DRAFT

Energy Division-Joint Utilities Status Update
2010-2012 DEER and NonDEER Measure Ex-Ante Values Review
May xx, 2010

Table of Contents

Introduction

Consistent with the direction in D.09-09-047 (see excerpts from the decision in Appendix I) and the November 18, 2009, ALJ "Ruling Regarding Non-DEER Measure Ex-ante Values," Energy Division and the Joint Utilities[1] have undertaken extensive and intensive discussions since December 2009. For much of this time the Utilities, Energy Division staff and their consultants have met two or three times per week for several hours each meeting to discuss the range of topics involved in freezing DEER and non-DEER values. These meetings have been highly productive in many areas; however, some areas of disagreement remain to be resolved. The sections below summarize the status of the work that Energy Division and the Utilities have made thus far.

A. Custom Applications Review

Energy Division (ED) and Joint-Utilities (Utilities) have agreed to the custom applications review process in the attached document titled, Energy Division – Joint Investor-Owned Utilities Custom Measure Review Process (Appendix II). This document addresses how Energy Division will fulfill its mandated role in reviewing ex ante values to be used for custom measure/project claims and how the utilities will report ex ante claims for custom measures/projects. The objectives of this process are for Energy Division to review the utilities ex ante custom project estimates early to provide real time feedback to the utilities

[1] The joint utilities are 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).

and collect baseline data before project implementation, without interrupting the program application process or project implementation activity.

The next step requires that ED and the Utilities supplement the attached document to identify the specific protocol for the custom applications review to include utility submission of applications to ED, and ED coordination with utility in the application review protocol. This detailed review protocol document is intended to be a living document that will be updated as the custom applications review protocol is refined. The general approach to the review process is meant to be frozen, although specific details will be added/modified as appropriate upon agreement between ED and the Utilities.

Detailed Custom Application Review and Coordination Process Document to be completed by: 5/31/2010

B. Non-DEER Non-HIM Workpaper Measures

By April 9, 2010, Utilities submitted to ED all utility Non-DEER Non-High Impact Measures[2] (HIM) workpapers consistent with the November 18, 2009 ALJ Ruling on Non-DEER measures review process. ED and Utilities agreed that due to the volumes of non-DEER non-HIM workpapers and the remaining amount of time available, ED could not review all the non-DEER non-HIM workpapers within the March 31, 2010 deadline as described in the ALJ Ruling. Per D.09-09-047, the Utilities were required to use the 2008 DEER version (v.) 2008.2.05 methodologies in development of all their workpapers. As such, the utility-submitted workpapers are deemed frozen throughout the 2010-2012 program cycle. These Non-DEER Non-HIM measures will be subject to the November 18, 2009 ALJ Ruling on Non-DEER Review Phase 2 Section H. Retrospective Review as ED deems necessary. In the Utilities' opinion, the retrospective review process may result in a workpaper change if the measure reaches a threshold greater than non-HIM status; however, such a change will be propagated in the subsequent program cycle. On December 10, 2009, the Utilities met with ED and requested specific clarification and guidance to update/create work papers that were consistent with the November 18, 2009 ALJ Ruling on Non-DEER measure review process. These requests included clarification on lighting operating hours and factors used for interactive effects that were unclear in the 2008 DEER v. 2008.2.05 documentation. In response, Energy Division provided the lighting workbooks that contain methodology for interactive effects estimates and provided lighting operating hours to the Utilities. See Section E. below for further status on these lighting workbooks.

Status of Non-DEER Non-HIM Workpaper Review:
The non-DEER non HIM workpapers that the Utilities have submitted to date will be subject to the Phase 2 process as described above.

