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ENERGY EFFICIENCY POLICY MANUAL, VERSION 4.0

(August 2008)

Applicable to post-2005 Energy Efficiency Programs

EE Policy Manual Version 4.0

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ENERGY EFFICIENCY POLICY MANUAL FOR POST-2005 PROGRAMS

I. Introduction

This document presents the California Public Utilities Commission's (Commission) policy rules and related reference documents for the development and evaluation of energy efficiency programs funded by ratepayers in California. Referred to as the Energy Efficiency Policy Manual, Version 4.0, this document shall apply to all energy efficiency activities commencing in program year (PY) 2005 and beyond. The policy rules, terms and definitions contained herein apply to energy efficiency activities funded through the following mechanisms:

- The electric public goods charge (PGC), as authorized by Public Utilities (PU) Code Sections 381 and 399.
- The gas surcharge, as authorized by PU Code Sections 890-900.
- Procurement rates, as authorized by the Commission.

The rules in this manual do **not** currently apply to:

- Low-income energy efficiency programs (LIEE) funded by the electric PGC or gas surcharges.
- California Alternative Rates for Energy (CARE) for low-income customers funded out of electric or gas PGC.[1]
- Interruptible rate or load management programs.[2]
- Self-generation and demand-responsiveness programs developed in response to AB 970 (PU Code Section 399.15(b)).[3]

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[1] A separate low-income rulemaking was initiated on January 25, 2007 (R.07-01-042).

[2] Interruptible and load management programs are addressed under Decision (D.) 05-11-009 (Rulemaking (R.) 02-06-001).

[3] These programs were adopted in D.01-03-073, in R.98-07-037.

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This document supersedes all previous versions of the Energy Efficiency Policy Manual. Sections II-XI below articulate the Commission's policy rules ("Rules") governing energy efficiency activities, commencing in 2006.

The term "Program Administrators" refers to the following investor-owned utilities (IOUs): Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas).

II. Energy Efficiency Policy Objectives and Program Funding Guidelines

1. Commission and state energy policy, as expressed in the Energy Action Plan and reaffirmed in Decision (D.) 04-12-048, make energy efficiency the utilities' highest priority procurement resource. In other words, cost-effective energy efficiency should be first in the "loading order" of resources used by the utilities to meet their customers' energy service needs. The Governor's and the state's policies also seek to reduce the environmental impact (including the greenhouse gas emissions) associated with the state's energy consumption, to protect the public's health and safety. Energy efficiency is a critical part of the state's strategy to achieve these goals.

1.a. For PY2009 and through 2020 and beyond, the utilities shall develop a single, comprehensive Strategic Plan updated annually for energy efficiency programs and program cycles. The plan shall incorporate collaboration with a wider range of stakeholders, integration with other demand-side management programs, and innovation of energy efficiency programs, as outlined under D.07-10-032. The utilities shall aggressively pursue energy efficiency as part of the Western Regional Climate Action Initiative, February 26, 2007 and the National Action Plan for Energy Efficiency (See http://www.epa.gov/solar/energy-programs/napee/index.html).

2. The Commission's overriding goal guiding its energy efficiency efforts is to pursue all cost-effective energy efficiency opportunities over both the short- and long-term. By D.04-09-060, the Commission translated this policy into specific annual and cumulative numerical goals for electricity and natural gas savings by utility service territory. These goals shall be updated periodically by the Commission as provided for in that decision. The Commission-adopted energy savings goals are expressed in terms of annual and cumulative gigawatt hours, million-therms and peak megawatt load reductions. By D.06-06-063, Ordering Paragraph 1, the definition of peak megawatt load reduction contained in the 2005 Database for Energy Efficient Resources (DEER) shall be used for the

purpose of verifying energy efficiency program and portfolio performance.[4] Program Administrators should develop their energy efficiency program portfolios so that they will meet or exceed these annual and cumulative savings goals, both over the short- and long-term.[5] As clarified in D.07-10-032, cumulative savings represent the savings in that year from all previous measure installations (and reflecting any persistence decay that has occurred since the measures were installed) plus the first-year savings of the measures installed in that program year.

3. In order to promote the resource procurement policies articulated in the Energy Action Plan and by this Commission, energy efficiency activities funded by ratepayers should focus on programs that serve as alternatives to more costly supply-side resource options ("resource programs"). Focusing energy efficiency efforts in this way is the most equitable way to distribute program benefits: By keeping energy resource procurement costs as low as possible through the deployment of cost-effective portfolio of resource programs, over time *all* customers will share in the resource savings from energy efficiency**.**

4. "Lost opportunities" are those energy efficiency options which offer long-lived, cost-effective savings and which, if not exploited promptly or simultaneously with other low cost energy efficiency measures or in tandem with other load-reduction technologies or distributed generation technologies being installed at the site (e.g., solar heating or photovoltaics), are lost irretrievably or rendered much more costly to achieve. "Cream skimming" results in the pursuit of only the lowest cost energy efficiency measures, leaving behind other cost-effective opportunities. Cream skimming becomes a problem when lost opportunities are created in the process.

5. Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the

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[4] D.06-06-063. As discussed in this decision, DEER defines peak demand as the average grid level impact for a measure between 2:00 p.m. and 5:00 p.m. during the three consecutive weekday periods containing the weekday temperature with the hottest temperature of the year.

[5] While the energy savings achieved by LIEE programs will count towards the Commission's savings goals, per D.04-09-050, the Commission considers factors other than cost-effectiveness in determining LIEE program design and funding levels.

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 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.

6. Compliance with Rule II.5 will generally dictate the appropriate balance for portfolio funding of resource programs across market sectors (e.g., residential, industrial, commercial) and geography, as well as the most appropriate program designs. Program Administrators should also include a selection of statewide marketing and outreach programs, upstream market transformation programs, information and education programs, support for codes and standards and other activities in their proposed portfolios that support the Commission's short-term and long-term energy savings goals. Program administrators shall allocate a sufficient portion of portfolio funding to statewide marketing and outreach to continue and build upon the success of the existing program. Statewide marketing and outreach programs should convey a consistent statewide message to energy consumers in all sectors.

7. To further support the Governor's and State's goals to reduce greenhouse gas emissions, Program Administrators should explore with their advisory groups ways in which to co-brand with the California Climate Action Registry that will encourage the accurate reporting of emissions in California. This might include, for example, marketing and outreach efforts that provide information about the Registry to IOU customers and encourage larger commercial and industrial customers to participate in the Registry reporting protocols. In their program plan applications, Program Administrators shall describe the ways in which such co-branding will be supported through their proposed programs. Similarly, energy efficiency marketing efforts should strive to co-brand with water conservation messaging, recycling, toxic reductions (particularly mercury from fluorescent lamps), solar, distributed generation, green buildings, low income, and other related programs. (D.07-10-043, mimeo., p. 59.)

8. The deployment of new and improved energy efficiency products and applications can help sustain or increase current savings yields from program dollars, and serves to create a new generation of technologies available to tap the cost-effective potential of energy efficiency in ways we cannot predict today. In order to provide higher levels of bridging between available upstream innovations and the marketplace, annual funding for emerging technologies programs should increase. Program Administrators should work with the California Energy Commission (CEC) and other appropriate stakeholders to include appropriate levels of funding to demonstrate and commercialize emerging technologies funded through the California Public Interest Energy Research (PIER) program and other sources that otherwise would not receive funding for pre-commercialization demonstration. In their program planning applications, the Program Administrators shall jointly propose emerging technologies programs and increases to current funding levels for these programs. The main purpose of these programs should be to increase the probability that promising technologies will be commercialized within six years of program funding and thereby increase the chance of obtaining additional energy savings from these technologies in the long run. Program strategies should focus on reducing both the performance uncertainties associated with new products and applications and the institutional barriers to introducing them into the market.

9. Per D.05-01-055, Program Administrators with input from the public and advisory groups will develop for Commission consideration their portfolios of energy efficiency programs utilizing selection criteria that are consistent with these Rules. Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules.

10. Pursuant to PU Code Sections 381, 381.1,[6] 399 and 890-900, PGC and gas surcharge funds must be spent to deliver energy efficiency benefits to ratepayers in the service territory from which the funds were collected.

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[6] Consistent with the provisions of AB117 (Chapter 838, Chaptered September 24, 2002), Section 381.1 was added to Public Utilities Code permitting community choice aggregators (CCAs) to apply to administer cost-effective energy efficiency and conservation programs. The Commission adopted certain procedures in Decision (D.) 03-07-034 (dated July 10, 2003) to implement portions of AB 117 affecting the allocation of energy efficiency program funds. [MOVED FROM FOOTNOTE 1.]

Additionally, gas PGC collections must fund natural gas energy efficiency programs and electric PGC collections must fund electric energy efficiency programs. However, nothing in these Rules is intended to prohibit or limit the ability of the Commission to direct the IOUs to jointly fund with PGC, gas surcharges, or other collections (e.g., via procurement rates) selected measurement studies, statewide marketing and outreach programs, or other energy-efficiency activities that reach across service territory boundaries.

11. Fund Shifting Rules (D.05-09-043, Table 8) applicable to the 2006-2008 program cycle are added to these Policy Rules as an attachment to Appendix A. Appendix A is modified per D.07-10-032 for carry-back/carry-over funding to apply to the 2009-2011 funding cycle, and is repeated below.

12. Bridge Funding. Programs continuing from the 2006-2008 program cycle into the 2009-2011 cycle may use 2009-2011 funding, once the 2009-2011 portfolio has been approved and start-up costs for 2009-2011 programs may use 2009-2011 funding once the 2009-2011 portfolio has been approved. (D.07-10-032). Unspent or uncommitted funds from previous program years, or 2006-2008 funds that will not be needed should be used prior to using 2009-2011 funds. Both continuing program funding and start-up cost funding are limited to 15% of the current budget cycle without Commission approval. An Advice Letter is required for funding in excess of this percentage.

13. Funds may be committed for projects with lead times beyond three years under the following conditions:

- Long-term projects that require funding beyond the three-year program cycle shall be specifically identified in the utility portfolio plans and shall include an estimate of the total costs broken down by year and associated energy savings;
- Funds for long-term projects must be actually encumbered in the current program cycle;
- Contracts with all types of implementing agencies and businesses must explicitly allow completion of work beyond the end of a program cycle;
- Encumbered funds may not exceed 20% of the value of the current program cycle budget to come from the

subsequent program cycle, except by approval in an advice letter process;

- Long-term obligations must be reported and tracked separately and include information regarding funds encumbered and estimated date of project completion; and
- Energy savings for projects with long lead times will be calculated by defining the baseline as the applicable codes and standards at the time of the issuance of the building permit.

14. For calculating the Performance Earnings Basis (PEB), funds encumbered for continuing programs or for programs with long lead times shall be counted when those funds are spent.

15. Mid-Cycle Funding Augmentations. See Rule IV.12 below.

III. Common Terms and Definitions

1. Common terms and definitions will facilitate the review, selection and evaluation of energy efficiency activities. In particular, program definitions should be designed to facilitate to the extent possible: (1) the identification of energy efficiency activities by end-use savings potential, (2) the evaluation, measurement and verification (EM&V) of those activities based on Commission-adopted EM&V protocols, and (3) the coordination of program development and evaluation with resource planning and procurement needs. To this end, Program Administrators and program implementers should use the definitions included in Appendix B to these Rules when characterizing any proposed program activity. The burden is on them to justify any departure from those terms and definitions.

