicitations, areas for targeted solicitations, process for soliciting third party bids, and criteria to evaluate the bids. SCE proposed a 2006 budget for 3rd party programs that as of the date of this PRG assessment represents 34% of the total portfolio, with 26% budgeted for the delivery of SCE-managed program, and 7% budgeted for competitive solicitation of new programs. The PRG is concerned that some of the areas SCE identified for targeted bids may be more appropriate for subcontracting than for inclusion within the "20%" part of the portfolio. Although the Commission's decision does not clearly define what types of activities should fall within the "20%" bid part of the portfolio and what should be subcontracted, based on the information the PRG has to review at this time, we believe that some of the targeted areas identified by SCE may be more appropriately considered subcontracting and should not count towards the Commission's minimum 20% requirement. After reviewing SCE's proposed targeted bid areas, the PRG finds that even if we exclude the questionable targeted areas, we find that SCE's competitive bid plan to be compliant with the Commission's minimum 20% requirement. Although we support a greater emphasis on bids for innovative programs, in general, we found SCE's plan to be fair to potential bidders and to allow for both traditional and innovative proposals,

The Commission asked the IOUs and their advisory groups to discuss and potentially recommend fund-shifting rules to govern what process, if any, the administrators should follow when shifting funds between programs over the next three years. In general, the PRG members support fund-shifting flexibility that will enable the utilities to meet the Commission's savings targets. We encourage the utilities to make use of this flexibility to adjust the portfolio as market circumstances change and as it gauges the relative success of the programs within the portfolio. We also recognize that there may be situations when it would be necessary for the utility to quickly shift funds away from programs that are having difficulty meeting their savings goals without having to wait two to three months for Commission approval. However, some limits on fund-shifting flexibility may be desirable since (1) some of the program details, including cost-effectiveness information, remain vague, and in particular, we wish to ensure that utilities maintains an appropriate balance between programs that will provide near-term and long-term savings, and (2) there might be a tendency for some administrators to shift funds away from programs providing longer-term savings towards program focused solely on harvesting savings in the short-term. The PRG discussed two potential fund-shifting policies, but was not able to reach consensus on a recommendation to the Commission. We, therefore, outline the two options that the PRG discussed in Appendix J.

Table of Contents

Introduction

By CPUC Decision (D.) 05-01-055, dated January 27, 2005, the Commission adopted an administrative structure for post-2005 energy efficiency programs that returns to the states' investor-owned utilities (IOUs) the lead role in program choice and portfolio management functions. With this new structure, the Commission also adopted quality control measures to ensure that the IOU program administrators select programs and manage them in a manner consistent with the Commission's objectives. The Commission directed the IOUs established an advisory group structure as safeguards against the potential for bias in the IOUs' program selection and portfolio management. The Commission envisions the advisory groups as a means to (1) promote transparency in the program administrator's decision-making process; (2) provide a forum to obtain valuable technical expertise from stakeholders and non-market participants; (3) encourage collaboration among stakeholders; and (4) create an additional venue for public participation.

The Commission directed the IOUs to establish three "Program Advisory Groups, or PAGs" drawing from the energy efficiency expertise of both market and non-market participants across the full spectrum of program areas and strategies. One PAG should be established for Pacific Gas & Electric Company's service territory, one for San Diego Gas & Electric Company's service territory, and one for the combined service territories of SCE/SCG (Joint SCE/SCG). The PAGs serve to provide guidance to the IOUs regarding region-specific customer and program needs, and provide a forum for input and collaboration with the local interests and stakeholders served by the programs.

Within each PAG, the Commission directed the IOUs to identify and select a subgroup of non-financially interested members with extensive energy efficiency expertise that are willing to serve as peer reviewers in their program planning and selection process. These subgroups are referred to as "Peer Review Groups (PRGs)." The Commission specified Energy Division to chair the PRG. The Joint SCE/SCG PRG consists of the following representatives:

- Devra Bacharach, Natural Resources Defense Council (NRDC)
- Peter Lai, CPUC Energy Division (ED)
- Michael Messenger, California Energy Commission (CEC)
- Cynthia Mitchell, Consultant for The Utility Reform Network (TURN)
- Christine Tam, CPU Office of Ratepayer Advocates (ORA)

As defined in D.05-01-055, the role of the PRG includes:

a. Members of each PRG will participate in the ongoing PAG process.

b. Review the IOUs' submittals to the Commission and assess the IOUs' (1) overall portfolio plans, (2) their plans for bidding out pieces of the

portfolio per the minimum bidding requirement, (3) the bid evaluation criteria utilized by the IOUs, and (4) their application of that criteria in selecting third-party programs.

c. The three PRGs are also expected to meet and assess the statewide portfolio (represented by the combination of the four IOUs separate portfolios) in terms of its ability to meet or exceed short and long-term savings goals in compliance with the Commission's policy rules.

The Joint SCE/SCG PRG held three meetings (on April 5, April 20, and May 11, 2005) with the utilities to review and discuss the utilities' (1) overall portfolio plans, and (2) their plans for bidding out pieces of the portfolio per the minimum bidding requirement. During these meetings, the Joint PRG defined the assessment tasks, developed assessment criteria balancing cost effectiveness with other potential objectives, applied the criteria to the utility's proposed plan, identified strengths and weaknesses, and crafted a set of recommendations to enhance the proposed programs, portfolio, and third party process. Additionally the respective three PRGs met on a statewide level on March 10, and April 27, 2005 to discuss data expectations from the IOUs upon which the PRG assessment will be based.

This Joint SCE/SCG PRG's assessment is based on draft versions of SCE's proposed 2006-08 Portfolio of Energy Efficiency Programs Plan provided to the group by SCE as of May 18, 2005. Since then, SCE continued to revise its portfolio beyond the date that the PRG began its assessment. Some of the observations or recommendations included in this assessment may not reflect SCE's revisions to its portfolio after May 18, 2005 that SCE's files on June 1, 2005. Wherever possible, we have included language in this assessment that reflects a consensus opinion. All members retain their right to submit individual comments to the Commission, or to provide recommendations to the Commission that are either outside of the scope of this assessment, or that differ from certain items or recommendations included herein.

Our review of SCE's proposed portfolio of energy efficiency programs plan includes (a) handouts provided at the PAG and PRG meetings, (b) our observations of how the administrators conducted these public meetings, and (c) Preliminary Program Application filings to include those documents listed in Appendix A.

Criteria

The Joint SCE/SCG PRG established and provided both utilities with a set of criteria that it will use for evaluating their portfolio of energy efficiency programs to be submitted on June 1, 2005. The criteria are specific to the evaluation of SCE's and SCG's portfolios, but are generally consistent with those proposed by other PRGs. Our criteria, listed below, represent the PRGs' top priority criteria for assessing SCE's portfolio, and are not intended to be a comprehensive list of criteria for the

Commission's evaluation. The Joint SCE/SCG PRG established and provided both utilities by Memorandum dated April 14, 2005 a set of criteria that it will use for evaluating their portfolio of energy efficiency programs to be submitted on June 1 2005, 2005. The criteria are specific to the evaluation of SCE's and SCG's portfolios, but are generally consistent with those proposed by other PRGs. Our criteria, listed in shorthand below, represent the PRGs' top priority criteria for assessing SCG's portfolio, and are not intended to be a comprehensive list of criteria for the Commission's evaluation. A full explanation of each criteria below and their impact of the ability to reach the Commission's savings goals are presented in the Appendix B.

1. Vision to Motivate Employees and Contractors and Strategies to get there
2. Clear Statement of Program Goals
3. Flexibility to Redeploy Resources to Meet Savings Goals
4. Diversification of Program Approaches to reduce risks of Not Meeting the Energy Savings goals
5. Strong Leadership to Engage Stakeholders
6. Promote and Reward Innovation
7. Integration efficiency opportunities with demand response and renewable energy options
8. Plan to Reward Excellence in Delivering Energy Efficiency Savings-
9. Leverage Program and Private Sector Efforts
10. Strategy to Meet Long-term Savings Targets
11. Best Program Implementation
12. Coordination of program implementer efforts
13. Develop and Implement a Continuous Improvement Plan
14. Compliance with Policy Rules and other Commission directives
15. Responsiveness to the Green Building Initiative Executive Order

Likelihood that Proposed Portfolio Will Satisfy Near-Term Savings Targets

The PRG concludes that in the near-term, for the 2006-08 cycle, SCE's proposed portfolio is likely to cost-effectively meet the Commission's targets. We find that SCE has maintained an adequate emphasis on measures and programs with a proven track record of delivering savings. In addition, SCE has most likely built an adequate margin of error into its forecasted energy savings, although the margin of error for average demand is not large enough to make us entirely confident in SCE' ability to meet the demand goals, or address reliability and critical load issues in Southern California. In this section, we discuss our findings based on our review of SCE's draft application, and provide our recommendations to ensure that SCE's will meet the Commission's near-term energy and demand saving targets.

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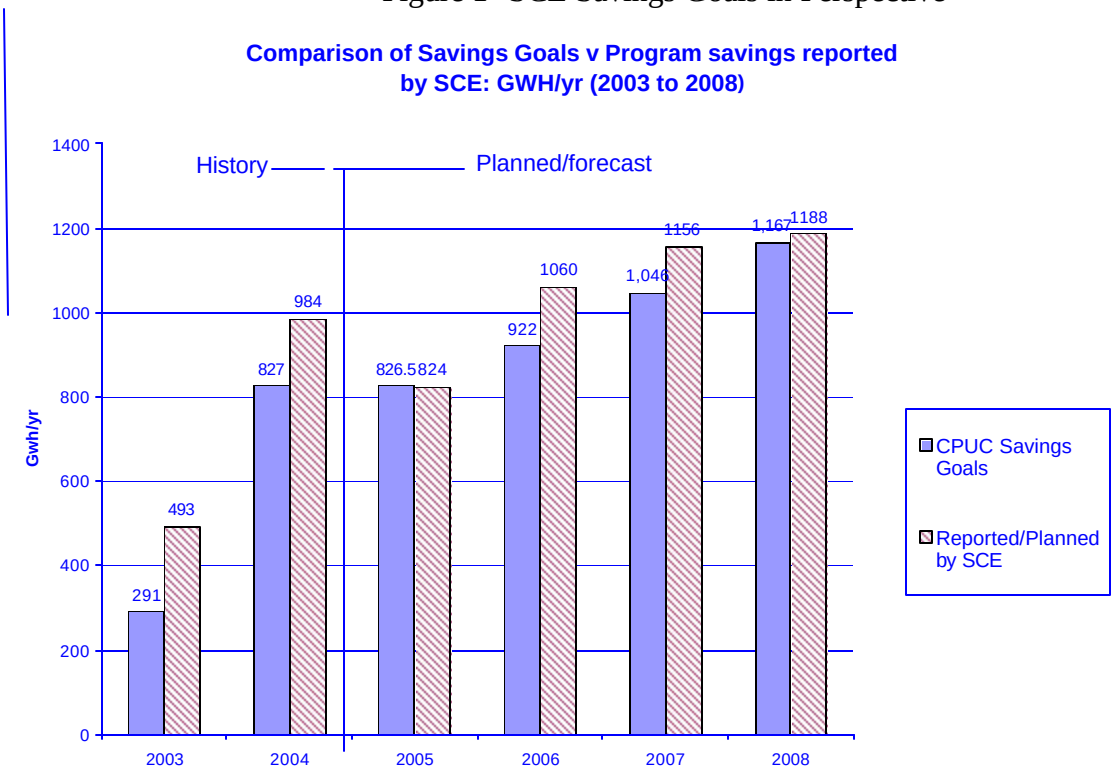
California's energy agencies (CEC and CPUC) are expecting SCE to significantly increase the annual electricity savings achieved by its energy efficiency programs

over the next five years. (See Figure 1) This will require roughly a doubling of electricity savings over the five-year period from the 456 Gwh reported from 2003 programs to the savings goal of 1167 Gwh/year in 2008.

Figure 1- SCE Savings Goals in Perspective



This figure shows that SCE has more than doubled the annual savings achieved by its programs between 2003 and 2004; from 493 Gwh/yr in 2003 to 984 Gwh/yr in 2004. This is a very significant achievement, if it is sustainable, because this jump represents over 75% of the increase needed to get to the annual saving level of 1167 Gwh/yr in 2008.[1] SCE should be congratulated for achieving such a significant increase if these claimed savings are verified during the goals assessment process.