C. Non-DEER HIM Workpaper Measures (Excluding Lighting and Appliance Recycling Workpapers)

Utilities have provided all Non-DEER HIM workpapers [3]consistent with ED's schedule. ED has begun its review of these workpapers and provided clarifying question to the utilities commencing April 1, 2010. Utilities agreed to respond to ED's questions within 3 to 4 days

[2] High Impact Measure is defined to be measure or measure group that contributes towards more than 1% of a utility's total portfolio savings forecast.
[3] This includes utilities' lighting and appliance recycling workpapers.

after the questions were posted on ED's workpaper submission website, https://energydivision.basecamphq.com . ED followed up on the technical issues associated with the workpapers during the period from April 12 through April 23, 2010 by scheduling face to face technical workshop(s) and conference call meetings with utilities by workpaper or workpaper groups to resolve issues and differences regarding methodologies and assumptions in these workpapers. In accordance with the November 18, 2009 ALJ Ruling, Phase 1, Section C, this process resulted in either ED accepting a particular workpaper, or ED flagging the workpaper as reviewed but not accepted. ED reviewed as many Non-DEER HIM workpapers before April 30, 2010, as possible. These measures will be subject to the November 18, 2009 ALJ Ruling on Non-DEER Review Phase 2 Section H. Retrospective Review as ED deems necessary. In the Utilities' opinion, the retrospective review process may result in a workpaper change if the measure reaches a threshold greater than non-HIM status; however, such a change will be propagated in the subsequent program cycle.

ED and the Utilities have agreed that due to the timing of 2006-2008 impact study results, Energy Division would not require, but strongly encourages the Utilities to consider these results to be applied to work paper updates for the 2010-2012 program cycle. It was also agreed that the Utilities would review these results and proactively make programmatic changes with regards to the findings. Additionally, the mandated 60-day program response process to the 2006-08 evaluation studies results is also in place to address the study results through any needed programmatic changes.

Status of Non-DEER HIM Workpaper Review: : Energy Division posted the results of its review of the Utilities' Non DEER HIM workpapers on the https://energydivision.basecamphq.com website on May 3, 2010.

D. DEER Fixes and Additions to 2008 DEER version 2.05

In D.09-09-047, the Commission clarified the use of 2008 DEER v. 2008.2.05, dated December 16, 2008, for planning and reporting accomplishments for 2010-2012. The Commission recognized that errors may be identified in the measure ex-ante values in the 2008 DEER version 2008.2.05 and directed that "Energy Division, in consultation with the utilities, should develop a process by which new measures values can be added to the frozen measure datasets and mutually agreed errors in the frozen values can be corrected."

On March 5, 2010, Energy Division and the DEER Team proposed corrections and additions to the 2008 DEER v2008.2.05. A summary of the error fixes, new measures, and changes to the DEER methodology are contained in the document embedded in Appendix III. This document was provided to the Utilities on March 5, 2010 and updated on March 18, 2010. The DEER Team had incorporated these proposed DEER 2008 changes in methodology and corrections into DEER version 3.02, which was used to develop the lighting and appliance workbooks discussed in Section E below.

Consistent with the collaborative approach envisioned by the Commission, Energy Division staff, the DEER Team and the utilities met on March 25, 2010, to discuss the proposed

corrections and additions to 2008 DEER v 2008.2.05. The Utilities' responses to the ED's proposal can be found in the spreadsheet embedded in Appendix IV. Based on the information presented by ED and it's consultants at the March 25th workshop, the Utilities have agreed to the following:

- Any changes made to the frozen 2008 DEER v. 2008.2.05 that the Utilities have determined as a change in methodology will be held for further review and discussion. Once agreed upon, these changes would be incorporated into DEER 2008 version 3.02 with the earliest implementation in the 2013-2015 program cycle.

- Changes made by the DEER team that the Utilities have determined as "acceptable" errors or new measures that will be implemented in the 2010-2012 program cycle include:

    1. Large office lighting schedule for linear fluorescent technologies
    2. HVAC Package unit updates for Title 24.
    3. General T24 updates (primarily HVAC)
    4. General Lighting updates (primarily Linear Fluorescent)

- Changes made by the DEER team that the Utilities have determined as "acceptable" errors or new measures, but will not elect to implement in the 2010-2012 program cycle include:

    1. DOE2 bug fixes changes
    2. Dishwasher/Clothes washer additions
    3. Multi-family building type additions

ED still believes that the DOE2 bug fixes are critical corrections to the 2008 DEER v. 2008.2.05, which should be incorporated for the 2010-2012 program cycle. DOE2 is a building energy analysis program used to develop DEER measure savings estimates by building type, by climate zone. The DEER team discovered several errors in the DOE2 software, which affect the modeling of heat load due to lighting fixtures, outside air volume associated with duct leakage, and default minimum heat flow rate. The corrections to the heat load due to lighting fixtures are necessary to develop accurate weighting of heating/cooling saturation by HVAC system types to estimate interactive effects impacts. ED believes that not correcting for these errors and only applying those changes that the utilities found acceptable does not make logical sense, since it would mean updating a database (i.e., 2008 DEER version 2.05) with known errors to begin with. Furthermore, it will be more resource intensive for ED to start with 2008 DEER v. 2008.2.05, and implement the Utility-accepted errors, instead of using DEER v. 2008.3.02 with the DOE2 bug fixes and removing those other corrections that the Utilities identified as not acceptable at this time.

While the Utilities agree that the DOE2 bug fixes are important to make, the Utilities believe that the likely level of overall impact is small (less than 3%) (A high level lighting analysis for the SCE 2006-2008 portfolio shows a small impact as outlined in Appendix V) in comparison to the amount of resources required to make the updates in their respective tracking systems at this time in line with "Energy Division must implement a review and approval process that balances the need for measure review with the utilities need to

rapidly implement the portfolios approved by this Decision." (Per D.09-09-047). In the Utilities' opinion, that for completeness, ED's effort would likely require that all 2008 DEER v. 2008.2.05 values (1.2 million records) be updated. Simultaneously, the Utilities would be required to update all work papers that use the 2008 DEER v. 2008.2.05 values and incorporate the values into all of their tracking systems where DEER or Non-DEER impacted work papers are used. In the Utilities' opinion, this change would likely entail an incremental three to six month effort involving thousands of employee hours that would involve revising dozens of work papers, and updating tens of thousands of measures sets by the Utilities and their contractors which is a significant and costly effort that may question the overall ratepayer benefit of revising the DOE2 model for these named changes.

In the Utilities' opinion, such an effort could not be finalized prior to the timing the Commission envisioned as adequate for the Utilities to begin full program implementation.

Currently, the 2005 DEER v. 2005.2.01 savings values, which are still being used by the Utilities for many of their portfolio measures, are not explicitly integrated into 2008 DEER v. 2008.2.05. In the Utilities' opinion, the Utilities would still be using a version of DOE2 without the bug fixes and as such be inconsistent with the assumptions found in DEER v. 2008.3.02. The Utilities would propose that it is a better use of resources to incorporate the DOE2 bug fixes for the 2013-2015 program cycle as DEER 2005 values are migrated to DEER 2008 and as subsequent updates to the existing DEER 2008 measures are made.

Status of DEER Fixes and Additions to 2008 DEER version 2008.2.05: Since Energy Division still believes that the DOE2 fixes is a threshold correction and updating DEER only for those corrections that the utilities find acceptable will be more resource-intensive, Energy Division and the Utilities agreed that the 2008 DEER v. 2008.2.05 will be left as is for purposes of the Utilities' 2010-2012 "frozen" ex-ante values.

E. Lighting and Appliances Workbooks

During 2009, the utilities have asked the ED DEER Team to add lighting measures to 2008 DEER version 2.05 that are common and important in their program offerings. To address this request as well as provide a method to facilitate the Utilities' ability to easily add new or change existing lighting measures in the future, the ED DEER Team developed a set of lighting and appliance workbooks in March 2010. In the Utilities' opinion, these workbooks were meant to partially replace 2008 DEER v. 2008.2.05 MISER tool measures that were created in 2008 for the Utilities to use. These workbooks provide a heating/cooling, system type, and building type weighting methodology direction to the Utilities that in the Utilities' opinion, had never been fully clarified previously, utilized in previous versions of DEER, or explicitly addressed in D.09-09-047 or in the related DEER documentation. These workbooks also provide complete measure impact values for the high impact measures; however, they do not rely upon the 2008 DEER v. 2008.2.05 methodology frozen in D.09-09-047.