IV. Cost-Effectiveness

1. The cost-effectiveness indicators referred to in these rules are described in the *California Standard Practices Manual: Economic Analysis of Demand-Side Management Programs* (SPM): Economic Analysis of Demand-Side Management Programs. Program Administrators and Implementers should perform cost-

effectiveness analyses consistent with the indicators and methodologies included in the SPM, unless otherwise indicated.[7]

2. This Commission relies on the Total Resource Cost Test (TRC) as the primary indicator of energy efficiency program cost effectiveness, consistent with our view that ratepayer-funded energy efficiency should focus on programs that serve as resource alternatives to supply-side options. The TRC measures the net resource benefits from the perspective of all ratepayers by combining the net benefits of the program to all ratepayers, both participants and non-participants. The benefits are the net present value of avoided costs of the supply-side resources avoided or deferred. The TRC costs encompass the net present value of the costs participants incur for the measures/equipment installed over the measure life and all non-rebate[8] costs incurred by the program administrator.[9] The TRC is calculated utilizing a discount rate that reflects each utility's weighted average cost of capital, as adopted by the Commission.[10]

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[7] See Appendix A of this manual for information on how to obtain a copy of the SPM and its clarifications.

[8] The SPM restricts rebates to include only dollar benefits such as rebates or rate incentives (monthly bill credits) paid from the Program Administrator to participating ratepayers.

[9] The TRC test uses the "incremental" measure cost (not the full cost) and incremental energy savings benefit (not the full energy savings benefit) when an energy-efficient appliance or measure promoted through the program is installed in lieu of the standard (less efficient) appliance/measure that would have been installed, without the utility EE activity. The TRC test uses the full measure cost (at the time of installation) and the full energy savings benefit (of the new measure) for the remaining useful life of the pre-existing equipment (e.g., three or more years), where the utility EE activity causes measure/equipment to be replaced much earlier. The TRC test then uses the incremental savings for the balance of the effective useful life of the newly installed measure/equipment and deducts the full cost of that equipment discounted back to the date of the measure/equipment installation.

[10] For the 2006-2008 program cycle an average IOU weighted cost of capital may have been used for cost effectiveness calculations. The value used for *ex ante* calculations should also be used for *ex post* calculations.

3. The Program Administrator Cost (PAC) test of cost-effectiveness should also be considered in evaluating program and portfolio cost-effectiveness. Under the PAC test, the program benefits are the same as the TRC test, but costs are defined differently to include the net present value of costs incurred by the program administrator (including financial incentives and rebates paid to anyone), but not the costs incurred by the participating customer. Like the TRC test, the PAC test is calculated utilizing a discount rate that reflects each utility's weighted cost of capital, as adopted by the Commission.

4. Applying both the TRC and PAC cost-effectiveness test is called the "Dual-Test." In almost all instances, an energy efficiency program that passes the TRC test will also pass the PAC test. However, if deployment of the program requires rebates or financial incentives to participants that exceed the measure cost, then the program may pass the TRC test, but fail the PAC test. Considering the results of both tests when evaluating program proposals ensures that program administrators and implementers do not spend more on financial incentives or rebates to participating customers than is necessary to achieve TRC net benefits.

5. TRC and PAC benefits should be computed utilizing the avoided cost methodologies and input assumptions, including non-price factors (e.g., for avoiding greenhouse gas and non-greenhouse gas pollutants) that have been developed for the evaluation of energy efficiency programs in our avoided cost rulemaking, R.04-04-025.[11] The performance earnings basis (PEB) of energy efficiency resource programs shall be calculated from TRC and PAC benefits (being equal) minus TRC and PAC costs weighted two-thirds and one-third respectively. (D.05-04-051.)

6. A prospective showing of cost-effectiveness using the Dual-Test for the entire portfolio of ratepayer-funded energy efficiency activities and programs (i.e., individual programs, plus all costs not assignable to individual programs, such as overhead, planning, evaluation, measurement verification and administrator compensation and performance, if applicable) is a threshold condition for eligibility for ratepayer funds. This prospective showing of cost-effectiveness shall include the costs for shareholder incentives that are projected to be paid for portfolio performance under the energy efficiency risk/reward

[11] See D.05-04-024 and D.06-06-063.

incentive mechanism in effect at that time.[12] This threshold requirement applies to each of the following: (1) the entire statewide portfolio of programs and (2) the service-territory wide program portfolios offered by each Program Administrator, excluding emerging technologies programs. Program administrators must demonstrate that this threshold requirement is met on a prospective basis in their program funding applications to the Commission. If a prospective showing of cost-effectiveness for the entire statewide portfolio *including emerging technologies programs* does not also pass the Dual-Test, Program Administrators shall describe the benefits associated with these programs that are not reflected in the TRC or PAC tests, and describe how these programs are expected to produce benefits in excess of costs for California ratepayers over the long-term. Program Administrators must also demonstrate that the proposed level of electric and natural gas energy efficiency program activities are expected to meet or exceed the Commission-adopted electric and natural gas savings goals, by service territory.[13]

7. As described in these Rules, fuel-substitution programs must also pass the Dual-Test to be considered for inclusion in the portfolio and eligible for funding. In addition, as a condition for the inclusion of solar water heating within the definition of energy efficiency measures, solar water heating installations must be cost-effective on a stand-alone basis, i.e., pass the Dual-Test of cost-effectiveness to be eligible for funding. Similarly, solar-powered water circulators must be cost-effective on a stand-alone basis (i.e., pass the Dual-Test) to be eligible for funding.[14] Other programs are not strictly required to pass the Dual test on a program level basis to be considered for funding, but their cost-effectiveness must be carefully considered in order to design an overall portfolio that passes the Dual-Test, per Rule IV.6. Accordingly, except where otherwise indicated in these Rules, Program Administrators must present estimates of TRC and PAC net benefits for each program on a prospective basis in their program funding applications, along with any other information that may be requested by the Commission, assigned Commissioner, Administrative Law Judge or Energy Division.[15] However, evaluation, measurement and verification costs should not

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[12] D.07-09-043, mimeo., p. 220.

[13] Per D.04-09-060, savings from LIEE programs will also count towards these goals.

[14] Per D.07-11-004, eligible for 2006-2008 funding and cumulative savings goals.

[15] See, for example, Ordering Paragraph 4, D.04-09-060.

be allocated to individual programs in the calculation of TRC and PAC net benefits. Rather, all costs associated with evaluation, measurement and verification should be allocated at the total portfolio level, rather than program by program.

8. To support comparisons of all resources in the utilities' procurement portfolio, the program administrators are required to also provide levelized unit cost estimates at the portfolio, end-use and measure level consistent with the methods described in the SPM. This information should be submitted with the program administrators' compliance filings on the competitive bid results, during each program cycle.

9. The usefulness of the TRC test as a primary indicator of cost-effectiveness is limited for certain programs which do not necessarily focus on the timing or type of resource needs of the utility, such as programs designed to demonstrate or commercialize promising emerging energy efficiency technologies or structurally change the marketplace. For statewide marketing and outreach programs and information-only programs, the link between programs and savings is also difficult to discern. Therefore, the Commission and program administrators will need to consider factors and performance metrics other than the TRC and PAC Tests of cost-effectiveness when evaluating such program proposals for funding and when evaluating their results.

10. Fuel substitution programs may offer resource value and environmental benefits. Fuel-substitution programs should reduce the need for supply without degrading environmental quality. Fuel-substitution programs, whether applied to retrofit or new construction applications, must pass the following three-prong test to be considered further for funding:

1. The program must not increase source-BTU consumption. Proponents of fuel substitution programs should calculate the source-BTU impacts using the current CEC-established heat rate.

2. The program must have TRC and PAC benefit-cost ratio of 1.0 or greater. The TRC and PAC tests used for this purpose should be developed in a manner consistent with these Rules.

3. The program must not adversely impact the environment. To quantify this impact, respondents should compare the environmental costs with and without the program using the most recently adopted values for residual emissions in

> the avoided cost rulemaking, R.04-04-025. The burden of proof lies with the sponsoring party to show that the material environmental impacts have been adequately considered in the analysis.

For purposes of applying these tests, fuel substitution proponents must compare the technologies offered by their program with the most efficient same-fuel substitute technologies available to prospective participants that would have TRC and PAC benefit-cost ratio of 1.0 or greater. The burden of proof falls on the party sponsoring the analysis to show that the baseline comparison adheres to this requirement. Fuel substitution programs with a predominantly load building or load retention character are not eligible for funding, and the proponent of a fuel-substitution program carries the burden of proof to demonstrate that the program focuses on energy efficiency and creates net resource value.

11. To the extent possible, the assumptions that are used to estimate load impacts (e.g., kWh, kW and therm savings per unit, program net-to-gross ratios, incremental measure costs and useful lives) in the calculation of the TRC and PAC tests shall be taken from the most up-to-date version of the Database for Energy Efficiency Resources (DEER).[16] If the required cost-effectiveness test inputs for a measure to be included into a portfolio are not available in DEER, documentation supporting the inclusion of new information from alternate sources must be provided to Energy Division for review and approval prior to the inclusion of that measure's use in a savings claim or to a portfolio filing's approval. Cost-effectiveness parameters for non-DEER measures should be developed using methods and data from DEER to the extent possible. The evaluation, measurement and verification protocols for post-2005 programs will include a schedule and process for updating DEER on a regular basis. (See Rule V.2 below) (D.08-01-042).

12. Costs and energy savings from mid-budget cycle funding additions for programs other than low income energy efficiency (LIEE) programs shall be counted when calculating portfolio cost-effectiveness and the performance earnings basis in applying the energy efficiency risk/return incentive mechanism. Energy savings from mid-budget cycle funding additions shall count towards the utilities' energy efficiency goals for resource planning

[16] See Appendix A of this manual for information on how to access DEER.

purposes only. Such savings shall not be counted towards the energy efficiency goals for the purpose of (1) satisfying the minimum performance standard (MPS) associated with the energy efficiency risk/reward incentive mechanism, or (2) determining which "performance band" (e.g., deadband or applicable earnings tier level) should be used in calculating incentive payments or penalties. Each proposal to augment energy efficiency program funding must be carefully reviewed to ensure that such funding is not misclassified as LIEE, given the implications associated with LIEE classification that carry over to the adopted incentive mechanism. Savings associated with any mid-cycle funding augmentation to the LIEE program will not count towards the MPS. (OP 7, D.07-10-032.)

V. Evaluation, Measurement and Verification (EM&V)

1. The development of energy efficiency programs that deliver reliable energy savings for California's ratepayers depends on well-designed methods of portfolio performance evaluation, measurement and verification (EM&V). Rigorous and strategically focused EM&V practices are required to gauge the performance of Program Administrators and Implementers, verify energy savings, improve the design and success of future energy efficiency programs and enhance the reliability of forecasted savings for resource planning purposes.

2. The performance basis and related EM&&V protocols for energy efficiency portfolios and programs for post-2005 energy efficiency activities were developed in the EM&&V phase of R.01-08-028, and updated in Rulemaking 06-10-040, consistent with these Rules. The California Energy Efficiency Evaluation Protocols were initially adopted by ALJ Ruling dated April 25, 2006 (later updated in June 2006) to specify the current **minimum** acceptable approaches and procedures for the evaluation of utilities energy efficiency portfolios. Per D.05-01-055, Energy Division will have the lead role in the further development of EM&V protocols and procedures and the assigned ALJ may provide additional clarification and direction on EM&V administrative issues as needed.