The PRG conducted a near-term assessment of SCE's proposed portfolio by the following four criteria:

Criteria 1: Has SCE built a reasonable margin of error when comparing program

[1] SCE 2003 and 2004 reported savings include commitments. The historic (03–05) data is also overstated due to recent changes in CFL hours of operation, inclusion of programmable thermostats (determined to not provide sustained savings), and assumptions that all high efficiency central HVAC units are operating at nameplate efficiency ratings (field data reflects that conservatively 50% are not being properly installed. These matters are important to the short term assessment for two reasons. First, SCE may have even a bigger challenge ahead than just doubling electricity savings over the five year period. Second, this exercise illustrates the importance of good program design to insure a high-level of verified and sustained savings for integration with supply side resource procurement.

forecast savings targets against the Commission's savings goals?

Finding: Most likely on annual energy, not certain on average demand.

Analysis: Table 1 provides a comparison of SCE's projected portfolio savings to the CPUC's targets annually, and for 2006- 2008 in total. The far-right hand column (tan highlights) shows that SCE is projecting annual energy savings over target by 9%, with savings over target for average demand only 5%.[2]

Table 1: SCE Projected Portfolio Impacts

	2006	% Target	2007	% Target	2008	% Target	2006-2008	% Target
Net Electricity Savings (GWh/yr)	1,061	115%	1,156	111%	1,188	102%	3,405	109%
CPUC Electricity Target (GWh/yr)	922	0%	1,046	0%	1,167	0%	3,135	
Savings Over/Under Target	388		505		43		935	
Annual Net Av. Demand Savings (MW)	230	109%	250	108%	258	100%	738	105%
CPUC Demand Target (MW)	207		227		253		687	
Savings Over/Under Target	18		18		-1		35	

Because SCE's proposed portfolio continues to rely largely on "tried and true" energy saving measures that have been incented by California IOUs for several years, projected savings are susceptible to increasing levels of program free riders, captured in the net-to-gross (NTG) ratios. NTG ratios for the most part have not been updated for some time, with the NTG ratios for nonresidential in particular very high -- meaning low levels of assumed freeridership.

Declining NTG ratios reflect the hypothesis that the proportion of customers installing energy-saving measures solely due to the utility efforts will likely decline over time. The theory is that the impact of utility programs will likely decline as a higher percentage of customers choose to purchase energy-saving measures in the absence of utility programs or incentives.

The TechMarket Works team's May 27, 2005 draft report for the CPUC and PRGs on the IOUs' preliminary energy efficiency plans urges caution in the use of the current default NTG ratios in the DEER database:

> "Each utility provided a net-to-gross (NTG) numbers for each measure. However, the NTG numbers were generally the same across all the measures within a program. As presumably instructed, the utilities used default NTG numbers based on the CPUC Policy Manual. For

[2] When comparing SCE's projected demand savings to the CPUC's targets, it is important to keep in mind that this is average demand, not coincident peak demand. If policymakers are interested in energy efficiency as offsets to critical load peaks when prices are high, then SCE's projected demand savings should be adjusted to net out 90% of the residential lighting savings (this does not change the annual energy savings.) See footnote 8 for 90% reference.

example, PG&E's Mass Markets Program utilized a NTG of 0.96 for all C&I measures from LED exit signs to NEMA premium motors. PG&E did change the NTG to 0.80 for residential customers. However, using these numbers increases the risk that the portfolio will not produce the savings indicated by the program planners and may be inconsistent with some evaluation findings that report different NTG values. Certainly, when the program description indicates that a particular measure has a 40-50% market share, the default NTG assumption of 0.80 or 0.96 may not be reasonable. This can be further seen when industrial program participants are given the prescriptive rebates with the attendant NTG more appropriate for a Hard to Reach sector than large industrial customers. While these standard NTG levels make it easier for planning and analysis, they usually, but not always, increase the risk of overstating savings forecasts within the portfolio." (emphasis added)

Any number of possible changes to the NTG ratios could significantly erode SCE's projected **35** Mw surplus of average demand savings, and **935** Gwh of energy savings (blue high light Table 1). For example: [3]

- Applying a lower NTG ratio (say 0.80 instead of 0.96) to the savings attributed to the Business Incentive Program[4] could drop projected demand savings **51** Mw, and energy savings **179** Gwh.

- Using a lower NTG ratios for all lighting savings (say 0.75 instead of 0.96 for non-residential, 0.80 for single-family, and 0.89 for multi-family) would drop projected demand savings by **49** Mw and energy savings by **233** Gwh.

- Or, even assuming lower NTG ratios for the portion of lighting savings attributable to screw-in CFLs[5] (say 0.60), would lower projected demand by **34** Mw and projected energy savings by **219** Gwh.

Outside of freeridership, other examples of possible downward adjustments to SCE's projected savings include: the approximate 14 Mw of nonresidential savings included for delamping (generally removing 1 or more florescent lamps (long tubes) from an existing 2 to 4 lamp fixture), or the 1 Mw of multifamily and nonresidential savings for projected programmable thermostats. Both are examples of energy-saving measures that are generally not sustained over time.

[3] See Appendix K for workpaper.

[4] New program, similar to current Express Efficiency Program. Business Incentive Program accounts for 49% of the demand savings and 34% of the annual energy savings, see Criteria 4.

[5] Increasing levels of freeridership for high efficiency lighting products is a particular concern for 2006-08 because SCE is counting on lighting savings for almost half of all its projected demand and energy savings (see Table 2). As lighting has been California's "heavy hitter" for several years now, nowhere is the freeridership concern greater than with screw-in CFLs. Not only are screw-in CFL's the cheapest and easiest lighting improvement, the IOUs already recently flooded the market with screw-in CFLs in 2001.

PRG Recommendation: The Commission should encourage its staff and parties to evaluate SCE's application to ensure that the additional savings from increased reliance on lighting is able to meet the Commission's goals even if unforeseen circumstances arise. The PRG and SCE should work together to ensure that the portfolio has a sufficient margin of error in the projected average demand savings.

Criteria 2: Does SCE's portfolio place sufficient emphasis on reducing critical load?

Finding: No.

System reliability is of paramount concern in CA, as exemplified most dramatically by SCE's 2005 Summer Supplemental EE filing of more than $50 million. Also, the CPUC's long-term procurement decision found the CA electric IOUs long on energy for the next several years, but very short on peak capacity and exposed on a reliability basis.[6] (Although in the mid- to long-term, the state needs both baseload and peak resources.) This suggests a need for SCE to consider measures that provide significant savings during peak periods in the near term. In addition, the CPUC's final Energy Efficiency Policy Manual places a strong emphasis on critical load.[7]

The PRG notes that the majority of SCE's residential program savings are not targeted at reducing summer needle peaks (see Table 2). Fully 76% of the residential category demand savings and 78% of the energy savings (yellow highlight) are from lighting in SCE's portfolio filing. Research shows that over 90% of residential lighting does not

[6] D. 04-12-048 December 16, 2004 Opinion Adopting PG&E, SCE, SD&E LTPP
1. Discussion of Net Open Positions
In summary, all three IOUs have capacity needs throughout the planning horizon. Capacity needs expand considerably in 2011, due to the expiration of most of the DWR contracts. All three IOUs are long on energy, primarily in the off-peak and shoulder hours, through 2009 (PG&E) and 2010 (SCE and SDG&E) until the bulk of DWR contracts expire. Because resources are 'lumpy,' adding preferred resources upon existing resources somewhat exacerbates this long position, requiring utilities to be energy sellers in many off-peak and shoulder hours.
…current focus is on maintaining and enhancing grid reliability through accelerated reserve margin targets pg 33
Note: In the mid- to long-term, the state needs both baseload and peak resources.

[7] ENERGY EFFICIENCY POLICY MANUAL FOR POST-2005 PROGRAMS
II. Energy Efficiency Policy Objectives and Program Funding Guidelines
5. Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities. In addition, the Program Administrators should demonstrate in their program planning applications for PY2006-PY2008 how their proposed portfolio will aggressively increase overall capacity utilization and lower peak loads through the deployment of low load factor/high critical peak saving measures. The aggressive annual and cumulative savings goals established by the Commission will serve to discourage cream-skimming program designs or implementation approaches that create lost opportunities. Nonetheless, Program Administrators should actively develop strategies to minimize lost opportunities, and should describe those strategies in the applications they submit for each program cycle. *(emphasis added.)*

operate coincident with the utility peak.[8] While achieving these savings will provide cost-effective energy savings, it is not likely to "aggressively increase capacity utilization" called for in the policy rules.

Only 6% of forecasted demand and 2% of energy savings (green highlight) are projected from residential space cooling -- the end use responsible for some of California's needle peaks in the summer. In fact, the 2006 savings from the space cooling use are *lower* than SCE's reported 2004 residential HVAC savings of 18% demand and 4% energy (tan highlight). This trend toward achieving less peak saving over time is in the wrong direction.

Table 2: Comparison of Kema-Xenergy Potentials Analysis to SCE 2004 Reported and 2006-08 Projected Savings

	% of Total Customer Category Savings					
	Kema-Xenergy		2004 Savings		2006-08 Savings	
Residential	Mw	Gwh	Mw	Gwh	Mw	Gwh
HVAC	56%	11%	18%	4%	6%	2%
Lighting	16%	42%	55%	80%	76%	78%
Commercial						
HVAC	46%	23%	10%	9%	31%	31%
Lighting	43%	45%	49%	25%	32%	31%

SCE's proposed continued emphasis on lighting relative to space cooling, particularly in the residential category is also largely at odds with the Kema-Xnergy[9] potentials analysis.

The PRG is also interested in looking at the impact of the utility's portfolio on rates and to assess how savings on and off peak effect procurement costs.

Although this analysis of the relative contribution from end-uses indicates that SCE could place additional emphasis on reducing energy and peak demand associated with HVAC, we note that SCE has made an effort during this planning process to work with stakeholders to design a program that will lay the foundation for an expanded HVAC effort. While the PRG supports SCE's proposed Comprehensive HVAC program, it is too early to tell how long it will take SCE to ramp up the infrastructure to deliver greater savings from HVAC.[10]

PRG Recommendation: The Commission should encourage its staff and parties to evaluate SCE's application to ensure that their portfolio places sufficient emphasis on critical load. The PRG and SCE should work together portfolio places sufficient

[8] Kema-Xeneryg Report
[9] Kema-Xnergy
[10] See Appendix G, Recommendation 6- for suggested additional opportunities to reduce HVAC load in the next year.

emphasis on critical load. The PRG and SCE should work together to realign their portfolio to the extent necessary to increase critical load savings.

Criteria 3: Does SCE's proposed portfolio appear to be cost-effective?

Finding: Yes

Analysis: SCE projects a TRC of 3.10 and a PAC of 3.65 for the 2006 – 2008 time period. These benefit-cost ratios appear to provide sufficient room for realigning the portfolio to the extent necessary to more place additional emphasis on critical load if feasible.

PRG Recommendation: None.

Criteria 4: Is SCE's short-term portfolio sufficiently diversified (i.e are all the eggs in one basket)?

Finding: Uncertain

Analysis: Within SCE's proposed portfolio, the Business Incentive Program alone accounts for 49% of the peak demand savings and 34% of the electricity savings. The second largest program, Residential EE Rebates, accounts for 1% of the peak demand savings and 23% of the electricity savings. While the Residential EE Rebates program has been a bread-and-butter component of SCE's EE portfolio in the past decade, the Business Incentive Program is a new program that integrates past programs including Express Efficiency, Savings by Design and Standard Performance Contract. While the PRG supports SCE's proposed approach to combine the energy audits and design assistance components common to these programs, the delivery of the program's savings goals will remain a big challenge and will remain the biggest risk to SCE's ability to meet its portfolio goals.

PRG Recommendation: The PAG/PRG and the Commission should closely monitor the savings results from the Business Incentive Program and residential incentive programs to ensure that they are on track to meet their goals.