These workbooks, since they contain impact values in addition to HVAC interactive effects factors and saturation weighting, could eliminate the need for the utilities to turn in workpapers on hundreds of residential and non-residential indoor lighting and appliance

measures, both DEER and non-DEER. In the Utilities' opinion, since the workpapers have already been developed and submitted, the current value of the workbook is marginal. The 2008 DEER v. 2008.2.05 MISER tool and the 2005 DEER Access database would still be required for all other measures not included in these workbooks. ED proposed that utility savings estimates generated from these workbooks will be the accepted unadjusted ex ante savings estimates to be used in the Utilities planning forecast and accomplishment reporting.

As mentioned above, the ED DEER Team produced several drafts of the proposed workbooks, developed by incorporating all the corrections and additions identified in Appendix III as well as the Utilities feedback received in March of 2010.

The Utilities expressed they liked the functionality of the workbooks, but did not accept most of the ED DEER Team proposed DEER corrections, as they were methodological changes, and not corrections, as defined by the Commission in D.09-09-047. These changes in methodology and corrections are discussed in Section D that were incorporated into these workbooks. The Utilities agree that it is important to improve the assumptions and fix errors going forward; however, the Utilities feel that it is equally important to fully vet the assumptions and review the implications, including the resources required to effect the changes, with sufficient lead time prior to implementing them. In the Utilities' opinion, while a reasonable attempt was made to do this at the March 25, 2010, meeting, there simply wasn't enough time to fully review all of the changes in detail and decide to implement them in a timely manner so as to not impact program execution. The Utilities consider that this approach is consistent with the November 18, 2009 ALJ ruling, where "…The level of detail of the review of measures will be performed as ED resources permit or as ED deems appropriate based upon the importance of measure(s) to the overall Utility portfolio…"

ED and the ED DEER team considers the HVAC system type additions and DOE-2 bug fixes as prerequisites to utilizing the workbooks; however, the utilities did not accept those proposed changes in methodology, additions, and corrections to 2008 DEER version 3.02 at this time. The utilities recommend that the lighting workbooks be implemented for the 2010-2012 program cycle using the assumptions found in 2008 DEER version 2.05 and not 2008 DEER v.2008.3.02.

In the April 9, 2010, ED-Joint Utilities Non-DEER Review Process meeting, the group agreed to not use the workbooks with all the corrections due to the outstanding disagreement on the inclusion of the DOE-2 bug fixes and system type additions. Instead, ED-Joint Utilities agreed to follow the process described below.

1. Lighting and appliances measures ex ante parameter estimates will be reviewed as part of the Non-DEER HIM Workpapers Measures Review process as described in Section C above, but with a due date of May 15, 2010 (decided later), for the completion of ED review of these workpapers. The utilities have submitted lighting measures workpapers under the non-DEER non-HIM submission to ED using the 2008 DEER v. 2008.2.05 methodologies, as directed by the Commission. ED will take those workpapers out of that bucket and move them to the non-DEER HIM review bucket.

2. The Utilities will use the ED DEER Team developed lighting and appliances workbooks, aka Workbooks 3.02, moving forward in the 2010-12 EE Cycle for applicable new measure ex ante estimates submitted under "Phase 2" outlined in the November 18, 2009 ALJ ruling. Consistent with the policy Manual version 4.0, the Utilities clarify that "new measures" for "Phase 2", include new values for base case, measure case, end use, and technology, but do not include new building types, climate zones, or predefined delivery methods.

In the Utilities' opinion, implicitly, measures not accounted for in these workbooks, but are part of the 2008 DEER v. 2008.2.05 dataset would utilize the MISER tool to estimate the energy savings. Other measures that are part of the DEER 2005 data set would utilize the 2005 DEER Access database to estimate the energy savings.

Status of Lighting and Appliances Workbook and Workpaper Review:

Energy Division posted the results of its review of the Utilities' lighting and appliance workpapers on the https://energydivision.basecamphq.com website on May 17, 2010, for purposes of the 2010-2012 "frozen" ex-ante values. The Utilities will use the Lighting and Appliance Workbooks for applicable "new" measures as defined above going forward under Phase 2 ex-ante review and approval processs.

F. Dispute Resolution Process

The Utilities proposed that ED collaborate with the Utilities to develop a mutually agreeable dispute resolution process addressing technical disagreements raised during Non-DEER measures review process. In the latest Evaluation, Measurement, and Verification Decision 10-04-029, the Commission was silent on a dispute resolution process for the non-DEER measures ex ante estimates review process.

