Decision 10-12-049 December 16, 2010

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Examine the Commission's Energy Efficiency Risk/Reward Incentive Mechanism.	Rulemaking 09-01-019 (Filed January 29, 2009)

DECISION REGARDING THE RISK/REWARD INCENTIVE MECHANISM EARNINGS TRUE-UP FOR 2006-2008

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DECISION REGARDING THE RISK/REWARD INCENTIVE MECHANISM EARNINGS TRUE-UP FOR 2006-2008

1. Introduction

This decision resolves the third and final phase of Risk/Reward Incentive Mechanism (RRIM) proceedings for the 2006-2008 cycle, for savings achieved due to energy efficiency programs administered by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and Southern California Gas Company (SCG) (the utilities or IOUs). As adopted in Decision (D.) 07-09-043, RRIM was designed to offer financial incentives or offsets (called penalties) as a function of utility success in achieving and surpassing the Commission's adopted energy savings goals.

In this decision, we complete the true-up of the interim awards for the 2006-2008 period, and determine whether additional incentive earnings are due, or alternatively whether penalties apply. The IOUs were previously authorized interim incentive awards totaling $143.7 million for the first two installments of the 2006-2008 cycle.[1] Based on the final results reviewed herein, and summarized in Appendix A, we determine that the IOUs' 2006-2008 energy savings achievements are sufficient to qualify for total incentives of $211,853,077. Subtracting the interim awards the IOUs have already received leaves $68,158,522 in incentive awards to be paid to the utilities. In determining the final phase of the 2006-2008 cycle, we have made modifications to the mechanism that was originally adopted in D.07-09-043. The original mechanism was designed to align ratepayer and utility investor interests by awarding earnings up to 12% of independently verified energy savings attributable to the portfolio of approved programs, with remaining savings going to ratepayers. By modifications we adopted in D.08-01-042, requiring, among other things, updated parameter measures, the utility investor was at risk for lower earnings (or for payment of penalties) to the extent that actual savings achieved, based on updated parameter assumptions (required by D.08-01-042), varied from the original estimates. By the modifications we adopt herein, rather than assessing the performance of the utilities' energy efficiency programs based on updated parameters, as was our original intent, we modify the mechanism such that the performance against the goals, as well as the total savings attributed to the utility programs for purposes of determining incentives are calculated using the parameters that were in place at the time the Commission approved the utility energy efficiency portfolios. This approach, alone, relieves the utilities of the risk that an independent evaluation of updated parameter assumptions will reduce earnings or produce penalties, and, correspondingly, because this increases the risk to ratepayers of providing incentives for savings that, based on updated assumptions may not be attributable to the utility programs (and conversely, reduces the risk to the utilities of incurring penalties), we also make a commensurate change in the shared savings rate applied to the performance earning basis (PEB), reducing it from the 9% and 12% levels adopted in

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[1] The first interim awards were authorized by D.08-12-059, and the second interim awards were authorized by D.09-12-045. In each instance, a portion of the awards was held back from distribution. Together, the interim awards total $143.7 million.

D.07-09-043 to 7%. We appreciate the difficulty in quantifying the appropriate shared savings percentage reduction to offset the impacts of this risk shifting. Based on our judgment, we conclude, however, that an adjustment down to 7%, for all savings over 85%, is justified and reasonable.

Such changes to the incentive mechanism as it applies to the 2006-2008 cycle are warranted because of our experience with this program and consistent with scope of the OIR issued on February 4, 2009, establishing this underlying proceeding (R.09-09-019). We believe the changes to the mechanism are appropriate in light of ongoing concerns about substantial, controversial, and unanticipated swings in a number of the key parameters in Energy Division's recent evaluation studies.

The incentive mechanism reinforces our strong commitment to the goal of decreasing overall future per capita electricity consumption in California by the customers of the IOUs. It cannot be disputed that such reductions benefit the IOUs' customers and California society at large. This decision, which concerns the final phase of the 2006-2006 period, adopts modifications to the incentive mechanism for purposes of calculating the 2006-2008 true-up. Further, we determine that this same mechanism should be applied to the 2009 program year, and establish a process by which incentives for the 2009 program year will be determined. We defer matters concerning energy efficiency achievements in 2010 and beyond to a subsequent decision in this proceeding.

When we opened this rulemaking in February 2009, we were cognizant of the contentious character of the prior proceeding, R.06-04-010, with respect to calculating and awarding incentive earnings to the IOUs.[2] This controversy has continued unabated. When applied, the RRIM methodologies for assessing incentive earnings have proven far more complex and contentious than we had originally contemplated.

In this proceeding we sought to develop a new framework for the determination of 2006-2008 energy efficiency incentives.[3] In developing this new framework, we left open the possibility of reexamining and changing, as warranted, the mechanism adopted in D.07-09-043. Specifically, in the OIR issued February 4, 2009, we stated,

> We see a need to reconsider the RRIM earlier than in 2011 as anticipated in D.07-09-043. The controversies raised concerning the first Verification Report show that methodologies of the RRIM process are quite complex and are not as easily or as timely resolved as we had hoped. We believe it is necessary to consider a more transparent, more streamlined and less controversial RRIM program. This may require making small but significant changes to the existing RRIM, or may require wholesale adoption of a new incentive mechanism. Any new or revised RRIM must continue to provide incentives to utilities to provide the maximum verifiable and socially-desirable level of energy efficiency programs and services, while protecting ratepayers through necessary cost containment mechanisms.

(R.09-01-019 at pp. 4-5.)

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[2] This rulemaking is the successor to Rulemaking (R.) 06-04-010, our inquiry into post-2005 energy efficiency policies, programs, evaluation, measurement and verification (EM&V), and related issues. We issued a number of decisions in R.06-04-010 on topics ranging from energy efficiency goals (e.g., D.08-07-047) to the RRIM.

[3] R. 09-01-019 at p. 5.

We further stated: "It is our intent to adopt a new framework for the review of the remainder of 2006 through 2008 energy efficiency activities in a timeframe consistent with interim payments for 2008 no later than December 2009, and any final payments for 2006 through 2008 no later than December 2010."[4]

The modifications reflected herein are made with the intent of reforming a mechanism that has proven unwieldy in ways that we find compromise its central purpose, namely, motivating the utilities to embrace energy efficiency as a core part of their business. This is a critical objective for Californians, given the central role energy efficiency must play in California's energy future, particularly as the state seeks to dramatically reduce the carbon intensity of its energy system, pursuant to Assembly Bill 32 (AB 32). Energy efficiency remains one of the most cost effective approaches to reducing carbon emissions and providing energy services, which is recognized in the state's loading order and in the California Air Resources Board's AB 32 Scoping Plan. In order to be effective, an incentive mechanism for energy efficiency investments by the IOUs must provide rewards or impose penalties on the basis of factors that are reasonably within the control of the entity to which it is being applied.

As described in more detail below, we find that the RRIM as adopted and implemented to date, has not reflected this fundamental criterion of an effective incentive mechanism. In particular, we find that the expectations regarding the ability of the utilities to modify their portfolios in response to changes that were ultimately found to have taken place over the three-year program cycle were

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[4] R.09-01-019 at p. 5.

unreasonable, particularly given the timing of availability of information regarding these changes, the substantial controversy surrounding their accuracy, and their magnitude. The modifications made in this decision result in an appropriate level of incentives based on what the utilities could have been reasonably expected to know and respond to during the 2006-2008 program cycle. We are of the opinion that subjecting the IOUs to penalties or substantially reduced incentives based on factors they could not reasonably be expected to anticipate or effectively respond to will do little to motivate them to aggressively pursue energy efficiency, and may undermine the interests of the people of the state of California in placing energy efficiency on a par with "steel-in-the-ground" supply-side resources. By adopting this approach, we ensure the mechanism remains effective in aligning utility and ratepayer interests with respect to the resource priorities of the state.

Although we have repeatedly encouraged parties to pursue settlement discussions of these protracted issues, unfortunately, the resulting efforts to seek resolution have not been successful. We have also explored possible alternative policy assumptions to streamline the derivation of incentive amounts while maintaining the integrity of the process.

We continue to believe that the Commission should pursue prospective reforms to the incentive framework that will accomplish the State's energy efficiency goals while avoiding the protracted controversies over technical methodologies that have characterized the RRIM process. We intend to address needed reforms in the prospective redesign of the RRIM in the next phase of this proceeding.

2. Procedural Background

This phase of the proceeding finalizes the true-up of incentives (or penalties) for achievements in energy efficiency savings for the 2006-2008 cycle. Additionally it establishes the methodology and process for the determination of incentives associated with the 2009 program year. Previous interim incentive earnings for the 2006-2008 cycle were awarded in Decision (D.) 08-12-059 and D.09-12-045, respectively. Parties participating in the proceeding, in addition to the IOUs, are the Commission's Division of Ratepayer Advocates (DRA), The Utility Reform Network (TURN), Natural Resources Defense Council (NRDC), and Women's Energy Matters (WEM). The record developed for this phase of the proceeding consists of written comments by parties, together with work products produced by the Commission's Energy Division, namely, the Energy Efficiency Evaluation Report, and the Scenario Analysis Report. The record also includes the scenario analysis presented by the IOUs in filed comments. The IOUs filed supporting calculations on July 16, 2010, identifying assumptions utilized in their scenario.

As discussed in D.07-09-043, the RRIM earnings claims process was originally expected to be ministerial. Incentive earnings were to be awarded based on the Energy Division's independent evaluation of savings accomplishments. Substantive earnings claim issues were to be resolved through adopted procedures for vetting of the Energy Division Evaluation, Measurement, and Verification (EM&V) Reports. Under circumstances where disposition of EM&V issues might require more than ministerial action under General Order 96-B, Energy Division was to prepare a resolution for recommended adoption by the Commission. In D.08-12-059, the Commission revised this procedure, stating that:

> Beginning with the draft verification report that was issued on November 18, 2008 and going forward, we will require that Energy Division issue these reports via draft resolution for consideration and adoption by the Commission before those reports are used to determine incentive payments or penalties under the RRIM. This direction applies to both the verification reports used to assess interim claims as well as those used for the final true-up. These resolutions should include detailed information regarding the underlying assumptions used and supporting documentation that provides the basis for those assumptions. (D.08-12-059 at p. 21.)

Pursuant to the schedule for the true-up phase of this proceeding set in D.09-12-045, the Energy Division issued its 2006-2008 draft Energy Efficiency Evaluation Report on April 15, 2010, culminating nearly three years of field-based evaluation research. The Report was issued in final form on July 9, 2010, incorporating corrections and responses to parties' comments.

The Final Energy Division Evaluation Report identified the IOUs' energy efficiency savings, but did not address the calculation of RRIM earnings. Accordingly, because RRIM earnings were not addressed, no resolution was issued in connection with the Report's issuance. The Energy Division's evaluated results are, however, in addition to parties' comments on the process and the results, a part of the record of this proceeding.

On April 8, 2010, an Assigned Commissioner's Ruling (ACR) outlined a process to develop the record for the true-up phase of incentive earnings using the Evaluation Reporting Tools/Database (ERT).[5] Parties filed comments in

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[5] The ERT is a combination of tools and processes that work in concert to calculate 2006-2008 energy efficiency portfolio performance results.

The ERT core features were used to compile and evaluate alternative scenarios and resulting RRIM earnings based upon changes to key parameters. The ERT aggregates

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response to the ACR on April 20, 2010. A subsequent ACR, issued on May 4, 2010, provided for comments on the Energy Division Scenario Analysis Report which set forth incentive earnings and/or penalties calculations under a range of scenario assumptions. Parties filed comments in response to this ACR on May 18, 2010, and reply comments on June 11, 2010. The IOUs presented a separate scenario analysis in their comments and filed supporting calculations underlying their scenario proposal on July 16, 2010. DRA filed comments on these supporting calculations on July 26, 2010. The IOUs filed a response on August 2, 2010.

In D.09-12-045, the Commission also directed parties to convene a settlement conference "to enter into further settlement discussions to seek agreement on a 2010 final true-up of incentive earnings for each utility that reasonably ties incentives to actual performance consistent with the policies adopted in [D.09-12-045]."

In this regard, the Commission stated that:

> …while the Final Performance Report may provide a context for settlement discussions, we encourage parties to explore the possibility of a 2010 true-up settlement based upon simplified assumptions or metrics not necessarily tied to the detailed and minute level of calculations embodied in the Final Performance Basis Report for the 2006-2008 cycle. In this manner, the schedule for comments and adoption of the Final Performance Basis Report may proceed on a separate, but related track to the schedule for a settlement, or related dispute resolution processes

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and reports efficiency savings performance at the level of measure group, program, and total portfolio. Based on specified parameter assumptions, the ERT generated scenario runs showing corresponding RRIM earnings.

to determine the final 2010 true-up of incentive amounts for each utility. (D.09-12-045 at p. 72.)

A settlement conference was convened on June 27, 2010, but no settlement was reached. The parties filed a further round of comments on July 9, 2010 with reply comments on July 23, 2010.

3. Principles Governing the RRIM True-Up Process

As a basis for finalizing the last phase of the 2006-2008 cycle, we modify elements of the RRIM that had been adopted in D.07-09-043. The purpose of the RRIM is to offer incentives to the IOUs in a manner that will encourage and compel them to meet and exceed Commission goals for energy efficiency savings, and to extend California's commitment to making energy efficiency the highest energy resource priority. Under the mechanism, rewards are earned or penalties incurred as a function of the IOU's success in achieving adopted energy savings goals.

More specifically, the magnitude of rewards and penalties is based on some share of the avoided costs that energy efficiency measures are determined to provide. D.07-09-043 adopted an earnings/penalty curve that established the level of efficiency savings attributed to the utility programs relative to the adopted energy efficiency goals that result in penalties or rewards, as well as the magnitude of those penalties or rewards. Incentive rewards are earned as a shared percentage of the net benefits achieved due to deployment of energy efficiency measures, designated as the PEB. The shared savings rate (SSR) varied depending upon the extent of success in meeting or exceeding adopted goals. If the utilities' programs realized savings greater than 85% but less than 100% of the energy efficiency goals, the SSR applied to the PEB would be 9%. If the utilities' programs realized savings greater than 100% of the energy efficiency goals, the SSR applied to the PEB would be 12%. Initially, savings between 65% and 84% were considered to be in the "deadband" range and a 0% SSR applied. Falling below 65% subjected the IOUs to penalties. Maximum limits on incentive earnings and penalties for all IOUs were capped at $450 million for the 2006-2008 cycle.