First and foremost, it is of utmost importance that the collegial exchange of information and ideas between SCE and SoCalGas, PAG and PRG members, as well as third parties, partnerships, and utility customers -- continues in both the near and long-term. Also, while the PRG sincerely commends SCE for its heroic effort over the past several months carried out in a pleasant and cooperative manner, the PRG suggests that the May filing be considered a starting, not end point, for SCE's 2006-08 portfolio of energy efficiency programs and activities. There is significant need to improve the likelihood that SCE will not only meet its short-term average demand and annual energy savings targets, but also address reliability and critical load issues in Southern California. The PRG is concerned that SCE's projected savings may be largely overstated from outdated and unreasonably low assumptions of program free riders, particularly in lighting which

accounts for almost half of the projected savings. Related, there appears to not be enough attention focused on saving energy on peak, particularly in residential space cooling. Discussion and analysis also needs to had on the near-term impact of the utility's portfolio on rates and how savings on and off peak effect SCE's procurement costs.

Likelihood that Proposed Portfolio Will Satisfy Long-Term Savings Targets

Achieving the savings goals for SCE in 2009 and beyond will require SCE to increase its annual savings by roughly a factor of 2.5 relative to 2003. To achieve and sustain an increase in savings of this magnitude, we believe that the SCE administrators should include the following components within their planning process and portfolio plans:

1. A vision and strategy of how to mobilize internal staff, contractors, ESCO's, wholesalers and retailers of energy efficient equipment, and remaining energy efficiency community to achieve this dramatic change.
2. A clear statement of SCE's program goals and how progress toward these goals will be tracked over the next three years.
3. Strong leadership to engage stakeholders in the planning process.
4. A commitment to develop and implement innovative programs including new technologies and program approaches..
5. A plan to reward excellence for those customers, implementers and evaluators that contribute to reaching the savings goals.
6. A strategy to meet the long term savings targets (2009-2013) that clearly identifies near term program expenditures expected to yield significant savings in the outer years even though they will not contribute any significant savings in the short term.
7. An analysis of the risk of relying on specific technologies or strategies to achieve the bulk of the energy savings goals and a plan to diversify this risk.
8. A discussion of how the proposed programs will seek to leverage the resources of state and national energy organizations pursuing similar energy savings goals
9. A plan to continuously improve program designs offerings to maximize the usefulness of ongoing tracking and evaluation studies.
10. A commitment from the highest levels of company management to "make it happen" by requesting the appropriate amount of program funding.

In the following sections, we analyze to what extent the information provided by SCE gives us confidence that they can meet the long-term savings goals for calendar years 2009-2013.

A. Vision and Strategy-

> "Vision is where tomorrow begins, for it expresses what you and others who share your vision will be working hard to create. Since most people don't take the time to think systematically about the future, those who do, and who base their strategies and actions on their visions, and cultivate buy in from their team to work together towards a shared vision, have inordinate power to shape the future. "
> --Burt Nanus, author of Visionary Leadership

During the planning process SCE presented an initial vision and strategy for attaining its energy efficiency goals. However we are not confident that this initial effort will be sufficient to meet the Commission's long-term savings goals. In part this is because SCE has not had sufficient time to forge a consensus among the key stakeholders whose help is needed to make the vision a reality. We believe SCE, and most probably the other program administrators, have not had sufficient time to think systematically about the future and create a complete vision. We conclude that SCE can develop a robust vision and strategy to get there by continuing to work on strengthening its program strategies and building a coalition of supporters over the next few months.

In this section, we identify some promising signs that SCE is taking steps to develop the vision and strategy that will be required to achieve the goals, and identify areas where the lack of vision may inhibit their success and recommend a plan to develop a more complete vision with all of the relevant stakeholders in this process. The PRG is committed to working with SCE to achieve its long-term goals.

<u>Positive signs of SCE's vision and leadership observed to date-</u>

1. SCE's Program Plans provide evidence of a sincere commitment to reach out and work with a variety of different stakeholders, including their proposed partnerships with local governments, third party delivery agents, manufacturers, national organizations and ESCO's.
2. SCE's proposal to use third party solicitations (the IDEEA process) to identify both better ways to deliver the same measures and to develop new program approaches represents a very positive step toward encouraging innovation and a comprehensive approach.
3. SCE's willingness to work with So Cal Gas to integrate the seamless delivery of Home Energy Surveys, Sustainable Communities, Saving By Design and the Advanced Home new construction programs will make it easier for all Southern California customers to access and take advantage of energy efficiency programs to save both natural gas and electricity.
4. SCE's willingness to Participate in comprehensive statewide HAVC program is a positive step that recognized savings from HVAC systems on paper can be lost if new appliances/systems are not installed properly and regularly maintained.

5. SCE's proposal to expand its outreach approach in industrial and agricultural program by working with respected industry consultants to develop new approaches including benchmarking.
6. SCE has responded positively to PAG suggestions to make it easier for customers to participate by developing on line rebate forms and point of sale rebates for its residential and small commercial programs.
7. SCE has significantly expanded product offerings to include the next generation of lighting equipment such as LED's
8. SCE's program descriptions make extensive use of RASS and CEUS results to identify baseline participation levels in key program levels. This switch to a quantitative rather than qualitative description of goals and baselines is a welcome improvement.
9. SCE has responded positively to PRG recommendations to provide residential customers with access to billing benchmark data and track the impact of measure adopted on their billing use in the home energy use survey program
10. SCE's proposed integration of demand response and energy efficiency recommendations in integrated schools programs and integrated analyses presented to industrial customers and partnerships are examples of taking a vision and developing strategies to get there.

<u>Vision Components Missing from the Planning process to date-</u>

1. Bold Thinking and Metrics to Track Progress are needed- The challenges posed by the Commission's accelerated savings goals between 2008 and 2013 will require administrators to think differently about reaching out and engaging customers the future. As we recommended during the planning process, SCE needs to simultaneously increase:
    - its program's reach to customers (breadth) and
    - the level of the energy savings achieved per customer once contacted (depth) and
    - the probability that these customers will maintain their first year savings over time and become repeat program participants (customers) based on their initial positive experience in an SCE program

    SCE's program descriptions primarily focus on a qualitative discussion of the first two bullets with little discussion of the third. (The Home Energy Efficiency Survey program provides perhaps the most discussion of the repeat customer issue; SCE plans to track customers' adoption of energy efficiency measures and maintain an on-going dialogue with customers.) The PRG feels it is critical to set quantitative metrics to track progress for each of the three objectives above. This will allow SCE (and others) to judge if their programs are reaching new market entrants, if they are achieving greater savings per customers (% savings on bills) or if last years customers are becoming repeat customers. (% of customers participating this year who have participated in any program over the last five years)

Recommendation 1: We recommend that SCE work with its PAG to develop metrics that will allow them to track their progress in reaching a greater number of customers, at greater savings, and with a greater probability they will use SCE again when making energy related investments. Representatives from the Flex Your Power organization and evaluation consultants should be asked to provide or help brainstorm metrics related to market reach, depth, and repeat business by attending these workshops.

2. Establish Clear, market level, goals- SCE has provided a clear statement of its portfolio-level goals (including realizing the promise of efficiency as a reliable resource, offering a unified approach with all DSM programs, etc.). However, SCE has not yet developed any market level goals that help communicate its vision of moving to a more energy efficient future to the outside world. Numerical energy savings goals are not real or relevant for most private businesses or even some policy makers; what is helpful are firm goals like "increase the sales of more efficient HVAC systems by 15%/year," or "increase the market penetrations of energy management systems in the hospital sector by 12%."

   Recommendation 2: We recommend that SCE develop proposed market level goals over at least a three year period for each major market segment that trade allies and customers can understand. More market level goals examples are provided in Appendix C.

3. Explore new strategies to increase Program Reach- All of SCE's program descriptions appear to assume that increased marketing materials or more attractive rebates can be used to reach a significant number of new market participants. But no data has been presented on what fraction of the customers in any of the market segments have already participated in an SCE program so it will be difficult to tell if SCE will be successful in reaching new customers. We suggest that new approaches to reaching customers who, for whatever reason, have not participated in SCE programs for the last ten years need to be developed in order to meet the long-term goals. PAG members presented some suggestions that deserve to be explored in future meetings

   Recommendation 3: SCE should work with its PAG to explicitly discuss the effectiveness of current approaches to reach customers and consider piloting new approaches recommended by trade allies or PAG members.

4. Match program savings goals to previous estimates of electricity savings potential and relevant evaluations - The materials reviewed by the PRG had an incomplete linkage between previous estimates of potential savings opportunities, program evaluations, and the end uses or sectors targeted by SCE's programs. Some programs descriptions reference and use the Kema Xenergy potential estimates in targeting program approaches or measures while others omit any mention of previous savings potential and launch into

describing program design details. PRG members would prefer that a uniform approach was used that identifies relevant program potential estimates, previous program experience and results of previous evaluations to help ensure the proposed program approach is moving towards the right target .

Recommendation 4: SCE should strive to ensure that all future program descriptions identify potential savings estimates from previous studies, relevant evaluations of similar designs, and previous SCE program experience to set the context to be used to evaluate both program savings estimates and the likelihood of program success.

5. Develop a Plan to Reward excellence- PRG members had requested SCE develop a plan to motivate program implementers and reward successful customers with publicity and or case studies of their peers achieving success, This request was made in writing and during the meetings but the PRG was unable to find this plan in SCE's May 17th filings. We anticipate this may have been an oversight or the result of the PRG request conflicting with a minimum set of data requirements subsequent to our request.

   Recommendation 5: We look forward to working with SCE to help develop a plan to reward excellence among SCE implementers, third party implementers and trade allies in the coming weeks. The plans should be presented to PAG for comment and then finalized by September 1, 2005.

Summary of Overall Vision Recommendations: SCE should continue to work with its PAG to jointly develop a vision of how to achieve the Commission's goals over next decade, and jointly develop strategies to get there. Appendix F provides an example of elements of the vision and how the visions might be developed and implemented in a workshop process

B. Clear Statement of Program Goals and Translation to the Market Level-
In general, SCE did a good job at clearly stating each program's goals and describing the rationale (or logic) behind the programs' design. As previously discussed above, we recommend that SCE commit to translating these high level program goals into market specific goals that make sense to program implementers, trade allies, and contractors.

C. Leadership-

" True leadership must be for the benefit of the followers, not the enrichment of the leader. In combat, officers eat last." R Townsend 1984

"Ninety Percent of Leadership is the ability to communicate something people want" D Feinstein 1990.

SCE's draft program plans reflect substantial input from the PAG process, and we believe that this process has substantially improved the proposed portfolio. However, the PRG members would have liked to see signs of stronger leadership by SCE during the PAG and PRG planning process meetings. The SCE/SCG PAG meetings were particularly challenging because they included the need to review the plans of two utilities instead of just one, so it was often unclear who was "in charge" of running the meeting. In addition the PAG had twice as much material to cover in the same amount of time as the other PAGs.

In March, after the first meeting, some PAG members suggested that SCE needed some outside meeting facilitation services to ensure all members felt they were being heard. And although it is now clear that SCE is willing to take the PAG's input seriously, during the process, particularly early on, it was not readily apparent that SCE was effectively responding to the PAG's input and achieving two way communication..

Recommendation 6- SCE and SCG should work with facilitation experts to further improve the flow and effectiveness of future PAG meetings. The goal should be to more actively engage PAG members and the public in the planning process. SCE may also want to consider presenting some of its newer programs strategies to focus groups outside of the PAG process and bring theresults back to the PAG process.

D. Innovation-

SCE's draft plan contains a number of innovative programs and program elements. In its draft plan, SCE included helpful summary boxes for each program highlighting some of what is new about the program and what some of the innovative elements are. Some of SCE's more innovative programs include: Sustainable Communities, Comprehensive HVAC, Retro-Commissioning, and the Home Energy Efficiency Survey programs. In addition, several of the programs contain innovative elements including: integration with demand response and distributed generation, integration with gas and water efficiency, and an on-bill financing pilot. While SCE was perhaps slower than some of the other utilities at proposing and embracing innovative ideas, we believe that SCE's draft portfolio plan contains a good mix of innovative programs along with programs that have a proven track record at delivering savings.

Innovative programs often require a longer time horizon to realize savings. The challenge during this program cycle will be how to encourage and support innovative programs or ideas when there is pressure to move funds to maximize short-term savings or because the effort has not paid off in six months. Perhaps the first test will be SCE's courageous attempt to create a successful "on bill" financing program for small commercial customers. It will be important for SCE to define the criteria they will used in evaluating the success of the pilot and to communicate pilot results to relevant internal SCE and Commission staff. SCE should also develop a plan to disseminate these pilot results with its PAG and other interested portfolio administrators. .