In the April 9, 2010, Non-DEER Review Process ED-Joint Utilities meeting, the group agreed that ED and utilities should make an effort to discuss and resolve technical disagreements. However, if ultimately there is an impasse, ED and the utilities should agree to disagree. These ex ante estimates are ultimately the utilities' forecast estimates.

G. 2010 First Quarterly Reporting

Currently, the utilities' first quarter accomplishment reporting is anticipated to be due the first week in June of 2010. The Utilities request submitting the first quarterly reports with the second quarterly reports, which are due on 9/1/2010 to account for changes to non-DEER workpapers and associated decisions made during this non-DEER measures workpapers review process, which will require significant effort on the part of the Utilities to incorporate.

Establish Process for Initial Reporting Date: On or before July 1, 2010
First and Second Quarterly Reports Due Date: September 1, 2010

H. Process for Phase 2 Review: Adding New Measures & Error Corrections

The November 18, 2009 ALJ Ruling on Non-DEER measures review process describes a Phase 2 for a general process for the submission, review, and acceptance/approval of measures for the non-DEER measure database on a going forward basis after March 31, 2010. The ruling states, "The level of detail of the review of measures will be performed as ED resources permit or as ED deems appropriate based upon the importance of measure(s) to the overall Utility portfolio." The Ruling further describes a high-level process for this review.

ED will review the Phase 2 process as described in the November 18, 2009 ALJ Ruling with the Utilities to identify what is not clear to the Utilities in the Phase 2 process to ensure that the requirements are clearly communicated. Clarifications to this process will be completed by May 28, 2010.

Status of Phase 2 Review:

ED will meet with the Utilities to review and clarify the Phase 2 process by May 28, 2010. ED will instruct the ED DEER team to complete those workbooks as soon as practical for use in Phase 2 review and approval activities.

Appendix I

Excerpts from Decision (D.) 09-09-047

D.09-09-047 was issued on September 24, 2009 and included the following ordering paragraphs (page 390):

> 47. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Southern California Gas Company shall closely examine 2006-2008 program final evaluation results when they become available and to apply the results to the approved programs as warranted for the 2010-2012 program period.
>
> 48. Both DEER 2008 and non-DEER measure ex ante values established for use in planning and reporting accomplishments for 2010-2012 energy efficiency programs shall be frozen, based upon the best available information at the time the 2010-2012 activity is starting.

The sections of D.09-09-047 reproduced below specifics of particular importance to understanding the intent of the timing and content of the frozen data sets highlighted.

4.2 Energy Savings Goals/4.2.2 Discussion, (D.09-09-047, p42-45)

> We agree with SCE's and PG&E's comments that measure ex ante values established for use in planning and reporting accomplishments for 2010-2012 should be frozen. However, we do not agree with PG&E or SCE that those ex ante measure values should be frozen using the values found in the E3 calculators submitted with their July 2, 2009 applications. We agree with TURN's comment that frozen values must be based upon the best available information at the time the 2010-2012 activity is starting and that delaying the date of that freeze until early 2010 is a reasonable approach to better ensure that the maximum amount of updates is captured before the freeze takes effect.
>
> The utilities' portfolio measure mix contains both DEER measures and non-DEER measures. As discussed in this decision (e.g., Sections 4.2 and 4.5), the Utilities have not always properly utilized current DEER measure values and assumptions in their submitted cost-effectiveness calculations. We note that the Utilities have commented that the documentation on the use of DEER is insufficient and that the Commission should be more specific about the version of DEER to be utilized. We clarify that the DEER 2008 values referred to by this decision are the complete set of data denoted as 2008 DEER version 2008.2.05, dated December 16, 2008, as currently posted at the DEER website (http://www.deeresources.com) maintained by Energy Division.
>
> Energy Division must provide the utilities with further detail and clarifications on the proper application of DEER so that the utilities are able to correct these problems. Additionally, as of this decision, Energy Division has not performed a review and approval of non-DEER measure ex ante estimates provided by the utilities. Energy Division must complete that review in a timely manner before those measure assumptions are frozen. It is therefore essential that the utilities work with Energy

Division in its review and approval of their non-DEER measures ex ante values so that this activity can be completed as soon as possible. However, Energy Division must implement a review and approval process that balances the need for measure review with the utilities need to rapidly implement the portfolios approved by this Decision. We also recognize that the Energy Division or utilities may identify new measures appropriate for inclusion in the 2010-2012 portfolios that are not yet included in current DEER measure datasets. We also recognize that errors may be identified in frozen measure ex ante values. Energy Division, in consultation with the utilities, should develop a process by which new measures values can be added to the frozen measure datasets and mutually agreed errors in the frozen values can be corrected.