3. In D.05-04-051, the Commission defined the current performance earnings basis, or PEB, as the net dollar benefits to ratepayers of the utilities portfolios calculated as specified in IV.5. above. In D.07-09-043, the Commission defined the Minimum Performance Standard threshold, or MPS, for evaluation of the utility portfolios. Together the MPS and PEB form the "performance basis" focus for energy efficiency portfolio performance evaluation. Additionally, portfolio evaluation efforts are to be structured such that they can: (1) inform the program selection process, (2) provide early feedback to program implementers,

(3) produce calculations of performance basis at the end of the funding period, and (4) feed back into the planning process for the next program cycle.

4. D.05-01-055 adopts an approach to EM&V administration whereby Energy Division has management and contracting responsibilities for all EM&V impact-related studies that will be used to (1) measure and verify energy and peak load savings; (2) generate data for savings estimates, cost-effectiveness inputs, and the Commission's adopted performance basis; and (3) evaluate whether portfolio goals are met.

5. As also directed in D.05-01-055, public participation in the development of impact-related evaluation studies will be provided in several stages including: (1) development of the EM&V protocols; (2) the overall EM&V plans, budget and the allocation of funding levels to studies will be addressed during each program planning cycle; (3) study results will be made available for public review and comment while in draft form; and (4) finalized studies will be made available for public review in an appropriate forum established by Assigned Commissioner's ruling.

6. D.05-01-055 adopts an approach to EM&V administration whereby Program Administrators and program implementers may directly contract for (and serve as technical lead in managing) program design evaluation and market assessment studies to assist them in selecting and managing a portfolio of programs to meet the Commission's objectives as well as provide them with access to information on a real-time basis to improve program delivery. While soliciting input from Energy Division, the Program Administrators should also take the lead in allocating Commission-authorized funding for this category of EM&V across individual studies, develop the scope of work for each study and prepare the RFPs. In their program plan applications, the Program Administrators should also describe each type of study (including general scope of work) they or their program implementers plan to manage and/or directly contract for in this category. All interested parties should have an opportunity to consider whether any of those proposed studies would create a conflict of interest if the IOU Program Administrators or program implementers managed and directly contracted for them.

VI. Competitive Bidding and Partnership Programs

1. Competitive solicitations can help to identify innovative approaches or technologies for meeting savings goals with improved performance that might

not otherwise be identified during the program planning process. However, not all program activities lend themselves to a competitive solicitation. It would be counterproductive to require open bids in instances where, for example, partnerships between IOUs and local governments ("local government partnership programs") can take advantage of the unique strengths that both partners bring to the table, or a combination of partnerships and bilateral contracting arrangements with private or public entities can deliver effective statewide initiatives, such as a statewide public awareness campaign or an upstream lighting program.

2. Competition in energy efficiency procurement should focus on soliciting good, new program ideas to achieve or exceed the Commission's savings goals, rather than allocating a specific percentage of program funding to particular implementers. Decisions on whether non-IOUs should be program implementers responsible for designing and delivering the program (rather than working to implement IOU-designed programs) should be made based on an evaluation of whether the program designs and delivery mechanisms proposed by non-IOUs are superior to those currently being implemented or planned for the future in achieving overall portfolio savings goals.

3. As directed in D.05-01-055, for each program planning cycle, the Program Administrators shall propose a portfolio of programs (with input from the Program Advisory Groups as described in that decision) that reflects the continuation of successful IOU and non-IOU implemented programs and new program initiatives designed to meet or exceed the Commission's savings goals with cost-effective energy efficiency. As part of that process, the Program Administrators will identify a minimum of 20% of funding for the entire portfolio of programs that will be put out to competitive bid to third-parties for the purpose of soliciting innovative ideas and proposals for improved portfolio performance. Per D.07-10-032, successful third-party programs from the 2006-2008 program cycle retained by the IOUs for successive budget cycles will count towards the 20% and the extensions should be able to be structured as bilateral contracts. (D.07-10-032, OP 19.) The portions to put out to bid could encompass programs currently designed and delivered by a combination of IOU and non-IOU program implementers. Any current program or group of programs (IOU or non-IOU designed and implemented) that can be improved upon in this way may be subject to open bids to replace, augment or otherwise enhance current efforts. However, open bids should not be required in instances where current or potential future partnerships between the Program Administrators and local governments can take advantage of the unique strengths that both partners bring to the table to deliver cost-effective energy

efficiency services, or where combination of partnerships and bilateral contracting arrangements with private or public entities can deliver effective statewide initiatives that enhance portfolio performance. Such activities should be funded out of the 80% (maximum) core portfolio that is not put out to competitive bid.

4. As directed in D.05-01-055, the proposed portfolio of programs, portions to put out to bid and the bid evaluation criteria will be filed by the Program Administrators in their program plan applications for each funding cycle, and subject to Commission approval. Upon receiving Commission approval of the applications, the Program Administrators will complete the process of selecting programs and program implementers to design and deliver the programs in the next program cycle. During this process, the Program Administrators will develop and issue RFPs using criteria approved by the Commission and select a set of bids. For the 2007-2011 program cycle, third-party proposals will be included in the utility's portfolio application and the competitively bid RFP process and the PRG's review to ensure that the criteria are applied properly will occur prior to the utility's submittal of the application, as directed in D.07-10-032. The Peer Review Groups (including Energy Division's independent consultant(s)) will observe the Program Administrators' bid selection process to ensure that the criteria are applied properly. Before finalizing their selections, the Program Administrators will discuss the proposed results of their bid review process with the Peer Review Groups (and Energy Division's independent consultants). After incorporating feedback, the Program Administrators will make public all winning bids and submit compliance filings, as directed in D.05-01-055.

5. Future partnership programs need to be developed in a manner that places the Program Administrator and local government (or private) partner on more equal footing, in terms of involvement in program design and planning, information sharing and program implementation. We recognize that some program partners may prefer or be best suited to functioning as a subcontractor to the Program Administrator and performing a supporting role for the program. However, this should not be the only option available for partnership programs. Other partnership arrangements, e.g., where the local government partner is fully involved in program planning and implementation, may take better advantage of the relative strengths of each partner. These arrangements must, in any event, be considered in light of other applicable Commission decisions, including the implementation of community choice aggregation , and should in no way diminish or dilute the responsibility and accountability of Program Administrators to meet the Commission-adopted savings goals.

6. Standard contract language should improve the effectiveness of future partnership programs. The standard language should establish the rights and responsibilities of the partners with sufficient flexibility to enable each partner to make improvements to program performance, as circumstances warrant. The standard language should also address information sharing, intellectual property ownership, reimbursement turn-around, dispute resolution, and other issues. Energy Division and Legal Division should work with the Program Administrators, interested local governments and other parties to develop a standard contract for future partnership programs, and submit that language with the program plans.

VII. Advisory Groups

D.07-10-032 eliminated the Public Advisory Groups (PAGs) for the purposes of planning for the 2009-2011 program cycle and beyond. The following rules combine the functional descriptions of the PAGs with the Peer Review Groups (PRGs) for the 2006-2008 program cycle and the 2009-2011 program cycle and beyond, and should be applied to the appropriate program cycle.

1. The Program Administrators should put together the advisory groups and implement the program design and selection process consistent with D.05-01-055 and D.07-10-032 and in the spirit of the collaborative approach they discuss in their filings. For 2009 and beyond, the Public Advisory Group (PAG) is eliminated while the Peer Review Group (PRG) is retained. Per D.07-10-032, the advisory function formerly performed by the PAG will be subsumed in the statewide strategic planning activity. These advisory groups should serve 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 advisory groups will provide advice and feedback to the IOUs and provide information to the Commission, but will not have any independent decision-making or contracting authority.

2. As discussed in D.05-01-055, members of the PAGs should be drawn from the energy efficiency expertise of both market and non-market participants across the full spectrum of program areas and strategies. One purpose of the

PAGs is 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. However, the PAGs must not focus exclusively on region-specific needs. The IOUs and their PAGs should also address statewide programs and consistency issues, bringing in national expertise as appropriate to consider these issues. For the purpose, the IOUs should form a subgroup of their PAG members who will closely collaborate and coordinate on statewide marketing and outreach, support for building codes and standards, education and training and other activities that secure both short- and long-term energy savings and peak demand reductions by providing a consistent and recognizable program presence throughout the state. In addition, the PAGs and IOUs should collaborate on statewide program designs and implementation strategies that increasingly integrate energy efficiency with demand response and distributed generation offerings to end-users. For 2009 and beyond, the Public Advisory Group (PAG) is eliminated while the Peer Review Group (PRG) is retained. Per D.07-10-032, the advisory function formerly performed by the PAG will be subsumed in the statewide strategic planning activity.

3. The IOUs and PAGs should ensure that statewide residential and nonresidential offerings take advantage of "best available practices" and avoid customer confusion by being as uniform and consistent as possible. While we recognize that differences in climate zones and other parameters may warrant some variations in program offerings to customers, these variations should be the exception and not the rule. If the need emerges to focus on a particular market segment, the IOUs and PAGs may also establish a separate working group of industry experts and stakeholders to address that need.

4. Energy Division and DRA staff will be *ex officio* members of each PAG and peer review subgroup described below, and CEC staff is invited to participate as *ex officio* members as well. The IOUs will select additional PAG members, but participation will be voluntary and there will be no formal voting rules or designation of voting or non-voting members. Within each PAG, the IOU will also identify and select a subgroup of non-financially interested members with extensive energy efficiency expertise that are willing to serve as peer reviewers for the energy efficiency program evaluation and selection process, referred to as "Peer Review Groups" (PRGs.)

5. As described in D.05-01-055 and D.07-10-032, members of each PRG will be expected to: (1) oversee the development of criteria and selection of government partnership programs, (2) review the IOUs' submittals to the Commission and assess the IOUs' overall portfolio plans, their plans for bidding

out pieces of the portfolio per the minimum bidding requirement and (3) review the bid evaluation utilized by the IOUs and their application of that criteria in selecting third-party programs. In addition, the three PRGs are expected to meet and assess the statewide portfolio in terms of its ability to meet or exceed short and long-term savings goals in compliance with these Rules.

6. The PAG meetings should be open to the public, and the IOUs should establish a clearinghouse website for noticing these meetings and posting documents to be discussed by the PAG at the meetings. In addition, the IOUs are expected to conduct public workshops, at least twice a year that are designed to solicit broad public input from non-PAG members concerning program design and implementation. For 2009 and beyond, the Public Advisory Group (PAG) is eliminated while the Peer Review Group (PRG) is retained. Per D.07-10-032, the advisory function formerly performed by the PAG will be subsumed in the statewide strategic planning activity.

VIII. Performance-Based Risk and Reward Incentive Mechanism

1. In accordance with Public Utilities Code Section 739.10, the Commission has established balancing accounts for each utility that remove significant regulatory disincentives for utility investments in energy efficiency and other demand-side management programs. With these balancing accounts, a large majority of the utilities' fixed-cost revenue requirements are no longer tied to the forecasted level of commodity electric and natural gas sales.

