Decision 08-01-042 January 31, 2008

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Examine the Commission's Post-2005 Energy Efficiency Policies, Programs, Evaluation, Measurement and Verification, and Related Issues.	Rulemaking 06-04-010 (Filed April 13, 2006)

INTERIM OPINION: JOINT PETITION FOR MODIFICATION OF DECISION 07-09-043

1. Summary[1]

On October 31, 2007, the utilities jointly filed a Petition for Modification of D.07-09-043 (Joint Petition). They filed an amendment to this Joint Petition on November 7, 2007, making minor corrections to the manner in which they had described the adopted shareholder incentive mechanism in their Joint Petition.

Today's decision approves the amended Joint Petition, with modifications. While we adopt the utilities' requested changes to the true-up provisions adopted in D.07-09-043, we reject their recommendation to retain the hold-back amount adopted in that decision for the interim claims. Instead, we increase that amount from 30% to 35% in order to mitigate the risk to ratepayer of earnings overpayment. In response to comments, we also clarify the sources of *ex ante* load impact estimates that we will use to calculate the interim incentives for the 2006-2008 program cycle.

[1] Attachment 1 described the abbreviations and acronyms used in this decision.

2. Background

Under the risk/reward incentive mechanism adopted in D.07-09-043, the Commission established a minimum performance standard (MPS) for the utility portfolio of energy efficiency activities. For San Diego Gas & Electric Company (SDG&E), Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (SCE), earnings begin to accrue if the utility portfolio achieves no less than an 85% average of the Commission's kilowatt-hour (kWh), kilowatt (kW) and therm goals, and no individual savings metric can fall below 80% of those goals. Since Southern California Gas Company (SoCalGas) cannot average across savings metrics (because its energy efficiency portfolio saves only therms, and not any kWhs or kWs), SoCalGas is required to meet a minimum of 80% of the therm savings goal to be eligible for earnings.

If the portfolio meets the MPS, the utility shares a percentage of the net benefits produced by the portfolio, where "net benefits"represents the dollar value of the portfolio resource savings minus costs. The dollar value of these net benefits is referred to as the performance earnings basis (PEB). More specifically, if the MPS is achieved, the utilities share 9% of the portfolio PEB. If portfolio performance achieves 100% of the Commission's savings goal(s) or higher, the shared-savings rate increases from 9% to 12%. If performance falls to 65% or below of the savings goals for any individual metric (kWh, kW or therms), financial penalties are imposed. No earnings or penalties accrue in the "deadband range," i.e., above 65% and below 85% of the Commission's savings goals. Total earnings and penalties are capped at $450 million over each three-year program cycle, for the four utilities combined.

During the three-year program cycle, the utilities file two interim incentive claims (1st and 2nd Claims) based on the Energy Division's verification of measure installations and program costs, which can result in either earnings or penalties. The interim incentive calculations are based on cumulative savings and net benefits that reflect the actual measures installed and actual program expenditures (as verified by Energy Division), but using planning *ex ante* estimates for per measure savings (also referred to as "load impacts"). There is a 30% "hold-back" for any interim payout of earnings, that is, if the calculations indicate that the payout should be $100 million, only $70 million (70% of $100 million) would be authorized for rate recovery at that claim.

The utilities submit the 3rd Claim after the program cycle has been completed. For this final claim, the planning estimates of load impacts (including net-to-gross ratios to remove free riders)[2] are also trued-up based on Energy Division's *ex post* measurement results. Because all earnings payouts are based on cumulative savings and net benefits, the 1st Claim payout is subtracted from the 2nd Claim earnings calculations, and both the 1st and 2nd Claim payouts are subtracted from the final claim calculations to establish the final payout amount (positive or negative).

Under D.07-09-043, both attainment of the MPS and the calculation of PEB net benefits are trued-up at the third (and final) earnings claim based on the results of *ex post* measurement of load impacts, including net-to-gross adjustments to remove free riders. That is, the savings and net benefit calculations for the 3rd Claim incorporate the Energy Division's verification of

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2 In the context of energy efficiency, free riders are those program participants who would have undertaken the energy efficiency activity in the absence of the program. The "net-to-gross" ratio is the total number of participants who are *not* free riders, e.g., a ratio of 0.80 indicates that 20% of the participants are free riders. This ratio is evaluated on an *ex post* basis for many programs/measures as part of Energy Division's evaluation, measurement and verification activities, and the results are included in the studies used to true-up the 3rd Claim.

measure installations, verification of program expenditures and *ex post* measurement of load impacts for the full three-year program cycle. This true-up introduces the possibility that the utility may have been found to meet the MPS during the two interim earnings payouts, but at the final true-up payment they are found to have fallen short of the 85% threshold (80% for SoCalGas). Under these circumstances, the utility would be required to return the previously distributed interim payments by booking those (negative) amounts against positive energy efficiency earnings in a subsequent program cycle.

3. Joint Petition and Supporting Analysis

The utilities request that achievement of the MPS be established based on verification of measure installations but using *ex ante* planning estimates of load impacts. They argue that it would defeat the purpose of the incentive mechanism to subject them to the "all or nothing" forecasting uncertainty associated with the MPS true-up in the 3rd claim, as adopted in D.07-09-043. They recommend that the PEB (i.e., the level of net benefits that would be shared) continue to be trued up in the 3rd and final claim based on *ex post* results for load impacts, including free riders. However, they propose that there be no requirement to return any interim payments at the final true-up if *ex post* results indicate that portfolio performance is within the deadband range or higher. Further, the utilities propose that the Commission retain the 30% hold-back provisions in D.07-09-043 for each interim payout.