In D.08-01-042, we modified D.07-09-043 and prescribed a process to update, evaluate and verify the *ex ante* (pre-installation) assumptions of energy efficiency savings[6] as programs are implemented during three-year program cycles. First, the utilities report the number and type of measures installed and services rendered, along with associated program costs. This reporting was to occur during the first quarter of each year covering the prior year's accomplishments.

Next, Energy Division and its contractors were to review this information, conduct field research, and release timely reports evaluating the costs of installations and estimate related savings achieved. Program costs were validated through an audit conducted by the Commission Audit Branch. Verification reports were to be released annually during the month of August following the end of each calendar year.[7]

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[6] *Ex ante* refers to assumed energy savings associated with a particular energy efficiency measure or equipment prior to installation. Thus, *ex ante* refers to using program metric assumptions based on past program performance. *Ex ante* measurement relies on engineering estimates or the results of *ex post* savings measurement (e.g., load impact studies) from previous program years or other program experience. (See D.05-04-051 at p. 35.)

[7] See *ALJ Ruling Adopting Protocols for Process and Review of Post-2005 EM&V activities*, January 11, 2006. Energy Division's Verification Report schedule was modified by Administrative Law Judge (ALJ) ruling on January 2, 2007. For the 2006-2008 program

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At the end of the program cycle, the Energy Division evaluation results were to be used to "true-up" the *ex ante* estimates of savings with respect to the number and type of measures installed, and with the associated program costs. Other parameters that were evaluated with respect to measure savings include: (1) per-unit energy savings and peak demand reductions, (2) expected useful lives for installed measures/equipment and (3) net-to-gross (NTG) ratios.[8]

Energy Division and its consultants were to evaluate these parameters on an *ex post* (post- installation) basis with a variety of field research methods. A true-up of portfolio savings and PEB for the full program cycle was to be based on the parameters evaluated by Energy Division.

The RRIM provides opportunities for earnings (or risk of penalties) at interim points for each three-year program cycle.[9] Under the adopted process,[10] each IOU is eligible for three awards comprised of two interim incentive installments, and a final true-up. Interim RRIM earnings were to be based on savings achievements measured using *ex ante* assumptions subject to a holdback of a portion of the claim, pending *ex post* true-up.

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cycle, verification of 2006 installations and program costs were combined with the report on 2007 accomplishments. Both were released concurrently.

[8] NTG ratios are used to discount savings associated with program to reflect the existence of "free riders," that is, customers who would have installed the energy efficiency measure or equipment without the utility's financial incentive (e.g., rebate). NTG ratios are estimated at the start of program implementation, and EM&V studies are designed to evaluate those ratios on an *ex post* (post-installation) basis, using control groups and statistical regression analyses, among other approaches.

[9] D.08-01-042 at p. 10, citing D.07-09-043 Conclusion of Law No. 7 at p. 212.

[10] See D.07-09-043, Conclusion of Law No. 7 at p. 212, and Attachments 6 and 7.

Our rationale for adopting this methodology was premised on the idea that the utilities should be evaluated, and incentive payments/penalties determined, on the basis of energy savings that actually materialize,[11] recognizing that over the three year cycle, many of the parameters underlying the portfolios developed by the utilities are subject to change. Implicit in this approach was the notion that over this same period, the utilities would be able to observe or influence many of these changes and modify their portfolios accordingly. However, as described in more detail below, experience has taught us that it was not possible to operationalize the mechanism in a manner that would actually allow such modifications to occur in a timely manner. This aspect of the mechanism proved to be a singular challenge. In addition, changes in the various parameters that influence the assessed efficacy of various efficiency measures in generating energy savings has been subject to extensive and ongoing controversy.

In December 2008, by D.08-12-059, we awarded the IOUs a first installment of RRIM earnings for 2006-2007 mid-cycle performance. In D.09-12-045, the IOUs received a second installment for the 2006-2008 program cycle. The interim incentive awards for the first and second phases totaled $143.7 million, as set forth below:

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[11] D.07-09-043, at p. 13.

Table 1: Interim 2006-2008 RRIM Earnings Previously Awarded

Utility	First Installment (Authorized in D.08-12-059) [A]	Earnings Rate Used For Second Installment	Maximum Earnings (PEB * Earnings Rate) [B]	Maximum Earnings less 35% holdback [C]	2nd Installment of Interim Earnings [C]-[A]	Holdback Amount Subject to Final True-Up [B] – [C]
PG&E	$41,500,000	12%	$115,277,868	$74,930,614	$33,430,614	$40,347,254
SCE	$24,700,000	12%	$77,465,151	$50,352,348	$25,652,348	$27,112,803
SDG&E	$10,800,000	12%	$17,077,803	$11,100,572	$300,572	$5,977,231
SCG	$5,200,000	12%	$11,247,724	$7,311,021	$2,111,021	$3,936,703

Neither the first or second awards were based solely on our Energy Division's EM&V reports. The interim EM&V reports of energy efficiency portfolio performance produced by Energy Division have been the subject of considerable controversy. Due to delays associated with the first interim report, the first installment of RRIM incentives was based on IOU self-reported results and subject to a 65% (rather than 35%) hold back. We utilized self-reported utility claims because the First Verification Report was not available prior to year's end. The holdback of 65% was adopted to protect ratepayers from increased uncertainties associated with self-reported claims.

The Commission formally adopted the Energy Division Second Verification Report by resolution on October 15, 2009. (Resolution E-4272.) The resolution incorporated reference to Verification Report's extensive log of corrections to modeling tools and inputs[12] and itemized responses to criticisms or comments posed by stakeholders.[13] In D.09-12-045 the Commission upheld the

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12 See Resolution E-4272, October 15, 2009, Energy Efficiency 2006-2008 Verification Report, Section 8.2, at p. 89 (also known as the Second Verification Report).

13 *Id.*, Section 9.2, at p. 134.

validity of the Energy Division Second Verification Report regarding the dollar value of energy savings subject to the RRIM calculation for the second interim claims.

The second installment of incentive earnings was based on net benefits measured by the Energy Division Verification Report, with additional adjustments for following factors:

(1) Both positive and negative interactive savings effects were applied;

(2) The cumulative effects of 2004-2005 savings goals were excluded;

(3) Savings goals were adjusted for interactive effects that were not originally considered in setting 2006-2008 goals;

(4) A shared savings rate of 12% was used by applying the IOUs' original unmodified *ex ante* assumptions in comparing the IOUs' reported savings achievements relative to Commission goals;

(5) The NTG ratio applied for savings attributable to SCE's residential lighting program was adjusted to reflect SCE's specific implementation approach to this program; and

(6) The realization rate applied to SDG&E's Energy Savings BID program and SoCalGas' Local Business Energy Efficiency program was adjusted to reflect the unique nature of those programs as compared to more generic statewide programs.

4. Framing of the Issues for the True-Up

As a framework for determining the true-up of incentive earnings for the 2006-2008 program cycle, parties present two fundamental disputes: (1) the amount of assumed net dollar benefits subject to the incentive calculation, and (2) the applicable percentage allocation of those benefits to be shared between ratepayers and shareholders. Based on these differences, parties disagree as to whether the IOUs are entitled to additional incentive earnings, or whether penalties apply.

The assigned Commissioner circulated a range of incentive earnings scenarios as set forth in the Energy Division "Scenario Analysis Report" (provided by ACR dated May 4, 2010). This Report illustrated the sensitivity of RRIM earnings over a range of different policy assumptions calculated utilizing the ERT. Each scenario incorporated variations showing incentive impacts assuming:

a) shared savings rate of 9%;
b) shared savings rate of 12%;
c) results compared to 2006-2008 goals;
d) reduced therm goals by 22% for SDG&E and 26% for PG&E;
e) recognition of 100% of savings from Codes and Standards (C&S) Advocacy accomplishments; and
f) Inclusion of interim RRIM awards as additional program costs.

These assumptions were highlighted to illustrate the effects of various policy disputes previously at issue in interim incentive proceedings. The scenarios drew data from different sources utilizing the ERT as a template, including Energy Division evaluation findings, along with the IOUs' self-reported data.

The RRIM earnings calculated under these scenarios range from less than $1 million to almost $400 million. The scenarios can be grouped into the following general categories:

(1) Scenarios S2 and S3 -- "Utility Reported Net Savings"

These scenarios apply *ex ante* values for all key parameters and exclude updating based on EM&V evaluation studies. These scenarios result in total awards of either about $400 million (all

S2 results) or around $300 million (S3 results with updated installation rates). Scenario S2 calculates the results using IOU-reported net savings based on their 4th quarter tracking database, with IOU-reported NTG ratios, without updating for evaluation field research. Scenario S3 utilizes a similar data set as Scenario S2, but with IOU-reported quantities adjusted based on evaluated installation rates.

(2) Scenarios S4 and S5 -- "Evaluated Gross Savings"

These scenarios use key parameters updated based on Energy Division's evaluation studies of installation rates and energy savings, but exclude Energy Division's evaluated NTG ratios. These scenarios result in awards totaling around $200 million, though the two sub-scenarios that use a 12% sharing rate result in earnings of about $250 million.

(3) Scenarios 6 through 9 -- "Evaluated Net Savings"

These scenarios apply *ex post* savings as evaluated by the Energy Division yielding total shareholder incentive earnings of about $29 million for all the utilities for the 2006-2008 cycle. These scenarios replace *ex ante* utility parameter values with evaluated *ex post* results based on the most recent studies conducted under the EM&V protocols. None of these scenarios result in awards higher than about $85 million. The sub-scenarios that use a 9% rate result in total incentives of about $30 million, while the use of the 12% sharing rate results in earnings of about $80 million. Scenario 7 shows incentive earnings for all three utilities as $29,101,924, because the Commission has already authorized $143.7 million in non-refundable interim RRIM payments, no further RRIM awards would be due. However, Scenario 7 calculates that PG&E accomplished less than 65% of its demand savings goal, which would place PG&E into the penalty zone, resulting in a refund of $74 million of previous incentive payments.

TURN, DRA, and WEM have argued that the incentive true-up should be determined utilizing the Energy Division evaluation of net savings. The IOUs and NRDC, however, oppose the Energy Division findings as the basis for measuring energy efficiency savings. They criticize the Energy Division Report and the measurement studies that formed the basis for its findings on evaluated savings.

The IOUs and NRDC have argued that the net savings used in the true-up should instead carry forward certain *ex ante* assumptions previously used in the 2005 Database for Energy Efficiency Resources (DEER) at least for key, highly controversial parameters. The IOUs also argue that incentives should apply using a 12% shared savings rate, while TURN, DRA, and WEM support the use of a 9% shared savings rate, as calculated by the Energy Division based on the RRIM formula.

DRA and TURN contend that the Energy Division Evaluation Report utilizes the most up-to-date and independently verified parameters of energy efficiency savings achievements. DRA argues that ignoring these results or engaging in after-the-fact lowering of goals defeats the purpose of the incentive mechanism to align the interest of shareholders and ratepayers by rewarding innovative and effective performance in achieving the Commission's goals. If the IOUs are rewarded for results that do not achieve the Commission's energy efficiency goals, DRA alleges the incentive mechanism loses its value to promote optimal performance. DRA and TURN support use of the Energy Division's adjusted results in the Evaluation Report for calculating incentives for 2006-2008. DRA and TURN argue that the Energy Division is independent and, unlike the IOUs, has no financial interest in the outcome of the incentives calculation, and is, therefore, the most unbiased source of information. DRA argues that if other assumptions are used to calculate incentives, the shared savings rate established in D.07-09-043 should be lowered to reflect the decreased risk shareholders face by using lowered goals or less accurate parameter measures.

The IOUs contend that the Energy Division Evaluation Report has many technical deficiencies and cannot be relied upon to assess IOU achievements for the 2006-2008 cycle. Among the claimed shortcomings, the IOUs complain of inappropriate sample sizes, low confidence intervals, self-reported NTG ratios, and generally poor measurement execution.[14]

The IOUs propose that instead of the Energy Division *ex post* evaluations for certain specified measures, incentive earnings should be quantified by applying the *ex ante* values that were assumed at the time that the 2006-2008 program cycle funding was initially established, as reflected in the 2005 DEER. The IOUs contend that the 2005 DEER values are the only ones that have been properly vetted and accepted. Nevertheless, the IOUs propose the use of updated data for computing avoided costs and greenhouse gas (GHG) adders.

The IOUs and NRDC argue that the Energy Division evaluation studies completed in 2008 and 2009 are not reliable sources of certain key parameters, such as NTG ratios. In the interests of compromise, however, the IOUs accept certain assumptions in the Energy Division Report except as detailed below. The IOUs allege that a final installment of RRIM earnings should be awarded based upon their own proposed calculation scenario, arguing that their calculation produces an appropriate outcome given the current policy and intent of the Commission. The IOUs' calculation scenario uses the Energy Division's Final Evaluation Report as a foundation, but applies different assumptions for factors

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[14] The Energy Division's responses to claimed technical deficiencies are discussed in Section 5.2 below.

that the Joint IOUs have alleged to be errors in the Energy Division Report. The Joint IOU Scenario:

- applies a 12% shared savings rate in accordance with D.09-12-045 (citation included above);
- does not compare energy savings against 2004-2008 cumulative goals;
- includes 100% of the savings from 2006-2008 C&S activities; and
- applies *ex ante* values for NTG ratios, Expected Useful Life (EUL), In-Service Rates (ISR) for upstream-delivered Compact Fluorescent Light bulbs (CFLs), and Interactive Effects as found in the 2005 DEER.[15]

Based on these assumptions, the Joint IOUs argue that they are entitled to an additional $112.3 million in RRIM earnings. When added to the $143.7 million previously awarded, the IOU allegation that they should be awarded an additional $112.3 million would result in cumulative RRIM awards for 2006-2008 totaling $256 million, summarized as follows:

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[15] The IOU Scenario accepted the Energy Division evaluated results for remaining parameters including: (1) Unit Energy Savings (UES), (2) Installation rates (except for upstream CFLs), (3) Incremental Measure Costs (IMC), (4) Load Shapes, (5) Residential/Non-Residential split for upstream CFLs, (6) Realization Rates, (7) Program Costs, (8) Makeup of PEB: TRC/PAC split, and (9) Goals.