2. Per D.07-09-043 OP 2, as modified by D.08-01-042 OP 2, the risk/reward shareholder incentive mechanism applies to the energy efficiency programs funded for the 2006-2008 program cycle and for subsequent program cycles until further Commission notice. The risk/reward shareholder incentive mechanism is structured as follows:

a) To be eligible for earnings, SDG&E, PG&E and SCE shall meet the following minimum performance standard (MPS) for the energy efficiency portfolio as a whole, on an *ex ante* basis for load impacts, with verified installations and costs:

   (1) Achieve a minimum of 85% of the Commission-adopted savings goals, based on a simple average of the percentage of each individual gigawatt-hour (GWh), megawatt (MW) and, as applicable, million therm (MTherm) goal they achieve, *and also*

(2) Meet a minimum of 80% of the goal for each individual savings metric.

b) SoCalGas shall meet the MPS and be eligible for earnings if it achieves a minimum of 80% of the MTherm savings goal on an *ex ante* basis for load impacts, with verified installations and costs.

c) Once the utility meets the MPS, earnings shall be calculated as a percentage (sharing rate) of the "performance earnings basis" (PEB) metric defined in Decision (D.) 94-10-059, as follows:

(1) Portfolio net benefits calculated using the Total Resource Cost test of cost-effectiveness are weighted by two-thirds, and
(2) Portfolio net benefits calculated using the Program Administrator Cost test of cost-effectiveness are weighted by one-third.

d) Program savings and costs shall be counted in determining whether the MPS is met and in calculating the PEB, as follows:

(1) Savings from low-income energy efficiency (LIEE) programs shall count towards determining whether the utilities have met their MPS, but neither LIEE program costs nor savings shall be included in the calculation of the PEB under the risk/reward shareholder incentive mechanism.

(2) With the exception of the Emerging Technologies Program and LIEE, all energy efficiency portfolio costs including associated evaluation, measurement and verification (EM&V) shall be included in the calculation of PEB.

(3) Verified savings from Codes and Standards Advocacy Programs[17] shall count as described in (a) and (b) below.

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[17] D.05-09-043 and Attachment 10. ***Note*** – The 50% verified savings calculation for Codes and Standards Advocacy work applies only to savings leading to the adoption of the 2005 standards developed by the CEC. At the time, installed savings and committed savings had been counted during the same budget cycle. D.05-04-051 had adopted a

Footnote continued on next page

Codes and Standards savings are to be *verified* (as opposed to *ex ante* estimates used for planning purposes).

(a) Fifty (50) percent of verified savings from pre-2006 Codes and Standards Advocacy Programs shall count towards the energy savings goals and minimum performance standards for the 2006-2008 (per D.07-09-043) and 2009-2011 (per D.07-10-032) program cycles.

(b) One hundred (100) percent of verified savings from post-2005 Codes and Standards Advocacy Programs shall count towards the energy savings goals, minimum performance standards and performance earnings basis for the 2006-2008 and 2009-2011 program cycles.

Codes and Standards Advocacy costs are included as they are incurred in calculating the performance earnings basis and savings are included as they are realized.

e) If the utility has met the MPS, a first tier sharing rate of 9% shall apply. If the utility has met 100% of the savings goals, a second tier sharing rate of 12% shall apply, up to the earnings cap adopted for each utility.

(1) If the MPS is met, each individual savings metric must be no less than 5% below the second tier threshold to be considered within that tier based on the three-metric average.

(2) If the MPS is met utilizing *ex ante* assumptions for load impacts, with verified installations and costs, but the *ex post* EM&V results take an individual metric below the

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policy to count only verified savings. To avoid double counting of committed savings with verified savings, a methodology was developed and adopted to derive the amount of savings attributable to reducing energy over the future years concerned (post 2005) using a calculation considering economic potential, market potential and naturally-occurring savings associated with the codes adopted. The result was 50%.

80% threshold or take the overall portfolio results to between 65% and 85% of the Commission-adopted savings goals, the utility shall continue to earn at the first tier sharing rate of 9%, applied to the *ex post* PEB, and shall not return any interim claims payments. If, however, *ex post* results take a utility below 65% of Commission goals for any individual metric, the utility shall pay back any interim payments, in addition to any applicable penalty.

f) Penalties shall begin to accrue if portfolio performance for any single savings metric (GWh, MW or MTherm) falls to or below 65% of the savings goal for that metric. If this occurs, the larger of the following penalty provisions apply up to the penalty cap adopted for each utility:

   (1) 5¢/kWh, 45¢/therm and $25/kW per unit penalties applied to each unit below the savings goal, or (if larger):

   (2) Dollar-for-dollar payback of negative net benefits ("cost-effectiveness guarantee"), where negative net benefits are calculated based on the PEB formula adopted in D.04-10-059.

g) Total earnings and penalties are capped for the four utilities combined at $450 million over each three-year program cycle, beginning with the 2006-2008 program cycle. The $450 million combined cap is allocated to each utility as follows: PG&E--$180 million; SCE--$200 million; SDG&E-$50 million and SoCalGas--$20 million.

3. Earnings (or penalties) under the risk/reward shareholder incentive mechanism shall be paid as follows:

   a) There shall be two "progress payment" interim earnings claims and one final true-up claim for each three-year program cycle. They shall be linked to Energy Division's Verification and Performance Basis Reports as described in D.07-09-043 and in its Attachment 6.

   b) Interim claims shall be evaluated on a "Cumulative-to-Date" basis, which counts the verified achievements from program year(s) in determining whether the MPS is met in each subsequent interim claim.

c) Thirty-five (35) percent of the earnings calculated for each interim claim shall be "held back" until the final true-up claim, in order to minimize the risk of overpaying earnings before the *ex post* true-up of load impacts in the final claim. (D.08-01-042)

d) The costs of shareholder incentives shall be included in calculations when (1) evaluating the cost-effectiveness of program plans submitted during the program planning cycle (on a projected basis), or (2) conducting a cost-effectiveness review of portfolio performance in hindsight. These costs shall not be included in the calculation of PEB.

See Appendix A for a graphic illustrating this mechanism.

4. Per D.08-01-042, for the 2006-2008 program cycle, the following *ex ante* assumptions of energy savings and demand reductions shall be used in conjunction with verified installations and verified costs to calculate the 1st and 2nd Claims:

(a) Except as otherwise provided for below, the *ex ante* measure savings parameters that are contained in the utilities' E3 calculators, as of the 4th quarter 2007 report for the 1st Claim and as of the 4th quarter 2008 report for the 2nd Claim.

(b) For measures contained in the Database for Energy Efficient Resources (DEER), the 2008 and 2009 DEER updates of *ex ante* measure savings parameters, including net-to-gross ratios and expected useful lives. The 2008 DEER update shall apply to the 1st Claim and the 2009 DEER update shall apply to the 2nd Claim.

(c) For customized measures or customized projects that represent aggregated measures in the E3 calculator, Energy Division shall identify the appropriate installed measure(s) based on its measure verification results and develop the associated *ex ante* load impact values. For this purpose, Energy Division may use the utilities' tracking system information, engineering workpapers, DEER values and methods, or other current measurement and verification results that are available.

5. Per D.08-01-042, direction on the *ex ante* assumptions used to calculate interim claims during the 2009-2011 program

cycle shall be provided in the decision authorizing the 2009-2011 program plans.

6. Procedures for Review and Approval of Earnings/Penalties under the Energy Efficiency Risk/Reward Incentive Mechanism.[18] (D.07-09-043, OP 5, Attachment 7.)

6a. *Interim Claims* - Payments under the interim claim(s) represent a "progress payment" towards total expected earnings:

(1.) Evaluation contractors use data requested from investor-owned utility (IOU) program tracking databases and reports to develop Contract Group[19] level reports that verify unit installations.

(2.) California Public Utilities Commission (CPUC) audit team develops financial audit reports that verify portfolio costs for each utility.

(3.) Energy Division aggregates evaluation contractor reports and *ex ante* measure parameters (updated as directed in VIII.4 and VIII.5 above) for each utility to quantify the portfolio resource benefits and uses that quantity in connection with the audit team reports to develop the draft Verification Report, which is posted on a publicly accessible website. Energy Division notifies the CPUC Energy Efficiency service lists and lists of other interested stakeholders [20] maintained by Energy Division of the availability of the draft Verification Report and the website posting location. Energy Division also notifies all of those stakeholders of the conference described in the next Step.

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[18] These procedures augment and substitute for Attachment 4 to *Administrative Law Judge's Ruling Adopting Protocols for Process and Review of Post-2005 Evaluation, Measurement and Verification Activities,* dated January 11, 2006.

[19] These procedures augment and substitute for Attachment 4 to *Administrative Law Judge's Ruling Adopting Protocols for Process and Review of Post-2005 Evaluation, Measurement and Verification Activities,* dated January 11, 2006.

[20] "Stakeholders" refers to those listed on one of the CPUC's Energy Efficiency service list or who have notified Energy Division of their interest.

(4.) Energy Division holds a conference by telephone or in person. At this meeting, all stakeholders have an opportunity to discuss the draft Verification Report with those who prepared it (and supporting consultants). Stakeholders may raise questions about the draft report, receive responses from those who prepared it, and point out any errors they believe are contained in the report. The goal is to have a give and take between the stakeholders, report authors, and the supporting technical experts.

(5.) Stakeholders have an opportunity to provide written comments to Energy Division identifying any errors in the draft Verification Report. Stakeholders will be required to include in the written comments at least a brief description of every point in the draft report which they believe needs correction, even if discussed at the conference.

(6.) Energy Division makes any necessary changes to the Verification Report stimulated by the oral conference and written comments. All written comments, and Energy Division's treatment of them, will be reflected in an appendix to the Final Verification Report, which is posted on a publicly accessible website.

(7.) Final Verification Report is made publicly available.

(8.) Within 45 days of issuance of the Final Verification Report, the utility will file an advice letter for Energy Division disposition pursuant to Section 7.6.1 of General Order 96-B, citing the Verification Report. The advice letter will address whether based on that report there are any earnings or penalties, and if so at what level, for the interim claim.

(9.) Energy Division will approve the advice letter as soon as practicable thereafter so long as it correctly incorporates the results of the Verification Report; if it does not, Energy Division will take other appropriate action under General Order 96-B.

6b. *Final Claim* - The final claim and true-up of savings and performance basis estimates will be based on the Final Performance Basis Report:

(1.) Evaluation contractors complete draft final evaluation reports[21] and post them on a publicly accessible website. The evaluation contractors will notify the CPUC Energy Efficiency service lists and lists of other interested stakeholders maintained by Energy Division of the availability of the draft final evaluation reports and their website posting location(s). Energy Division will notify all of those stakeholders of the conference described in the next Step.

(2.) Evaluation contractors hold a conference, under Energy Division sponsorship, with stakeholders, by telephone or in-person, to discuss draft final evaluation reports.

(3.) Stakeholders have an opportunity to provide written comments identifying any errors in the draft final evaluation reports. Stakeholders will be required to include in the written comments at least a brief description of every point in the draft report which they believe needs correction, even if discussed at the conference.

(4.) Energy Division directs evaluation contractors to make any necessary changes to final evaluation reports stimulated by the comments. All written comments, and Energy Division's treatment of them, will be reflected in appendices to the final evaluation reports. The final evaluation reports are posted on a publicly accessible website.

(5.) Within 60 days of public release, program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings as they relate to potential changes to the programs. Energy Division can choose to extend the 60 day limit if the administrator presents a compelling case that more time is needed and the delay will not cause any problems in the implementation schedule, and may shorten the time on a case-by-case basis if necessary to avoid delays in the schedule.