Under the utilities' proposal, if the final true-up of load impacts indicates that the portfolio did not meet the MPS, the utility would not automatically lose all the earnings that had been already paid to it in the two interim payouts. Instead, the utility would be eligible for earnings at a 9% sharing rate for all positive PEB net benefits that the portfolio did produce (based on full true-up at the final claim) *provided that* utility performance with respect to kWh, kW and therm savings was still within the deadband range. However, if portfolio performance falls below the deadband range based on the *ex post* results at the final true-up claim, the utility would be required to return all interim progress payments and incur the requisite penalties.

In an Attachment to the Petition, the utilities prepared tables to demonstrate that their proposal (with a 30% hold-back) would be sufficient to allow for regular earnings by the utilities while still protecting ratepayers from a significant risk of overpayment of earnings.

First, they present a table to illustrate how changes to the largest-producing elements in the utility portfolios affect the portfolio savings as a whole. For example, they calculate that if the top five elements of PG&E's portfolio (e.g., residential compact fluorescent lamps (CFLs), Commercial T8/T5 lighting, Interior High Bay Lighting, Commercial CFLs and Industrial Process)--accounting for 34% of the projected portfolio savings--would be reduced by 15% and 20%, the overall impact on portfolio savings would be 5% and 7% respectively. (See Table 1.)

Next, they present tables to assess the "probabilities of true-up," and various risk scenarios of changes to earnings for each utility. This analysis outlines several scenarios to assess and demonstrate the true-up necessary during the 3rd Claim across a range of assumptions for how the 3rd Claim cumulative PEB differs from the 2nd Claim cumulative PEB. The results of the analysis show a range of potential 3rd Claim outcomes, that is, the potential for negative or positive PEB true-up amounts that depend upon the relationship between the 3rd claim and 2nd claim PEB and various probabilities of that relationship occurring. The analysis is broken into three separate "scenarios," which reflect different assumptions regarding the 2nd Claim variables (the PEB, achievement of goals and earnings rate), as follows:

> Scenario A: Cumulative savings at the 2nd Claim are estimated to achieve 100% of Commission goals and the PEB is estimated at \$2,689 million for all four utilities combined. The earnings (shared-savings) rate at this level of performance is 12% under the adopted shared-savings mechanism.
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> Scenario B: Cumulative savings at the 2nd Claim are estimated to achieve 95% of Commission goals and the PEB is estimated at \$2,443 million for all four utilities combined. The earnings (shared-savings) rate at this level of performance is 9% under the adopted shared-savings mechanism.
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> Scenario C. Cumulative savings at the 2nd Claim are estimated to achieve 120% of Commission goals and the PEB is estimated at \$3,673 million for all four utilities combined. The earnings (shared-savings) rate at this level of performance is 12% under the adopted shared-savings mechanism.

For each of the above scenarios (A, B, C), the utilities assume that the 3rd Claim earnings rate equals 9%, i.e., that *ex post* load impacts are sufficiently lower than the *ex ante* planning estimates to move portfolio achievement below 100% of the goals--but still within (or higher than) the deadband range. They then vary the 3rd Claim PEB to calculate the resulting true-up earnings adjustment, showing the results when the 3rd Claim PEB equals 70%, 80%, 90% and 100% of 2nd Claim PEB. Finally, the utilities weight these calculations in various combinations to present a range of "expected" 3rd Claim adjustments. The results of the analysis on a statewide basis (for all four utilities combined) are presented in Tables 2A, 2B and 2C. In their Joint Petition, the utilities also present scenario A, B and C results broken down by utility.

Based on this analysis, the utilities conclude that the 30% hold-back adopted in D.07-09-043 captures all reasonably foreseeable potential adjustments, while still ensuring that the utilities have an opportunity to realize and book earnings in the interim claims.[3]

4. Positions of the Parties

Comments in response to the Joint Petition were filed on November 30, 2007 by the Division of Ratepayer Advocates (DRA), The Utility Reform Network (TURN), Community Environmental Council (CE Council) and the Natural Resources Defense Council (NRDC).[4]

DRA, TURN and CE Council urge the Commission to deny the Joint Petition, arguing that revising D.07-09-043 as requested would undermine the balance struck by that decision and skew the possibility of rewards in favor of shareholders. In TURN's view, the modifications proposed by the utilities are contrary to the intended purpose of the adopted risk/reward incentive mechanism because it would "reward program implementation rather than program savings achievement."[5] Moreover, TURN contends that the Joint Petition is vague in terms of what *ex ante* assumptions for load impacts (including net-to-gross ratios) should be used in calculating the interim claims. DRA and TURN also argue that the proposed modifications would serve to inflate *ex ante* forecasting rather than prudent portfolio management.

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[3] *Joint Petition (amended)*, pp. 3-4.

[4] Pursuant to Rule 16.4(g) of the Commission's Rules of Practice and Procedures, the utilities requested permission to submit reply comments, and were granted that permission by the assigned Administrative Law Judge and assigned Commissioner. The utilities jointly filed reply comments on December 10, 2007.