Recommendation 7: The following questions should be addressed in the on-bill financing pilot's evaluation:

1. Are both breadth (number and type of customers reached) and depth (% savings achieved by customer) measures to be used in assessing the success of the on bill financing pilot?
2. Can the experiment tell us if on bill financing approach is pulling customers away from rebate programs or if a new type of customers is being reached for the first time?
3. Will the pilot results provide a basis for determining if the on bill approach can be transferred to other customer market sectors or scaled quickly to capture larger markets?
4. Can the on bill financing pilot results be used to leverage meaningful changes in the display and format of customer monthly bills?

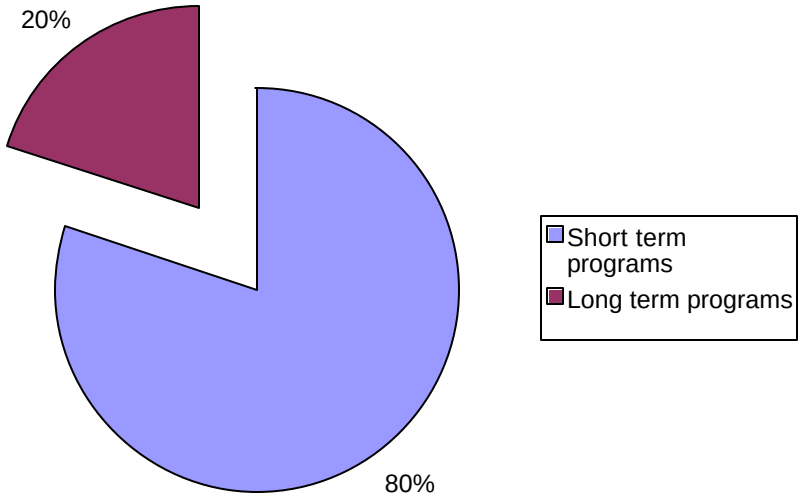
E. Develop an Appropriate Balance between Programs designed to achieve short term savings and those designed to commercialize new technologies to increase long-term savings-

SCE's draft filing lacks a discussion of how its portfolio balances programs designed to achieve short-term savings with the need to cultivate new technologies and approaches to bring in additional savings in the 2008 to 2013 timeframe. In addition, during the planning process there was little discussion of the balance between short-term programs to bring in savings and investments and the long term programs designed to increase opportunities for program savings in the long run. We explore this balance below.

Figure 2 shows the balance between the short and long term programs funding as revealed in SCE's portfolio proposal. We estimate that approximately 20% of SCE's portfolio program budget is targeted at programs that will provide long-term savings and the remainder of funding is devoted to capturing savings from existing technologies in the short run. (Appendix E provides the data and explanation of how we classified each program as long or short term)

Figure 2

Fraction of SCE Portfolio Funding Devoted to capturing Short and Long term Electricity Savings



Total Program funding- 2006 to 2008= $705 million

The Commission's annual electricity saving targets for SCE in the next cycle are about 13% higher on average than the annual goals the 2006-08 cycle. As such, SCE's allocation of funding for stimulating more long-term savings appears to be reasonable. However, our analysis of the certainty that these additional savings would result from this additional funding would benefit from knowing what magnitude of savings can be expected from the long run programs. Indeed some PRG members were uncomfortable in supporting the conclusion that SCE investments were likely to yield the necessary additional savings without additional information on at least the range of expected savings from these programs.

Long-term savings estimates were not provided from the following key programs

- Emerging technologies
- Codes and Standards
- Many of the Partnerships
- The IDEEA solicitations
- New Construction programs

Recommendation 8- SCE should estimate the energy savings for these long term programs and how they will contribute to meeting the targets beyond 2008. This effort will requires a systematic look at how to forecast the expected savings from

any increases in the rate of commercialization of new technologies supported by the emerging technology or any of the other long term programs described above.

F. Risk Analysis-

PRG members have suggested during the planning process that SCE perform a risk analysis to determine if there are strategies that can be used to mitigate or diversify the risk that SCE may not achieve its short and long-term savings goals. Factors to analyze include both the initial spread of program investment by end use and market sector and the identification and simulation of factors beyond its control such as the business cycle or major changes in the structure of the energy market.

Recommendation 9- We suggest SCE consider initiating an analysis of the risks to achieving the savings goals from the following factors:

a. Over reliance on savings from the lighting end uses for a significant portion of the total savings in the portfolio.
b. Under emphasis on exploring savings from air conditioning and other peak end uses.
c. Under investment in efforts to develop new programs for end uses where energy use is growing most rapidly; e.g. vampires from home entertainment systems.
d. Rapid swings in the economic growth cycle which interact with the rate of housing and building starts.
e. The impact of technological advances that might lead to either a significant increase or decrease in the price of energy and electricity.

G. Plan to Leverage other national and state efforts-

SCE has done a good job at leveraging resources from national organizations such as the Coalition for Energy Efficiency and Energy Star in past. SCE's proposal to work with Energy Star and CEE did not stand out in its draft application. SCE did emphasize its plans to work with local governments and schools to leverage their ability to reach new customer groups.

H. Continuous Improvement Plan-

SCE did not have time to present a plan or discussion of how it intended to encourage continuous improvement of its program delivery process. We believe it is in SCE's and the public interest to develop such a plan over the next few months and communicate it to the network of program implementers and its advisory groups

Recommendation 10 - PRG members believe it is important for SCE to develop a plan that seeks input from a variety of stakeholders on feedback received from

buyers and sellers in the market and provides forums to use this input to improve program design, operations, and mechanisms to track program progress .

I. Sufficient staff and funding resources to reach the Commission's Savings goals

SCE has requested a 31.2% increase in funding for its 2006 portfolio (relative to actual spending of $189 million in 2004). While on first look the increase in savings from 2004 to 2006 would appear to be 7%, the actual increase in savings that occur during the calendar year may approach 33% if SCE's estimate of the carryover of savings from commitments is correct. These differences are due to to the Commission's change in the way it requires administrators to counts energy savings (from "committed plus actuals" to only "actuals").

Recommendation 11- We consider SCE's proposed budget sufficient to give the program managers and implementers the resources needed to meet the commission's long term savings goals.

Table 1 below presents a summary of our overall assessment of SC's long-term portfolio plans.

Table 1
Summary of PRG Assessment of SCE Portfolio Plans

Long Term Criteria	SCE
Vision & Strategy	Satisfactory
Clear Program/Mkt Goals	Needs Improvement
Strong Leadership	Needs Improvement
plan to Cultivate and Reward Innovation	Excellent
Reward Excellence in Execution	Not Provided
Strategy to meet Long term goals	Needs Improvement
Risk Analysis to Increase Probability of meeting goals	Not Provided
Plan to Leverage outside resources	Satisfactory
Continuous Improvement plan	Not Provided
Management Commitment to Achieve Goals	Satisfactory
Likely to Meet Short Term Savings Goals	Yes
Likely to Meet Long Term Savings Goals	No, not without more work

Guide to Understanding the Ratings

1. Excellent- Plan exceeds expectations and will contribute to more long term savings
2. Satisfactory-Plan meets the PRG expectations and includes necessary elements
3. Needs improvement- Plan did not meet PRG expectations and thus reduces SCE's chances of reaching the long term goals. Probability to reach goal will increase if PRG recommendations are pursued
4. Not Provided- No information was presented in filings on this topic, leading to a high risk that savings goals will not be met. But there is still plenty of time to develop this before 2006 cycle begins

Note Short term savings goals= 2006 to 2008
Long Term Goals- 2009 to 2013

Statewide Coordination

One area that may have been shortchanged in the planning process was the exchange of information related to utility plans for running statewide programs with similar but not identical program designs. In D.05-01-055, the Commission directed the IOUs to form subgroups of their PAG members to closely collaborate and coordinate on statewide programs that cut across the IOU service territories. As part of statewide coordination, the Commission instructed PAGs and IOUs to collaborate on statewide program designs and implementation strategies that increasingly integrate energy efficiency with demand response and distributed generation offerings to end-users.[11] While the IOUs have begun the process of addressing statewide coordination issues (two statewide PAG meetings have been held to date on April 7, 2005 and April 29, 2005), the PRG believes that the process is far from complete.

The proposed IOUs' portfolios are largely a product of regional planning and lack details on statewide coordination. Even so, Table 1 reflects that the IOUs will continue to allocate a significant portion of funds to statewide programs and rely heavily on statewide programs for the majority of savings.[12]

Projected Funding by Geographical Scope ($ millions)								
	PG&E 2006		SCE 2006-08		SDG&E 2006		SoCalGas	
	% T Budget	% T Savings	% T Budget	% T Savings	% T Budget	% T Savings	% T Budget	% T Savings
Statewide	n/a	n/a	65%	83%	45%	47%	48%	n/a
Local			35%	17%	55%	53%	52%	

Table 1: Projected Funding by Geographical Scope ($ millions)								
	PG&E 2006		SCE 2006-08		SDG&E 2006		SoCalGas	
	% T Budget	% T Savings	% T Budget	% T Savings	% T Budget	% T Savings	% T Budget	% T Savings
Statewide	n/a	n/a	65%	83%	45%	47%	48%	n/a
Local			35%	17%	55%	53%	52%	

PAG and PRG members have offered a plethora of suggestions on statewide activities and programs. Many of these ideas and recommendations have been picked up by the IOUs and incorporated in various places throughout their proposed portfolios. While this is a positive step forward, it still does not go to the heart of the matter, which is:

Certain fundamental aspects of economies of scale and scope in the manufacture, distribution, and purchase, of energy-using equipment and appliances call for a *consistent, coordinated,* and *leveraged,* statewide approach.

[11] D 05-01-055 1/27/2005. *Interim Opinion on the Administrative Structure for EE: Threshold Issues*, page 93-94.

[12] PG&E has not yet proposed a state/local allocation; information was not provided in SoCalGas May filing.

Generally speaking, the four IOUs appear to be developing two rather different approaches to IOU-implemented EE in their respective proposed portfolios. This may have lead to some of the confusion and inability to focus sooner and more clearly on statewide matters.

SCE, SCG, and SDG&E are largely maintaining the existing framework of programs (with program enhancements and some new programs) defined along customer categories. (e.g. Single-family and Multifamily Retrofit Rebate Programs, Express Efficiency (small commercial) Standard Performance Contracting (larger commercial), etc. On the other hand, PG&E is in their words "blowing up all the boxes" and establishing one very large "mass market" program category, (encompasses primarily SF and MF existing, and existing Express Efficiency program, small commercial) that will rely largely on deemed savings, with then a dozen or so programs targeted at specific market sectors and customer categories such as schools and colleges, retail stores, office buildings, medical facilities, etc. (somewhat the current Standard Performance Contracting Program niche) that will work largely with calculated savings.

Regardless of the apparent two different approaches to utility-delivered EE, (enhance existing customer-centric program categories or define new programs along market categories) certain fundamental aspects of customer approaches to energy efficiency, market opportunities for interacting with the customer, market barriers, and strategies to overcome barriers, remain.

For instance, each time consumers face a market choice involving energy use it is a golden opportunity to engage consumers in assessing energy usage and efficiency potential on a comprehensive basis, and developing plans and strategies for carrying out those improvements. The critical junctures in the marketplace to positively engage consumers, businesses, and communities in energy efficiency are:

- In the design and construction of new homes and buildings; and the manufacture and distribution of equipment and appliances.

- At the point of purchase and point of installation of equipment and appliances.

- During the retrofit and refurbishment of existing homes and businesses, and the operation and maintenance of equipment and appliances.