Table 3: Joint Utility Scenario Results

(Dollars in Millions)

Utility	PEB	Earnings %	Total 2006 – 2008 Earnings	Interim RRIM Earnings	Final True-Up Payment
PG&E	$1,146.7	12%	$137.6	$75	$62.6
SCE	752.5	12%	90.3	50.4	39.9
SDG&E	128.3	12%	15.4	11.1	4.3
SoCalGas	106.7	12%	12.8	7.3	5.5
Totals			$256.1	$143.7	$112.3

Because the Joint IOU Scenario was not pre-defined within the ERT, the IOUs customized the ERT to run their scenario. The ERT allows users to run some aspects of the IOU scenario, including *ex ante* NTG ratios, *ex ante* effective useful lives, and *ex post* unit energy savings. However, to include *ex ante* in-service rates for upstream delivered CFLs, the IOUs modified the ERT Input Sheets to reflect the *ex ante* values, while retaining the *ex post* installation rate values for all other measures. Similar customization was required to address *ex ante* interactive effects.

PG&E also attempted to modify the ERT to include these interactive effects in calculating earnings under the IOU scenario. As an electric utility, therm interactive effects were not included in SCE's *ex ante* estimates. Therefore, SCE ran its calculations "with interactive effects" scenario and removed all therm benefits from the ERT. Upon running the scenario through the ERT, the IOUs applied an average factor to the net resource benefits to estimate the affect of increasing the GHG adder to $30 a ton.

5. Discussion

5.1. Summary Findings Regarding the True-Up of Incentive Earnings

In finalizing the 2006-2008 period, we are guided by the following fundamental principles:

1. The program should promote the Commission's energy efficiency goals;
2. Incentive methodologies should be applied in a fair, transparent, and conceptually consistent manner; and
3. The utilities should receive incentive rewards or face penalties based on their effective administration of the energy efficiency portfolios given the information they had access to at the time the portfolios were being implemented.

Accordingly, we evaluate the parties' disputes in terms of these goals and principles. Our task is to true-up the interim calculations of incentive earnings for the 2006-2008 cycle, and thereby determine whether additional earnings are due, or whether penalties apply. As a basis for evaluating whether the interim RRIM earnings awards warrant further adjustment in the final true-up phase, we must identify: (a) the magnitude of energy savings accomplishments subject to incentive rewards; and (b) an appropriate percentage allocation of the identified net benefits between ratepayers and IOU shareholders.

Because parties could not reach consensus on a reasonable basis to simplify the calculation of energy savings achievements, we look to the record and use our independent judgment to assess an acceptable outcome

As discussed below, we rely upon the *ex ante* assumptions from the 2005 DEER, as the basis for the true-up of energy efficiency incentives for the 2006-2008 program cycle. The EM&V process was the vehicle established by the Commission in D.07-09-043 for measuring success (or failure) in achieving energy efficiency accomplishments and cost savings for various purposes. We have used some of the information developed pursuant to the EM&V process, as reflected in Scenario 3, to arrive at the incentive amounts authorized by this decision; however, for reasons discussed herein, we do not rely on the entirety of the results. Unlike expenditures for energy resources that are measured through arms-length transactions, energy savings cannot always be as easily quantified. To calculate cost savings and net benefits associated with energy efficiency measures, it is necessary to develop assumptions as to relevant parameters based on surveys, sampling, and extrapolation of estimates over extremely large volumes of data points. As we have noted here and in earlier decisions, the EM&V process has been extremely contentious, resulting in considerable disagreement over estimates of energy savings achievements, and the resulting incentive payments due.

5.2. Role of the Energy Division Evaluation in the True-Up

The Final Evaluation Report of 2006-2008 energy efficiency savings performance was finalized by non-party staff and their consultants in our Energy Division in accordance with adopted Commission processes. The Report shows that California ratepayers' $2.1 billion investment in energy efficiency resulted in over 6,000 Gigawatt hours (GWh), 80 million therms, and over 1100 MW in annual energy savings over the 2006-2008 cycle.[16] These accumulated savings

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[16] The Energy Division Final Report used an updated E3 calculator that corrected the error for natural gas therm savings that was identified by SDG&E in its Petition to

Footnote continued on next page

represent approximately 3.2% of electricity and 1% of the natural gas sold in California in 2008. The reported savings were evaluated through field work to verify energy efficient technologies installed and the related savings attributable to the programs. In total, the evaluations for any given parameter directly assessed the majority of the *ex ante* claimed savings. Evaluations of measure installations accounted for 77% of kilowatt-hour (kWh) savings. Evaluations of unit energy savings accounted for 86% of kWh savings. Evaluations of load shapes covered 80% of kW savings and evaluations of NTG ratios covered 90% of kWh savings.

Energy Division focused evaluation resources on measuring gross savings from the end-use measures or technologies that dominated portfolio savings, i.e., high-impact measures (HIM), and on estimating net savings attributable to programs with the highest savings from installed technologies. The IOUs argue that HIM methodology developed point estimates for certain measures and then applied them to similar measures across the portfolio. They further contend that the shift in methodology to evaluation of HIMs represents an untested divergence from longstanding and commonly accepted EM&V protocols without the opportunity for public review. In addition, the IOUs argue that the evaluated results were not properly translated into earnings projections, and that the ERT itself was systematically flawed such that it produced earnings estimates with no statistical confidence.

Modify D.09-12-045, filed on February 19, 2010. Because we incorporate this correction into our true-up, the referenced Petition to Modify D.09-12-045 is rendered moot, and therefore, we shall dismiss it.

The IOUs allege that the findings in the Energy Division Report are unreliable, lack transparency, and have not been subject to an adequate public review process. PG&E, for example, argues that given the breadth of the evaluation, the time provided for review and comment on EM&V evaluations was too short. PG&E contends that critical data needed to conduct a comprehensive review was not made available in a timely fashion, which foreclosed the possibility of robust analysis. Consequently, PG&E asserts that the process did not provide for the free exchange among stakeholders, as contemplated by the Commission in D.07-09-043.

The IOUs also allege the Energy Division results utilized values without references to sources, and that methodologies lacked actual documentation. The IOUs further allege various technical errors in the processes utilized by the Energy Division in evaluations of savings.

The claimed errors involve various technical details often involving minute and arcane details such as how the Energy Division consultants conducted surveys, extrapolated samples, and used data in calculating the various savings measures. We recognize that there is room for debate about judgments made in conducting surveys and extrapolating results to estimate *ex post* measures.

In D.05-01-055, we mandated that the Energy Division take responsibility for managing and contracting for all EM&V studies.[17] This mandate marked a shift in the responsibility from the utilities to Commission's non-party staff and helped ensure unbiased results by having a neutral entity overseeing the EM&V

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[17] See also, D.07-09-043 at p. 4.

process. In addition, Energy Division has contracted with experienced expert evaluation contractors, whom they have used throughout the processes for developing the research and data to estimate interim and final earnings claims.

The Energy Division Report necessarily encompasses review of a large number of records that reflect considerable technical complexity and detail. The Commission established a process by which evaluation studies must be posted for public comment prior to finalizing the results. Energy Division followed the correct protocols for vetting that were adopted in D.07-09-043, which required:

> …a specific and adequate process by which parties can submit questions, concerns and comments to both Energy Division and evaluation contractors. Conferences and the submission of written comments based on conferences, allow parties to participate in the process by raising and discussing issues. This takes place in formulating the several reports before they are finalized: the draft Verification Report, the draft final evaluation reports, and the draft Final Performance Basis Report. Our belief is that any concerns the parties may have can be resolved through such a process.

(D.07-09-043 at p. 129.)

Energy Division circulated requests for technical participation from parties, provided draft materials, held several meetings to discuss technical issues, provided opportunities for comments, and responded in writing, explaining how assumptions were applied in developing and measuring performance results.[18] Energy Division changed or updated numbers where comments were found to have merit.

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[18] See e.g., Evaluation Report, Appendix O for a compilation of comments and responses.

The Energy Division contractors provided updates to installation rates (how many technologies were installed and operating), unit energy savings (savings for any given technology), and NTG ratios (a factor used to adjust savings to account for the influence of the program) where evaluation updates were available. Several parameters, primarily cost data, were part of the data set but were not updated with evaluation results.[19]

The Energy Division adhered to strict timelines and rigorous public review process. Stakeholders were provided opportunities to comment on the evaluation plans. Consultant reports were published at different times in 2007 and 2008, and the Energy Division's final report was released for public comment in December 2009. Results from the impact evaluations were posted for public review and comment in December 2009 in detailed technical reports, and were also presented in public webinars. The Energy Division Report included voluminous and detailed point-by-point responses to stakeholders' questions and claimed errors. The public comment period generated approximately 1,700 comments, all of which were addressed by the Energy Division and its evaluation contractors. The reports were finalized in February 2010. Summaries of these report findings are included in the Energy Division report, and the final reports were posted on the California Measurement and Advisory Council (CALMAC) website.

The IOUs claim the Energy Division results are non-transparent and utilize values without references to sources, and that methodologies lack actual

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[19] The updates applied, the source of the update, and the justification of the values were provided by each group, and presented in Appendix C of the Energy Division Report.

documentation. The IOUs claim various technical errors in the processes utilized by the Energy Division in evaluations of savings.

The claimed errors involve various technical details often involving minute and arcane details as to how the Energy Division consultants conducted surveys, extrapolated samples, and used data in calculating the various savings measures. We recognize that there is room for debate about judgments made in conducting surveys and extrapolating results to estimate *ex post* measures.

The Energy Division managed a budget of $97 million, representing one of the largest energy efficiency impact evaluations in the world, which was implemented by leading evaluation professionals. The focus of its studies was to verify IOU self-reported energy savings and identify energy savings that would not have likely occurred in the absence of the program. The Energy Division report adopts the findings of numerous individual EM&V studies of the performance of various individual energy efficiency programs in the IOUs' portfolios for the 2006-2008 cycle. The studies form the foundation for updates to the utility *ex ante* savings assumptions used to estimate portfolio and program savings and cost effectiveness, and provide information for program improvements and future estimates.

The Energy Division Report synthesizes three years of program implementation and evaluation and presents the final outcomes of multiple billions of dollars in ratepayer investments. The Energy Division Report incorporates multiple attachments of data and tools that allowed for detailed review by stakeholders. Most pieces (i.e., Contractor Reports, Decision Framework and ERT) have been introduced to the public in advance of the Energy Division report release. The largest and most complex portion of the data (over 4 million tracking records) was provided by the IOUs and standardized in collaboration with Energy Division consultants over the course of a three-year period.

Nevertheless, significant controversy remains with respect to the Energy Division evaluation reports. The information in the Energy Division Report may be valuable and useful for a variety of purposes, including in the planning of future energy efficiency portfolio design. We have utilized certain aspects of Energy Division's Report, as reflected in Scenario 3, for purposes of calculating the incentives adopted herein. However, for reasons explained below, we conclude that for purposes of the 2006-2008 true-up, we shall not rely solely on the results contained in the Energy Division report.

5.3. Use of *Ex Ante* versus *Ex Post* Measures for Measuring Savings

As noted by Energy Division, the energy efficiency savings goals for the last two program cycles (i.e., 2004-2005 and 2006-2008), were developed from analyses conducted in 2002-2004. As a result, significant variances exist between the savings estimates from the Energy Division *ex post* evaluation and the assumptions underlying the original *ex ante* assumptions used to develop the Commission's efficiency goals. This is not because those initial assumptions were necessarily inaccurate when they were adopted, but because market dynamics are likely to have changed in the intervening years.

The 2006-2008 energy efficiency net benefits used to determine final incentive earnings varies significantly depending on how key parameters are quantified. Parties disagree, in particular, on the appropriate values for the NTG ratio, expected useful lives, and in-service installation rates. The IOUs and NRDC advocate using *ex ante* values from the 2005 DEER. The Energy Division Evaluation Report calculated updated *ex post* values for these measures. A key factor contributing to the differences between *ex ante* and *ex post* savings found in the Evaluation Report is the much lower than expected impact attributed to interior screw-in lighting measures. Because they made up a significant portions of the portfolio, adjustments to NTG ratios, installation rates, and unit energy savings based on the Energy Division evaluation all contributed to these impacts.

In the aggregate, utility self-reported energy savings during 2006-2008 were claimed at the level of 151% of the adopted goals. By contrast, the Energy Division evaluation shows that energy savings equal to just 62% of the adopted goals. Similarly, utility self-reported demand savings for 2006-2008 were claimed to be 122% of the savings goals, but the Energy Division evaluation showed demand savings amounting to 55% of the savings goals.

In D.05-04-051, the Commission adopted principles requiring *ex post* updates "as a general policy" in the true-up of energy efficiency savings for programs implemented in 2006 and beyond, requiring:

> A true-up of *ex ante* (pre-installation) assumptions for program participation (e.g., types and number of measures or equipment) with actual participation verified on an *ex post* basis, i.e., during and after program implementation.
>
> A true-up of *ex ante* program costs assumptions with actual expenditure levels.
>
> As a general policy, *ex post* evaluation of per unit kWh, kW, and therm savings through load impact studies. An exception to the general policy may be appropriate for measures and/or programs for which there are well-established *ex ante* values with a high degree of confidence, and low external sources of variability that could influence the energy savings.
>
> Persistence studies will not be tied to the performance basis, but shall still be performed to inform future planning. This policy shall be revisited and revised, as appropriate, if there is evidence at a future date that the results of persistence studies are significantly different from the *ex ante* estimates.

(D.05-04-051 at pp. 92-93, Ordering Paragraph No. 8 a-d.)

In accordance with these policies, and through evaluations and other research conducted since the original goals were developed, Energy Division developed updated, end user adoption rates, and per unit savings levels. One of the key principles underlying the original design of the RRIM, as adopted in D.07-09-043, was that key parameters were to be trued up based on updating of net energy savings that are based on actual *ex post* load impact studies, and subject to independent verification. In D.07-09-043, we expressly stated:

> …[P]otential earnings for the 2006-2008 program cycle start at $176 million if all four utilities achieve the minimum performance threshold of 85%, which in turn would deliver approximately $1.9 billion in net benefits. That is, if the utilities *actually produce net benefits of $1.9 billion* (based on verified costs and resource savings) when they reach 85% of the savings goals, then their shareholders will receive $175 million of those net benefits under the shared-savings structure we adopt today. (D.07-09-043 at p. 10, emphasis added.)

In D.07-09-043, we acknowledged DRA's concern that failure to update may create a perverse incentive, because:

> … an approach that fails to true-up savings and net benefits (PEB) accomplishments based on the results of final load impact studies creates a perverse incentive for utility managers to promote exaggerated savings assumptions during the planning process. This is because the utility knows that it can get progress payments based on these inflated estimates that are not returnable when the final true-up reveals lower load impacts. (D.07-09-043 at p. 123.)