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[21] Evaluation reports refer to either interim or final reports submitted to Energy Division by program evaluation contractors describing results of evaluations (e.g., impact evaluation studies) of the Contract Groups.

(6.) Energy Division aggregates evaluation contractor reports for each utility to quantify the portfolio resource benefits and uses that quantity in connection with the audit team reports to develop the draft Final Performance Basis Report. Energy Division will notify the CPUC Energy Efficiency service lists and lists of other interested stakeholders maintained by Energy Division of the availability of the draft Final Performance Basis Report and the website posting location. Energy Division also notifies all of those stakeholders of the conference described in the next Step.

(7.) Energy Division, with the assistance of relevant contractors holds a conference with stakeholders, by telephone or in-person. At this meeting, all stakeholders have an opportunity to discuss the draft Final Performance Basis Report with those who prepared it (and supporting consultants). Stakeholders may raise questions about the draft report, receive responses from those who prepared it, and point out any errors they believe are contained in the report. The goal is to have a give and take between the stakeholders, report authors, and the supporting technical experts.

(8.) Stakeholders have an opportunity to provide written comments identifying any errors in the draft Final Performance Basis Report. Stakeholders will be required to include in the written comments at least a brief description of every point in the draft report or which they believe needs correction, even if discussed at the conference.

(9.) Energy Division makes any necessary changes to the Final Performance Basis Report stimulated by the oral conference and written comments. All written comments, and Energy Division's treatment of them, will be reflected in an appendix to the Final Performance Basis Report.

(10.) Final Performance Basis Report is made publicly available by posting on a publicly accessible website and sending it to the Energy Efficiency proceeding service list(s).

(11.) Within 60 days of issuance of the Final Performance Basis Report, the utility will file an advice letter for Energy Division disposition pursuant to Section 7.6.1 of General Order 96b, citing the Final Performance Basis Report. The advice letter will address whether based on that report there are any earnings or penalties, and if so at what level, for the final claim.

(12.) Energy Division will approve the advice letter as practicable as possible thereafter so long as it correctly incorporates the results of the Final Performance Basis Report; if it does not, Energy Division will take other appropriate action under General Order 96-B.

IX. Affiliate and Disclosure Rules

1. To avoid anti-competitive behavior and cross-subsidies between IOUs and their affiliates, all transactions between the IOU administrator and any implementer that is an affiliate of PG&E, SCE, SDG&E or SoCalGas are banned, per D.05-01-055.

2. The Program Administrators will not provide preferential treatment to any provider of an energy efficiency service that uses energy efficiency program funds.

3. Bidders for EM&V contracts, including program design evaluation and market assessment studies, shall provide full disclosure of any potential conflicts of interest, including all current non-energy efficiency related contracts with Program Administrators and program implementers.

X. Reporting Requirements

1. The Program Administrators shall present information in their program planning applications in compliance with Ordering Paragraph 13 of D.04-12-048, and in compliance with any further direction by this Commission, the Assigned Commissioner or Administrative Law Judge regarding the content or format of these filings. Energy Division may develop reporting requirements through workshops or other means to ensure that the types of data and the format of the information presented in the Program Administrator filings and reports is as consistent as possible.

2. The Program Administrators shall file reports on portfolio and program activities on a regular basis during the program cycle using the

standardized reporting formats, definitions, timelines and narratives established by the Energy Division, as updated from time to time. The design and oversight of program-specific, portfolio-level and financial reporting requirements for energy efficiency activities will remain the responsibility of the Energy Division, as discussed in D.05-01-055. Energy Division shall design the reporting requirements in consultation with the Assigned Commissioner and Administrative Law Judge.

3. In addition to other reports that may be required, the Program Administrators shall publish a summary of the achievements of the energy efficiency programs on an annual basis. This report will be available to the public on the web and will contain at least the following information for the entire portfolio as well as each utility's portfolio: (1) energy savings (annual, cumulative, and lifecycle kWh and therms), peak demand savings,[22] levelized costs, cost per kW saved, total cost to billpayers, total savings to billpayers, net benefits to billpayers and environmental benefits (tons of CO2 and other pollutants avoided). Following each program cycle, a summary of the *ex post* measured achievements from the entire portfolio will also be published.

4. The utilities shall incorporate the correction in the E3 calculator to the erroneous demand reduction estimated for lighting currently contained in DEER that is discussed in Section 8.3 of D.05-09-043. (D.05-09-043, OP 11.)

5. As discussed in D.05-09-043, the utilities are required to use the August 2005 updates to *ex ante* expected useful life (EUL) assumptions posted to DEER when reporting actual installations during program implementation, and when submitting calculations of savings, portfolio cost-effectiveness and performance basis during the 2006-2008 program cycle. Staff shall ensure that inputs to the E3 calculator are appropriately adjusted, so that these calculations will reflect the *ex ante* EUL values referenced above. (D.05-09-043, OP 12.)

XI. Process and Procedural Issues

1. The Commission, the assigned Commissioner, the assigned Administrative Law Judge, or the Energy Division may utilize both formal and

[22] By D.06-06-063, the definition of peak megawatt load reduction contained in the 2005 Database for Energy Efficient Resources (DEER) shall be used for the purpose of verifying energy efficiency program and portfolio performance.

informal procedural vehicles as needed to (1) revise the Rules and /or any of its referenced documents, in whole or in part, at any time, upon request by interested parties or on its own initiative, and (2) resolve disputes among or complaints from various market participants, as circumstances warrant. In addition, nothing in these Rules preclude the Commission from planning and developing future energy efficiency programs, or delegating that responsibility to the assigned Commissioner, the assigned Administrative Law Judge or to Energy Division in the future.

2. The assigned Administrative Law Judge or Commission staff may hold workshops or other forums, as needed, for interested parties, customers and market actors to provide input and feedback on energy efficiency-related issues.

3. Any program proposal for energy efficiency funding must describe a dispute resolution process to be used in dealing with complaints from end-use gas or electric consumers participating or attempting to participate in the program. In programs where the Program Administrators hold contracts with third parties, those contracts will also be required to include dispute resolution provisions.

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APPENDIX A: Reference Documents

1. **Energy Action Plan**

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

1.a **Energy Action Plan Update, February 2008:**

http://www.cpuc.ca.gov/NR/rdonlyres/58ADCD6A-7FE6-4B32-8C70-7C85CB31EBE7/0/2008_EAP_UPDATE.PDF

2. **CPUC Decision 05-01-055 "Interim Opinion on the Administrative Structure for Energy Efficiency: Threshold Issues"**

   http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/43628.htm

3. **CPUC Decision 04-09-060 "Interim Opinion: Energy Savings Goals for Program Year 2006 and Beyond." See attached tables for the savings goals adopted in that decision, by IOU service territory.**

   http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/40212.htm

4. **Standard Practice Manual. Economic Analysis of Demand-Side Management Programs. October 2001.**

   ftp://ftp.cpuc.ca.gov/puc/energy/electric/energy+efficiency/em+and+v/std+practice+manual.doc

   - SPM 2001 Correction Memo. From D.07-09-043, Attachment 9, page 7 of 7 linked below for the "SPM Correction Memo of October 7, 1988"

   http://www.cpuc.ca.gov/NR/rdonlyres/3D41FF54-9809-4651-8898-78F93F84999B/0/CorrectionMemoSPM1071988.pdf

   - SPM 2007 Clarification Memo. From D.07-09-043, attached to this reference list.

   http://www.cpuc.ca.gov/NR/rdonlyres/A7C97EB0-48FA-4F05-9F3D-4934512FEDEA/0/2007SPMClarificationMemo.doc

   - **NTG Numerical Examples from D.07-09-043**

   http://www.cpuc.ca.gov/NR/rdonlyres/101F0713-7277-43A8-883D-8EF2712EFA8A/0/NumericalExamplesNTGAdjtoTRCD0709043.pdf

5. **Database for Energy Efficient Resources (DEER)** http://eega.cpuc.ca.gov/deer/

6. **Methodology and Forecast of Long Term Avoided Costs for the Evaluation of California Energy Efficiency Programs**

   http://www.ethree.com/CPUC/E3_Avoided_Costs_Final.pdf

   - **E3 Calculators (Updated to comply with D.07-09-043, 10-7-07)**

   http://www.ethree.com/cpuc_cee_tools.html

7. **CPUC Energy Efficiency Program Reporting Requirements Manual under the heading "Reporting Rules".**

ftp://ftp.cpuc.ca.gov/PUC/energy/electric/energy+efficiency/programs/rrm4.pdf

8. **CPUC Energy Efficiency Program EM&V Protocols**

ftp://ftp.cpuc.ca.gov/PUC/energy/electric/energy+efficiency/em+and+v/evaluatorsprotocols_final_adoptedviaruling_06-19-2006.doc

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Energy Efficiency Programs
Approved Savings Goals 2006 through 2013 (D.04-09-060)

SCE

Year	Energy Savings Annual Goal (GWH/Yr)	Cumulative Energy Savings (GWH)**	Demand Reductions (MW/Yr)	Cumulative Demand Reductions (MW)**
2006	922	2574.9	207	541
2007	1046	3621.3	219	760
2008	1167	4788.5	246	1006
2009	1189	5977.2	249	1255
2010	1176	7153.4	247	1502
2011	1164	8317.1	245	1747
2012	1151	9468.5	241	1988
2013	1139	10607.6	240	**2228**

(1) Total Savings = all savings from energy efficiency programs funded by public goods charge and procureme
funding. This total includes savings from EE programs already in the CEC forecast. For incremental savings a
the levels included in the CEC forecast, see D.04-09-060 Attachment 9.
(2) GWh savings converted to MW by multiplying by .21, average of utility GWh to peak savings for 2004/5
applications. This is an estimate of average peak savings not coincident peak = GWH savings in peak period /
hours in period.

PG&E

Year	Gas Savings Annual Goal (MMTh/Yr)	Cumulative Gas Savings (MMTh)**	Energy Savings Annual Goal (GWH/Yr)	Cumulative Energy Savings (GWH)**	Demand Reductions (MW/Yr)	Cumulative Demand Reductions (MW)**
2006	12.6	32.1	829	2316.5	180	503
2007	14.9	47.0	944	3260.5	205	708
2008	17.4	64.4	1053	4313.5	228	936
2009	20.3	84.8	1067	5380.8	232	1168
2010	21.1	105.9	1015	6396.3	220	1388
2011	22	127.8	1086	7482.8	236	1624
2012	23	150.9	1173	8656.2	254	1878
2013	25.1	176.0	1277	9933.2	278	**2156**

(1) Total Annual Energy Savings = all savings from energy efficiency programs funded by public goods charge and procurement funding. This total includes savings from baseline EE program funding of $100 MM/yr accounted for in the CEC sales forecast. For incremental savings above the levels included in the CEC forecast, see D.04-09-060 Attachment 9.
(2) GWh savings converted to MW by multiplying by .217, which is ratio of GWh to peak savings for 2004/5 applications. This is an estimate of average peak savings not coincident peak = GWh savings in peak period / 560 hours in period.