Given the lack of discussion in coordinating statewide program designs, the PRG is unable to provide a meaningful assessment at this point. We recommend that the Commission direct the IOUs to continue the discussion with their PAG members and among themselves related to achieving similar designs and

qualifying criteria for statewide programs. Specifically we recommend the IOU's provide more details in their subsequent filing to the Commission in the following areas:

1. Statewide marketing and outreach.

The IOUs and Efficiency Partnership should submit a joint plan on statewide marketing and outreach initiatives. Currently that is a general lack of knowledge and confusion on how the IOUs local marketing and outreach efforts will integrate without duplicating or confusing statewide activities. A joint statewide plan would help mitigate these problems. The plan should address issues including: co-branding with 3rd party programs, coordination with both IOU and non-IOU program-specific marketing activities (particularly for non-resource programs), and marketing targeted at hard-to-reach segments (this includes the activities carried out by Runyon Saltzman & Einhorn and Univision Television Group funded in the 2004-05 program cycle).

2. Statewide manufacture, distribution, and retail programs.

A coordinated statewide manufacture, distribution, and retail program should be considered the starting point for making energy efficiency California's first loading order resource. Statewide marketing and outreach as noted above is part and parcel.

Upstream programs promote higher production levels and more aggressive distribution of high efficiency equipment through midstream contractor and downstream consumer demand. Upstream equipment and appliance efficiency programs have been practiced by many utilities throughout the country for a number of years. Through such programs, manufacturers and distributors often agree to discount the cost of higher efficiency equipment based on improved certainty of larger scale market demand. Also, but not always, manufacturers and distributors are offered financial incentives for increased production and distribution of higher efficiency equipment.

As a first step, PAG and PRG members encouraged the IOUs to develop a full menu of energy saving equipment and appliances, assess whether increasing the production and distribution of the mass market measures is most workable at the manufacturer level, distribution level, or both. It was suggested that a summary possibly in a matrix format would be helpful, along with a discussion of what works, and why and why not. The IOUs did some of this (albeit very late in the PAG process) largely demonstrating certain aspects of consistency, with coordination and market leverage, largely unaddressed.

Coordination and market leverage (exertion of market power) are concepts the IOUs are familiar with, and the PRGs hope that such advancements are happening "off line".

The IOUs should coordinate upstream programs targeting manufacturers and distributors to best leverage their combined market power. SDG&E currently plans to competitively bid out the Upstream HVAC/Motor Distributor Rebate program. It remains unclear how SDG&E and the other utilities will coordinate on the negotiations with manufacturers and distributors. Ideally, the utilities should jointly pursue any upstream efforts, or designate a single third-party to represent all the utilities in the negotiation and implementation process.

Preliminary potentials estimates could be readily calculated working with annual sales data, assuming normal replacement or retrofit, point of sale discounts (no consumer rebate processing increasing consumer participation), and possibly varying levels of manufacturer incentives. Program design and potentials estimates should work to achieve broad retail market participation in point of sale efforts.

3. Statewide collaboration to integrate energy efficiency with demand response and distributed generation offerings to end users.

The market integration of demand-side programs is a new program concept that affects all market sectors. By exchanging ideas and soliciting comments from the PAG members, we expect that the IOUs will be able produce a more concrete strategy that delivers demand-side programs at the most cost effective manner without adding more confusion from the customer perspective.

4. Statewide Emerging Technology program planning.

The IOUs should jointly develop a detailed plan for the 2006-08 Emerging Technology program. The plan should include a target list of technologies/software/services to be explored over the next three years, estimated time to commercialize each item on the target list, as well as the range of estimated aggregate savings from the target list.

5. Statewide Codes & Standards program planning.

The IOUs should jointly develop a detailed plan for the 2006-08 Codes & Standards program. The plan should include a target list of case studies, projected timeline for adoption by the CEC, and the estimated aggregate savings.

Third Party Bid Solicitation/Competitive Bidding Process

The PRG reviewed SCE's proposed budget for competitive solicitations, areas for targeted solicitations, process for soliciting third party bids, and criteria to evaluate the bids. SCE proposed a 2006 budget for 3rd party programs that as of the date of this PRG assessment represents 34% of the total portfolio, with 26% budgeted for the delivery of SCE-managed program, and 7% budgeted for competitive solicitation of new programs. The PRG is concerned that some of the areas SCE identified for targeted bids may be more appropriate for subcontracting than for inclusion within the "20%" part of the portfolio. Although the Commission's decision does not clearly define what types of activities should fall within the "20%" bid part of the portfolio and what should be subcontracted, based on the information the PRG has to review at this time, we believe that some of the targeted areas identified by SCE, for example, the torchiere exchange services piece of the residential rebates program, may be more appropriately considered subcontracting and should not count towards the Commission's minimum 20% requirement. While we were initially concerned by SCE's inclusion of the appliance recycling program as a targeted bid, we find that SCE is seeking substantial improvements in the design and scope of the program, and as such it is appropriate to include this bid within the targeted solicitations. After reviewing SCE's proposed targeted bid areas, the PRG finds that even if we exclude the questionable targeted areas, we find that SCE's competitive bid plan to be compliant with the Commission's minimum 20% requirement.

In general, we found SCE's plan to be fair to potential bidders and to allow for both traditional and innovative proposals, although we support a greater emphasis on bids for innovative programs. Our detailed comments on SCE's plan and our recommendations for improvements are discussed below.

Comments on Projected 3rd Party Program Budget and TRC:

1. Based on the proposed budget, 83% of the 3rd party contract funds is allocated to Targeted programs, 14% to IDEEA programs and 3% to InDEE programs (refer to Appendix H for summary of SCE's competitive bid plan). Given that the Targeted programs are components within existing SCE programs, the PRG feels that SCE's 3rd party budget allocation is inconsistent with the Commission's intent to spur innovative ideas through the 3rd party solicitation process. We recommend that SCE increase the budget allocation to IDEEA and InDEE programs closer to 25% of the budget for competitive solicitations.

2. Compared to the portfolio TRC benefit-cost ratio of 3.1, the projected TRC benefit-cost ratios for IDEEA and InDEE (4.67 and 4.57 respectively) seem unrealistic, especially since the IDEEA programs consist of pilot concepts that have no proven track record. Moreover, we would expect the programs resulting from these open solicitations to have lower cost-effectiveness on average than the overall portfolio since they are designed to take more risks and to try out new

ideas. We suggest that SCE provide documentation based on performance of the 2004-05 IDEEA programs, and lower the targeted TRC ratios for the IDEEA and InDEE programs.

3. For the SCE targeted solicitations SCE should justify the difference between proposed bid amount and the program budget, i.e. what activities will be under SCE's responsibilities besides contract administration (refer to Appendix I for the Targeted Programs' bid amount and program budget).

Recommendations: SCE should increase the combined budget allocation to the IDEEA and InDEE programs closer to 25% of the budget for competitive solicitations. The targeted TRC benefit-cost ratios for the IDEEA and InDEE programs should be lower than the projected portfolio-wide TRC ratio. Furthermore, SCE should justify the difference between the proposed bid amount and the program budget for the Targeted programs in their opening comments to the June 1st application.

Comments on the RFP process:

1. The PRG recommends that SCE and SoCalGas jointly solicit third party bids in as many areas as possible that can logically target both gas and electric savings. By consolidating the solicitation process for these program areas, the IOU administrators will benefit from reduced administrative overhead and avoiding duplicative efforts by third parties targeting the same customers within the SCE/SCG service territories.

2. We recommend that SCE coordinate with the other utilities on the upstream incentive components of the HVAC and Motors programs to send a consistent message to manufacturers and distributors. Should the utilities decide to use a 3rd party to manage the relationships with the distributors and manufacturers, there should be a single entity contracted to represent all the utilities.

Recommendations: SCE should coordinate with SoCalGas to jointly solicit third-party bids for local programs that target both gas and electric savings. For upstream incentive programs, SCE should coordinate with the other utility administrators to ensure that there is a single entity coordinating all activities with manufacturers and distributors.

Comments on the RFP schedule:

1. The PRG notes that any delays in the launch date of programs may jeopardize the ability of the program implementers to meet their program goals and may cause a delay in any future portfolio evaluation activities. To ensure that there is adequate time to select 3rd party program bids and to allow them to begin implementation by January 1st 2006, the PRG supports SCE's proposal to issue the RFP and to receive and screen stage I abstracts prior to the Commission's approval of the bid

process and criteria. The PRG further recommends that the Commission bifurcate its decision on this application and authorize SCE's competitive solicitation process as soon as possible and prior to the Commission's approval of SCE's full application.

2. Presently, SCE plans to present the final selection results to the PAG/PRG on October 3, 2005 without any other touch points with the PRG prior to that date. The PRG recommends that SCE review its selection of stage one abstracts with the PRG prior to notifying bidders to submit full proposals. Also, prior to finalizing the stage two selection, SCE should include a process that allows the PRG to monitor SCE's bid selection process to ensure that the bid evaluation criteria are applied properly.

3. The staggered solicitation schedule in an excellent idea, not only in giving SCE the flexibility to extend successful programs or pull funds from underperforming programs, but it also helps to nurture the marketplace by allowing market actors to continue to introduce new program ideas throughout the program cycle.

Recommendations: The PRG recommends that the Commission bifurcate its decision on SCE's application and authorize SCE's competitive solicitation process as soon as possible and prior to the Commission's approval of SCE's full application. We further recommend that SCE reviews its selection of stage one abstracts with the PRG prior to noticing the stage one selection results. SCE should also include a process that allows the PRG to monitor SCE's Stage Two bid selection process.

Comments on the Contract Terms for the InDEE program:

1. SCE proposed the contract terms for InDEE program to run between three to six months with the option for extension. The PRG recommends that SCE allows the InDEE contract terms to run up to one year, in order to accommodate pilot projects that may need a longer period of time to track results.

   Recommendations: The PRG recommends that SCE allows up to one year for the InDEE program contract terms.

Comments on the Program Solicitation Criteria:

1. For Targeted Resource Program solicitations, the proposed weights are as follows: (i) kWh and kW Potential 40%; (ii) Cost Effectiveness 25%; (iii) Program implementation and feasibility 15% (iv) Program Innovation 10% (v) Skill and Experience 10% (v) Minimizing Lost Opportunities 5%. However, these percentages add up to 105%. We adjust the criteria weights as follows: (i) kWh and kW Potential 35%; (ii) Cost Effectiveness 25%; (iii) Program implementation and Feasibility 15% (iv) Program Innovation 10% (v) Skill and Experience 10% (v) Minimizing Lost Ppportunities 5%.

2. We are concerned that the weighting of the selection criteria for the IDEEA and InDEE program solicitations will not achieve the stated objectives of promoting program innovation. In particular, the PRG proposes to place more emphasis on the Program Innovation criteria. As such, the PRG recommends the weights presented in the table below:

Criteria	IDEEA – Resource Programs	IDEEA – Non-Resource Programs	InDEE
kWh and kW Potential	20%	na	20%
Cost Effectiveness (for resource programs)/ Cost Efficiencies (for non-resource programs)	20%	25%	20%
Program Implementation and Feasibility	15%	15%	15%
Program Innovation	30%	45%	30%
Skill and Experience	10%	10%	10%
Minimizing Lost Opportunities	5%	5%	5%

3. The first stage screening process described in the draft portfolio application provided to the PRG seems to be too subjective. We recommend that the criteria that will be used in screening stage one submissions be more explicitly defined.

4. SCE's proposed bid evaluation criteria provides a detailed breakdown of the criteria it proposes to use in evaluating individual bids, and states that the utility's portfolio managers will ensure that all programs and technologies fit into its overall portfolio. This proposed bid selection process provides inadequate detail on the portfolio-level criteria SCE will use to evaluate bids and assemble the final portfolio. We suggest that SCE further clarify these portfolio-level criteria, such as ensuring that the portfolio is cost-effective, comprehensive, reaches a diversity of target markets, does not result in overlapping or competing programs, adequately lays the groundwork for reaching the Commission's long-term savings targets, etc.

Recommendations: The PRG recommends that SCE modify the stage two bid evaluation criteria weights for the different competitive solicitations as above. Furthermore, we recommend that SCE provide a more explicitly defined set of criteria for screening stage one submissions as well as clarify the Stage Two portfolio-level criteria.