We previously denied a request by the IOUs to remove the requirement for updates of key parameters in assessing RRIM earnings. (See e.g., D.08-12-059.) In denying the IOUs' earlier request to reconsider the requirement we adopted in D.08-01-042 for updating of parameters, we explained in D.08-12-059:

> At this point we do not think it would be reasonable to remove, in part or in whole, the requirement that the *ex ante* assumptions used to assess interim claims be updated. This updating is part and parcel of the balance that was struck in D.08-01-042 between providing utilities the ability to book interim rewards without the uncertainty that they would have to return these interim amounts after the fact, and limiting the risk to ratepayers of overpayment. (D.08-12-059 at p. 19.)

We reiterated the importance of this principle in D.09-12-045 where we relied upon updated assumptions in the Energy Division verification studies as the basis for the net benefits used to allocate incentive awards. By not updating *ex ante* assumptions, to the degree more accurate assumptions are available, we feared we could risk being left with an outdated basis for measuring cost savings and associated incentive payments. We have also previously stated that the earnings true-up would reflect updated assumptions in the DEER, as noted in D.08-01-042:

> 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. (D.08-01-042 at p. 17.)

For purposes of determining the actual impacts of energy efficiency programs in reducing demand and obviating the need for supply side resources, it is clearly incumbent on the Commission to update the assumptions used to quantify the impacts of the utilities' efforts. Because the actual impacts of energy efficiency play a key role in determinations of supply side resource need, it would be inappropriate to assess savings achieved from energy efficiency based on outdated assumptions in this context. If, for example, a given variable, like a measure expected useful life, is found to be less than what was assumed when the utility portfolios were adopted, it would make no sense to ignore that update and rely on an exaggerated estimate of energy savings since this will have real world impacts in terms of Commission determinations of supply-side resource need once energy efficiency has been accounted for. Similarly, in the case of variables like NTG ratios, which do not, in of themselves, impact the gross savings of a given measure or program, it is incumbent on the Commission to evaluate these as it does drive determinations of energy efficiency measure and program cost effectiveness, thus impacting program portfolio design. However, in the context of the incentive framework, as explained below, our experience with the mechanism over the past three years, establishes that the reliance on *ex post* updating creates an unreasonable amount of risk for the utilities because it results in an imposition of unrealistic expectations regarding their ability to anticipate and respond to changes in thousands of parameters that influence program performance.

In D.08-01-042, the Commission endorsed the idea that failure to update the *ex ante* assumptions may create a perverse incentive for utility program managers to exaggerate savings assumptions during the portfolio planning process. While such an incentive may exist absent updating, on further reflection this theory failed to account for the fact that the utility portfolios are submitted for review and approval by the Commission with extensive opportunity for feedback from stakeholders. Consequently, any claims by the utilities regarding the cost effectiveness or savings potential of their portfolios are expressly subject to Commission review. During that review, the Commission may receive information from sources other than the IOUs as well. In conducting that review, the Commission must make a determination regarding the cost-effectiveness of the utility portfolios and their ability to meet the energy efficiency savings goals we have adopted for the particular period. Nothing in that process prevents the Commission, or parties, from contesting the assumptions made by the utilities based on other, more objective and/or reasonable sources of information.

Over the 2006-2008 period there has been profound disagreement on the appropriateness of the various adjustments to many of the underlying assumptions and parameters driving the estimated performance of the utility programs. In our view, however, these disputes raise a fundamental question regarding the fairness in how the mechanism, originally adopted in D.07-09-043, actually operates. In particular, the intense debate over factors like the net to gross ratios, measure expected useful life, and the residential/non-residential installations of incented lighting products under the utilities' upstream lighting programs, has caused us to consider whether the incentive mechanism appropriately rewards or penalizes the utilities for things that could be reasonably anticipated or are within their control. Or, instead, does the mechanism reward or punish the utilities for a variety of factors over which they have only limited control or ability to anticipate and respond to? The efficacy and legitimacy of the incentive mechanism hinges fundamentally on the ability of the utilities to modify their programs and portfolios over the course of the 2006-2008 program cycle in response to changes in the various parameters that influence measure savings and attribution.

As a practical matter, however, the ability of the utilities to reasonably anticipate, much less respond to, such changes is limited. Assessing the changing dynamics of the energy efficiency environment and market is a profoundly difficult task. This fact is reflected in the tens of millions of dollars in ratepayer monies that are allocated to EM&V activities[20] each year to develop the very same estimates that the mechanism, as implemented, to date, all but requires the utilities to anticipate. An argument has been made that because of the ongoing EM&V activities of Energy Division, the utilities had ample information available to them regarding changes in some of the key underlying assumptions. In light of that information, some parties argue, the utilities could and should have modified their portfolios accordingly. As an example, prior to the incorporation of formal updates to DEER in October of 2008, draft EM&V studies of the 2004-2005 energy efficiency programs were made available to parties. Those draft EM&V studies indicated, among other things, that NTG values for lighting were declining. A legitimate argument may be made that these results could be reasonably deemed final, and actionable, in October of 2007, when the 2004/2005 Statewide Residential Retrofit Single-Family Energy Efficiency Rebate Evaluation (Itron Report) was published. However, an equally valid point is that prior to that date, these updated assumptions were merely preliminary and subject to additional review by parties and the Energy Division, they were not final and, thus, not actionable.

The IOUs argue that the NTG updates in the Energy Division Verification Report are fundamentally flawed, and, even if correct, occurred too late in the 2006-2008 cycle to enable the IOUs to make meaningful mid-course adjustments in program funding in response to the updated NTG ratio. By way of example, for PG&E's programs, allocations of incentives to upstream lighting

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[20] D.05-11-011 authorized $162,794,829 for EM&V activities over the 2006-2008 energy efficiency program cycle.

manufacturers/distributors must be made at least 120 days prior to the movement of the products into the marketplace. Therefore, the IOUs argue, the October 2007 report, even were they to accept them as accurate, allowed little time for adjustments to program delivery and implementation to take hold during the 2006-2008. They further argue that it is inappropriate to apply these NTG values to the entire 2006-2008 program cycle for purposes of awarding incentives. We agree.

Until the review process has run its course and numbers are adopted as final, we do not think it is reasonable to, in effect, require the utilities to modify their portfolios as if preliminary assessments are, in fact, final. To do so undermines the purpose of the review, and it essentially prejudges the outcome of that process. A more reasonable approach and expectation is for the utilities to modify their portfolios based on assumptions available to them at the time they are developing and implementing their portfolios. We do not believe the changes to the parameters, and the magnitude thereof, that result in the dramatic swing in earnings under the incentive mechanism, as adopted, were available in a manner that would have allowed the utilities to react in a timely manner.

We also note that controversy over key parameters, most notably NTG ratios, was discussed in D.05-09-043, which authorized 2006-2008 programs. D.05-09-043 cautioned that "[s]pecific sensitivities around the NTG ratio assumptions indicate that the proposed portfolios may not meet the cumulative 2006-2008 energy (GWh) savings targets."[21] The Commission found some risk

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[21] D.05-09-043 at p. 56. See, generally, the discussion concerning the Case Management Statement at pp. 53-56.

that the portfolio plans may not meet the Commission-adopted GWh and therm energy savings goals, due to uncertainties over free ridership assumptions and the useful life estimates associated with certain lighting measures, among others.

The Commission directed that NTG ratios used for planning purposes would be "further addressed through *ex post* true-up of these ratios in performance basis evaluation, consistent with our direction in D.05-04-051."[22] In recognition of the uncertainty regarding whether the assumptions underlying the achievement of savings goals were realistic, the Commission did not direct that those assumptions remain frozen throughout the 2006-2008 program cycle for incentive purposes. Instead, we stated:

> Our decision today on how best to bound the uncertainty associated with this key savings parameter for planning purposes is predicated on the expectation that NTGs *will* in fact be adjusted (trued-up) on an *ex post* basis when we evaluate actual portfolio performance. We believe that this is entirely consistent with the resolution of threshold EM&V issues in D.05-04-051. (D.05-09-043 at p. 97.)

Looking back, we see that our expression was indicative of concerns regarding the uncertainty around the NTG ratios, and the possibility that the NTG ratios used in developing the portfolios were too high. In our view, because these concerns are expressed only in qualitative terms and based on preliminary results, this information provided an insufficient basis for the utilities to act. Given the preliminary nature of the information available to the utilities over the 2006-2008 period regarding changes to key parameters, the expectation that they should have dramatically modified their portfolios in a

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22 *Id*. at p. 167, Finding of Fact No. 7.

manner sufficient to avoid the adverse consequences under the incentive framework is unreasonable.

We point out that when the RRIM was adopted in D.07-09-043 it allowed for interim claims subject to a holdback of 30%. That we realized within a short time that a 30% holdback was smaller than necessary, is illustrative of the difficulty in anticipating the magnitude of the changes Energy Division has observed in the various parameters that affect the energy savings estimated to result from the utilities' energy efficiency programs. As stated in Ordering Paragraph No. 4(c): "Thirty (30) 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 the utilities in their interim claims*."(D.07-09-042 at p. 221, emphasis added.)[23] In order to minimize the risk of overpayment, the Commission initially thought that the possibility of the incentives changing by more than 30%, based on *ex post* review, to be relatively remote. However, the results of Energy Division's Verification Reports strongly indicate that this assumption was incorrect. For the 2006-2008 portfolios, the estimated incentive earnings the utilities would have earned if their programs were evaluated on the basis of *ex ante* assumptions would have been $307 million.[24] Yet changes in the underlying parameters result in collective earnings declining to minus $45 million, a swing of $353 million in incentives. This represents a reduction of

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[23] Ordering Paragraph No. 4 of D.07-09-043 was modified by D.08-01-042, where, among other things, we increased the holdback to 35%. (D.08-01-042 at p. 14.)

[24] 2006-2008 Energy Division Scenario Analysis Report at p. 39.

more than 100%.[25] This enormous swing is entirely due to changes in the underlying parameters, over which considerable dispute remains. Clearly the magnitude of the shift in the incentive amounts driven by these changes far exceeds the relatively substantial 30% holdback that the Commission adopted as a buffer in D.07-09-043, to minimize the risk of overpayment. The Commission itself failed to reasonably anticipate the magnitude of the dramatic changes to the parameters underlying its assessment of energy efficiency program performance and the huge swings this would cause in the incentive calculations. It is telling that the timing of D.07-09-043 predated by only one month the issuance of the 2004/2005 Statewide Residential Retrofit Single-Family Energy Efficiency Rebate Evaluation. Unfortunately, due to the timing of the two different events, information regarding the potentially significant reduction in the NTG ratios was not available when D.07-09-043 issued. It is now obvious that the 30% holdback adopted by D.07-09-043 to "minimize" the risk of overpayment, has since been proven to be too low, in light of the dramatic changes in the estimated savings and incentives based on the updates to the *ex ante* assumptions.

The forgoing review establishes that one of the fundamental premises on which the incentive mechanism adopted in D.07-09-043 was based was fundamentally flawed. Specifically, it was/is unreasonable to expect the utilities to anticipate the very substantial changes in a number of the key parameters over the three year cycle that drive their energy efficiency program results. Furthermore, given the after-the-fact timing of Energy Division's updates to

[25] 2006-2008 Energy Division Scenario Analysis Report at p. 30, Table 9.

these parameters, we find that the IOUs did not have the opportunity to modify their portfolios on the basis of this updated information in a way that would allow them to substantially avoid the adverse impacts of those updated assumptions on estimated program performance. Irrespective of the accuracy of the updates adopted by Energy Division, we find that the incentive mechanism as implemented was/is unfair to the utilities, in that it bases its results on assumptions the utilities cannot be reasonably expected to anticipate; and further, when those changed assumptions come to light, cannot be reasonably expected to respond to in a way that enables them to substantially avoid the adverse impacts on the estimated performance of their programs.

A more reasonable approach to assessing the 2006-2008 period for purposes of determining utilities' energy efficiency program performance and the associated incentive earnings is to rely on *ex ante* assumptions. These were the assumptions the utilities used in developing the portfolios that the Commission approved in D.05-09-043 for the 2006-2008 cycle.

Notably they are also the assumptions that align with the goals against which the utilities performance is being measured as noted in D.09-12-045.[26] D.09-12-045 recognized the inconsistency of holding the utilities, on one hand, to the achievement of energy savings goals which are not adjusted to reflect market transformation (as reflected in a much reduced NTG ratios), while discounting the efficacy of their programs in realizing energy savings based on the assumption that such market transformation had occurred. Since higher per-unit energy savings estimates were expected when the Commission developed the

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[26] D.09-12-045 at pp. 68 and 79 Finding of Fact No. 19.

goals against which the utilities' programs are compared, significant downward adjustment in per unit savings, without a commensurate reduction in the goals could make it virtually impossible for utilities to achieve those goals.[27])

5.4. Shared Savings Percentage Rate for the True-Up

While evaluating the utilities programs on an *ex ante* basis is straightforward, we also find that changing the incentive framework in this way substantially changes the risk profile of the incentive mechanism. By removing the updating provisions, the risk to ratepayers of overpayment (defined here as incentive payments that are justified on the basis of the assumptions relied on at the time the portfolios were adopted, but that with updated assumptions would not be earned), increases substantially. Conversely, the risk of penalties is greatly reduced to the utilities because not updating the *ex ante* parameters removes a key source of uncertainty in the mechanism, namely changes to key underlying parameters that occur over the three year program cycle. This change conflicts with a number of the criteria adopted in D.07-09-043. Many of those criteria were adopted in the hopes of eliminating all risk to ratepayers in the event that the portfolios turn out to have delivered fewer savings than had been anticipated when those portfolios were adopted, and to place that risk on the utilities. For reasons explained above, we find the mechanism adopted in D.07-09-043 did not provide a correct balance and was unfair in view of what we now are able to see are more reasonable expectations regarding the ability of the utilities to anticipate and respond to changing assumptions. While our

[27] See D.09-12-045 at p. 68.

modifications to the mechanism for the 2006-2008 true-up that reflects this change substantially reduces the risk to the utilities of incurring penalties, it does not wholly eliminate it. Even holding *ex ante* assumptions constant, the utilities may only receive incentive earnings in relation to actual portfolio measures verified as installed. This limitation will help to ensure that ratepayers fund incentives for programs and measures actually deployed. However, because the use of *ex ante* assumptions does alter the risk profile of the incentive mechanism by shifting additional risk to ratepayers, some additional modifications to the mechanism are necessary.