[5] *Response of TURN to the Amended Petition to Modify D.07-09-043*, November 30, 2007, p. 6.

If the Commission is inclined nevertheless to grant the Joint Petition, DRA, TURN and CE Council recommend that the Commission revise the earnings rates adopted by D.07-09-043 downward as well.

NRDC supports the Joint Petition, with certain modifications and suggested clarifications. In NRDC's view, the potential swings in *ex ante* load impact assumptions and *ex post* results undermine the effectiveness of the shareholder risk/reward incentive mechanism adopted in D.07-09-043. For this reason, NRDC believes that the Commission should handle the true-up of load impacts (including net-to-gross ratios) in different manners for different aspects of the incentive mechanism, as the utilities propose. However, NRDC strongly urges the Commission to adopt a 50% (instead of 30%) hold-back to minimize the risk of earnings overpayment to the utilities. In addition, NRDC suggests that certain clarifications be made to the utilities' proposed changes to D.07-09-043, to ensure that the meaning is clear in all cases. Finally, if the Commission adopts the utilities' Joint Petition, NRDC stresses the importance of using net-to-gross *ex ante* assumptions during the planning process that incorporate the best-available information, through new evaluation results as they become available.

5. Discussion

By D.07-09-043, we departed significantly from our previous design of shared-savings mechanisms with regard to MPS true-up provisions. In years past, we rejected the notion that utilities would have to pay back all the interim claims if the final EM&V studies indicated that the MPS had not been met—as long as the portfolio still produced positive net benefits (PEB).[6] However, with the goal of designing an incentive mechanism that recognized a "dual objective function" for energy efficiency—to both achieve kWh, kW and therm savings

[6] See D.94-10-059, 57 CPUC 2d, 1, pp. 43-46.

goals and maximize dollar net benefits in the process--we adopted more stringent true-up provisions in D.07-09-043. More specifically, we directed that both the MPS (tied to the savings goals) and the PEB (a calculation of net benefits) be trued up at the final claim, subjecting the utilities to the possibility of paying back all interims claims if the final true-up based on *ex post* studies indicated that the MPS had not been met. Although we recognized that the possibility of refunding earnings already claimed presented certain problems for the utilities with respect to their financial reporting, we concluded that these problems could be readily addressed by (1) limiting payout of initial claims to 70% (30% hold-back) and (2) deducting any over-collections from future earnings claims.[7]

However, we are persuaded by the arguments presented by the utilities (and supported by NRDC) that the value of any energy efficiency earnings as a systematic part of the utility's basic business earnings will be seriously degraded, unless we modify the true-up provisions adopted by D.07-09-043. As explained in the Joint Petition, this is because the uncertainty over *ex post* measurement results (for net-to-gross ratios in particular) coupled with the "all or nothing" nature of the MPS makes it unlikely that the utilities will be able to book any authorized interim earnings during the program cycle under the current true-up provisions:

> Utilities must be able to recognize, or book, incentives on a regular basis for accounting purposes in a manner that can be expected and anticipated by the investment community. Otherwise earnings from energy efficiency programs are not truly on par with generation resources in the minds of investors. As the incentive mechanism is currently adopted, if the utilities do not have sufficient certainty, consistent with Financial Accounting Standards Board directives,

[7] D.07-09-043, *mimeo.*, pp. 121-124.

> that the incentive will be earned, they cannot be booked until after the end of the program cycle when the final adjustments have been determined. If the incentives are not booked at regular intervals, they would result in a one time earnings adjustment that would likely be excluded from operating earnings, which are the basis for a company's financial valuation. The uncertainty could result in a higher cost of financing. As a consequence, the utilities would not receive the full benefit of these shareholder incentives from the financial markets.
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> Because of the uncertainty associated with the net-to-gross factor, for which the final results will not be known until 2009 or 2010 when the Energy Division's measurement consultants issue their reports, it is unlikely that the utilities will be able to timely book any incentives earned without having to simultaneously reserve against that amount, because of the uncertainty over whether the utilities will have to return any interim earnings or meet the final minimum performance standards because of this one factor.[8]

This was not our intent in establishing the earnings recovery provisions under our adopted risk/reward incentive mechanism. To the contrary, in D.07-09-043, we recognized that an effective incentive mechanism must include provisions for earnings (or penalties) at interim points during the three-year program cycle, as opposed to waiting nearly five years after portfolio implementation for any financial feedback to utility managers and investors.[9] In our view, the effectiveness of our adopted incentive mechanism is seriously undermined if the utilities cannot book authorized interim earnings under that incentive mechanism, and we are persuaded by the Joint Petition that this is likely to be the case. None of the arguments that TURN, DRA or CE Council

[8] *Joint Petition (Amended),* p. 13.

[9] See, for example, D.07-09-043, Conclusion of Law 7.

present in opposition to the Joint Petition addresses this fundamental problem to our satisfaction.