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Energy Efficiency Programs
Approved Savings Goals 2004 through 2013 (D.04-09-060)

SoCalGas

Year	Gas Savings Annual Goal (MMTh/Yr)	Cumulative Gas Savings (MMTh)**
2004	9.6	9.6
2005	9.6	19.3
2006	14.7	34.0
2007	19.3	53.3
2008	23.3	76.5
2009	27.2	103.7
2010	28.3	132.0
2011	29.9	161.9
2012	32.3	194.2
2013	35.8	230.1

Total Savings = all savings from energy efficiency programs funded by public goods charges and procurement funding.
This total includes natural gas savings from energy efficiency programs already included in the CEC forecast.

SDG&E

Year	Gas Savings Annual Goal (MMTh/Yr)	Cumulative Gas Savings (MMTh)**	Energy Savings Annual Goal (GWH/Yr)	Cumulative Energy Savings (GWH)**	Demand Reductions (MW/Yr)	Cumulative Demand Reductions (MW)**
2004	1.8	1.8	268.4	268.4		50.4
2005	1.8	3.6	268.4	536.8		100.7
2006	2.7	6.3	280.5	817.3	54.6	155.3
2007	3.1	9.5	285.1	1102.4	54.2	209.5
2008	3.7	13.1	284.4	1386.8	54	263.5
2009	4.1	17.3	282.3	1669.1	53.6	317.1
2010	4.5	21.8	273.6	1942.7	52	369.1
2011	4.9	26.7	262.5	2205.2	49.9	419
2012	5.3	32.0	221.7	2426.9	42.1	461.1
2013	5.7	37.6	214.9	2641.8	40.8	**501.9**

Total Savings = all savings from EE programs funded by public goods charge and procurement funding. This total includes savings from EE programs already in the CEC forecast. For incremental savings above the levels included in the CEC forecast, see D.04-09-060, Attachment 9)
MW Savings derived by multiplying GWh Savings by 0.19, average value SDG&E GWh to peak savings for 2004/5 applications. This is an estimate of average peak savings during all the peak hours: = GWh savings in peak period/560 hours in period.

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Total Electricity and Natural Gas Program Savings Goals (all IOUs) 2006-2013 (D.04-09-060)

		Total Annual Electricity Savings (GWh/yr)	Total Cumulative Savings (GWh/yr)	Total Peak Savings (MW)	Total Annual Natural Gas Savings (MMTh/yr)	Total Cumulative Natural Gas Savings (MMTh/yr)
2004		1,838	1,838	379	21	21
2005		1,838	3,677	757	21	42
2006		2,032	5,709	1,199	30	72
2007		2,275	7,984	1,677	37	110
2008		2,505	10,489	2,205	44	154
2009		2,538	13,027	2,740	52	206
2010		2,465	15,492	3,259	54	260
2011		2,513	18,005	3,789	57	316
2012		2,547	20,552	4,328	61	377
2013		2,631	23,183	4,885	67	444

Total annual energy savings = all savings from EE programs funded by public goods charges and Procurement funding. This total includes savings from baseline EE program funding of $100 MM/yr accounted for in the CEC sales forecast. For incremental program savings above the levels included in the CEC forecast, see Attachment 9 of D.04-09-060.

Average peak MW estimated by multiplying GWh from utility by the ratio they used in 2004/5 filings ranging from 0.19 to 0.21. This is an estimate of average peak savings, not coincident peak savings = GWh savings in peak period/560 hours in period.

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D.05-09-043

TABLE 8: ADOPTED FUND SHIFTING RULES, as modified by D.06-12-013 and D.07-10-032

Category	Shifts Among Budget Categories, Within Program	Shifts Among Programs, Within Category	Shifts Among Categories
Resource / Nonresource Programs (includes multiple program categories – see definitions below)	Yes, no formal Commission review/approval triggered.	• Yes, no formal Commission review/approval triggered. • However, 15 day PRG notification and comment required if shifts exceed 25% on an annual basis or 50% on a cumulative basis. • Adding a new program outside the competitive bid process triggers Advice letter process. • Advice letter required if allocation to third-party implementers is expected to fall below 20%.	• Yes, up to 25% on an annual basis or 50% on a cumulative basis. Advice letter required for larger shifts. • Adding a new program outside the competitive bid process triggers Advice letter process. • Advice letter required if allocation to third-party implementers is expected to fall below 20%.
C&S / ET / Statewide M&O	Yes, same as above	Advice letter required for shifts that would reduce any of these programs by more than 1% of budgeted levels.	Advice letter required to shift funds OUT of any program more than 1% of budgeted levels.
EM&V	Yes, within utility portion. Fund shifting between the utility and ED portions only with Assigned Commissioner or ALJ approval, in consultation with Joint Staff.	Not Applicable – Single Program	Assigned ALJ or Commissioner ruling required to shift funds OUT of EM&V by any amount.

For purpose of these fund-shifting rules, the Resource/Non-Resource program categories are as follows:

- Resource / Non-Resource Program categories for **SCE, SDG&E**, and **SoCalGas** are: (1) Residential; (2) Nonresidential; (3) Crosscutting (except C&S, ET, SW Marketing and Outreach, EM&V).
- Resource / Non-Resource Program categories for **PG&E** are: (1) Mass Market (residential/small commercial cross-cutting); (2) Residential targeted market sectors within Targeted Markets and (3) Non-Residential targeted market sectors within Targeted Markets.

Utility program administrators may carryover/carryback funding during the 2006-2008 program cycle without triggering a review/approval process. Authorization for utilizing 2006 funding in 2005 for specific purposes is described in D.05-09-043. Per D.06-12-013 (OP 2), utility program administrators may file an advice letter to seek authorization to shift existing, unspent uncommitted energy efficiency funds from previous program cycles to the 2006-2008 portfolio budgets to fund new energy efficiency programs or incremental energy efficiency activities as part of existing authorized programs. Utilities should consult with the PRG prior to submitting this type of advice letter. Per D.07-10-032, carryover/carryback funding is permitted during the 2006-2008 budget cycle so long as the 2009-2011 portfolio has been approved. CPUC approval is not necessary for up to 15% of the "current" program cycle. See Rules II.12 and II.13.

Changes to incentive levels or modifications to program design (such as changes to customer eligibility requirements) will not trigger Energy Division or formal Commission review, except as indicated below. We expect that the results of EM&V studies, statewide coordination efforts and ongoing consultation with advisory groups will enable utility program administrators to identify the best practices and program designs for portfolio implementation.

- If the proposed incentive level change impacts as statewide offering, e.g., is included in the deemed and calculated measure list presented in the statewide PAG meeting on August 2-3, 2005, and is less than 50% of the original incentive level on a cumulative basis over the three-year program cycle, the utility administrator will need to inform and solicit comment from the joint PRGs prior to the change taking place.
- If the proposed incentive level change impacts a statewide program offering and is more than 50% of the original incentive level on a cumulative basis, the utility administrator will follow the advice letter process described in these rules.
- The program administrator will notify the PRG of all incentive level changes that take place.

For all significant shifts in funding or modifications to program design, the utilities should seek informal review with their PRG members as part of the ongoing exchange of information during program implementation. Where an advice letter is required under these rules, absent a protest or written data request by Energy Division for additional information by the end of the 20-day protest period, the request will become effective on the twentieth day after filing. If Energy Division staff issues a data request before the end of the protest period, the response time requirements and other procedures applicable to our normal advice letter procedures, as updated by D.05-01-032, will take effect. All advice letters required for fund shifting shall be served on the service list in A.05-06-004 and R.01-08-028, or its successor rulemaking, unless otherwise specified by the assigned ALJ. The assigned ALJ, in consultation with the Assigned Commissioner, may provide further clarification on implementing these fundshifting rules, or consider modifications to these rules during the 2006-2008 program cycle, as appropriate.

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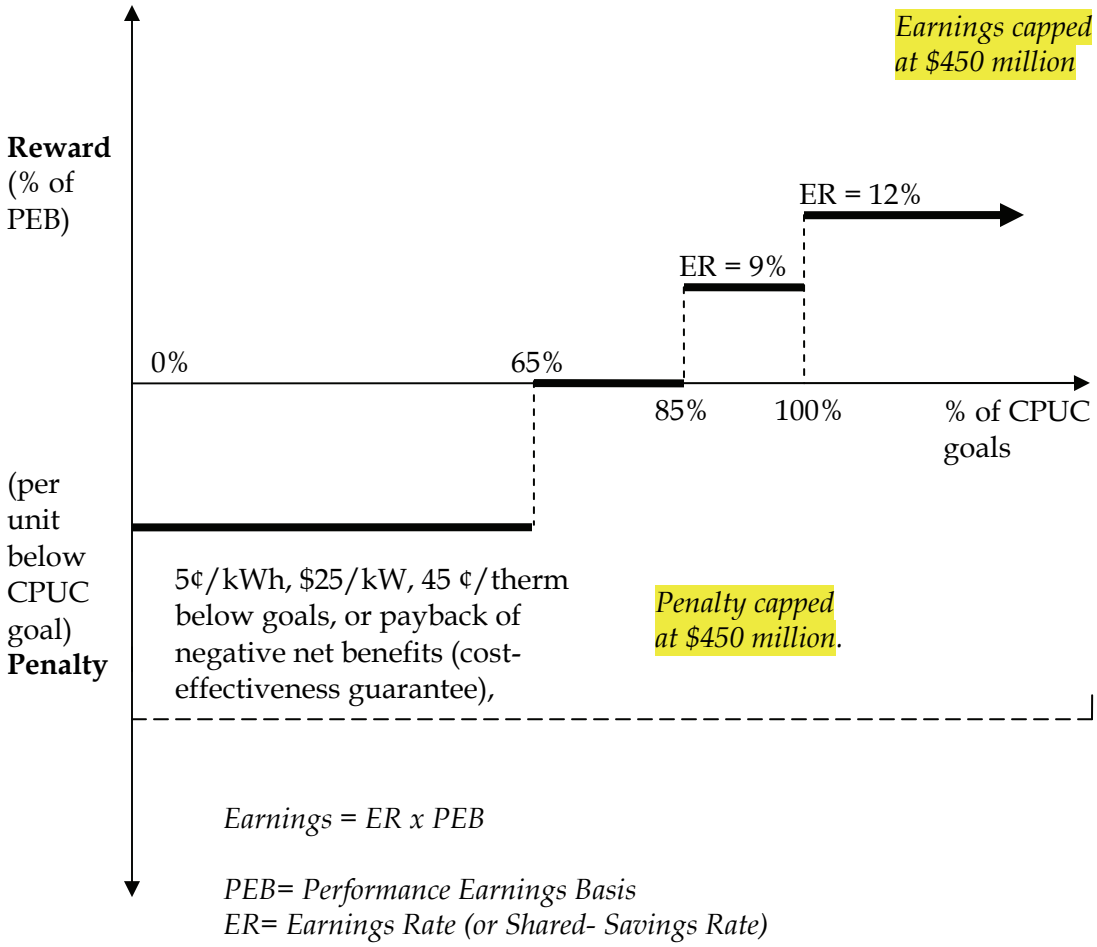
Figure 1: Adopted Incentive Mechanism Earnings/Penalty Curve



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APPENDIX B: GLOSSARY
COMMON ENERGY EFFICIENCY
TERMS AND DEFINITIONS

Adopted Program Budget
The program budget as it is adopted by the Commission. Inclusive of costs (+/-) recovered from other sources.

Advanced Technologies
Measures or processes which exceed the efficiency or thermodynamic performance of standard energy using equipment or processes.