There are a number of levers available to the Commission for rebalancing the incentive mechanism in light of this shift to an *ex ante* approach. These "levers" are represented by the various factors or elements of the incentive mechanism, including the minimum performance standard and the placement of the various inflection points on the earnings/penalty curve, the caps applied to the penalties and rewards, and the shared savings rate. In our view, the most straightforward, reasonable and fair option is to reduce the shared savings rate, i.e., the percentage share of net benefits the IOUs may earn as incentive payments, to reflect the substantially reduced risk the utilities face under an *ex ante a*pproach. By using a reduced shared savings rate, the IOUs' potential earnings under the incentive mechanism shall be reduced relative to the mechanism adopted in D.07-09-043. This approach is consistent with the views expressed by DRA and TURN in the context of proposed reforms to the RRIM. Both DRA and TURN have argued that should the Commission modify the RRIM in a way that reduces the risk to the utilities and increases the risk born by ratepayers, that corresponding changes should be made to the shared savings rate and incentive cap.[28] We agree with the thrust of these arguments and find they are equally applicable in the context of modifications to the incentive mechanism as it applies to the 2006-2008 period.

We now turn to the issue of the magnitude of the reduction in the shared savings rate that is appropriate under the *ex ante* approach we adopt in this decision relative to the shared savings rate incorporated into the incentive mechanism adopted in D.07-09-043. As noted in that decision, "establishing the level of earnings opportunity for a shareholder risk/reward mechanism is ultimately a judgment call the Commission must make, and not a precise science."[29] The range of proposed shared savings rate was fairly broad, as indicated in Attachment 3 of D.07-09-043. DRA, TURN, and the Community Environmental Council (CEC) proposed shared savings rates generally below 5% of the Performance Earning Basis. In contrast, the utilities argued for much higher shared savings rates, ranging from 10% and increasing to as much as 30%, depending on the performance of the utility programs relative to the energy efficiency savings goals. NRDC supported a middle-ground level, closer to TURN's, CEC's and DRA's proposals, ranging from 6% to 12%. D.07-09-043 ultimately adopted a shared savings rate of 9% of the PEB in cases where the utilities' programs achieved between 85% and 100% of the energy efficiency goals, and a 12% shared savings rate if the utilities' programs exceeded 100% of

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[28] DRA Post Workshop Comments and Further Recommendations for the 2009-2011 Shareholder Incentive Mechanism at p. 13; TURN Post Workshop Reply Comments on Energy Efficiency Incentive Mechanisms at p. 4.

[29] D.07-09-043 at p. 104.

the energy savings goals.[30] Because of the much reduced risk associated with an *ex ante* approach, we believe it is just, reasonable, appropriate and necessary to reduce the shared savings rate. In our judgment a shared savings rate of 7% provides the appropriate level of risk re-balancing to offset the effects of relying on *ex ante* assumptions to derive final PEB-related incentive levels. This relatively lower shared savings rate of 7% will be applied to the PEB calculated using ex ante assumptions instead of the 9% and/or 12% shared savings rates that were initially adopted in D.07-09-043 for the 2006-2008 true-up. By applying a 7% share of savings as incentive earnings of the 2006-2008 period, we preserve the remaining majority of energy efficiency savings as a ratepayer benefit.

For purposes of calculating incentives under the mechanism adopted herein, we rely primarily on the PEB assumptions set forth in Scenario 3 (S3), Template 1 (T1) included among the various scenarios that were developed and presented in the Energy Divisions 2006-2008 Scenario Analysis Report. This scenario reflects the use of *ex ante* assumptions (including those in the DEER at the time the utilities energy efficiency portfolios were adopted in 2005) adjusted to reflect verified installations. However, we do make some adjustments to this scenario to reflect certain modifications proposed by SCE in its comments on Commissioner Peevey's alternate proposed decision. In its comments, SCE proposed modifications to some of the *ex ante* parameters. The specific parameters that SCE proposed be changed in Scenario 3 were provided in Attachment B to SCE's comments on the alternate decision of Commissioner Peevey. During the three year period, neither PG&E, SDG&E, nor SCG modified

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[30] D.07-09-043 at p. 8.

their assumptions. SCE however, made some modifications in response to updated information. As a result, SCE argues, under Scenario 3, relative to SCE, PG&E, SDG&E and SCG would be rewarded for not making any changes because they are attributed more savings than they would have been had they modified these parameters. SCE argues that reliance on Scenario 3, absent its proposed changes, would effectively punish SCE for trying to "do the right thing" because many of the parameters reflected in Scenario 3 had been modified in a way that reduced the energy savings attributable to SCE's programs.

We asked the Energy Division to review SCE's recalculation of the incentive amount incorporating the parameter changes it proposes. After consulting with Energy Division, we agree to modify Scenario 3 to reflect SCE's proposed modifications. The parameters and changes to those parameters identified by SCE are provided in Table 5 below.

Table 5: *Ex Ante* Parameter Modifications Proposed by SCE and Reflected In Scenario 3

	SCE Program Updates	2006-08 Compliance Filing	2006-08 Final Quarter Report	Type of Change	Source
1	**SCE2500 Appliance Recycling**				
	Refrigerator Recycling Measures	35%	61.4%	NTG	2004-05 EM&V Study
	Freezer Recycling Measures	54%	70.6%	NTG	2004-05 EM&V Study
2	**SCE2501 Residential Energy Efficiency Program - Residential Lighting Program**				
	Traditional Screw-in CFLs (Res/Nonres)	80%	75%	NTG	2004-05 EM&V Study Channel Distribution methodology applied to current program distribution
	Specialty CFLs (Res/Nonres)	80%	78%	NTG	2004-05 EM&V Study Channel Distribution methodology applied to current program distribution
	CFL Fixtures (Res/Nonres)	80%	76%	NTG	2004-05 EM&V Study Channel Distribution methodology applied to current program distribution
3	**SCE2502 Multifamily Energy Efficiency Program**				
	CFL Lighting	89%	78%	NTG	2004-05 EM&V Study
4	**SCE2507 Comprehensive Packaged Air Conditioning Systems**				
	Quality Installation Measures (RCA, DTS, etc)	80%	89%	NTG	Used 89% NTG from the EE Policy Manual for use in a "Residential Contractor Program"
5	**SCE2509 Industrial Energy Efficiency Program**				
	All Measures	94%	80%	NTG	Reverted to the Nonresidential Default NTG from the EE Policy Manual
	All Customized Measures	100%	89%	Gross Realization Rate	2003 SPC Evaluation
6	**SCE2510 Agricultural Energy Efficiency Program**				
	Pump Test and Hydraulic Services	80%	75%	NTG	Reverted to the Agricultural NTG from the EE Policy Manual
	All Customized Measures	100%	89%	Gross Realization Rate	2003 SPC Evaluation
	All Express-Type Measures	96%	80%	NTG	Reverted to the Nonresidential Default NTG from the EE Policy Manual
7	**SCE2512 Savings By Design**				
	All System Approach and Whole Building Measures	82%	73%	NTG	Average of 2002, 2003, 2004-05 Studies
	All System Approach and Whole Building Measures (kWh)	100%	112%	Gross Realization Rate	Average of 2002, 2003, 2004-05 Studies
	All System Approach and Whole Building Measures (kW)	100%	95%	Gross Realization Rate	Average of 2002, 2003, 2004-05 Studies
8	**SCE2517 Business Incentives & Services**				
	All Express Efficiency Measures	96%	80%	NTG	Reverted to the Nonresidential Default NTG from the EE Policy Manual
	All SPC Measures	100%	89%	Gross Realization Rate	2003 SPC Evaluation

Utilizing the adjustments reflecting SCE's proposed modifications, under this scenario-template combination, both the utilities' program performance against the minimum performance standard and the performance earnings basis are calculated using *ex ante* assumptions. Applying a 7% shared savings rate yields the results provided in Table 6 below. This scenario-template combination includes the 2004-2005 cumulative savings goals used in determining the relevant minimum performance standard, as well as attribution of 50% of the savings attributed to codes and standards development to the utilities, for purposes of determining program performance relative to the minimum performance standard. With regard to interactive effects, S3-T1, as modified, does not reflect any specific updates, nor does it account for interactive effects, either positive or negative.

Table 6: Scenario 3, Template 1 RRIM Results Modified to SCE compliance *ex ante* numbers and a 7% Shared Savings Rate

	Third Earnings Claim (PY2006-2008 True-Up)				
	PG&E	SCE	SDGE	SoCalGas	Total
MPS Average Metric Performance	121%	100%	93%	112%	110%
PEB at MPS Threshold	$ 1,486,366,077	$ 1,063,485,626	$ 230,997,869	$ 245,622,959	$ 2,948,260,634
Earnings Rate	7%	7%	7%	7%	
Total Earnings Over 2006-2008 Period	$ 104,045,625	$ 74,443,994	$ 16,169,851	$ 17,193,607	$ 211,853,077
1st Interim Claim Earnings	$ 41,500,000	$ 24,700,000	$ 10,800,000	$ 5,200,000	$ 82,200,000
2nd Interim Claim Earnings	$ 33,430,614	$ 25,652,348	$ 300,572	$ 2,111,021	$ 61,494,555
Total Interim Claim Earnings Received	$ 74,930,614	$ 50,352,348	$ 11,100,572	$ 7,311,021	$ 143,694,555
True-Up Claim	$ 29,115,011	$ 24,091,646	$ 5,069,279	$ 9,882,586	$ 68,158,522

6. San Diego Gas & Electric and Southern California Gas Company Petition for Modification

On February 19, 2010 San Diego Gas & Electric and Southern California Gas Company (Joint Petitioners) filed a Petition to Modify D.09-12-045 to address a number of calculation errors the Joint Petitioners alleged resulted in an unjustifiable reduction of the energy savings attributed to their energy efficiency programs. As result of this alleged calculation error, the incentive earnings approved by the Commission in D.09-12-045 were less than what the Joint Petitioners argue they would have been entitled to had this calculation error not occurred. Specifically, Joint Petitioners argue that the energy savings attributed to their respective energy efficiency programs in the Second Interim 2006-2008 Verification Report reflected results that were miscalculated owing to an error in the E3 calculator. According to the Joint Petitioners' allegation, the E3 calculator incorrectly truncated estimated savings from certain gas measures installed under the Joint Petitioners' energy efficiency programs so that only savings through the year 2024 were included in the savings results, although, as Joint Petitions argue, these measures may continue to provide benefits beyond 2024. Joint Petitioners presented evidence that they assert indicates E3's acknowledgement of this error. The Joint Petitioners also provided an estimate of the additional incentives they assert they should have received had this error not occurred. DRA filed a response to the Joint Petition on March 22, 2010. DRA did not take a specific position on the Joint Petition itself, but did indicate that it was unable to confirm either the calculation error or its alleged magnitude. DRA asked that before granting the requested relief, we direct Energy Division to verify the alleged error and its impact.

Under the approach and mechanism adopted herein, we find that the Petition for Modification is rendered moot. First, we note that the error observed by Joint Petitioners was corrected in the calculation of the results provided in the Energy Division's 2006-2008 Scenario Analysis Report. In addition, under Scenario 3, which serves as the basis for the calculation of incentives awarded herein, the total amount the Joint Petitioners should be awarded in incentives over the full 2006-2008 cycle exceeds the amounts they have already received in interim payments. Because this decision concerns the entire three year cycle, this final true-up takes into account both interim periods, and, thus, the awards previously made for the first and second interim periods. Pursuant to Scenario 3, modified to apply a 7% shared savings rate to the PEB,, SDG&E and SoCal Gas are entitled to awards totaling $16.2 million and $17.2 million, respectively, for their programs' achievements over the 2006-2008 period. Pursuant to D.08-12-059 and D.09-12-045, they have each received interim awards for the first and second periods totaling $11.1 million and $7.3 million, respectively. Therefore, by this decision, SDGE is entitled to an additional $5.1 award, and SoCalGas is entitled to an additional award of $9.9 million. Accordingly, to the extent the prior claims may have understated the amounts the Joint Petitioners allege they should have received, because the additional amounts to be awarded in the final true-up for the entire 2006-2008 cycle exceed the additional amounts Joint Petitioners allege they should have previously been awarded, any alleged underpayment from the interim period would be fully reflected in a commensurately higher final true-up payment. The additional amounts the Joint Petitioners claim they should have received in D.09-12-045 are $426,142 for SDG&E and $1,324,612 for SoCalGas. These amounts are less than the additional awards we find the Joint Petitioners are entitled to for the 2006-2008 cycle. Therefore, the Joint Petition should be dismissed.

6.1. Energy Efficiency Parameter Updates

Because we shall conduct the true-up of the 2006-2008 RRIM proceeding on the basis *ex ante* assumptions, as discussed above, we do not need to resolve all of the concerns raised over the course of this proceeding, in R.06-04-010 and R.09-01-019, regarding the accuracy of Energy Division's updates to various key parameters, including NTG ratios, EUL estimates, upstream CFL in-service rates, and GHG compliance costs. In our view, whether the updates to key parameters are reasonable in light of more current information is a separate question from the use of those updates for purposes of determining incentive amounts under the RRIM. In addition to concerns regarding the accuracy/reasonableness of the updates to various measure parameters that are currently recognized in the incentive mechanism, questions were also raised regarding whether and how certain other factors should be included in the calculation of the energy efficiency goals and savings. In particular questions were raised regarding the following factors: (1) inclusion of 2004-2005 cumulative goals in assessing the utilities' program achievements relative to the MPS, (2) inclusion of Codes and Standards, and (3) adjustments to account for interactive effects. We address each of these below.

6.1.1. Treatment of 2004-2005 Cumulative Goals

The Energy Division Scenario Analysis Report calculated incentive earnings based on cumulative goals starting from 2004, compared with alternative impacts from excluding cumulative 2004-2005 goals. The direction provided in D.07-09-043, Ordering Paragraph No. 4(b) called for interim incentive claims to be evaluated on a "cumulative-to-date" basis. As further explained in D.07-10-032:

> For any given year, cumulative savings represents 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. (D.07-10-032 at p. 79.)

Our rules on cumulative savings goals were first developed in D.04-09-060 to ensure the IOUs focus on long-term savings, as opposed to those with short-term payback and short expected useful lives. We elaborated on this principle in D.07-10-032, which provides at page 80:

> Under the risk/reward mechanism's MPS, the utilities are further motivated to avoid excessive reliance on short-lived measures. Therefore, it does not work to the utilities' advantage to focus exclusively on measures with short lives (or low persistence of savings over time) because doing so creates the savings shortfall illustrated above, making it harder to meet the MPS. For example, if an energy efficient light with an expected life of five years was installed in 2004, it will remain in service producing savings throughout 2006-2008, after which it will reach the end of its life and need to be replaced with like-savings in 2009.

The IOUs, however, take issue with the inclusion of 2004-2005 data in measuring cumulative goals in deriving incentive earnings for the 2006-2008 cycle. In D.09-05-037, the Commission found that 2004-2005 data is not directly reconcilable with 2006-2008 evaluation results. Consequently, cumulative savings for purposes of the prospective program cycle were defined to exclude the 2004-2005 data. (D.09-05-037 at p. 57 Conclusion of Law No. 1.)