As the utilities note in their Joint Petition, their "request to eliminate some of the uncertainty of the interim payments is not intended for…the utilities benefiting from undeserved earnings."[10] However, we share the concerns expressed by NRDC that a 30% hold-back provision is likely to be insufficient to ensure that the utilities are not overpaid in interim payments once final performance is trued up with *ex post* results. The tables that the utilities provide illustrate only up to a 30% drop in PEB from *ex ante* assumptions to *ex post* results. (See Tables 2A-2C.) As NRDC points out, this drop may not be inclusive of the possible reductions in PEB that may be seen due to decreased *ex post* net-to-gross ratios. From the scenario analyses that the utilities filed in their compliance filings to their 2006-2008 portfolio applications, we concur with NRDC's observation that decreases in net-to-gross ratios appear to be amplified when carried through to PEB. (See Table 3.) For instance, a 25% drop in net-to-gross ratios for the utilities' 2006-2008 portfolios results in a 33-48% drop in PEB, depending on the utility.

Moreover, the utilities' analysis of the impact of diversification on reducing the risk of total portfolio PEB reductions (Table 1) appears to be highly sensitive to how program elements are defined and the data sources used to identify them. Table 4 presents PG&E's top five elements by end-use based on reported data through 2nd Quarter 2007.[11] Using this approach to defining the top five elements for PG&E, we observe a much higher level of variability in

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[10] *Joint Petition (Amended)*, p. 17.

[11] This table was prepared by Energy Division at the request of the assigned Administrative Law Judge.

PG&E's PEB for the two scenarios prepared by the utilities, i.e., 15% and 20% reduction in savings for the top five elements. It also shows that if *ex post* load impact results reduces the savings from these top five elements (relative to planning assumptions) on the order of 35%, rather than the 20% level presented in the utilities' worse case scenario, then PG&E's overall portfolio PEB would be reduced by 30% or greater.

Under the utilities' scenario analysis, holding back 50% of the interim claim pending the final true-up of earnings, as NRDC strongly recommends, will eliminate potential overpayments in all of the scenarios they present for our consideration.[12] With a 30% hold-back, however, there is a potential for earnings overpayment under the utilities' Scenarios A and C if the *ex post* level of PEB (net benefits) is less than 80% of the PEB estimated in the interim claims, depending upon the probability one assigns to that outcome. Similarly, under the illustrative scenarios that NRDC presents for our consideration in its comments (where the *ex post* level of PEB is on the order of 60% of *ex ante* PEB), a 50% hold-back eliminates the overpayments that are seen to occur if only 30% is held back.[13] This is also the case under the utilities' portfolio analysis with alternate

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12 At the request of the assigned ALJ, the utilities provided the excel spreadsheets underlying Tables 2A-2C, allowing us to modify the hold-back provisions and review the results. Table 2D presents Scenario 2C (the utility scenario with the largest potential for overpayment) with a 50% hold-back, including more conservative assumptions about the 3rd Claim PEB (i.e., that it could be as low as 60% of the 2nd Claim PEB estimate).

13 See *Response of NRDC to Petition for Modification of D.07-09-043*, November 30, 2007, p. 8 and Tables 2 and 3, for Scenarios 1-4. We do not include the results for NRDC's Scenarios 5 and 6 because they do not reflect possible outcomes under the utilities' proposed modification to D.07-09-043. More specifically, these scenarios assume that the utilities can keep the interim payments even if the *ex post* results indicate that they are in the penalty range. At the request of the assigned ALJ, the utilities confirmed that this retention of earnings would not be the case under their proposal—they would be

assumptions for PEB variability in all but a very "worst case" scenario illustrated in Table 2D, i.e., when one assumes that the probability of *ex post* portfolio PEB falling to 60% of its *ex ante* value is 80% or greater.

As discussed below, we will require the utilities to update the *ex ante* load impact data based on the Database for Energy Efficient Resources. The Joint Utilities contend in their Comments on the Proposed Decision that both increasing the hold-back to 50% and updating the *ex ante* energy savings estimate each year have the potential to diminish the impact of the shareholder incentive mechanism. The Joint Utilities recommend that the Commission adopt the updating of the *ex ante* energy savings each year, but continue the 70% interim claims/30% final claims split in the current incentive mechanism.

There is an overlap between the *ex ante* update and increasing the hold-back percentage. Both mechanisms are intended to balance the ratepayer interest of limiting overpayment with the utility interest in assuring revenues can be booked in a timely manner. If considered independently, these mechanisms can interfere with the balance between these interests by implementing two mechanisms separately intended to mitigate ratepayer risk.

There is no record evidence as to how to quantify the interaction between the *ex ante* update and the hold-back provision. It is clear from NRDC's evidence that increasing the hold-back to 50% substantially mitigates ratepayer risk. However, the *ex ante* update only partially mitigates ratepayer risk because there is a significant (though reduced) risk that overpayments may still occur due to incomplete *ex ante* updates or lack of net benefits. Therefore, we find a

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required to return all interim payments and pay applicable penalties if the final true-up (based on *ex post* results) indicated that portfolio performance fell into the penalty range.

combination of updated *ex ante* values combined with a lesser increase in the hold-back that recommended by NRDC will substantially mitigate ratepayer risk brought upon by the changes we adopt to the true-up mechanism.

Based on the considerations discussed above, we will approve the modifications requested by the utilities to the MPS true-up provisions, but will require a 35% hold-back of interim payouts, rather than the 30% level adopted in D.07-09-043. This 35% hold-back represents a reasonable balancing of the concerns raised by the parties. In this way, our adopted incentive mechanism will provide the utilities with an opportunity to book meaningful earnings during the program cycle, based on verified measure installations and program costs, and at the same time will minimize the potential risk of earnings overpayment once the final *ex post* load impact studies are completed.