Affiliate
Any person, corporation, utility, partnership, or other entity 5% or more of whose outstanding securities are owned, controlled, or held with power to vote, directly or indirectly either by an administrator or any of its subsidiaries, or by that administrator's controlling corporation and/or any of its subsidiaries as well as any company in which the administrator, its controlling corporation, or any of the administrator's affiliates exert substantial control over the operation of the company and/or indirectly have substantial financial interests in the company exercised through means other than ownership. For purposes of these Rules, "substantial control" includes, but is not limited to, the possession, directly and indirectly and whether acting alone or in conjunction with others, of the authority to direct or cause the direction of the management of policies of a company. A direct or indirect voting interest of five percent (5%) or more by the administrator, its subsidiaries, or its affiliates in an entity's company creates a presumption of control.

Avoided Costs
Avoided costs refers to the incremental costs avoided by the investor-owned utility when it purchases power from qualifying facilities, implements demand-side management, such as energy efficiency or demand-response programs, or other wise defers or avoids generation from existing/new utility supply-side investments or energy purchases in the market. Avoided costs also encompass the deferral or avoidance of transmission and distribution-related costs. (D.08-01-006, Footnote 2)

Baseline Data
The initial base metric for comparing the net result of programmatic changes versus what would have happened in the absence of the program or activity.

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Coincident Peak Demand
The metered or estimated demand of a device, circuit, or building that occurs at exactly the same time as the system peak for a given year and weather condition.

Community Choice Aggregators
Organizations created by local governments pursuant to Assembly Bill 117 for the purpose of procuring power and administering energy efficiency programs on behalf of local citizens.

Competitive Solicitation
The process whereby parties are requested to submit bids offering innovative approaches to energy savings or improved program performance.

Conservation
Reduction of a customer's energy use achieved by relying on changes to the customer's behavior which may result in a lower level of end use service.

Conservation Measures
Activities and/or behaviors aimed at reducing energy consumption.

Conservation Programs
Programs which are intended to influence customer behavior as a means to reduce energy use.

Cost Effectiveness
An indicator of the relative performance or economic attractiveness of any energy efficiency investment or practice when compared to the costs of energy produced and delivered in the absence of such an investment.

Cream Skimming
Cream skimming results in the pursuit of a limited set of the most cost-effective measures, leaving behind other cost-effective opportunities. Cream skimming becomes a problem when lost opportunities are created in the process.

Cross Subsidization
Benefits enjoyed by one group, such as a customer class, which are funded by another group.

Customer
Any person or entity that pays an electric and/or gas bill to an IOU and that is the ultimate consumer of goods and services including energy efficiency products, services, or practices.

Cumulative Savings
As clarified in D.07-10-032, cumulative savings represent the savings in that year from all previous measure installations (and reflecting any persistence decay that has occurred since the measures were installed) plus the first-year savings of the measures installed in that program year.

Dual Test
The requirement that an energy efficiency activity pass both the TRC and the PAC cost-effectiveness test.

E3 Calculator
The E3 calculator is a model developed by Energy Environmental Economics (or "E3" for use by the utilities to map Commission-adopted avoided costs to energy efficiency programs for cost-effectiveness calculations.

Effective Useful Life (EUL)
An estimate of the median number of years that the measures installed under the program are still in place and operable.

Electricity Savings
Reduced electricity use (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which usually reduce energy use by reducing the quantity or quality of the baseline energy services demanded.

Emerging Technologies
New energy efficiency technologies, systems, or practices that have significant energy savings potential but have not yet achieved sufficient market share (for a variety of reasons) to be considered self sustaining or commercially viable. Emerging technologies include early prototypes of hardware, software, design tools or energy services that if implemented will result in energy savings.

Emissions Reductions

The Commission requires annual reporting of reduced emissions of carbon dioxide (CO2), sulfur oxides (SOx), nitrous oxides (NOx), and particulate matter (PM10) as a result of energy efficiency savings. The utilities use the E3 calculator to compute the annual electric and natural gas emissions reductions, which are the units implemented in the year times the annual emission reduction for a particular measure. The E3 calculator calculates values of CO2 in tons per kWh or therms; NOx and PM10 are in pounds per kWh or therms.

The following equations are from the "E3 Calculator Tech Memo" found at the following web link:
http://www.ethree.com/CPUC/E3%20Calculator%20TechMemo%203c.doc

Emissions Reductions

Electric Reductions: CO2 tons per year *(Emission[E][CO2])*

$$Emission[E][CO2]_y = \sum_{Q=1+(y-1)*4}^{y*4} \left(IN_{M,Q} * kWh\_A_M * NTG_M * ER[CO2]_M \right)$$

Where

y	=	year of consideration. 2006 = 1. "Total Annual" used for years 2008 through the end of the implementation period.
Q	=	Quarter of the year. Jan-Mar 2006 = 1.
$IN_{M,Q}$	=	# of incremental of measures implemented in quarter *Q*.
NTG_M	=	Net–to-Gross ratio for measure *M*.
$ER[CO2]_M$	=	Emission rate of CO2 in tons per kWh of measure *M*. (The emissions rate for each measure is calculated using the product of the hourly measure savings load shape and the hourly heat rate for the IOU.).
kWh_A_M	=	Annual kWh reduction for measure *M*.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per kWh. NOX and PM-10 are in pounds per kWh.

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Gas Reductions: CO2 tons per year *(Emission[G][CO2])*

$$Emission[G][CO2]_y = \sum_{Q=1+(y-1)*4}^{y*4} \left(IN_{M,Q} * Th\_A_M * NTG_M * ER[CO2]_{GCT} \right)$$

Where

y	=	year of consideration. 2006 = 1. "Total Annual" used for years 2008 through the end of the implementation period.
Q	=	Quarter of the year. Jan-Mar 2006 = 1.
$IN_{M,Q}$	=	# of incremental of measures implemented in quarter *Q*.
NTG_M	=	Net–to-Gross ratio for measure *M*.
$ER[CO2]_{GCT}$	=	Emission rate of CO2 in tons per therm, based on the gas combustion type (GCT) specified on the input sheet for the measure.
Th_A_M	=	Annual gas reduction (in therms) for measure *M*.

NOX and PM-10 equations are the same. Just replace [CO2] with the appropriate indicator. Note that CO2 emission rate is in tons per Therm. NOX and PM-10 are in pounds per Therm.

Energy Efficiency Groupware Application 2006 (EEGA2006)
The utilities post monthly and quarterly status reports to the EEGA2006 webpage, which is accessible to the public: **http://eega2006.cpuc.ca.gov.**

End Use

1) The purpose for which energy is used (e.g. heating, cooling, lighting).
2) A class of energy use that an energy efficiency program is concentrating efforts upon. Typically categorized by equipment purpose, equipment energy use intensity, and/or building type.

Energy Efficiency
Activities or programs that stimulate customers to reduce customer energy use by making investments in more efficient equipment or controls that reduce energy use while maintaining a comparable level of service as perceived by the customer.

Energy Efficiency Measure
An energy using appliance, equipment, control system, or practice whose installation or implementation results in reduced energy use (purchased from the distribution utility) while maintaining a comparable or higher level of energy service as perceived by the customer. In all cases energy efficiency measures decrease the amount of energy used to provide a specific service or to accomplish a specific amount of work (e.g., kWh per cubic foot of a refrigerator held at a specific temperature, therms per gallon of hot water at a specific temperature, etc). For the purpose of these Rules, solar water heating and

stand-alone solar-powered water circulators are eligible energy efficiency measures. (Per D.07-11-004, OP 1.)

Energy Efficiency Programs
Programs that reduce customer energy use by promoting energy efficiency investments or the adoption of conservation practices or changes in operation which maintain or increase the level of energy services provided to the customer.

Energy Efficiency Savings
The level of reduced energy use (or savings) resulting from the installation of an energy efficiency measure or the adoption of an energy efficiency practice, subject to the condition that the level of service after the investment is made is comparable to the baseline level of service. The level of service may be expressed in such ways as the volume of a refrigerator, temperature levels, production output of a manufacturing facility, or lighting level per square foot.

Evaluation, Measurement and Verification (EM&V)
Activities which evaluate, monitor, measure and verify performance or other aspects of energy efficiency programs or their market environment.

Evaluation Project Budget
The project level evaluation budget as it is defined by the program administrators or Joint Staff for internal program budgeting and management purposes. Inclusive of direct and allocated overhead and costs (+/-) recovered from other sources.

Financial Incentive
Financial support (e.g., rebates, low interest loans, free technical advice) provided to customers as an attempt to motivate the customers to install energy efficient measures or undertake energy efficiency projects. (See Rebate)

Free Drivers
A free driver is a non-participant who adopted a particular efficiency measure or practice as a result of a utility program. (From April 2006 EM&V Protocols)

Free riders (Free Ridership)
Program participants who would have installed the program measure or equipment in the absence of the program.

Fuel Substitution

Programs which are intended to substitute energy using equipment of one energy source with a competing energy source (e.g. switch from electric resistance heating to gas furnaces).

Funding Cycle
Period of time for which funding of energy efficiency programs have been approved by the Commission.

Gas Savings
Reduced natural gas usage (or savings) produced by either energy efficiency investments which maintain the same level of end use service or conservation actions which can reduce energy use by reducing the quantity or quality of the baseline services provided.

Hard to Reach, Non Residential
Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a language, business size, geographic, or lease (split incentive) barrier. These barriers are defined as:

Language – Primary language spoken is other than English, and/or
Business Size – Less than ten employees and/or classified as Very Small, and/or
Geographic – Businesses in areas other than the San Francisco Bay Area, San Diego area, Los Angeles Basin or Sacramento, and/or
Lease – Investments in improvements to the building benefit the business only during the lease period; landlords benefit longer.

Hard to Reach, Residential
Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a language, income, housing type, geographic, or home ownership (split incentives) barrier. These barriers are defined as:

Language – Primary language spoken is other than English, and/or
Income – Those customers who fall into the moderate income level (income levels less than 400% of the federal poverty guidelines), and/or
Housing Type – Multi-family and Mobile Home Tenants, and/or
Geographic – Businesses in areas other than the San Francisco Bay Area, San Diego area, Los Angeles Basin or Sacramento, and/or
Home Ownership – Renters.

Incremental Measure Cost
The additional cost of purchasing and installing a more efficient measure. Calculated from the price differential between energy-efficient equipment and standard or baseline measures. The inclusion of the word "gross" in the definition reflects incremental measure costs, which have not been adjusted for free riders. Net incremental measure costs means that the term has been adjusted for free riders; i.e., the net-to-gross ratio has been applied.

Information & Education
Information and education programs can provide a wide range of activities designed to inform or educate a customer or customer group. Generally these range from in-depth, one-on-one, on-site or centrally located classroom style instruction in topics related to energy efficiency, to programs that target information to specific types of customers, to general information provided to a wide range of customers, to short inexpensive public service announcements on FCC approved communication frequencies. Programs intended to provide customers with information regarding generic (not customer-specific) conservation and energy efficiency opportunities. For these programs, the information may be unsolicited by the customer.

Innovation Incubator
A low-cost, stand-alone program designed to grow innovative energy saving programs and processes for the larger portfolio over the long term. The incubator funds new program ideas that meet reasonable scientific scrutiny for potentially cost-effective energy savings and peak reduction.

Institutional Barriers
A type of market barrier: In this case, the internal organizational hurdles that inhibit the evaluation and or choice to take energy efficiency actions.