In addition, the Commission concluded in D.09-12-045 that "[f]or the purposes of measuring interim incentive earnings for the 2006-2008 cycle, we agree that it is appropriate to exclude the effects of cumulative goals starting from 2004, as reflected in the Verification Report." (D.09-12-045 at p. 66.) The IOUs argue that the same principle of excluding the cumulative effects of the 2004-2005 program cycle should apply for determining incentive earnings in the final 2006-2008 true-up.

As explained in D.09-05-037, although we excluded 2004-2005 data in the calculation of cumulative savings for the 2010-2012 cycle, we did not reverse our policy of comparing results against cumulative goals. As stated in D.09-05-037, cumulative savings are a critical element of our overall strategy to create long-term, lasting savings through ratepayer investments. Without the cumulative savings goals, we cannot ensure that energy efficiency programs will produce benefits comparable to investments in power plants.

Although we excluded 2004-2005 data in measuring cumulative goals for the 2010-2012 cycle, we did not decide how 2004-2005 data should be treated in defining the cumulative savings for the final 2006-2008 true-up. The treatment of 2004-2005 data for the 2006-2008 true-up likewise does not set any precedent as to the treatment of cumulative goals on a prospective basis as previously addressed in D.09-05-037.

Under the *ex ante* approach adopted herein to evaluate the IOUs' performance over the 2006-2008 period and the associated incentive earnings, we note that all the IOUs met and exceeded the minimum performance standard required to begin earning incentives. Scenario 3, Template 1, as modified, on which the incentive awards adopted by this decision are based, includes the 2004-2005 cumulative goal data. Excluding these cumulative goals would have no impact on the awards and it would only further reduce the MPS hurdle that, under the approach adopted herein, the IOUs already exceeded. Furthermore, because we are adopting a 7% shared savings rate for savings over 85%, in place of the tiered 9% and 12% shared savings rates, excluding the 2004-2005 cumulative goals would have no impact on the level of incentive earnings. Therefore, for purposes of this decision we find resolution of the question of excluding the 2004-2005 cumulative savings goals is unnecessary and not relevant for purposes of the 2006-2008 true-up.

6.1.2. Savings from Codes and Standards (C&S) Advocacy Programs

The IOUs argue that pursuant to the Commission's policy rules for energy efficiency, 100% of verified savings from pre-2006 C&S Advocacy Programs shall count towards the energy savings goals, minimum performance standards and performance earnings basis for the 2006-2008 and 2009-2011 program cycles.

The ERT assumptions utilized by the Energy Division, however, did not reflect any net benefits associated with any C&S activity initiated within the 2006-2008 program cycle.

In D.09-12-045, the Commission accepted the non-inclusion of such C&S benefits for interim claims because information was not yet available for incorporation into the savings calculations. The Commission concluded that "since the requisite data will be incorporated for purposes of the 2010 true-up, the utilities will be made whole for the effects of any updated data that may change the incentive earnings amount." (D.09-12-045 at pp. 64-65.)

The IOUs contend that omission of this information in the Energy Division's calculations systematically undercounts the benefits associated with the utilities' 2006-2008 programs. In accordance with the Commission's directive, the IOUs argue that the savings used to compute RRIM awards should include 100% of the efficiency savings and net benefits from the aforementioned C&S.

In D.10-04-029, the Commission determined that it is appropriate to count 100% of these savings toward achievement of the 2010-2012 cumulative goals. This determination was based on the finding that: "…better technical data about savings is now available as compared to when the original 50% determination was made in D.05-09-043, including Evaluation Protocols and elimination of concerns about double-counting and base case forecasts." (D.10-04-029 at p. 46.) Under the *ex ante* approach adopted herein, the utilities exceed the MPS when including only attributing 50% of the C&S savings to their programs. It follows that increasing the amount of C&S savings the utilities may count toward the MPS would result in the utilities exceeding the MPS by more. In comments, PG&E argued that the alternate decision of Commissioner Peevey erred in stating that that savings associated with Codes & Standards are only considered for purposes of assessing performance relative to the MPS but are not included in the calculation of the PEB. Our intent in this decision is not to adopt modifications to prior decisions regarding the inclusion of savings and costs from Codes and Standards advocacy for purposes of determining utilities' progress against the energy efficiency goals or how those savings and costs are incorporated into the calculation of earnings under the incentive mechanism. Rather, in this decision we simply reaffirm the Commission's prior determinations on how Codes & Standards advocacy would contribute toward goals and incentive earnings. Our reasoning regarding the MPS as it relates to the inclusion of 50% or 100% of the savings attributable to Codes & Standards advocacy still holds; however, to the degree that savings due to Codes & Standards should, based on prior Commission determinations, be included in the calculation of the PEB for the 2006-2008 period, then additional incentive rewards may be appropriate. No studies have been submitted into the record in this proceeding that address the magnitude of any such savings, so we have no basis to include additional rewards in this decision, provided prior Commission determinations allow for the inclusion of savings from C&S activities in the calculation of the PEB for this period. Of course, nothing in this decision precludes the utilities from seeking credit for the Codes & Standards advocacy work in the future, provided such a request is consistent with prior Commission determinations on this issue.

6.1.3. Treatment of Interactive Effects

Historically, the energy savings profile of a given efficiency measure has been considered in isolation. The impact of installing a single CFL, for instance, is estimated as the difference in its own energy consumption and that of the incandescent bulb it is assumed to replace. However, in some cases, measures have systems impacts, or "interactive effects," which are not captured by baseline comparisons along a single parameter. Some energy efficiency measures, for example, produce less heat than the measure they replace. Depending on factors, including where they are installed, certain energy efficiency measures may increase the need for heating or decrease the need for air conditioning.

The Energy Division reviewed available studies and produced scenario calculations to incorporate interactive effects for both residential and commercial measures for a number of lighting and appliance measures, resulting in negative therm impacts and positive kWh demand impacts for select measures. The data underlying the Commission's currently adopted goals, however, do not reflect these assumptions regarding interactive effects. For comparison, the Scenario Analysis Report also showed the savings impacts, assuming exclusion of all interactive effects.

In D.09-05-037, we affirmed that interactive effects affect net energy savings and are, thus, appropriate for incorporation into the DEER update, stating that:

> It is of paramount importance to maintain the analytical rigor of our methodologies to count savings. Compromising the technical integrity of our counting methodologies is tantamount to compromising the reliability of energy efficiency as a resource. Given the priority energy efficiency holds in our loading order, we are duly committed to reflecting our best knowledge regarding savings in DEER. (D.09-05-037 at p. 21.)

We also recognized, however, how interactive effects can have a significant effect on assumed savings achievement, particularly for the dual-fuel utilities, PG&E and SDG&E. In D.09-05-037, we determined the adjustment that was appropriate to reduce 2009-2011 therm goals to recognize the applicable interactive effects, but we did not separately address, in that proceeding how the utilities' therm goals for the 2006-2008 cycle should be adjusted for interactive effects. Because interactive effects, particularly those experienced by dual-fuel gas and electric utilities, had not been considered in previously adopted energy efficiency goals, we found it reasonable, in D.09-05-037, to make adjustments to SDG&E and PG&E's goals for therm savings for purposes of their 2009-2011 gross savings goals. Drawing from the Energy Division Verification Report's analysis of 2006-2007 data, we thereby reduced the adopted 2009-2011 therm savings goals for PG&E by 26% and for SDG&E by 22%.

We concluded in D.09-12-045 that the issue of whether to apply the full 26% reduction to PG&E's 2006-2008 therm goals for purposes of computing 2006-2008 RRIM earnings would be addressed in this true-up

Under the *ex ante* approach adopted herein, however, we have relied on Scenario 3, Template 1, which does not make any adjustments to the energy savings results to address interactive effects. As we have previously discussed, however, the utilities, under Scenario 3, Template 1 already exceed the MPS, therefore, reducing the goals to account for interactive effects would have no bearing on the outcome. A reduction in the goals would only serve to increase the degree to which the IOUs are found to exceed the MPS, but would not impact the calculation of the PEB, nor the shared savings rate we have adopted herein. Therefore, because of the modification adopted by this decision, this issue is no longer in need of resolution, and is not relevant for purposes of the 2006-2008 period.

7. Assignment of Proceeding

John A. Bohn is the assigned Commissioner, and Thomas R. Pulsifer is the assigned Administrative Law Judge (ALJ) for this proceeding.

8. Comments on Alternate Proposed Decision

The alternate proposed decision of Commissioner Peevey 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 December 6, 2010 by SCE, PG&E, SDG&E/SCG, DRA, TURN, and NRDC and reply comments were filed on December 13, 2010 by SCE, PG&E, SDG&E/SCG, DRA, and NRDC.

In its comments, SCE supports the approach adopted in the alternative proposed decision of Commissioner Peevey. As explained, SCE made some anticipatory changes to its parameters based on emerging information over the course of the 2006-2008 cycle. Consequently, it argues that absent certain modifications to Scenario 3 that would "back-out" changes SCE made to various parameters over the course of the 2006-2008 cycle, SCE would essentially be punished. As explained above, it was unreasonable to conclude the IOUs could have anticipated the magnitude of all the changes identified in the *ex post* evaluation report. Nor was it reasonable to expect them to be able to adjust their portfolios in a manner that would allow them to avoid the adverse impacts of those changes. While SCE did make some adjustments, those adjustments were insufficient to compensate for the profound changes identified in the *ex post* evaluation report. We agree with SCE and modify the alternate proposed decision accordingly.

PG&E comments indicate general support for the conceptual underpinnings of the alternate proposed decision of Commissioner Peevey. However, it takes issue with certain modifications to the mechanism as it applies to the 2006-2008 true-up. Specifically, PG&E argues that a 12% shared savings rate is more appropriate than the 7% rate adopted in the alternate proposed decision, alleging that under Scenario 3, if all other aspects of the mechanism were left unchanged, PG&E would be earning at the 12% shared savings rate. PG&E further argues that the 7% rate is in conflict with the purported goal of supply side comparability. In addition, PG&E contends that Scenario 3 leaves unresolved questions regarding when the IOUs will receive credit for the energy savings associated with compact fluorescent light bulbs that were purchased and rebated in the 2006-2008 period but which are not installed until later. Lastly PG&E alleges that the alternate proposed decision mischaracterizes the treatment of Codes & Standards as adopted by the Commission. Specifically, PG&E argues that the Commission had previously determined that 100% of the savings from Codes and Standards work should be included in calculating performance relative to the MPS as well as the PEB.

Much of PG&E's argument, recounted above, concerns policy matters. We find PG&E's argument that a higher shared savings rate should be adopted based on the shared savings rate that would apply under Scenario 3to be without merit. PG&E's argument ignores the substantial change that results in the risk balance caused from shifting to an *ex ante* approach. Specifically, under an *ex* *ante* approach, ratepayers are at greater risk of paying incentives for efficiency savings that, in retrospect, are found to have not occurred or which were less cost-effective than originally anticipated. To address this, we find that reducing the shared savings rate provides a just, reasonable and straightforward way of restoring the balance in the mechanism.

PG&E, and SCE in reply comments, also raised an issue related to the treatment of CFLs that were procured and rebated over the 2006-2008 cycle but which are not installed until after the cycle. PG&E asserts that according to the Energy Division's Upstream Lighting Report 97% of the all residential CFLs sold to customers may be installed within two years of the conclusion of the program cycle. Thus, PG&E is concerned whether and when it will receive credit for the eventual installation of the CFLs.

We understand PG&E's concern that CFLs that are procured and rebated, and which are ultimately installed, should yield some level of energy savings that are attributable to the utility programs; however, we do not have sufficient information to make a determination regarding how the savings associated with these CFLs would impact the utilities' earnings under the incentive mechanism for the 2006-2008 period. In any event, nothing in this decision precludes the utilities from seeking credit for energy savings based on the installation of CFLs that were procured and rebated over the 2006-2008 cycle but which were not installed in that period, provided an incentive mechanism is adopted on a going-forward basis. As we discuss *infra*, concerning SDG&E's and SCG's comments on the alternate proposed decision of Commissioner Peevey, by this decision we have determined that the *ex ante* approach adopted herein including the use of a 7% shared savings rate, should be applied to the 2009 period.

Lastly, PG&E alleges that the alternate proposed decision errs in stating that that savings associated with Codes & Standards are only considered for purposes of assessing performance relative to the Minimum Performance Standard. We addressed this issue in section 6.1.2 above and need not review it again here.

SDG&E/SCG generally support Commissioner Peevey's alternate proposed decision. They also assert that the methodology should be applied to the utilities 2009 energy efficiency programs. They also argue, much like NRDC, that the Commissioner Peevey's alternate proposed decision inappropriately endorses the updates to various parameters that Energy Division identified in its impact reports. We have addressed this latter allegation in the discussion, *infra*, regarding NRDC's comments.

SDG&E/SCG argue, applying the mechanism as modified in this decision to the 2009 energy efficiency programs would be consistent with the bridging approach the Commission took to the 2009 program year when we authorized, by D.08-10-027, the utilities to continue existing 2006-2008 programs into the 2009-2011 period pending the a final decision on the 2009-2011 portfolios. SDG&E/SCG also argue that the approach taken in the ALJ's proposed decision on the Incentive Mechanism for the 2010 to 2012 period, under which the Commission would simply skip 2009, would create an "unwarranted omission" in the treatment of the efforts the utilities undertook to promote energy efficiency in that year. We agree in principle with SDG&E's/SCG's bridging approach argument. We think this approach also ensures that the opportunity to earn incentives shall be consistently applied on a year-to-year basis. However, applying the mechanism adopted in this decision for the 2006-2008 period to 2009 is complicated by the fact that a number of changes have been made to what is included in the energy efficiency goals post 2006-2008, as well as changes to what is included among the activities that contribute toward goal achievement. These changes include, but are not necessarily limited to, the transition to goals being set on a gross basis, and the removal of the 2004-2005 cumulative savings from the goals.

Notwithstanding these complicating factors, we are persuaded that applying the mechanism adopted here for the 2006-2008 true-up to the 2009 program year is reasonable. To that end, the utilities shall file applications in which they calculate for energy efficiency incentives in 2009 pursuant to the modifications made to the incentive mechanism adopted herein. These applications shall be submitted to the Commission no later than June 30, 2011 to allow for consideration and disposition by December 31, 2011.