More generally, today's adopted modifications effectively make the interim claims a reward or penalty for the success or failure in implementing the energy efficiency programs and the final claim a reward or penalty for the measured load impacts resulting from the programs. These changes will mitigate the largest earnings transition in the adopted earnings mechanism at 85% of the Commission's goals, which could cause a large change in earnings for a very slight change in energy savings. For the reasons discussed above, such changes are reasonable and necessary in order to improve the effectiveness of the risk/reward incentive mechanism adopted in D.07-09-043.

Accordingly, the 1st and 2nd interim earnings claims under the risk/reward incentive mechanism adopted in D.07-09-043 will be based on verified measure installations and verified program costs, but using *ex ante* assumptions for load impacts, including net-to-gross ratios.[14] As TURN points out in its comments, the utilities do not specify in their Joint Petition (or in their joint reply to comments) the specific *ex ante* assumptions for measure savings to be used in calculating the 1st and 2nd interim earnings claims. It is particularly important to clarify this issue for the 2006-2008 program cycle because the utilities' compliance filing data is too aggregated to be useful for this purpose for a significant number of programs. Moreover, consistent with agreements reached during the development of the Case Management Statement (CMS), some of the utilities have already updated their *ex ante* savings parameters in consultation with Energy Division since submitting their compliance filings in order to reflect more recent and realistic values for net-to-gross ratios.[15] It makes no sense to undo this work by relying on earlier planning assumptions that have since been superceded by the inclusion of more realistic *ex ante* values in some of the utilities' E3 calculators.[16]

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[14] As we directed in D.07-09-043, we will be revisiting the adopted risk/reward incentive mechanism--including the modifications we authorize today--and considering Energy Division's recommended modifications in time for the 2012-2014 program cycle. See D.07-09-043, Section 13.

[15] The CMS was developed during the planning phase for 2006-2008 portfolio programs. Its purpose was to reflect discussions among the utilities, Peer Review Group members (including Energy Division staff) and interested parties that filed opening comments in Application 05-06-004 et al. Specifically the CMS was intended to (1) summarize the areas/issues in dispute based on the June 2005 filings on the utilities' proposed portfolio plans, (2) describe issues/areas where resolution had been reached based on further discussions among the CMS participants, (3) describe the extent to which cost-effectiveness issues raised by the report developed by Energy Division's consultant (TecMarket Works) had been addressed during the process, and (4) identify the remaining areas of disagreement that required Commission resolution.

[16] The "E3 calculators" contain the inputs and formulas to perform cost-effectiveness calculations and report portfolio performance for the utilities' authorized energy efficiency programs. This model is named after the consultants ("Energy and

So that there is no ambiguity as to which *ex ante* assumptions shall be used for the purpose of calculating the 1st and 2nd interim claims under today's adopted modifications to D.07-09-043, we provide direction today for the 2006-2008 program cycle. Except as otherwise indicated below, we will use the *ex ante* measure savings parameters that are contained in the utilities' E3 calculators, as of their 4th quarter 2007 report for the 1st Claim and as of their 4th quarter 2008 report for the 2nd Claim. Specific direction for the 2009-2011 program cycle will be provided in our decision approving the utilities' 2009-2011 program plans.

For measures included in the Database for Energy Efficient Resources (DEER), however, we will update the values contained in the E3 calculators with the 2008 and 2009 DEER updates of *ex ante* measure savings parameters, including net-to-gross ratios and expected useful lives. DEER is a database developed jointly by this Commission and the California Energy Commission and funded by ratepayers. Our adopted evaluation, measurement and verification protocols require that staff undertake the updating of *ex ante* assumptions for measures included in DEER on a regular basis, based on the most recently completed evaluation studies. [17] Pursuant to D.06-06-063, the utilities are reporting program and portfolio accomplishments for the 2006-2008 program cycle using the 2005 DEER estimates of energy and demand reductions only "until additional [evaluation, measurement and verification] study results are available that would update those DEER values." [18]

Environmental Economics, or E3") that developed them for use by the utilities for this purpose.

[17] ALJ's Ruling dated September 2, 2005 in R.01-08-028, p. 18.

[18] D.06-06-063, p. 21; see also D.06-06-063, Finding of Fact 6; see also our direction to the utilities to present updates of *ex ante* load impacts for customized rebate programs

The 2008 and 2009 DEER updates are expected to be completed in early 2008 and 2009, respectively, under the direction of Energy Division. Accordingly, the 2008 DEER update will apply to the 1st Claim and the 2009 DEER update will apply to the 2nd Claim, which are currently scheduled for submission in September of 2008 and 2009 (respectively) following the release of Energy Division's verification reports in August.[19]

Updating measure load impacts using the DEER database prior to the payout of interim claims in 2008 and 2009 should help to mitigate the risk of extremely large swings in earnings (positive or negative) at the final earnings true-up, which serves the interests of both utility shareholders and ratepayers. Moreover, incorporating updated DEER *ex ante* values into these interim claim calculations will improve the consistency between the *ex ante* load impact assumptions we will be using to calculate earnings during 2008 and 2009 and the *ex ante* load impact assumptions being used to develop the 2009-2011 portfolio plans. Finally, this direction ensures that all the utilities, without further delay, will adjust their lighting savings estimates to "reflect more realistic and updated assumptions" on net-to-gross ratios, consistent with the agreements reached in the CMS.[20]

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based on DEER savings values for the installed measures to staff every six months. (D.06-06-063, pp. 27-28.).