Comments on the Continuation of Successful Non-IOU Programs:

1. D.05-01-055 instructs the IOUs to construct a portfolio that "reflect[s] the continuation of successful IOU and non-IOU implemented programs and new program initiatives designed to meet or exceed [the energy savings] targets." (p 95) We have reviewed the SCE analysis on 2004-05 third party programs and are concerned that SCE did not use a sufficiently robust process to select existing programs to continue in the 2006-08 program cycle. For some programs, it remains unclear in SCE's program descriptions whether SCE will be partnering with existing third party implementers or whether they will be subject to competitive bids

2. We support the idea of "mainstreaming" successful programs ideas into one of SCE's statewide or local programs. As described in SCE's draft Program Concept Paper (May 9th version), "if a greater demand is determined that is beyond the capability of the contractor or their program design, SCE may elect to shorten the program and its contract and mainstream the technology or concept. The mainstream program that receives this new concept or technology shall also collect the residual funds from the originating, abbreviated program." (p 237) There is a perceived lack of reward for the program implementer that introduced the successful program concept or technology to SCE in the first place. From the program implementer's perspective, there is no difference between running a successful program and an unsuccessful program. The end result is the same: the program will be subjected to early termination. Clearly, there needs to be an explicit reward for program implementers that launch the successful technology or concept in the first place. We ask that SCE introduce a tangible reward system in the IDEEA and InDEE program solicitation.

Recommendations: SCE should continue to work with the PRG to develop a more robust process to mainstream non-IOU implemented programs, including a tangible reward system to continue to motivate 3rd parties to introduce innovative program ideas.

Fund Shifting

The Commission asked the PRG to discuss and potentially recommend fund-shifting rules to govern what process, if any, the administrators should follow when shifting funds between programs over the next three years. In general, the PRG members support fund-shifting flexibility that will enable the utilities to meet the Commission's savings targets. There may be situations when it would be necessary for the utility to quickly shift funds away from programs that are having difficulty meeting their savings goals without having to wait two to three months for Commission approval. However, some limits on fund-shifting flexibility may be desirable since (1) some of the program details, including cost-effectiveness information, remain vague, and in particular, we wish to ensure that utilities

maintains an appropriate balance between programs that will provide near-term and long-term savings, and (2) there might be a tendency for some administrators to shift funds away from programs providing longer-term savings towards program focused solely on harvesting savings in the short-term. The PRG discussed two potential fund-shifting policies, but was not able to reach consensus on a recommendation to the Commission. We, therefore, outlined the two options that the PRG discussed in Appendix J[13].

Conclusions

We have attempted to include language in this assessment that reflects a consensus opinion, however, due to time constraints in writing this report, all members retain their right to submit individual comments to the Commission, or to provide recommendations to the Commission that are either outside of the scope of this assessment, or that differ from certain items or recommendations included herein.

The PRG believes that in the near term, for the 2006-08 cycle, SCE's proposed portfolio is likely to cost-effectively meet the Commission's targets. We find that SCE has maintained an adequate emphasis on measures and programs with a proven track record of delivering savings. In addition, SCE has most likely built an adequate margin of error into its forecasted energy savings, although the margin of error for average demand is not large enough to make us entirely confident in SCE' ability to meet the demand goals, or address reliability and critical load issues in Southern California.

Achieving the long-term (2009 and beyond) savings goals will require the utility to increase its annual savings by roughly a factor of 2.5 relative to 2003. During the planning process, SCE presented an initial vision and strategy for attaining its energy efficiency goals. However we are not confident that this initial effort will be sufficient to meet the Commission's long-term savings goals. In part this is because SCE has not had sufficient time to forge a consensus among the key stakeholders whose help is needed to make the vision a reality. SCE, and most probably the other program administrators, have not had sufficient time to think systematically about the future and create a complete vision. SCE can develop a robust vision and strategy to get there by continuing to work on strengthening its program strategies and building a coalition of supporters over the next few months. To achieve and sustain an increase in savings of this magnitude, this PRG made several recommendations that SCE

[13] Although Energy Division does not endorse either of the PRG recommendations, it does not wish to impinge upon the PRG's freedom to request an expanded role, or to request that it be vested with the following responsibility. However, Energy Division may deem it as part of its responsibility to advise the Commission to make a recommendation on a fund-shifting request and approval process that differs from that suggested by this PRG. Energy Division has not yet determined what the staff position will be as it has not yet reviewed the filings or yet consulted with Commission decision makers on their desired level of staff oversight of utility portfolio administration and expenditures, however ED might have concerns about the feasibility and propriety of the recommended process. Energy Division does not wish to either undermine the PRG process by seeming obstructionist or appear duplicitous.

administrators should consider within their planning process and portfolio plans.

One area that may have been shortchanged in the planning process was the exchange of information related to utility plans for running statewide programs with similar but not identical program designs. In D.05-01-055, the Commission directed the IOUs to form subgroups of their PAG members to closely collaborate and coordinate on statewide programs that cut across the IOU service territories. As part of statewide coordination, the Commission instructed PAGs and IOUs to collaborate on statewide program designs and implementation strategies that increasingly integrate energy efficiency with demand response and distributed generation offerings to end-users. While the IOUs have begun the process of addressing statewide coordination issues, the PRG believes that the process is far from complete. Generally speaking, the four IOUs appear to be developing two rather different approaches to IOU-implemented EE in their respective proposed portfolios. This may have lead to some of the confusion and inability to focus sooner and more clearly on statewide matters. Given the lack of discussion in coordinating statewide program designs, the PRG is unable to provide a meaningful assessment at this point. We recommend that the Commission direct the IOUs to continue the discussion with their PAG members and among themselves related to achieving similar designs and qualifying criteria for statewide programs.

The PRG reviewed SCE's proposed budget for competitive solicitations, areas for targeted solicitations, process for soliciting third party bids, and criteria to evaluate the bids. SCE proposed a 2006 budget for 3rd party programs that as of the date of this PRG assessment represents 34% of the total portfolio, with 26% budgeted for the delivery of SCE-managed program, and 7% budgeted for competitive solicitation of new programs. The PRG is concerned that some of the areas SCE identified for targeted bids may be more appropriate for subcontracting than for inclusion within the "20%" part of the portfolio. Although the Commission's decision does not clearly define what types of activities should fall within the "20%" bid part of the portfolio and what should be subcontracted, based on the information the PRG has to review at this time, we believe that some of the targeted areas identified by SCE may be more appropriately considered subcontracting and should not count towards the Commission's minimum 20% requirement. After reviewing SCE's proposed targeted bid areas, the PRG finds that even if we exclude the questionable targeted areas, we find that SCE's competitive bid plan to be compliant with the Commission's minimum 20% requirement. Although the PRG tends to support a greater emphasis on bids for innovative programs, in general, SCE's proposed plans appear to be fair to potential bidders and to allow for both traditional and innovative proposals.

The Commission asked the PRG to discuss and potentially recommend fund-shifting rules to govern what process, if any, the administrators should follow when shifting funds between programs over the next three years. In general, the PRG members support fund-shifting flexibility that will enable the utilities to meet the Commission's savings targets. The PRG discussed two potential fund-shifting policies, but was not able to reach consensus on a recommendation to the

Commission. We, therefore, outlined the two options that the PRG discussed in Appendix J.

Appendix A

1. SCE: 2006-08 Energy Efficiency Program Plans Draft – May 9, 2005, revised May 18, 2005.
2. SCE Portfolio Application Outline, Energy Efficiency Program Year 2006-08, provided on May 9, 2005
3. SCE/SCG PAG and Public Workshops- Recommendations, provided on May 9, 2005.
4. SCE Energy Efficiency Summary Tables 5-18 (Excel Workbook file), dated May 18, 2005
5. SCE: Areas of Portfolio Identified For Competitive Bid, provided May 9, 2005
6. 3rd Party Program Analysis: 2004-05 Non-IOU Programs in SCE's Service Territory: Resource and Non-Resource and 2004-05 CPUC Non-Utility Energy Efficiency Programs (Excel Workbook file), provided May 9, 2005
7. SCE's May 18, 2005 response to PRG's data request

Appendix B

April 14, 2005

To: Utility Energy Efficiency Portfolio Managers
From: Mike Messenger, CEC
Devra Bachrach, NRDC
Cynthia Mitchell, TURN
Zenaida Tapawan Conway, CPUC Staff
Peter Lai, CPUC staff
Christine Tam, ORA

Subject: Criteria for evaluating the portfolio of energy efficiency programs to be submitted on June 1, 2005.

In the interests of full disclosure and no surprises, here are the criteria we plan to use in assessing whether the utility portfolio manager submittals on June 1st, 2005 are consistent with the Commission's energy efficiency policy goals.

1. **Vision**- The utility administrators should present a strategic vision and set 3 year stretch goals for each market segment (beyond just the quantitative energy saving goals set by the Commission) that will motivate employees, stakeholders and the regulatory community. This vision should include a thoughtful analysis of how today's emerging trends will effect program opportunities between now and 2008.
2. **Clear Statement of Program Goals**- Maximize cost effectiveness or achieve energy and peak savings goals or others? Also, the application should contain a clear description of how the programs in the portfolio will minimize lost opportunities and reflects "best practices" drawing upon experience and information to date on both IOU and non-IOU implemented programs.. In addition, the application should demonstrate that it is designed to displace or defer more costly supply-side resources by demonstrating that the portfolio of programs is cost effective.
3. **Flexibility**- Plan should contain the milestones to verify that the programs are on track to achieve savings goals and mechanisms to shift program funding as market circumstances change and evaluation results become available.
4. **Diversification of Program Savings Risk**- Discuss how the portfolio diversifies risk, and how the elements of portfolio are divided on the spectrum between "tried and true" programs and new programs to "test the waters." Provide an expected value analysis of the risks of over reliance on specific programs or measures for to achieve large portions of the portfolio savings goals. Demonstrate that the plan provides an adequate margin of error in meeting the Commission's targets, and identify the key uncertainties in savings estimates that must be confirmed over time.
5. **Leadership**- Provide evidence that portfolio managers have worked hard to bring ideas and concepts from various stakeholders and PAG members into finished

program concepts within the application and bringing successful ideas from third party programs into the main stream.

6. **Innovation** - Explore end uses where energy savings have not been significant over the past ten years (e.g., gas water heaters), new end uses (e.g., home entertainment systems), and new approaches (e.g., on bill financing, feedback from utility bills, and co branding).
7. **DSM Integration** - Integration of EE opportunities with demand response and renewable options as part of program delivery options.
8. **Reward Excellence**-Define a process to develop a plan to reward excellent execution from program planners and implementers under contract to the portfolio manager.
9. **Leverage** – Demonstrate that the portfolio is leveraging national efforts through participation with CEE, Energy Star, etc. and statewide efforts through coordination with other utilities (including municipal utilities, water utilities, etc.) and agencies (e.g. the CEC).
10. **Strategy to Meet Long-term Targets** – Demonstrate that the portfolio "plants the seeds" for a future ramp-up in savings in order to meet the more aggressive targets beyond 2008 and capture *all* cost-effective savings. Describe the balance of long-term vs. short-term programs within the portfolio. Demonstrate that the portfolio builds the energy efficiency infrastructure to achieve greater future savings.
11. **Best Program Implementation** – Explanation of how the areas to be competitively bid and the funding levels were chosen in order to meet the Commission's goal of improving programs and spurring innovation.
12. **Coordination** – Clear plan to coordinate all program implementers (both utility and non-utility) to ensure the success of the entire portfolio, and a plan to help *all* program implementers be successful.
13. **Continuous Improvement Plan** – Outline a plan to continually improve the portfolio of programs through process evaluations, market assessments, etc. and ongoing portfolio planning and stakeholder input (i.e. the portfolio planning process should not rush now and then cease in 2006, it should be ongoing to make mid-course changes and to take the time necessary to plan an even better portfolio for 2009 and beyond).
14. **Compliance with Policy Rules and other Commission directives** – demonstrate how the portfolio/programs comply with the policy rules (expected to be adopted on April 21) and other directives set forth in prior Commission decisions, as applicable.
15. **Responsiveness to the Green Building Initiative Executive Order**– Demonstrate how the portfolio/programs address the goals set forth in the Executive Order with respect to improving energy efficiencies in state and commercial buildings, and informing building owners/operators about energy efficiency

Please contact Mike Messenger if you have any questions about these criteria or how we plan to apply them. Thanks.

Appendix C

Examples of Market Level Goals- from SoCalGas filing

1. By 2013, SoCalGas will replace all standard coin operated laundry machines with high efficiency clothes washers and dryers.

