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ENERGY EFFICIENCY POLICY MANUAL, VERSION 5.0

(June 2011)

Applicable to post-2009 Energy Efficiency Programs

EE Policy Manual Version 5.0

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	Coincident	

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ENERGY EFFICIENCY POLICY MANUAL FOR POST-2009 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 5.0, this document shall apply to all energy efficiency activities commencing in program year (PY) 2010 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:

- Energy Savings Assistance Programs for low income customers 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 AB970 (PU Code Section 399.15(b)).[3]

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 2010.

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).

[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 05-11-009 (R.02-06-001).

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

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.[4] 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. The Commission-adopted energy savings goals are expressed in terms of annual and cumulative gigawatt hours, million-therms and peak megawatt load reductions. The goals were later updated in D.08-07-047, D.09-05-037, and D.09-09-047 and shall be continue to be updated periodically by the Commission. 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.[6] In D.08-07-047, the

[4] Subsequently adopted in D.08-09-040 and revised in D.10-09-047.

[6] D.06-06-063, O.P. #1 at p. 94. As discussed in this decision, DEER defines peak demand as the average grid level impact for a measure between 2 p.m. and 5 p.m. during the three consecutive weekday periods containing the weekday temperature with the hottest temperature of the year.

Commission revised the energy efficiency goals to be gross goals, not net of free riders starting in 2009. 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.[7] 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.

- The utilities may apply a conservative deemed assumption that 50% of savings persist following the expiration of a given measure's life, until current PY EM&V results inform better metrics.[8]
- Both DEER 2008 and non-DEER measure ex ante values established for use in planning and reporting accomplishments for current PY energy efficiency programs shall be frozen, based upon the best available information at the time the current PY activity is starting.

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-

[7] While the energy savings achieved by LIEE programs will count towards the Commission's savings goals, per D.04-09-060, the Commission considers factors other than cost-effectiveness in determining LIEE program design and funding levels.

[8] D.09-09-047, O.P. #49 at p. 390.

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 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 to build the new statewide DSM brand. Statewide marketing and outreach programs should convey a consistent statewide message to energy consumers in all targeted 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, the scope of energy efficiency marketing efforts through the new brand shall include energy efficiency, low income energy efficiency, demand response, and renewable self-generation program offerings. (D.09-09-047) Further, IOUs should use the new brand alone or in a co-branded capacity with IOUs across all energy efficiency marketing efforts for all programs which use energy efficiency funds, all or in part.[9],[10]

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 6 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. Program Administrators 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, 381.112, 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. 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

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[9] D.09-09-047 further stipulates: "Co-branding with Investor-Owned Utility brands shall begin in conjunction with the launch of the mass media phase of the Marketing Education and Outreach campaign and after awareness of the new statewide brand is established." [D.09-09-047, O.P. #34, as modified by D.10-12-054, O.P. #5 at p. 38]

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 applicable to the current program cycle are added to these Policy Rules as an attachment to Appendix A. Appendix A is modified per D.09-09-047, A.08-07-021, D.05-09-043, D.06-12-013, and D.07-10-032 to apply to the current funding cycle. Furthermore, the role of the Peer Review Group is eliminated for the purposes of reviewing fund-shifting.

12. Funding of Program Cycle Extensions. IOUs may spend up to 15% of next-cycle funds within the final year of the program cycle after the next-cycle portfolio is approved, and may continue the average monthly level of expenditures for the final year of a budget cycle to continue on a month-to month basis until the next portfolio budget is approved (or as specified in the Commission decision for the next portfolio budget cycle) .

12. 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.

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

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

15. Program Cancelation. IOUs shall not eliminate any energy efficiency program or sub-program except through an Advice Letter seeking such a change.

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.*[13]

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

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[13] In D.07-09-043, *Shareholder Risk/Reward Incentive Mechanism for EE Programs*, the Commission clarified the definition of TRC to include the rebate costs for free rider

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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[15] costs incurred by the program administrator.[16] The TRC is calculated utilizing a discount rate that reflects each utility's weighted average cost of capital, as adopted by the Commission[17].