[19] See Attachment 6 of D.07-09-043.

[20] Among other things, the CMS noted that Peer Review Group members were frustrated that the utilities used net-to-gross ratios for a variety of strategies that were outdated and inaccurate and probably to high. (CMS, p. 6.) The Peer Review Group requested that PG&E in particular reduce its reliance on lighting measures, especially residential lighting, to which PG&E responded that it would "adjust its 2006 portfolio lighting savings to reflect more realistic and updated assumptions on NTG ratios." (CMS, pp. 17-18.)

For customized measures or customized projects that represent aggregated measures in the E3 calculators, Energy Division will need to 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.

Finally, we put the utilities on notice that there is increasing feedback from recent *ex post* evaluation studies to support lowering of 2005 DEER and non-DEER *ex ante* assumptions for net-to-gross ratios during the forthcoming DEER updating and 2009-2011 planning process, particularly for certain lighting measures. Energy Division staff will be working closely with the assigned Commissioner and assigned ALJs to ensure that the *ex ante* planning assumptions used for the 2006-2008 interim claims and 2009-2011 portfolio plans are realistic and reflect the results of the most up-to-date studies available.

6. Assignment of Proceeding

Dian M. Grueneich is the assigned Commissioner and Meg Gottstein is the assigned ALJ for Phase 1 of this proceeding.

7. Comments on Proposed Decision

The proposed decision of assigned Commissioner Grueneich and ALJ Gottstein in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on January 10, 2008, and reply comments were filed on January 15, 2008 by DRA, TURN, NRDC and the Petitioners. Based on comments, we modify the proposed decision to change the hold-back to 35% (from 30% at present and 50% in the proposed decision) to take into account interactions between the hold-back and other parts of the incentive mechanism.

Findings of Fact

1. To provide effective financial feedback to utility managers and investors, a risk/reward incentive mechanism for energy efficiency must include provisions for earnings (or penalties) at interim points during the three-year program cycle.

2. Uncertainty over *ex post* measurement results coupled with the "all or nothing" nature of the MPS, makes it unlikely that the utilities will in fact be able to book any authorized interim earnings during the program cycle, given the true-up provisions adopted in D.07-09-043.

3. As a result, the effectiveness of the incentive mechanism we adopted in D.07-09-043 will be seriously undermined unless we take steps to ensure that the utilities are able to book any interim earnings that we may authorize for portfolio performance.

4. None of the arguments that TURN, DRA or CE Council present in their opposition to the Joint Petition addresses this fundamental problem to our satisfaction.

5. The utilities' proposed modifications to the MPS true-up provisions permits the booking of authorized earnings, but their recommendation to retain a 30% hold-back of interim earnings does not sufficiently mitigate the risk of earnings overpayment.

6. With a 30% hold-back, there is a potential for earnings overpayment under the utilities' Scenario A and C if the *ex post* level of PEB (net benefits) is less than 80% of the PEB estimated in the interim claims, depending upon the probability one assigns to that outcome.

7. The "worst case" scenario evaluated by the utilities in their Joint Petition is a 30% reduction in *ex ante* portfolio PEB based on the final true-up of *ex post* load impacts, including net-to-gross ratios. However, by the utilities' own calculations in an earlier phase of this proceeding, decreases in net-to-gross ratios are amplified when carried through to PEB. For instance, those calculations indicate that a 25% drop in net-to-gross ratios for the utilities' 2006-2008 portfolios results in a 33-48% drop in PEB, depending on the utility.

8. The utilities' conclusion that portfolio diversification will mitigate the overall impact of forecasting uncertainty on portfolio PEB, thereby making it unlikely that *ex post* PEB will vary more than 30% of the *ex ante* value, appears to be highly sensitive to how program elements are defined and the data sources used to identify them. Defining the top five program elements for PG&E by end-use and using reported (versus planning) data, for example, produces a much higher level of variability in PG&E's PEB than the scenarios presented in the Joint Petition.

9. NRDC presents alternative scenarios that illustrate potential reductions in *ex post* PEB on the order of 60% of *ex ante* PEB, where a 30% hold-back provision results in earnings overpayment.

10. The utilities' scenario analysis do not appear to include a sufficiently broad range of possible reductions in PEB that may arise due to decreases in *ex post* net-to-gross ratios and other load impact assumptions, and therefore underestimates the risk to ratepayers of overpaying earnings when the hold-back amount is only 30%.

11. A combination of updated *ex ante* values combined wit h a larger hold-back will substantially mitigate ratepayer risk brought upon by the changes we adopt to the true-up mechanism.

12. There is an overlap between the *ex ante* update and increasing the hold-back percentage. Both mechanisms are intended to balance the ratepayer interest of limiting overpayment with the utility interest in assuring revenues can be booked in a timely manner.

13. Approving the Joint Petition subject to a 35% hold-back of interim claims will provide the utilities with an opportunity to book meaningful earnings during the program cycle, based on verified measure installations and program costs, and at the same time will minimize the potential risk of earnings overpayment once the final *ex post* load impact studies are completed. These modifications will also mitigate the largest earnings transition in the adopted earnings mechanism at 85% of the Commission's goals, which could cause a large change in earnings for a very slight change in energy savings.