Therefore, in measuring portfolio performance against goals over the program cycle, we will freeze both DEER and non-DEER ex ante measure values as the 2010-2012 portfolio implementation begins. We concur with NRDC's comments that the use of these frozen ex ante values is only for this portfolio planning proceeding and implementation management. These frozen ex ante values may or may not be used for purposes of the incentive mechanism that is subject of another proceeding. Furthermore, the decision here to hold constant measure ex ante values for the purpose of measuring performance against goals, does not imply that we will cease from updating DEER and non-DEER measures for other purposes, and in particular for striving for the best estimates of actual load impacts resulting from the program cycle. Our EM&V activity will continue to develop ex post verified measure, program and portfolio impacts to inform future energy efficiency and procurement planning activities. The frequency and scope of DEER updates going forward is discussed further in the EM&V section below. As for non-DEER ex ante measure review and approval, we direct Energy Division to develop that review and approval process within 30 days from the date of this decision, to be issued in an ALJ ruling.

We find that these actions support the design of a robust, aggressive utility program portfolio. The energy savings goals remain stretch goals which will neither be too easy nor too difficult for the utilities to meet. In addition, with more appropriately aligned goals, we gain the freedom to consider adjustments to the utility portfolios which are responsive to evaluation results without concern that we would be imposing a burden on the utilities with regard to reaching energy savings goals.

4.4 Administrative Costs, (D.09-09-047, p. 64)

Finally, administrative costs include the costs to respond to Commission reporting requirements and other regulatory activities. The Commission must do its part to minimize the regulatory burden on the utilities and have made every effort in this decision to require only necessary filings and reports. We request that the Energy Division review further all existing and new energy efficiency reporting requirements and report on possible ways to streamline these requirements.

7.3. Process for Adopting Detailed EM&V Plans and Budgets for 2010-2012 (D.09-09-047, page 301)

The EM&V Decision we will adopt later this year will include, but not be limited to, the following issues:

(Continuing on page 303)

- *Frequency and Scope of DEER Updates* -- We are aware of the concerns expressed by the utilities that the continual updating of the DEER values creates a "moving target" for the utilities in terms of goal attainment. While this is the model that we approved in our 2004 and 2005 decisions, as with other aspects of those decisions, we recognize that these factors have not played out as we originally envisioned. There is a need to ensure that our DEER values reflect the most recent technical information gathered in our EM&V processes while fairly addressing concerns that the utilities must be offered a reasonable opportunity to meet their goals and that the goals themselves cannot become constantly moving targets. Consistent with this, in the goals section of this Decision, we commit to holding constant the 2008 DEER ex ante values and methodologies for the purpose of measuring portfolio performance against goals contingent upon essential corrections in the utilities' compliance filings. The decision here to hold constant current DEER values for the purpose of measurement against goals, does not imply that we will cease from updating DEER for other purposes. We also will hold constant the non-DEER ex ante values finalized in the process to be determined as described in Section 4.2.2. There remains value in updating these metrics to ensure the best available load impact estimates. In the upcoming decision on EM&V we will examine the optimal scope and timing of such updates.

(Continuing on page 304)

As discussed in Section 4.2.2, the DEER 2008 and non-DEER measures ex ante estimates will be frozen for planning and program implementation purposes. Energy Division has not had the opportunity to perform the non-DEER measure ex ante parameter review and approval. We direct Energy Division to provide the utilities within 30 days after the effective date of this decision a document that details the requirements and procedure for the utilities to submit non-DEER measure workpapers for Energy Division's review and approval. The utilities shall fully cooperate with Energy Division during the course of the workpaper review so that this review and the finalization of non-DEER ex ante parameters that will be frozen for planning and program implementation purposes is completed in time for utilization in the utilities' first quarterly reports in 2010.