Least Cost/Best Fit
The procurement of cost-effective supply and demand-side resources that, regardless of ownership, meet capacity and energy deliverability requirements. Energy efficiency resources are constructed from the bottoms up approach that aggregates the demand and energy savings from various energy-saving measures and activities into applicable end-use categories such as space cooling, space heating, lighting, and refrigeration, in order to provide near- and long-term peaking, intermediate, and baseload requirements.

Levelized Cost
An estimate of the annualized cost of installing an energy efficiency measures divided by the annual energy savings. Typically calculated by multiplying the incremental cost of the measure by capital recovery factor (function of discount rate and expected useful life of the measure) and then dividing by annual energy savings.

Load Management
Programs which reduce or shift electric peak demand away from periods of high cost electricity to non-peak or lower cost time periods, with a neutral effect on or negligible increase in electric use.

Load Serving Entities
Entities that provide electric and/or gas commodity to customers.

Lost Opportunities
Energy efficiency measures that offer long-lived, cost-effective savings that are fleeting in nature. A lost opportunity occurs when a customer does not install an energy efficiency measure that is cost-effective at the time, but whose installation is unlikely to be cost-effective if the customer attempts to install the same measure later.

Market Effect
A market effect is a change in the structure or functioning of a market or the behavior of participants in a market that result from one or more program efforts. Typically these efforts are designed to increase in the adoption of energy-efficient products, services or practices and are causally related to market interventions. (From EM&V Protocols, April 2006).

Market Transformation
Decision (D.) 98-04-063, Appendix A, defines market transformation as "[l]ong-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market."

Marketing and Outreach

Communications activities designed to identify, reach and motivate potential customers to take actions to either learn more about or invest in energy efficiency opportunities.

Measures

(1) Specific customer actions which reduce or otherwise modify energy end use patterns.
(2) A product whose installation and operation at a customer's premises results in a reduction in the customer's on-site energy use, compared to what would have happened otherwise.

Minimum Performance Standard (MPS)

As part of the Shareholder Incentive Mechanism, the minimum performance standard is the minimum level of savings that utilities must achieve relative to their savings goal before accruing earnings and is expressed as a percentage of the Commission-adopted savings goals per utility. The utility MPS is based on the whole energy efficiency portfolio and the minimum goal of each individual savings metric. (See Rule VIII.)

Net to Gross Ratio

A ratio or percentage of net program impacts divided by gross or total impacts. Net to gross ratios are used to estimate and describe the free-ridership that may be occurring within energy efficiency programs.

Non-price Factors

Those factors included in cost effectiveness tests, other than commodity prices and transportation and distribution costs, e.g., environmental factors.

Operating Program Budget

The program budget as it is defined by the program administrators for internal program budgeting and management purposes. Inclusive of costs (+/-) recovered from other sources.

Participant Test

The Participant Test is the measure of the quantifiable benefits and costs to the customer due to participation in a program. Since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer. (See SPM link under Attachment A.)

Partnership

Coordinated efforts of a utility and a local government or other entity to use the strengths of both parties to achieve energy savings goals.

Peak Demand (per OP 1 of D.06-06-063)
The average grid level impact for a measure between 2:00 p.m. and 5:00 p.m. during the three consecutive weekday period containing the weekday temperature with the hottest temperature of the year.

Peak Demand-General (kW)
(1) The maximum level of metered demand during a specified period, such as a billing month, or during a specified peak demand period.
(2) Extremely high energy use, usually with reference to a particular time period.

Peak Savings- Coincident (kW)
The estimated peak (e.g. highest) demand savings (MW or kW) from a program for a specific time, date, and location coincident with the forecasted system peak for a given area and a given set of weather conditions. This estimate must also include consideration of the likelihood that the equipment is actually on at the time of coincident peak. Usage of this definition: Resource planning- for making adjustments to forecasts of peak usage for understanding reserve margins and reliability purposes.

Peak Savings- Daily Average (kW)
The average peak demand savings (kWh impacts/ # of hours in the peak rate period) for a given utility during their peak season. Example for SCE-Peak period is for summer weekdays from 12-6 PM. So - daily average savings would be the number of kWh saved/ # of kWhs saved for all weekday peak periods (= kWh/5 days/week * 12 weeks/ summer* 6 hours/day = kW average. Usage: Cost effectiveness analysis, primarily for valuing energy savings that occur during the peak period using "peak" average avoided costs.

Peak Savings –Non coincident (kW)
Estimated highest level of peak savings(kW or MW) for a given program during the peak time period for a given utility on the hottest day of a "normal" weather year. Thus if a group of measures saved 1MW at 2:00 p.m., 1.7 MW at 3:00 p.m., 1.6 MW at 4:00 p.m., 1.0 MW at 5:00 p.m. and 1.2 MW at 6:00 p.m, the peak non coincident savings would be 1.7 MW. This savings estimate does not. take into account how many of the

affected devices or equipment will be operating during the peak time period. Usage: Cost effectiveness analysis and procurement.

Peer Review Group (PRG)
A subset of the Program Advisory Group consisting of non-financially interested members who will review utility submittals to the Commission, assess overall portfolio plans, plans for bidding out pieces of the portfolio, and the bid evaluation criteria for selecting third-party programs.

Performance Basis
The metrics by which a program or a group of programs is measured and evaluated for the purpose of assessing the program(s) success at displacing or deferring more costly supply-side resources and or increasing more energy efficient design and practices.

Performance Earnings Basis (PEB)
A metric used in the shareholder incentive mechanism consisting of total portfolio net benefits (TRC) weighted 2/3rd and total Program Administrator Cost (PAC) portfolio net benefits weighted 1/3rd. (See Rule VIII.)

Performance Uncertainties
A market barrier: refers to new technologies or systems whose efficiency or system performance levels are uncertain due to lack of experience.

Portfolio
All IOU and non-IOU energy efficiency programs funded by ratepayers that are implemented during a program year or cycle. May also refer to a group of programs sponsored, managed, and contracted for by a particular IOU.

Portfolio Reporting
Regularly scheduled reporting by the portfolio administrators directly to the CPUC. Metrics reported are: portfolio budgets and expenditures, measures installed, services rendered, and other program activity deemed relevant to Energy Division's responsibility to support the Commission's responsibilities of quality assurance, policy oversight, and EM&V.

Pre-commercialization
A phase in the life of a product before it is readily available on the market.

Program
A collection of defined activities and measures that

- are carried out by the administrator and/or their subcontractors and implementers,
- target a specific market segment, customer class, a defined end use, or a defined set of market actors (e.g. designers, architects, homeowners),
- are designed to achieve specific efficiency related changes in behavior, investment practices or maintenance practice in the energy market,
- and are guided by a specific budget and implementation plan.

Program Activities
Any action taken by the program administrator or program implementer in the course of implementing the program.

Program Administrator
An entity tasked with the functions of portfolio management of energy efficiency programs and program choice.

Program Administrator Cost (PAC) Test
Under portfolio evaluation of cost effectiveness, the PAC test contains the program benefits of the TRC test, but costs are defined differently to include the costs incurred by the program administrator but not the costs incurred by the participating customer. (See the SPM link under Attachment A.)

Program Advisory Group (PAG)
Advisory groups for each utility service area composed of energy efficiency experts representing customer groups, academic organizations, environmental organizations, agency staff and trade allies in the energy market. For 2007 and beyond, the Public Advisory Group (PAG) is eliminated while the Peer Review Group (PRG) is retained. Per D.07-10-032, the advisory function formerly performed by the PAG will be subsumed in the statewide strategic planning activity.

Program Cycle
The period of time over which a program is funded and implemented.

Program Implementation Plan
A detailed description of a program that includes program theory, planned program processes, expected program activities, program budget, projected energy savings and

demand reduction and other program plan details as required by the Commission, assigned ALJ, or Energy Division.

Program Implementers
An entity or person that puts a program or part of a program into practice based on contacts or agreements with the portfolio manager.

Program Strategy
The set of activities deployed by the program in order to achieve the program's objectives.

Program Year(s)
The calendar year(s) during which the program operates.

Ratepayer
Those customers who pay for gas or electric service under regulated rates and conditions of service.

Rebate
A financial incentive paid to the customer in order to obtain a specific act, typically the installation of energy efficiency equipment.

Report Month
The month for which a particular monthly report is providing data and information. For example, the report month for a report covering the month of July 2006, but prepared and delivered later than July 2006, would be July 2006.

Resource Value
An estimate of the net value of reliable energy (e.g., kWh, therms) and capacity (e.g., kW, Mcfd) reductions resulting from an energy efficiency program. This includes the net present value of all of the costs associated with a program and all of the estimated benefits (both energy and capacity). The calculation of resource value and associated benefits should be consistent with the avoided costs adopted in the most recent Commission proceeding or otherwise provided for by the Commission.

Service Area
The geographical area served by a utility.

Short Term/Long Term
Planning terms referring to the timing or expected timing of program activities, program impacts, or program funding. Short term indicates program activities,

program impacts, or program funding that occurs during the current program cycle. Long term indicates program activities, program impacts, or program funding that occurs beyond the current program cycle.

Source-BTU Consumption
Conversion of retail energy forms (kWh, therms) into the BTU required to generate and deliver the energy to the site. This conversion is used to compare the relative impacts of switching between fuel sources at the source or BTU level for the three-prong test required for fuel-substitution programs.

Spillover
Reductions in energy consumption and/or demand in a utility's service area caused by the presence of the DSM program, beyond program related gross or net savings of participants. These effects could result from: (a) additional energy efficiency actions that program participants take outside the program as a result of having participated; (b) changes in the array of energy-using equipment that manufacturers, dealers and contractors offer all customers as a result of program availability; and (c) changes in the energy use of non-participants as a result of utility programs, whether direct (*e.g.*, utility program advertising) or indirect (*e.g.*, stocking practices such as (b) above or changes in consumer buying habits)." **Participant spillover** is described by (a), and **non-participant spillover**, by (b) and (c). **Some parties refer to non-participant spillover as "free-drivers."** (From EM&V Protocols, April 2006)

Standard Practice Manual (SPM)
The California Standard Practice Manual: Economic Analysis of Demand-side Programs and Projects is jointly issued by the California Public Utilities Commission and the California Energy Commission. It defines the standard cost effectiveness tests and their components used for energy efficiency programs.

Statewide
Energy efficiency programs or activities that are essentially similar in design and available in all Commission regulated utility service areas in California.

Third Party/Non-IOU
Non-regulated implementers of ratepayer funded energy efficiency activities.

Total Resource Cost Test (TRC)
The TRC test measures the net resource benefits from the perspective of all ratepayers by combining the net benefits of the program to participants and non-participants. The benefits are the avoided costs of the supply-side resources avoided or deferred. The

TRC costs encompass the cost of the measures/equipment installed and the costs incurred by the program administrator. (See SPM link under Attachment A.)

Zero Net Energy

Zero Net Energy is defined as the implementation of a combination of building energy efficiency design features and on-site clean distributed generation that result in no net purchases from the electricity or gas grid, at the level of a single "project" seeking development entitlements and building code permits. Definition of zero net energy at this scale enables a wider range of technologies to be considered and deployed, including district heating and cooling systems and/or small-scale renewable energy projects that serve more than one home or business. (D.07-10-032, Footnote 42.)

(END OF APPENDIX B)

(END OF ATTACHMENT)