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[15] D09-09-047 notes that on May 24, 2009, the Commission issued D.09 - 05

- 037 which revised Commission policy and counting rules to say, "The utilities'

request to use the individual utility weighted cost of capital adjusted for taxes for the 2009-2011 energy efficiency portfolios was granted." 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. D.09-05-037 requires a pre-tax Weighted Average Cost of Capital (WACC) which changed from a post-ta

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[16] 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., 3 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 installatio

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[17]The Commission, in D.09-05-037, directs the IOUs to utilize the pre-tax weighted cost of capital, as determined in the Commission's Cost of Capital proceeding. 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[18]. 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 incentive mechanism in effect at that time.[19] This threshold requirement applies to each of

[18] See D.05-04-024 and D.06-06-06

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[19] D.07-09-043, Mimeo page 22

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.[20]

7. As described in these Rules, fuel-substitution programs/projects must also pass the Dual-Test to be considered for inclusion in the portfolio and eligible for funding. As a condition for inclusion of solar-powered, non-generating technologies within the definition of energy efficiency measures, such technologies must be cost-effective on a stand-alone basis, i.e., pass the dual-test of cost-effectiveness to be eligible for funding. 22 Other programs/projects 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.23 However, evaluation, measurement and verification costs should not be allocated to individual programs in the calculation of TRC and PAC net benefits. Rather, all

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

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[22] Per D.07-11-004, eligible for 2006-2008 funding and cumulative savings goals. [D.07-11-004, O.P. #4, as modified by D.09-12-022, O.P. #2 at p. 1

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[23] See, for example, Ordering Paragraph 4, D.04-09-06

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

1. The program/project 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/project 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/project 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 Efficient Resources (DEER). [24] 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 shall count towards the utilities' energy efficiency goals for resource planning purposes. 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.

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,

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

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 Rulemaking 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 current 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

Each IOU is advised by a Peer Review Group (PRG), a group 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.

1. Energy Division and DRA staff will be *ex officio* members of each PRG, and IOU-selected group 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.

2. 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. The PRG will not be responsible for the review of fundshifting.

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. In Rulemaking 09-01-019, the Commission is developing a shareholder incentive mechanism that seeks to further remove any disincentive for investment in energy efficiency by rewarding utilities that successfully achieve significant levels of cost-effective energy efficiency.

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

IOUs are required to following the CPUC's Energy Efficiency Reporting Requirements Manual for the current program cycle. The RRM is shown in Attachment X. Please see Appendix C for Reporting Requirements. Additionally, please refer to http://eega.cpuc.ca.gov for the most current reporting templates and Energy Division guidelines.

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 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/

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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.09-09-047)[31]

SCE

Year	Energy Savings Annual Goal (GWH/Yr)
2006	922
2007	1,046
2008	1,167
2009	1,130
2010	1,117
2011	1,106
2012	1,093
2013	1,139

[OTHER IOUs' TABLES CONTINUED ON NEXT PAGE]

PG&E

[31] 5% reduction applied to Total Annual Electricity Savings (GWH/yr).
1% reduction applied to Total Annual Peak Savings (MW). Annual MW goals were not included in D. 04-09-060, but derived by subtracting out the prior year from the cumulative MW savings goal.
The therm adjustments approved in D. 09-05-037 for SDG&E and PG&E were extended to 2012.
* The 25% reduction for SDG&E's GWh and MW goals to account for the overstatement of potential was applied first, followed by the 5% and 1% reduction of goals to reflect updates in ex-ante savings assumptions.
** Annual goals for 2013 were not updated, but cumulative savings adjustments are reflected in this column.
The goal for 2009 was also adjusted downward for GWh and MW by 5% and 1% respectivel

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Year	Gas Savings Annual Goal (MMTh/Yr)	C
2006	12.6	
2007	14.9	
2008	17.4	
2009	15.1	
2010	15.6	
2011	16.2	
2012	17.1	
2013	25.1	

SoCalGas

Year	Gas Savings Annual Goal (MMTh/Yr)	Cumulative Gas Savings (MMTh)**
2006	15	15
2007	19	34
2008	23	57
2009	27	84
2010	28	113
2011	30	143
2012	32	175
2013	36	211

SDG&E

Year	Gas Savings Annual Goal (MMTh/Yr)	Cumulative Gas Savings (MMTh)**	Energy Savings Annual Goal (GWH/Yr)	Cumulative Energy Savings (GWH)**	Annual Demand Reductions (MW/Yr)	Cumulative Demand Reductions (MW)**
2006	2.7	3	210	210	41	41
2007	3.1	5.9	214	424	41	82
2008	3.7	9.5	213	638	41	122
2009	3.3	12.8	201	839	40	162
2010	3.5	16.3	195	1,034	39	201

2011	3.8	20.1	187	1,221	37	238
2012	4.1	24.2	158	1,379	31	269
2013	5.7	29.8	214	1,803	41	350