2. By 2013, SoCalGas will perform energy efficiency surveys on every home in our service area built before 1960.

3. By 2013, every SoCalGas residential customer will have an interactive electronic assessment device that will provide real time energy consumption and site-specific energy conservation/efficiency recommendations. (Virtual Auditor).

4. By 2013, every commercial kitchen in SoCalGas' service area will produce 20% more product for the same gas input in 2004.

5. By 2013, inefficient natural gas-related industrial plumbing designs will be eliminated.

6. By 2013, hybrid natural gas/electric space cooling systems will be a viable solution for electric-peak load reduction in the residential and small commercial segments.

7. By 2013, residential space heating energy consumption in SoCalGas' service area will be the same as that recorded in 2004

Appendix D

Listing of PRG AND PAG recommendations that deserve further investigation by SCE

1. Investigate the 1-2-5 approach to increasing savings in the industrial sector include targeting of CEO and chief financial officer.
2. PRG member suggests embedding a chip in an SCE consumer card that contained customer account information. This card could be provided to provider to participating retailers to swipe before purchasing qualifying projects and could be used to track long-term participation patterns.
3. Encourage builders to incorporate a chip into new homes or meters to include the original building plans and wiring diagrams. Chip should be readable by both homeowner and any auditors/ contractors seeking to improve integrity of a dwelling. This should substantially reduce the costs of measuring building dimensions during audits.
4. Evaluate Fuel Switching as an Energy Efficiency option
5. Evaluate if solar hot water heating is a cost effective replacement to electric water heating.
6. Installation of chips that self diagnose decay or failure of major HVAC systems and provide wireless signal to customer computer or to utility meters
7. Discuss Strategies to Provide Customers with Feedback on the Results of their efficiency Investment or changes in operations-
   i) Examples- Monthly Bill feedback that tracks normalized (for weather) energy consumption in bar graphs, equipment feedback on energy usage via wireless chip to onsite PC's or displays.
   ii) Utility representatives giving feedback to program participants via phone calls, email other means,
   iii) Annual savings report automatically mailed to customers participating in efficiency programs upon request
8. Consider Reformat monthly utility bills to allow customers to receive graphical feedback on the results of participating in program and or benchmarking to similar premises at the customers option.

Appendix E

Data table for figure 1- SCE program savings and funding 2003-2008
SCE Short vs Long Term Program funding and Savings
2006-2008 programs

	Funding		Energy Savings		Energy savings	
	$ 1000's	%	gWh	%		gWh
Short term programs	565,265.7	80.1%	3,390.4	92.1%	**Short term programs**	3,390.4
Long term programs	140,662.8	19.9%	289.6	7.9%	**Long term programs**	289.6

Key

short term 50% of Comprehensive HVAC, SF & MR Rebates, Appliance Recycle, Home energy surveys Business Incentive, Small business direct install, comprehensive comm HVAC, Retrocommissioning, Industrial process , Agriculture, 80% of Partnerships,

long term = CA New Homes, 50% of comp hvac residential, Advantage Homes, Savings by Design, Sustainable Communities, 20% of partnerships

Note IDEEA program was not classified short or long term due to lack of savings data and program/project descriptions

Appendix F

Examples[14] of Alternative Energy Efficiency Visions
and Questions to Explore in the Visioning Process

1. Customers routinely seek to confirm the savings achieved from previous programs by looking at their monthly bill and asking for an automatic verification check from their new interval meter
2. Small and large business owners track the energy component of their monthly expenses though simple benchmarking programs and compete to be best in the trades.
3. Utilities set up self sustaining web sites where customers rate the quality of major contractor installation jobs and allow skilled home doctors to flourish.
4. CPP pricing on peak leads customers to explore compressor less cooling in transition communities between coast and central valley.
5. Tradeable carbon market makes it profitable for SoCalGas and SCE to sell their savings to other countries and stimulates a " brain drain" of efficiency experts to the Far East.
6. Large industrial customers routinely consult with portfolio administrators when they are considering major plant retrofits or relocation to new areas.

Questions to Explore at Visioning Workshops

1. What are the key trends in micro-electronics, system controls and building energy management systems? How are they likely to effect opportunities for energy savings in the future?
2. How will the installation of interval meters effect customer motivation and program opportunities to save energy?
3. What are key trends in process industry growth and how will they affect energy savings opportunities?
4. What will be the effect of the eventual downturn in home sales on program savings in next three years?
5. What types of impacts will the governor's green building initiative on program saving opportunities, particularly the implementation of a commercial wide benchmarking system?
6. What are the likely effects on programs of the imposition of a cap and trade system for greenhouse gas mitigation within the next decade?

[14] Note these are examples only and are not necessarily endorsed by the entire PRG group.

Appendix G

Recommendations from PRG members that were not universally supported by all PRG members

The following is a list of recommendations that some PRG members felt were potentially important but did not enjoy the support of all PRG members. They are listed here because the PRG members from the CEC and TURN felt they raised interesting issues that the Program Administrator may decide to address in the short- or long- term. Other PRG members, including NRDC and ORA, expressed its intentions to address any of their individual issues through their comments on the utilities' applications after June 1.

Recommendation 1: SCE's Plan should make effort to reach and motivate a broader audience of stakeholders. SCE should consider redrafting portions of its plan for use in recruiting and motivating trade allies, equipment vendors and internal staff to help achieved SCE's goals

The audience for SCE's three year portfolio plan should be more than just regulators, it should speak to all of the professionals likely to be involved in designing and implementing SCE's programs as well as their customers. This suggest to us that the content and format of the plan should be modified to suit different audiences. For example Trade allies and venture capitalists need to be INSPIRED and CONVINCED that there are real profit opportunities in the development of new more efficient technologies and service. Quite frankly the current program explanations of the emerging technologies, advanced homes, and partnerships programs are not designed to reach venture capitalist or research audiences.

Recommendation 2: SCE should devote more time to developing program designs that encourage customer to achieve deeper levels of energy savings- "or how to avoid lost opportunities"

Very little if any discussion of methods to reduce lost opportunities occurred during the planning process. We suggest there are many options that could be pursued including the use of follow up emails, periodic site visits to recommision systems installed in previous program years, or customized feedback on energy reduced bills after investments are made.

Recommendation 3- SCE should consider strengthening its efforts to generate repeat customer business for future programs, particularly in the residential sector where the costs of reaching customers are high.

It is evident to some analysts that stimulating current program customer to become repeat customers interested in participating in future programs is a much cheaper strategy than devoting significant marketing resources each year to acquire new ones. SCE's plans do not apparently include an approach to building long-term relationships with successful

program participants. We suggest that satisfied efficiency customers are SCE's best and cheapest way to increase long-term savings. Customer relationships should be cultivated to maximize word of mouth opportunities by giving consistent and understandable feedback about the results of program induced savings. SCE should track repeat customers in data base and consider giving out energy efficiency hero/reward cards (AFTER successful efficiency investments). This card can be used by customers for future discounts or contacting host utility. Move these depth, reach, and repeat

Observation 4: SCE has provided insufficient information on the savings opportunities expected from the emerging technology program to justify a three year budget of over $ 11.3 million dollars

SCE should have provided more information on the technologies to be developed in the Emerging technology program and their anticipated energy savings in typical applications. Some PRG members expected the emerging technology program description to include an initial list of promising cutting edge technology research or commercialization projects to be pursued with the requested funds. This list would ideally include the estimated energy savings per unit or in aggregate that could be achieved by if the technology was commercialized (x% better than current technology) or if the research project was successful. At a minimum there should have been some discussion of the success of previous 2002 or 2003 emerging technology programs in generating savings opportunities.

Instead SCE (and other program administrators to be fair) provided a process discussion of the numerous gaps and pitfalls needed to bring energy technologies and processes to market without one hint of what specific new technologies were actually in the pipeline from last year or on the drawing boards for future years.

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A promise to do a good job should not be sufficient to receive a grant of $ 11 million.

Recommendation 4: Require SCE to re-file its emerging technology program description by October 1, 2005 to include the following items:

a. Technologies/software/services to be explored over next three years
b. Estimated percent increase in efficiency relative to existing technologies or processes
c. Range of estimated aggregated savings if successful- probabilistic analysis
d. Cost reduction goals for each technology/service if applicable.

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Observation 5: SCE's program goals are too complex to be used as a guide to program development or implementation.

Page 1 of the SCE program filing includes the following paragraph on program goals[15]:

A. [15] See SCE's discussion of its program goals in section 3.1.1 of portfolio outline

"SCE's goal is to fully realize the promise of DSM as a reliable and robust resource which is consistent with how the state of California views energy efficiency and all demand-side management activities as communicated in the state's Energy Action plan. The portfolio offers a unified program approach where all DSM programs work together seamlessly so that customers take actions that make sense to them. SCE will rely on a combination of short and long-term solutions to energy efficiency. Through a diverse, yet focused, set of programs SCE looks to an energy efficiency portfolio which can immediately harvest cost-effective energy efficiency savings and demand reductions while looking beyond the 2006-08 planning cycle to ensure energy efficiency remains a reliable and robust resource. SCE will maximize the benefits of diversity within the portfolio, among approaches, measures, markets, delivery channels and implementers. SCE will continue grow and sustain partnerships to crease a durable distributed infrastructure of local energy efficiency networks. SCE views partnerships as a means to get to the customer on a local level to embrace energy efficiency..".

This paragraph may sound like good policy but it does not provide a set of clear priorities to all of the many actors that will be working to achieve SCE's goals. For example, does SCE ask that its program implements seek to maximize total energy savings by increasing coverage and depth everywhere or should implementer focus on achieving lower levels of energy savings during times when they are worth more to the customer and the utility. Are there some priority customer types to be targeted? Is SCE willing to focus on achieving lowest cost and highest net resource benefit even if it means moving funds from residential to non-residential. Should all customers qualify for most program services or it is acceptable to target customers for programs based on their initial usage or building characteristics and exclude others?

Recommendation 5: SCE should work with PRG members to develop a more focused set of market level goals to distribute to its internal staff and program implementers by October 15, 2005

Recommendation 6- SCE should pursue additional opportunities to reduce HVAC load in the NEAR term, e.g. by next year.

Examples of Near-Term Lost Opportunities :

Energy-saving equipment and services

- Early distributor stocking SEER 13 HVAC units; coupled with:
- Value-added contractor quality installation. With 600,000 central AC units sold into CA annually, this qualifies as *Carp Diem! Seize the Lost Opportunities?*
- Also, appropriately valued incentives and program design to encourage commercially available, higher efficiency, central HVAC units. (Freus example: already sold throughout CA and rebated by the IOUs. Even though the Freus units have a much higher efficiency level, rebates are set at the lower SEER levels, making it still difficult for consumers to purchase the somewhat more expensive units.)

Foster innovative Delivery Mechanisms

- Saving critical load HVAC is expensive and complex. HVAC epitomizes one of the reasons why the CPUC has urged the IOUs since the return to IOU-EE in 2001 to seriously consider and move forward with on-bill financing. In the hopes that someday the IOUs will get there, off-bill financing provides a very workable bridge or set of stepping stones from rebates to on-bill. While SCE (as the other IOUs to greater and lesser degrees) is moving forward with some limited testing of on-bill as well as some ongoing boutique off-bill, this does not rise to occasion or challenge at hand.

Recommendation 7- Financing, On- and Off-bill, as a supplement and/or alternative to rebates.

There is a strong need for low- and no-interest financing of residential and small commercial energy efficiency equipment such as HVAC and major efficiency retrofit and refurbishments as an effective mechanism to overcoming significant market barriers that exist in inducing the majority of homeowners and businesses to invest in saving energy.

Financing is also one of way to effectively address the split-incentive landlord-tenant barrier at least in the commercial sector. Energy saving measures with a payback period less than the length of the tenant's lease are ripe for financing, with additional options including the ability to transfer an existing financing contract to the next tenant.[16]

The new federal standards for residential central air conditioning units effective 2006 heighten the need for financing. As lower-cost (lower efficiency) units are no longer available, customers may increasingly delay replacement. Appropriate financing could prevent the decline in replacement of older, less efficiency systems.