In developing and submitting their respective applications, the utilities shall recalculate their 2009 *ex ante* savings in the Evaluation Reporting Template (ERT) tool[31] to reflect gross *ex ante* savings. The utilities may also incorporate estimated net benefits attributable to post-2006 C&S program advocacy efforts. No other modifications shall be made to the ERT tool or the ERT input sheets,[32] provided, however, that SCE shall be permitted to revert some of the Gross Realization rates and NTGs back to the values used in the planning of the 2006-

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[31] The ERT Tool can be found and downloaded from this website: http://www.edcentralserver.com/2009ERT/L.%20%202009%20ERT%20Application%20(withData).exe.

[32] The ERT input sheets can be found and downloaded from this website: http://www.edcentralserver.com/2009ERT/M.%202009%20ERT%20Input%20Sheets.exe

2008 portfolio, consistent with the changes identified in Table 5 above. In addition, the utilities shall use the risk reward spreadsheet template provided by Energy Division which recognizes the removal of 2004-2005 goals and savings, the inclusion of 2006-2008 net goals and 2009 gross goals, the inclusion of 50% decay from 2006-2008, and the inclusion of verified C&S savings using 50% for pre-2006 and 100% post-2006 as directed in other Commission decisions. The utilities shall provide the following with their applications in order to facilitate the Commission's review of their incentive claims:

1. The Microsoft Access ERT tool the utilities used to modify the 2009 *ex- ante* numbers to gross savings.
2. For SCE, any ERT Input Sheets that have been modified.
3. The Risk Reward Spreadsheet template used to calculate the incentive amounts.
4. A document that describes the files or tables that were changed, and what specific changes were made.

NRDC generally supports the outcome of the alternate proposed decision, though it argues for the inclusion of additional Findings of Fact to underscore the Commission's commitment to energy efficiency as the state's priority resource, the benefits of the utility energy efficiency programs as implemented thus far in reducing energy consumption, and the criticality of performance based incentives in promoting energy efficiency. We remind NRDC that we made such findings in D.07-09-043, and thus, doing so again is harmless, although redundant. This Commission has steadfastly maintained over many years that energy efficiency is the state's top resource priority resource. Further, we decline to adopt NRDC's proposed finding because we have pending before us another decision regarding reforms to the incentive mechanism going forward. The outcome of that proceeding will be a more accurate reflection of the Commission's position regarding the criticality of an incentive mechanism to achieving the state's energy efficiency goals and a finding here that an energy efficiency mechanism is an "essential policy" could be construed as prejudging the outcome of that decision.

NRDC also argues that the alternate proposed decision inappropriately concludes that the Energy Division impact reports are accurate. On this point, NRDC argues that the alternate proposed decision makes such a finding without having adequate information on the record to do so. For purposes of this decision, as already noted above, questions regarding updates to various *ex ante* parameters are not germane given the *ex ante* approach adopted herein. While we continue to believe that updates to these parameters do, at some point need to be finalized for planning purposes, there is no need to engage on this issue in this decision, and so we modify this decision accordingly to eliminate discussion related to the updates to various *ex ante* parameters.

In its comments, DRA argues that the alternate proposed decision violates the intent of the mechanism as adopted in D.07-09-043 that ratepayers would only pay the incentives based on energy savings that were found to have actually occurred. Reliance on *ex ante* assumptions, in DRA's view, contravenes this because Energy Division found, though, we note, not without substantial controversy, that many of the *ex ante* parameters were found to have been overly aggressive in terms of the magnitude of energy savings they would attribute to the utility programs.

We do not disagree that the modifications adopted in this decision represent a shift in the incentive framework and we also agree that relying on *ex ante* assumptions does increase the risk that some incentive payments will be made for savings that based on updated parameters are found to not have occurred. The flaw in DRA's argument is that it ignores both the inconsistencies in the application of the *ex post* adjustments in the mechanism as adopted in D.07-09-043, as well as the practical challenges that mechanism posed given the timing and availability of robust data regarding changing market dynamics. By utilizing the modifications we have hereby adopted, these issues are dismissed. However, in recognition of the changed risk profile to customers the alternate proposed decision substantially reduces the shared savings rate.

In comments TURN argues that Commissioner Peevey's alternate proposed decision is incorrect in its proposition that the incentive mechanism adopted in D.07-09-043 imposed unreasonable expectations on the IOUs. TURN argues that the history of the proceeding and energy efficiency indicate that the utilities should have modified their portfolios based on the understanding that a number of parameters used in developing the portfolios were outdated. TURN correctly argues that concerns regarding factors like the NTG were expressed for many years. However, it is our judgment that these reservations or expressions of concern did not provide a sufficient basis for the utilities to modify their portfolios in a manner that would have allowed them to substantially avoid the adverse impacts driven by the purported changes in the underlying parameters As we have observed, the updates to the parameters have been and remain highly contentious, and, to the extent more robust data indicating the sheer magnitude of these adjustments was forthcoming, it was not made available and actionable until well into the 2006-2008 program cycle.

Furthermore, as the alternate proposed decision indicated, while factors like the NTG were shown by Energy Division to have declined precipitously, indicative of substantial market transformation, the goals against which the utilities performance was being compared were never similarly adjusted. This inconsistency places the utilities in an increasingly unreasonable position. For example, if Energy Division found there was 100% market transformation for a particular customer segment or program (i.e. the NTG ratio was determined be zero), by definition, no energy savings could be attributed to that utility program because these savings would occur irrespective of this program. Yet, under this example, the utilities would still be responsible for capturing savings that are no longer available for the utilities to be credited for capturing.

In addition, TURN argues that should the Commission adopt the Peevey alternate proposed decision, the scenario-template combination selected should be modified from Scenario 3 – Template 1 to Scenario 3 – Template 6. Template 6 includes in the calculation of the PEB, the costs of the interim payments already awarded to the utilities of $143 million,thereby reducing the base against which the alternate proposed decision's 7% shared savings rate applies. This would reduce the total incentives for the 2006-2008 period by approximately $10 million. TURN argues that this modification would be "consistent with Commission policy and is necessary to reflect the cost-effectiveness of the programs." While the incentives are a true economic cost of the program, that fact does not require, as TURN argues, that we recursively include, in the calculation of the PEB, and, by extension, the calculation of any incentive rewards, the value of the incentive payments themselves. Nor are we convinced by TURN's arguments that because the interim payments are sunk economic costs that they should be included as a cost in the calculation of the PEB for purposes of the final claim.

Findings of Fact

1. In D.07-09-043, the Commission adopted the RRIM to encourage achievement of Commission-adopted energy efficiency goals, and to extend

California's commitment to making energy efficiency the highest energy resource priority.

2. Pursuant to D.07-09-043 the RRIM would rely upon reports by Energy Division based on an independent evaluation of energy savings as the basis for interim and final incentive payments, as warranted.

3. The RRIM as adopted in D.07-09-043 required Energy Division to evaluate and verify the underlying parameters impacting savings resulting from and attributable to the utility programs and apply these evaluations to 2006-2008 results to ensure that ratepayers were not required to pay incentives for savings that did not materialize.

4. D.08-01-042 modified the original RRIM design to, among other things, require updating measure load impacts prior to the payout of interim claims to mitigate the risk of extremely large swings in earnings (positive or negative) at the final earnings true-up.

5. The process established for utilities to qualify for incentive earnings to meet and exceed Commission-adopted energy efficiency savings goals has proven to be quite controversial, because of disputes about methodologies used in calculating energy efficiency savings accomplishments, the sensitivity of incentive earnings to differences in the savings calculation methodologies, and more fundamental questions regarding the reasonableness of using updated *ex ante* assumptions and parameters to assess the utilities' energy efficiency program performance under the incentive mechanism.

6. By D.08-12-059 and D.09-12-045, the IOUs have been awarded two interim incentive payments for the 2006-2008 cycle, totaling $143.7 million.

7. Outstanding disputes as to the final true-up amount of incentive payments relate to assumptions regarding (a) the validity of both the *ex ante* and *ex post*

(updated) total net cost savings subject to incentive earnings calculations, and (b) the applicable percentage share of the net savings to be assigned as incentive earnings.

8. The calculation of the 2006-2008 earnings true-up amounts vary significantly depending upon whether assumed energy savings are derived using unmodified *ex ante* values, versus updated *ex post* measures for key parameters.

9. The use of unmodified *ex ante* parameters drawn from the 2005 DEER for purposes of deriving savings achievements subject to the 2006-2008 incentive earnings true-up may produce results that differ from an assessment of the savings the utility portfolios provided based on updated assumptions to the extent the 2005 DEER parameters changed over the 2006-2008 period.

10. Reliance on *ex ante* assumptions for purposes of calculating incentive claims under the RRIM does not require the Commission to rely on these same assumptions in quantifying the ultimate impact of energy efficiency programs on energy savings and utility resource needs.

11. The incentive mechanism, as adopted in D.07-09-043, was predicated on the notion that the utilities can exert control over the magnitude of savings actually realized from their energy efficiency portfolios and can be reasonably expected to anticipate changes in the impact of various energy efficiency programs and measures in their portfolios and modify their portfolios and programs accordingly.

12. Because the incentive mechanism, as modified by D. 08-01-042, required the *ex ante* assumptions to be updated, the utilities assumed additional risk associated with changes in the underlying parameters and resulting impacts on

measure savings and attribution over the 2006-2008 period over which they had no control.

13. Over the course of the 2006-2008 cycle, the evaluated measure of a number of key parameters changed dramatically from what had been assumed for purposes of developing and assessing the utilities 2006-2008 energy efficiency portfolios. Assessed changes to these parameters were such that the savings associated with the measures and programs in the utility portfolios were substantially reduced from what had been anticipated when the portfolios were approved.

14. The tiered shared savings rates of 9% and 12% in D.07-09-043 were adopted based on the Commission's judgment of what was reasonable given the risk to ratepayers of issuing incentives for claimed savings that may not ultimately materialize and the risk to the utilities of reduced incentives or penalties for missing or falling short of performance goals.

15. Eliminating the *ex ante* updating requirements for purposes of the incentive earnings true up (a) reduces the risk of lowered incentive earnings or penalties to the utilities substantially, and (b) increases the risk that ratepayers may pay incentives for supply-side savings that do not ultimately materialize.

16. The ability of the IOUs to make adjustments to their portfolios throughout the 2006-2008 cycle was constrained by the availability and timing of robust information regarding the various parameters that influence energy efficiency savings estimates and attribution.

17. Under the RRIM formula adopted by D.07-09-043, each IOU is eligible for a shared savings percentage that varies depending on the degree of success in achieving energy efficiency savings in relation to a "minimum performance standard."

18. Modification of the incentive framework that eliminates investor risk associated with independently evaluated updated *ex post* performance measures, but retains many aspects of the mechanism adopted in D.07-09-043, requires a corresponding reduction in each utility's applicable shared savings percentage in order to preserve the proper alignment of ratepayer and utility shareholder interests.

19. In order to rebalance the ratepayer-shareholder interests, in view of the use of unmodified *ex ante* assumptions, an appropriate reduction in the shared savings percentage is justified, reasonable and appropriate. Although the quantification of an appropriate reduction in the shared savings percentage is a matter of judgment, a reduction to a 7% rate for the 2006-2008 cycle provides for a reasonable realignment of investor and ratepayer interests.

20. Southern California Edison made a number of changes to the *ex ante* parameters concerning net-to-gross and gross realization rate numbers it assumed over the course of the 2006-2008 program cycle in an effort to be responsive to concerns regarding the accuracy of several *ex ante* values as reflected in Table 5 above.

21. Scenario 3, Template 1 represents the IOUs *ex ante* claims modified by Energy Division's installation rates.

22. Scenario 3, modified to reflect the original numbers used by Southern California Edison in its planning, provides a reasonable approximation of the savings that would be attributed to the utility programs using *ex ante* assumptions.

23. Based on the net benefits calculated under a modified Scenario 3, Template 1 in Energy Division's 2006-2008 Scenario Analysis Report, and applying a shared saving rate of 7% to the calculated net benefits, establishes that

SCE, PG&E, SDG&E and SCG are entitled to additional awards for the 2006-2008 program cycle.

24. The additional, final incentives the utilities have earned under the modifications adopted by this decision are as follows: PG&E: $29.1 ; SCE: $24.1 million; SDG&E: $5.1 million; SCG: $9.9 million.

25. The values set forth in Appendix A constitute a reasonable approximation of energy efficiency savings derived in accordance with Commission goals and policies as set forth in this decision for use in calculating the incentive formula covering the 2006-2008 program cycle.

26. Scenario 3 includes the 2004-2005 cumulative savings in the goals against which the utilities 2006-2008 energy efficiency programs are compared. Because, under this scenario the utilities' energy efficiency programs for the 2006-2008 period yield savings that are found to exceed the MPS, excluding the 2004-2005 goals would result in the utilities being found to exceed the MPS by more.

27. To the degree that savings attributable to Codes & Standards should, based on prior Commission determinations, be included in the calculation of the performance earning basis for the 2006-2008 period, then additional incentive rewards may be appropriate.

28. Nothing in this decision precludes the utilities from seeking credit for the Codes & Standards advocacy work in the future, provided such a request is consistent with prior Commission determinations on how savings from Codes & Standard are to be treated.

29. Nothing in this decision precludes the utilities from seeking credit for the energy savings associated with compact fluorescent lights that were sold and rebated in the 2006-2008 period but which were not or will not be installed until

later, provided the savings from those lights have not already been accounted for.

30. In D.08-10-027 the Commission authorized the utilities to continue existing energy efficiency programs from the 2006-2008 period into 2009 pending Commission adoption of a final decision on the utilities EE portfolio programs for the 2009-2011 period.

31. The Order Instituting Rulemaking which established Rulemaking 09-01-019 expressly contemplated making changes to the Risk/Reward Incentive Mechanism as it applies to the 2006-2008 true-up or replacing that mechanism altogether.

Conclusions of Law

1. The final true-up of incentive earnings for the 2006-2008 cycle should be evaluated based upon *ex ante* assumptions, adjusted for independently verified installations of savings measures as set forth in Appendix A.

2. The shared savings rate used to calculate incentives should be reduced to 7% in place of the 9% and 12% rates of the incentive mechanism adopted in D.07-09-043 because of the reduced risk to the IOUs of lowered incentive earnings or penalties under an *ex ante* approach to assessing program performance relative to the energy efficiency goals.

3. Based on of the IOU savings accomplishments for the 2006-2008 cycle, as set forth in Appendix A, the IOUs are eligible for additional incentive awards for the 2006-2008 pursuant to the modifications to the incentive mechanism adopted herein.