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Total Electricity and Natural Gas Program Savings Goals (all IOUs) 2006-2013 (D.09-09-047)[32]						
	Total Annual Electricity Savings (GWh/yr)	**Total Cumulative Savings (GWh)**	**Total Annual Peak Savings (MW/yr)**	**Total Cumulative Peak Savings (MW)**	**Total Annual Natural Gas Savings (MMTh/yr)**	**Total Cumulative Natural Gas Savings (MMTh)**
2006	1,961	1,961	428	428	30.3	30.2
2007	2,204	4,165	465	893	37	67.3
2008	2,433	6,599	515	1,407	44.1	111.3
2009	2,344	8,944	517	1,924	45.4	156.7
2010	2,276	11,220	502	2,424	47.1	204.8
2011	2,324	13,545	514	2,938	50	254.8
2012	2,365	15,910	521	3,459	53.2	308.1
2013	2,630	18,750	517	4,058	66.8	374.8

y.
[32] See Footnote 1 for complete explanatio

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TABLE X: ADOPTED FUND SHIFTING RULES, as modified by D.09-09-047, A.08-07-021, D.05-09-043, D.06-12-013, and D.07-10-032

Fund Shifting Category	Shifts Among Budget Categories, Within Program	Shifts Among Programs, Within Category	Shifts Among Categories
Statewide Programs	• Yes, no formal Commission review/approval required	• Yes, fund shifting among programs within a category is allowed with no advice letter requirement, See rules below for ET, ME&O and C&S.	• Advice letter required for shifts >15% between program categories in either direction (based on each category funding level) per annum. See rules below for shifting away from ET, ME&O, and C&S.
Third Party Programs	• Yes, no formal Commission review/approval required	• Yes, fund shifting among programs within a category is allowed with no Advice Letter requirement. • Advice Letter is required if fund shift causes a reduction below the 20% requirement for competitively bid programs (portfolio wide).	• Advice Letter required for shifts >15% between program categories in either direction (based on total category funding level) per annum. • Advice Letter is required if allocation to competitively bid programs falls below 20% of total portfolio funding.
Local and Statewide Partnerships	• Yes, no formal Commission review/approval required	• Yes, fund shifting among programs within a category is allowed with no advice letter requirement as long as the shift involves a program within the same category	• Advice Letter required for shifts >15% between program categories in either direction (based on category funding level) per annum. Any fund shifting will be shown on the quarterly fund shifting report which will be provided to the Energy Division beginning 7/1/10 (and every 90 days thereafter).
Statewide C&S / ET / Marketing Education & Outreach	• Yes, no formal Commission review/approval required	• Advice Letter required for shifts that would reduce any of these programs by more than 1% of budgeted levels	• Advice letter required for shifts that would reduce any of these programs by more than 1% of budgeted levels.
Residential lighting Incentive Program for basic CFLs (sub program under Statewide Residential Energy	• Yes, no formal Commission review/approval required	• Funds cannot be shifted into the program; however, funds can be shifted out of the program.	• Funds cannot be shifted into the program; however, funds can be shifted out of the program.

Efficiency Program)			
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.

Notes

- Any fund shifting will be shown on the quarterly fund shifting report which will be provided to the Energy Division beginning 7/1/10 (and every 90 days thereafter).
- No program or sub-program shall be eliminated except through the Advice Letter process.
- For adding new programs, except those chosen during a competitive process, an Advice Letter must be filed.
- Utility program administrator may carryover/carryback funding during the current program cycle without triggering a review/approval process.
- 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. Program administrators will notify the Commission of all incentive level changes that take place through the Program Implementation Plan Addendum process.
- 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.
- Marketing Education & Outreach and EM&V programs are subject to overall caps adopted in Section 4.5 of A.08-07-021. Program administrators may request fund shifting augmentations if they wish to increase budget caps. In addition, the fund shifting changes adopted in D.09-09-047 are not intended to change Section II, Rule 11 of the Energy Efficiency Policy Manual as applied to EM&V and ME&O spending below the adopted caps, nor to change the fund shifting rules for C&S or Emerging Technologies programs.

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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.

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.

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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. Per D.09-09-047 and until EM&V results inform better metrics, utilities may apply a conservative deemed assumption that 50% of savings persist following the expiration of a given measure's life

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.

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 (EEGA)

The utilities post reports to the EEGA webpage, which is accessible to the public: http://eega.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.

3)

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-powered, non-generating technologies are eligible energy efficiency measures (D.09-12-022).

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)

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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.

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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.)09-09-047, defines market transformation as "long-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 continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies until they are adopted into codes and standards (or otherwise adopted by the market), while also moving forward to bring the next generation of even more efficient technologies to the 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 p.m. and 5 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 2Pm, 1.7 MW at 3PM, 1.6 MW at 4PM, 1.0 MW at 5Pm and 1.2 MW at 6 pm, 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 Decision 07-10-032, the advisory function formerly performed by the PAG will be subsumed in the statewide strategic planning activity.

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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)

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APPENDIX C: 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 and most recent Decision approving program cycle, 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. The most current guidelines for reporting requirements will be located at: http://eega.cpuc.ca.gov/StandardTables/GuidanceDocument.aspx.

3. Annual Energy Efficiency Reporting Requirements Manual

Annual EE Reporting
Requirements Manual