14. The *ex ante* load impact data contained in the utilities' compliance filings for the 2006-2008 program cycle is too aggregated for the purpose of extracting ex ante savings assumptions by installed measure for a significant number of programs. Moreover, consistent with the agreements reached during the development of the CMS, some of the utilities have already updated their *ex ante* savings parameters in consultation with Energy Division since submitting their compliance filings in order to reflect more recent and realistic values for net-to-gross ratios. It makes no sense to undo this work by relying on earlier planning assumptions that have since been superceded by the inclusion of more realistic *ex ante* values in some of the utilities' E3 calculators.

15. Updating *ex ante* load impacts using the DEER database prior to the payout of interim claims in 2008 and 2009 should help to mitigate the risk of extremely large swings in earnings (positive or negative) at the final earnings true-up, which serves the interests of both utility shareholders and ratepayers.

16. Incorporating updated DEER *ex ante* values into the interim claim calculations will improve the consistency between the *ex ante* load impact assumptions we will be using to calculate interim earnings during 2008 and 2009 and the *ex ante* load impact assumptions being used to develop the 2009-2011 portfolio plans. In addition, this direction ensures that all the utilities, without further delay, will adjust their lighting savings estimates to reflect more realistic and updated assumptions on net-to-gross ratios, consistent with the agreements reached in the CMS.

Conclusions of Law

1. The modifications proposed by the utilities to the true-up provisions in D.07-09-043 are reasonable and necessary to improve the effectiveness of the risk/reward incentive mechanism adopted in D.07-09-043.

2. Increasing the interim earnings hold-back provision to 35%, rather than the 30% level adopted in D.07-09-043 and recommended in the Joint Petition, is reasonable and necessary to protect ratepayers against the risk of earnings overpayment.

3. The direction we provide today on the *ex ante* assumptions to use for the 1st and 2nd Claim during the 2006-2008 program cycle are reasonable and should be adopted.

4. In order to move forward as expeditiously as possible in implementing D.07-09-043, this order should be effective today.

INTERIM ORDER

IT IS ORDERED that:

1. The Petition for Modification of Decision (D.) 07-09-043 filed jointly by Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company and Southern California Gas Company on October 31, 2007, and amended on November 7, 2007, is approved as modified herein.

2. D.07-09-043 is modified as follows:

a. On page 12, the second sentence of the paragraph beginning "By today's decision, we also establish the earnings claim and recovery process…" is modified to read:

"We hold back 35% of the expected earnings in each interim claim to provide a reasonable margin of error in expected earnings and to protect ratepayers from the risk of overpaying earnings before the final *ex post* true-up of load impacts."

b. The following text beginning on page 12 and continuing on page 13 is stricken:

"We do not restrict the final true-up process, as some parties propose. Ratepayers will only be required to share net benefits with shareholders to the extent that those net benefits actually materialize, based on Energy Division's EM&V results."

The following text is inserted in its place:

"We do not restrict the final true-up process, except under the following set of circumstances:

"(a) The interim earnings claims, based on verified measure installations and costs and *ex ante* energy savings and demand reduction calculations, result in a utility meeting the 85%

minimum performance standard for earnings (80% for SoCalGas), and

"(b) The final true-up calculation, based upon *ex post* energy savings and demand reductions, results in that utility meeting less than 80% for any individual savings metric or less than 85% for the average savings threshold but greater than 65% of the Commission's goals for each individual metric.

"Under these circumstances, the utility will continue to achieve earnings at the 9% shared-savings rate, applied to the *ex post* PEB. In addition, as long as a utility continues to exceed the 65% of savings goals threshold for each individual metric on an *ex post* basis, it will not be required to pay back any interim incentives payments earned. However, if *ex post* results indicate a utility has dropped below 65% of savings goals for each individual metric, the utility must pay back any interim payments earned, and penalties will be assessed.

"In this way, the interim claims become a reward or penalty for the success or failure in implementing the energy efficiency programs and the final claim a reward or penalty for the measured load impacts resulting from the programs. We believe that this is approach is consistent with our overall goals for effective incentive design. It will mitigate the largest earnings transition in the adopted earnings mechanism at 85% of the Commission's goals, which could cause a large change in earnings for a very slight change in energy savings. At the same time, it ensures that the utilities and investment community can actually recognize or "book" the interim earnings that we may authorize."

b. On Page 124, the paragraph beginning with "For the reasons stated above, we do not restrict the true-up adjustment in the final claim" is deleted and replaced in its entirety with the following:

"We do not restrict the true-up adjustment in the final claim, except insofar as a utility meets the MPS for the interim claim based on verified measure installations and costs, and *ex ante* savings assumptions, but falls within the 65 to 85% of energy saving goals as a result of the final *ex post* true-up of load impacts. In that circumstance, the utility will continue to earn at the 9% shared-saving rate, applied to the *ex post* PEB. In addition, as long as a utility continues to exceed the 65% of savings goals threshold for each individual metric on an *ex post* basis, it will not be required to pay back any interim incentives payments earned. However, if *ex post* results indicate a utility has dropped below 65% of savings goals for any individual metric, the utility must pay back any interim payments earned, and penalties will be assessed.