While all the utilities to one degree or another are testing on-bill financing,[17] off-bill financing – part and parcel to all or most of the IOUs, third-party, and

[16] United Illuminating Company's *Small Business Energy Advantage* http://www.uinet.com/your_business/sbea.asp

[17] In D. 04-09-060 September 23, 2004 *Interim Opinion: Energy Savings Goals for Program Year 2006 and Beyond*, the CPUC directed the IOUs to submit proposals for on-bill financing. Page 34: "For this purpose, we encourage the program administrator(s) to aggressively develop program design options during the next program cycle that will address major barriers to energy efficiency deployment. We expect program administrator(s) to submit for our consideration an analysis of a wide range of promising options to remove barriers to rapid energy efficiency deployment, including on-bill financing of energy efficiency measures. In doing so, program administrator(s) should look to the practices used in other states to resolve the ratemaking, cost allocation and consumer protection issues raised by the parties in this proceeding regarding on-bill financing."

partnership energy efficiency programs and services – provides an excellent bridge as California hopefully moves closer to on-bill.

Appendix H

Summary of SCE's plan for competitive bidding

Third-party bid category	Projected Budget	Projected TRC	Bid Rationale	Bid Schedule
Targeted	$197,400,000	Varies	SCE plans to bid out targeted components within existing utility statewide and local programs that were previously outsourced to non-utility implementers. Through the competitive solicitation, SCE allows the bidders to introduce program innovations.	SCE plans to complete program/contractor selection by Oct 2005 to allow implementation to begin in Jan 2006. Contracts for the Targeted program will run from 2 to 3 years.
IDEEA	$32,824,000	4.67	Through the open IDEEA solicitation, SCE plans to add programs that offer different marketing or delivery methods, address different market segments, and/or different technologies to complement the SCE portfolio.	SCE plans to complete program/contractor selection by Oct 2005 to allow implementation to begin in Jan 2006. Contracts for the IDEEA program will run from 2 to 3 years.
IDEEA - ETCC	$5,700,312	4.57	Through the ETCC solicitation, SCE plans to introduce emerging energy efficiency technologies that may otherwise be not as cost effective for organizations to bring to the market.	SCE plans to complete program/contractor selection by Oct 2005 to allow implementation to begin in Jan 2006. Contracts for the IDEEA-ETC program vary between 3 to 6 mos.
SCE 2006-08 Portfolio	$687,623,000	3.1		

Appendix I

Summary of SCE's Third-Party Target Program Solicitations

Program Name	Program Budget*	Bid Amount *	Bid rationale*
Appliance Recycling	$39,823,800	$34,000,000	refrigerator, freezer and a/c recycling
Residential EE Rebates	$69,118,200	$2,000,000	implement torchiere exchange services
Home EE Surveys	$6,000,000	$4,000,000	In-home, mail-in, online audit services, welcome home package
CA New Homes	$18,886,000	$3,800,000	design services
Business Incentive Program	$127,177,828	$8,100,000	engineering reviews of proposed projects and onsite verification
Comprehensive HVAC	$59,718,777	$48,500,000	upstream incentive, quality installation, training and certification, maintenance
Retrocommissioning	$15,045,000	$13,500,000	all
industrial Processes	$38,618,373	$2,300,000	upstream motors incentive
Small Business Direct Install	$46,682,298	$40,100,000	prime contracting service
Outreach, Training	$21,627,593	$5,600	mobile service, design service

* source for Program Budget: "SCEEESumTables5-18.xls", received May 18, 2005
* source for Bid Amount and Rationale: "SCE 80-20 Allocations 5-9.xls", received May 9, 2005

Appendix J

Fund-shifting

The Commission asked the PRG to discuss and potentially recommend fund-shifting rules to govern what process, if any, the administrators should follow when shifting funds between programs over the next three years. In general, the PRG members support fund-shifting flexibility that will enable the utilities to meet the Commission's savings targets. There may be situations when it would be necessary for the utility to quickly shift funds away from programs that are having difficulty meeting their savings goals without having to wait two to three months for Commission approval. However, some limits on fund-shifting flexibility may be desirable since (1) some of the program details, including cost-effectiveness information, remain vague, and in particular, we wish to ensure that utilities maintains an appropriate balance between programs that will provide near-term and long-term savings, and (2) there might be a tendency for some administrators to shift funds away from programs providing longer-term savings towards program focused solely on harvesting savings in the short-term. The PRG discussed two potential fund-shifting policies, but was not able to reach consensus on a recommendation to the Commission; we outline the two options that the PRG discussed below.

Option A:

The Commission, and other parties with more of a long-term focus, may be the only effective advocate for maintaining funding for programs with a long-term focus, particularly if administrators are having difficulty meeting some of their short-term savings objectives. To guard against the tendency for administrators to shift funds from programs designed to achieve long run savings to short term programs that are short of their annual goals, we suggest that the Commission itself must approve any proposed reduction for long-term programs that exceeds 10% of the program budget. Administrator's requesting such a shift would have to file an advice letter and obtain Commission approval .

All other proposed fund shifting during the three-year planning cycle, either between programs within sectors or across sectors, would require notification of both the PRG and the Energy Division and a short comment process with each utilities' PRG, but would not require Commission action. Party comments on fund shifts would automatically become part of the next earnings assessment process that parties would be given the opportunity to show, after the fact, the impact of any fund shifting that they opposed. This step of linking administrator actions and comments on them to actual savings results will ultimately make the administrators more accountable for their actions. We believe administrators should remain open to suggestions from PRG members about the timing and wisdom of funding shifts AND should be held accountable for their funding allocation choices during the assessment of whether or not the Commission's savings goals have been met and the recommendation below

attempts to strike this balance.

Recommendation:

The utility should consult with the PRG at least 15 days prior to any significant shifts in program funding. We define a fund-shifting to be **significant** if it exceeds any of the threshold criteria listed below.

- Fund shifting among programs exceeds 25% OR $8.5 million of the initial authorized program budget, whichever is less, on an annual basis.
- Fund shifting among programs exceeds 50% on a cumulative basis.
-
- Approved budget for codes and standards, emerging technologies, statewide marketing and outreach, or EM&V is reduced by more than 1%.
- The percent of portfolio funding allocated to non-utility implementers falls below the Commission's mandated 20% for a calendar year.
- Proposed Implementation of a new program outside of the competitive solicitation process.

Recall that any proposed funding reduction in the budget of any long-term program (See Appendix E for the list) in excess of 90% would automatically trigger an advice letter process.

Fund shifting actions below these thresholds would not trigger the need to notify or consult with the PRG, or the Energy Division.

Significant funding shifts would require the utility to notify PRG members of the proposal by email and request comments in no less than 15 days from the date of the email. The comments should clearly state whether the PRG member is supportive of the shift, against the funding shift, or simply wants more information. The administrator would then have the responsibility to review these comments and decide if there was a need for either a follow up phone call or meeting to discuss the comments before moving ahead with the proposed action. After making this decision and pursuing any necessary follow ups, the administrator should notify all of the PRG members and the Energy Division of their final fund shifting decision and append a summary of the comments received on this item.

As much as possible, the utility's consultations with the PRG on potential fund shifts should occur at quarterly meetings, but the utility would not be precluded from bringing items to the PRG at other times using means of communication such as e-mail, conference calls, or meetings. At the quarterly PRG meetings, the utility should review the status of the programs and the portfolio with the advisory group, and

discuss any funds shifted within that period.

A summary of the funding shift actions taken and the comments received on them should be made available on an annual basis to all parties and the CPUC when it is reviewing each administrator's savings achievements as part of the annual AEAP. Parties will be allowed to comment, if they want to, on the wisdom or propriety of any fund shifting actions taken by the administrator and explicitly address if the actions taken were consistent with achieving the commission's short- or long-term savings goals. The Commission then would be free to take any action it wanted, if they were convinced that the fund shifting actions taken were not consistent with their policy directions.

In this way, portfolio administrators can be held accountable for the results or consequences of their fund shifting decisions within the context of what Commission should really care about: achievement of the short- and long-term energy savings goals. This process avoids both the need to construct an elaborate advice letter process and the delays that may occur in the process of securing commission approval for fund shifting proposals. In sum we believe fund-shifting decisions should be the administrator's responsibility. The best way to evaluate if the administrators are making the "proper" fund shifting decisions is to examine their impact on the bottom line, energy savings achieved in the short and long run.

Consistent with the process outlined above, this option encourages the Commission to grant the utility full flexibility in administering a portfolio of programs to meet or exceed the Commission's energy saving targets. It encourages the utilities to make use of this flexibility to adjust the portfolio as market circumstances change and as it gauges the relative success of the programs within the portfolio. It encourages the portfolio administrators to take advantage of its PRG to receive input on program design changes and to continue the collaborative process it has begun in the past few months.

Option B:

With a few exceptions (notably Codes and Standards, Emerging Technologies, EM&V, relative IOU versus non-IOU funding), the utilities has proposed unlimited fund shifting flexibility. In general, the PRG members support fund-shifting flexibility that will enable utilities to meet the Commission's savings targets. However, limits on fund-shifting flexibility are required since some of the program details, including cost-effectiveness information, remain vague, and in particular, we wish to ensure that utilities maintains an appropriate balance between programs that will provide near-term and long-term savings.

Recommendation:

If any of the thresholds listed below are reached, utilities should consult with the PRG

at least 15 days prior to its proposed action. If the PRG is in consensus with the utility regarding the action, then no formal PUC process is needed (other than complying with the Commission's reporting requirements). **If such consensus is not reached by the PRG, then the utility should file an advice letter.** Prompt action on the advice letter by the PUC is absolutely essential to ensure that the utility is able to use its best judgment as portfolio administrator to meet the savings goals for which the Commission will hold the utility accountable and upon which its resource portfolio managers are relying. This process would be triggered if the utility's proposed action exceeds the following thresholds:

- Administrative costs exceed 105% of the approved costs at the portfolio level.[1]
- Fund shifting among programs exceeds 25% OR $8.5 million, whichever is less, on an annual basis.
- Fund shifting among programs exceeds 50% on a cumulative basis.
- Funding for codes and standards, emerging technologies, statewide marketing and outreach, or EM&V is reduced.
- The percent of portfolio funding allocated to non-utility implementers falls below 20%.
- Implementation of a new program outside of the competitive solicitation process.

As much as possible, the utility's consultations with the PRG should occur at quarterly meetings, but utilities would not be precluded from bringing items to the PRG at other times using means of communication such as e-mail, conference calls, or meetings. At the quarterly PRG meetings, utilities should review the status of the programs and the portfolio with the advisory group, and discuss any funds shifted within that period.

Other than the guidelines outlined above, the PRG encourages the Commission to grant utilities full flexibility in administering a portfolio of programs to meet or exceed the Commission's energy saving targets. We encourage utilities to make use of this flexibility to adjust the portfolio as market circumstances change and as it gauges the relative success of the programs within the portfolio. We encourage utilities to take advantage of its PAG and PRG to receive input on program design changes and to continue the collaborative process it has begun in the past few months.

Appendix K

Workpaper: Illustration of impacts to SCE's projected demand and energy targets from changing net-to-gross (NTG) ratios.

1. Business Incentive Program: change current NTG ratio of 0.96 to 0.80

    - Current projected savings: 317 mW and 1119 gWh,
    - Change in projected savings: -51 mW and -179 gWh

2. Non-residential category lighting savings: change current NTG ratio of 0.96 to 0.75, and residential category lighting savings: change current NTG ratio SF of 0.80 and MF of 0.89 to 0.75

- Current projected nonresidential lighting savings: 144 mW and 669 gWh
- Change in projected savings: -30 mW and -140.5 gwh

    - Current projected residential lighting savings: 182 mW and 890 gWh; allocate 40/60% between SF and MF
    - Change in projected savings: -3.7 mW and -15.5 mW, SF/MF, total -19 mW; -17.8 gWh and -75 gWh, SF/Mf, total -93 gWh.

3. Non-residential category lighting savings screw in CFLs: change current NTG ratio of 0.96 to 0.60, and residential category lighting savings screw in CFLs of 0.80 and 0.89 to 0.60

- Current projected Business Incentive Program CFL savings: 40 mW and 213 gWh
- Change in projected savings: -15 mW and -77 gwh

    - Current projected CLF residential lighting savings SF 26 mW and 648 gWh; and MF 50 mW and 44 gWh
    - Change in projected savings: SF -5.37 mW and -130 mW, MF -14 mW and -13 gWh

[1] By “administrative costs” we refer to true administrative costs, rather than the definition of administrative costs used in the TRC test.