4. The calculations of the incentive awards which are based on the assumptions set forth in Appendix A, balance the goals of encouraging and rewarding the utilities' aggressive implementation of energy efficiency programs

with the risk that actual savings achieved over the course of the 2006-2008 cycle may be less than what may have been anticipated, due to changes in the underlying assumptions on which the utilities' portfolios rely.

5. Final awards for the 2006-2008 program cycle in the amount of $29.1 to PG&E, $24.1 million to SCE, $5.1 million to SDG&E, and $9.9 million to SCG are just and reasonable incentive earnings under the RRIM methodology adopted by D.07-09-043, as modified.

6. The total awards granted to PG&E, SCE, SDG&E and SCG for the 2006-2008 program cycle, which include the final awards adopted by this decision, in addition to the interim awards adopted by D.08-12-059 and D.09-12-045 are just and reasonable earnings under the RRIM as modified.

7. The 2006-2008 true-up should be finalized in accordance with the Ordering Paragraphs below.

8. Since the Energy Division's finalized calculations incorporate correction of the E3 calculator used to determine natural gas energy efficiency benefits, as referenced in the SDG&E and SCG's Petition to Modify D.09-12-045 filed February 19, 2010, and because the additional amounts allegedly owed to them pursuant to Appendix A of this decision exceed the shortfall in their interim claims, that filing is hereby dismissed because it is moot.

9. The Commission should apply the modifications to the incentive mechanism adopted herein to the 2009 energy efficiency program year, recognizing the changes in the manner in which goals are stated, and what measure or activities contribute toward the achievement of those goals.

O R D E R

IT IS ORDERED that:

1. Decision 07-09-043 is modified as follows:

   (a) Page 5, is modified to delete the second, third and fourth sentences of the first full paragraph, which provide: "As this figure shows, earnings begin to accrue at a 9% sharing rate if the utility meets 85% of the Commission's savings goals. If portfolio performance achieves 100% of the goals, the earnings rate increases from 9% to 12%. This means, for example, if the combined utilities achieve 100% of the 2006-2008 savings goals and the verified net benefits (resource savings minus total portfolio costs) at that level of performance is $2.7 billion, then $2.4 billion (88%) of those net benefits goes to ratepayers and $323 million (12%) goes to utility shareholders."

   (b) Page 5, the following added in place of the sentences deleted by Ordering Paragraph Number 1(a): "The earnings begin to accrue at a 7% sharing rate if the utility meets 85% of the Commission's savings goals." Footnote 6 follows the end of the modified sentence.

   (c) Figure 1 on page 8 is modified to delete the 9% and 12% of PEB figures and add 7% in the place of 9%.

   (d) Table 1 on page 9 is modified so that the highlighted area that is at 100% is moved to the 85% line.

   (e) Table 1 on page 9 is modified to reflect the application of a 7% shared savings rate to the Net Benefits for all calculations of Shareholder Earnings associated with Verified Savings of 85% of goals and higher.

   (f) Page 10 is modified to delete the second full paragraph.

   (g) Page 13: Footnote Number 9 is deleted.

(h) Page 12 is modified to delete the first sentence of the second full paragraph: "Each earnings claim will be based on the savings and net benefits verified in Energy Division's interim and final EM&V reports, and each claim will be submitted via compliance Advice Letter by the utilities," and add in its place: "Earnings claims will be based on the Commission's determination of the calculation of energy efficiency savings achievements and net benefits, including the Energy Division's interim and final EM&V reports, and each claim will be submitted via compliance Advice Letter by the utilities."

(i) Pages 12-13 are modified so that the sentence that carries over from page 12 to page 13, "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," is deleted

(j) The following added in place of the deletion ordered by Ordering Paragraph Number 1(h): "Ratepayers will only be required to share net benefits with shareholders to the extent that those net benefits actually materialize, based on our determination in light of the record."

(k) Page s 108 -109 are modified so that the sentence that carries over from page 108 to page 109, "Recognizing that our savings goals are aggressive (yet achievable), and considering what percentage of sharing is fair to ratepayers and will reasonably balance the penalty side of the curve, we find that the tiered-rate structure described below strikes a reasonable balance," is deleted and the following is added in its place: "Recognizing that our savings goals are aggressive (yet achievable), and considering what percentage of sharing is fair to ratepayers and will reasonably balance the penalty side of the curve, we find that the shared structure described below strikes a reasonable balance."

(l) Page 109 is modified to delete the second full paragraph: "Once the utility has met the MPS, a first tier sharing rate of 9% will apply. When the utility has met 100% of the goals, a second tier sharing rate of 12% will apply, up to the earnings cap, " and the following is added in its place: "Once the utility has met the MPS, the sharing rate of 7% will apply."

(m) Page 109, the second and third sentences of the third full paragraph, "So, for example, if a utility's MW achievement is at 85% of the MW goal, but its GWh and MTherm achievements are 100% and 115% of the goals, respectively, the utility has met the MPS of 85% but not the 100% threshold for the second tier (12%) savings rate. It is still in the first tier (9%) range until it pulls up the MW level to 95%," are deleted in their entirety.

(n) Page 110, the second full paragraph: "This level of earnings potential increases to $322.6 million (for all utilities combined) at 100% achievement of the Commission's savings goals, if and only if the corresponding net benefits of $2.7 billion are actually produced by the energy efficiency portfolio ratepayers. If the utilities' performance is truly superior, whereby they exceed the goals by a significant margin, the earnings for their shareholders increase up to a maximum of $450 million, provided that the utilities produce the corresponding $3.9 *billion* in net benefits at that maximum level of earnings," is deleted in its entirety.

(o) Page 110, the first sentence of the third paragraph is modified to delete the word "tiered", and add the word "shared" in its place, so that the sentence now provides: "In our judgment, this shared earnings structure appropriately recognizes that, as the utilities move towards and beyond the goals to a level of superior performance, they are creating substantial ratepayer value in the form of net benefits, as well as GWh, MW and MTherm savings."

(p) Page 220, Ordering Paragraph Number 2.e is deleted and the following added in its place: "e) If a utility has met the MPS, a sharing savings rate of 7% shall apply, up to the earnings cap adopted for each utility."

2. The true-up of Risk/Reward Incentive Mechanism Savings for the 2006-2008 program cycle is hereby concluded. The total amount of incentives the utilities have earned over the 2006-2008 period is identified in Appendix A.

3. In view of the amounts the utilities have previously received in interim claims, the utilities are awarded the following amounts of true-up payments: Pacific Gas and Electric: $29.1; Southern California Edison: $24.1 million; San Diego Gas & Electric: $5.1million; Southern California Gas: $9.9 million. These constitute the final and complete resolution of all awards due Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company for the 2006-2008 cycle.

4. No later than June 30, 2011, the utilities shall file applications in which they calculate energy efficiency incentives in 2009 pursuant to the incentive mechanism as modified herein. These applications shall be submitted to the Commission no later than June 30, 2011 to allow for consideration and disposition by December 31, 2011. In developing and submitting their respective applications, the utilities shall recalculate their 2009 *ex- ante* savings in the Evaluation Reporting Template (ERT) tool to reflect gross *ex- ante* savings. The utilities may also incorporate estimated net benefits attributable to post-2006 C&S program advocacy efforts. No other modifications can be made to the ERT tool or the ERT input sheets, except SCE is allowed to revert some of the Gross Realization rates and NTGs back to the values used in the planning of the 2006-2008 portfolio consistent with the changes identified in Table 5 above. In addition, the utilities shall use the risk reward spreadsheet template provided by Energy Division which recognizes the removal of 2004-2005 goals and savings, the inclusion of 2006-2008 net goals and 2009 gross goals, the inclusion of 50% decay from 2006-2008, and the inclusion verified C&S savings using 50% for pre-2006 and 100% post-2006 as directed in other Commission directives.herein. The utilities shall provide the following with their applications in order to facilitate the Commission's review of their incentive claims:

- The Microsoft Access ERT tool the utilities used to modify the 2009 *ex- ante* numbers to gross savings.
- For SCE, any ERT Input Sheets that have been modified.
- The Risk Reward Spreadsheet used to calculate the incentive amounts.
- A document that describes the files or tables that were changed, and what specific changes were made.

5. The Commission shall separately address in a subsequent proceeding in this docket whether, or subject to what conditions incentive payments and/or penalties may be due in 2010, and beyond.

6. Because of the corrections incorporated in the Energy Division Evaluation Report and the additional incentive amounts awarded herein to San Diego Gas & Electric Company and Southern California Gas Company for the final 2006-2008 true-up, the Petition to Modify D.09-12-045, filed by San Diego Gas & Electric Company and Southern California Gas Company is dismissed.

7. This proceeding shall remain open for consideration of issues relating to prospective modifications to the Risk/Reward Incentive Mechanism.

This order is effective today.

Dated December 16, 2010, at San Francisco, California.

MICHAEL R. PEEVEY
President
JOHN A. BOHN
TIMOTHY ALAN SIMON
Commissioners

I reserve the right to file a dissent.

/s/ DIAN M. GRUENEICH
CommissionerI

I reserve the right to file a dissent.

/s/ NANCY E. RYAN
Commissioner

APPENDIX A

Adopted Basis for Assessing Risk/Reward Incentive Mechanism True-Up

The following shall apply for evaluating whether or to what extent any utility is entitled to additional earnings or to penalties pursuant to the final true-up of 2006-2008 Risk/Reward Incentive Mechanism (RRIM) results:

1. Use the calculation of the Performance Earnings Basis utilizing a modified version of Scenario 3, Template 1 from the Energy Division's 2006-2008 Scenario Analysis Report. The modifications to Scenario 3 reflect changes to a number of underlying parameters identified by SCE in Attachment B to its comments filed December 6, 2010 on the Peevey APD. These are recreated in Table 5 in section 5.4 of this decision.
2. Apply a 7% shared savings rate to the Performance Earning Basis provided the utility achieves at least 85% of the Energy Efficiency Goals.

The table on the next page demonstrates that under the approach adopted herein, all of the IOUs savings performance exceeds 85% of adopted goals.

The total calculated RRIM earnings are $211,853,077 over the 2006-2008 period based on a 7% shared savings rate applied to the modified Scenario 3, Template 1 Performance Earnings Basis. Subtracting interim amounts already received pursuant to D.08-12-059 and D.09-12-045 of $143,694,555, results in a final true-up payment of $68,158,522.

Calculation of RRIM Earnings Using Assumptions Listed on the Preceding Page

	Third Earnings Claim (PY2006-2008 True-Up) PG&E	SCE	SDGE	SoCalGas	Total
Savings Goals			PY 2004-2008		
Total Cumulative Savings (GWH)	4,313.0	4,788.0	1,175.0		**10,276.00**
Total Peak Savings (MW)	936.0	1,006.0	223.0		**2,165.00**
Total Cumulative Natural Gas Savings (MMTh)	64.4		13.1	76.5	**154.00**
MPS Goals (80% of goal)					
Total Cumulative Savings (GWH)	3,450.4	3,830.4	940.0		**8,220.80**
Total Peak Savings (MW)	748.8	804.8	178.4		**1,732.00**
Total Cumulative Natural Gas Savings (MMTh)	51.5		10.5	61.2	**123.20**
Dead Band (65% of goal)					
Total Cumulative Savings (GWH)	2,803.5	3,112.2	763.8		**6,679.40**
Total Peak Savings (MW)	608.4	653.9	145.0		**1,407.25**
Total Cumulative Natural Gas Savings (MMTh)	41.9		8.5	49.7	**100.10**
Achieved Savings Towards MPS					
EE Portfolio Savings (adjusted ex-ante)			PY 2006-2008		
Total Cumulative Savings (GWH)	3,963.1	3,406.6	696.4		**8,066.08**
Total Peak Savings (MW)	657.2	606.1	124.2		**1,387.53**
Total Cumulative Natural Gas Savings (MMTh)	65.6		6.6	66.5	**138.77**
50% C&S Savings (adjusted ex-ante)			PY 2006-2008		
Total Cumulative Savings (GWH)	157.9	162.9	37.0		**357.80**
Total Peak Savings (MW)	30.6	31.5	7.2		**69.30**
Total Cumulative Natural Gas Savings (MMTh)	2.2		0.3	3.5	**5.95**
04-05 EM&V Adjusted EE Portfolio Savings			PY 2004-2005		
Total Cumulative Savings (GWH)	998.2	1,497.9	342.6		**2,838.67**
Total Peak Savings (MW)	212.3	270.5	59.3		**542.09**
Total Cumulative Natural Gas Savings (MMTh)	19.1		4.5	11.1	**34.71**
EM&V Adjusted LIEE Savings			PY 2004-2008		
Total Cumulative Savings (GWH)	123.5	107.1	27.8		**258.35**
Total Peak Savings (MW)	24.9	22.3	6.9		**54.10**
Total Cumulative Natural Gas Savings (MMTh)	5.7		1.2	4.6	**11.56**
Total Savings			PY 2004-2008		
Total Cumulative Savings (GWH)	5,242.7	5,174.5	1,103.7		**11,520.91**
Total Peak Savings (MW)	925.1	930.4	197.6		**2,053.01**
Total Cumulative Natural Gas Savings (MMTh)	92.6		12.7	85.8	**190.99**
MPS Individual Metric Performance					
Percent of GWH Goal	122%	108%	94%		112%
Percent of MW Goal	99%	92%	89%		95%
Percent of MMTh Goal	144%		97%	112%	124%
MPS Average Metric Performance	**121%**	**100%**	**93%**	**112%**	**110%**
PEB					
TRC Net Benefits	$ 1,374,776,934	$ 923,695,460	$ 195,456,427	$ 193,173,191	$ 2,687,102,012
PAC Net Benefits	$ 1,709,544,364	$ 1,343,065,958	$ 302,080,755	$ 350,522,495	$ 3,705,213,573
PEB	$ 1,486,366,077	$ 1,063,485,626	$ 230,997,869	$ 245,622,959	$ 3,026,472,532
PEB at MPS Threshold	**$ 1,486,366,077**	**$ 1,063,485,626**	**$ 230,997,869**	**$ 245,622,959**	**$ 3,026,472,532**
Earnings/Penalty Cap	$ 180,000,000	$ 200,000,000	$ 50,000,000	$ 20,000,000	$ 450,000,000
Earnings Rate	7%	7%	7%	7%	
Total Earnings	$ 104,045,625	$ 74,443,994	$ 16,169,851	$ 17,193,607	$ 211,853,077
Penalties	NO	NO	NO	NO	
Total Penalties	No Penalty	No Penalty	No Penalty	No Penalty	$ -

(END OF APPENDIX A)

D1012049 Dissent of Commissioner Dian M. Grueneich

D1012049 Dissent of Commissioner Nancy E. Ryan