"In this way, the interim claims become a reward or penalty for the success or failure in implementing the energy efficiency programs and the final claim a reward or penalty for the measured load impacts resulting from the programs. We believe that this is approach is consistent with our overall goals for effective incentive design. It will mitigate the largest earnings transition in the adopted earnings mechanism at 85% of the Commission's goals, which could cause a large change in earnings for a very slight change in energy savings. At the same time, it ensures that the utilities and investment community can actually recognize or "book" the interim earnings that we may authorize."

"We recognize that the possibility of refunding earnings already claimed if the utility falls into the penalty range on an *ex post* basis presents certain problems for the utilities with respect to their financial reporting. However, these problems can be addressed by limiting payout of interim claim(s) as NRDC and others have suggested and by deducting any interim payments that have already been made under these circumstances (and associated penalties) from future earnings claims, as recommended by PG&E. Accordingly, we incorporate both of these design features into today's adopted earnings recovery schedule, as discussed further below."

c. On Page 126, the Paragraph beginning with "With respect to the percentage of payout" is modified to read as follows:

"With respect to the percentage of payout, we agree with NRDC and others that some percentage of the interim payments should be "held back" until the final claim. In the context of the overall incentive design and true-up mechanism we adopt today, a 35% hold-back is a reasonable way to mitigate the risk to ratepayers of overpaying during the interim claims, prior to the *ex post* true-up of load impacts. Accordingly, we will hold back 35% of any authorized earnings in each of the interim claims. For example, if the MPS is met in the 1st claim, and the shared-savings earnings associated with the cumulative- to-date PEB estimated at that claim is $50 million (based on verified costs and installations), the payout in that claim would be $32.5 million (0.65 x $50 million). Assuming that the MPS is still met at the 2nd claim, and the shared savings associated with the cumulative-to-date PEB estimated at that claim has increased to $75 million, the 2nd claim payout would be $16.25 million (0.65 x $75 minus the 1st claim payout of $32.5 million)."

d. In Finding of Fact 110 is modified to read as follows:

"The possibility of refunding earnings already claimed if the may present certain problems for the utilities with respect to financial reporting. However, these problems are effectively addressed in today's decision by 1) limiting payout of initial claims(s); 2) allowing utilities to continue to earn at the 9% shared-savings rate, applied to the *ex post* performance earnings basis, if interim *ex ante* load impact results with verified installations and costs are above the 85% minimum performance threshold (80% for SoCalGas) and *ex post* results remain above the 65%

penalty threshold for each individual metric;
3) eliminating the possibility of refunding earnings adopted in the interim claims, as long as a utility continues to exceed the 65% of savings goals threshold for each individual metric on an *ex post* basis, and
4) deducting from future earnings claims any over-collections and associated penalties if the utilities fall into the penalty range on an *ex post* basis."

e. In Finding of Fact 111 is modified to read as follows:

"A true-up process provides the proper incentive for utility managers and staff to support the most accurate estimates of energy savings as possible and serves to ensure that ratepayers share the net benefits from their investment with shareholders at precisely the adopted shared-savings rates—no more, no less. It is consistent with our overall goals for effective incentive design to adopt a true-up approach whereby the interim claims become a reward or penalty for the success or failure in implementing the energy efficiency programs and the final claim becomes a reward or penalty for the measured load impacts resulting from the programs. This approach will also mitigate the largest earnings transition in the adopted earnings mechanism at 85% of the Commission's goals, which could cause a large change in earnings for a very slight change in energy savings. At the same time, it ensures that the utilities and investment community can actually recognize or "book" any interim earnings that we may authorize."

f. In Finding of Fact 112 is modified to read as follows:

"To reduce the effect of load-forecasting errors on the final true-up claim and minimize the risk to ratepayers of overpayments of earnings under today's adopted true-up provisions, it is reasonable to hold back 35% of the earnings progress payments calculated in each interim claim."

h. The first sentence of Ordering Paragraph 2.a) is modified to read as follows:

"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:"

i. In Ordering Paragraph 2.b) is modified to read as follows:

"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."

j. In Subsection (2) is added to Ordering Paragraph 2.e) as follows:

"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 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."

h. In Ordering Paragraph 4(c) is modified to as follows:

"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."

3. 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.

4. 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.

This order is effective today.

Dated January 31, 2008, at San Francisco, California.

MICHAEL R. PEEVEY
President
DIAN M. GRUENEICH
JOHN A. BOHN
RACHELLE B. CHONG
TIMOTHY ALAN SIMON
Commissioners

ATTACHMENT 1

LIST OF ACRONYMS AND ABBREVIATIONS

CE Council	Community Environmental Council
CFLs	Compact fluorescent lamps
CMS	Case Management Statement
D.	Decision
DEER	Database for Energy Efficient Resources
DRA	Division of Ratepayer Advocates
kW	Kilowatt
kWh	Kilowatt-hour
MPS	Minimum Performance Standard
NRDC	Natural Resources Defense Council
PEB	Performance earnings basis
PG&E	Pacific Gas and Electric Company
SCE	Southern California Edison Company
SDG&E	San Diego Gas & Electric Company
SoCalGas	Southern California Gas Company
TURN	The Utility Reform Network

(END OF ATTACHMENT 1)