Appendix II
Energy Division – Joint Investor-Owned Utilities Custom Application Review Process

Background

The utilities have expressed to Energy Division that it is not possible to provide Energy Division ex ante estimates for custom calculated measures or projects until a customer submits an application for a specific measure or project. Energy Division understands that due to their very nature there is a wide and somewhat unpredictable variation of custom measures and projects that will be encountered during the 2010-2012 energy efficiency programs cycle. For each of these custom measures or projects the energy savings impacts, net-to-gross values, effective useful lives, and participant and incentive dollar values are not known until a customer program application is approved by the utility. The utilities have provided Energy Division with a forecast of their target total custom measure/project participation and have also provided a list of calculation methods they expect will primarily be used to produce ex ante energy savings claims. However both the measure or project mix and the specific calculations methods used on each will vary as implementation proceeds.

For these reasons, the intent of "freezing" ex ante values of customer measures and projects while the same as that for deemed measures and project, the process is expected to be different. Some calculation approaches/methods can be approved and "frozen;" however, the input values used in those calculation methods to produce ex ante values may vary by project for these custom measures and projects and hence need a different process for approval and reporting. Additionally, it is expected that there will be a need to alter existing methods or add new methods in cases when specific custom project are encountered that are not adequately addressed by the methods available and approved at the time of the ex ante "freeze." Therefore, the "process" outlined below will be the agreed upon procedure for which the utilities will provide information/data to Energy Division for review of customized projects for the 2010-2012 program cycle. The Energy Division's review process will be in parallel of the utilities' own internal project application review and approval process. The Energy Division's review process will be implemented in a manner to avoid causing delay in the utilities' program application process or the project implementation activity.

Process

To address how Energy Division will fulfill its mandated role in reviewing ex ante values to be used for custom measure/project claims and how the utilities will report ex ante claims for custom measures/projects, a process is outlined in this document. The objective of this process is for Energy Division to review the utilities ex ante custom project estimates early providing real time feedback to the utilities, without interrupting the program application process or project implementation activity.

Steps:

1. **Custom measure/project calculation methodologies shall be based upon DEER methodologies as frozen for 2008 DEER version 2008.2.05 when possible or practical.** This means that if a measure or project utilizes technologies or is subject to use patterns or interactive effects considerations that are either the same or similar to DEER measures the calculations should be consistent with methods or values taken from DEER. This requirement is not intended to restrict the utilities ability to add new custom measures or restrict the custom measure calculation procedures for measures not within DEER. It is intended to ensure that custom measures that are variants of a DEER measure utilize methodologies derived from DEER to ensure the ex ante estimates for similar deemed and custom measures are comparable. Energy Division will instruct the DEER team to post all DEER analysis tools, models and documentation on changes to parameters or methodologies on the DEEResource.com website. The DEER team will also be instructed to provide assistance to IOU staff and their contractors to understand DEER methodologies and how to utilize the DEER tools in support of their development of workpapers and added tools for their ex ante estimates.

2. **For all custom calculations the utilities shall provide the Energy Division a complete list and archive of all calculation tools**. Tools shall mean software, spreadsheets, "hand" calculation methods with procedure manuals, or any automated methods. By March 31, 2010 the IOUs shall submit to Energy Division for archiving all tools expected at that time to be used for estimating ex ante values for custom projects. Tools that are commonly available to the public via website download will be supplied by providing links to that website so any versions referenced on the IOU submitted list may be downloaded. Tools that are created by the IOUs or their contractors must be supplied to Energy Division along with any available documentation. The submitted list of tools, tool weblinks, and tool archive shall be updated by the IOUs on an ongoing manner during the 2010-2012 implementation activity such that Energy Division is informed and is able to be in possession of the new tool or a new version of a prior listed tool in the production of ex ante estimates for any application prior to the time of application approval or submittals to Energy Division under item 4 below.

   The tool submission shall include:
   a. All manuals and use guidelines, where applicable. If the calculation tool is simply a spreadsheet type, then all cell formulas and documentation shall be readily accessible from the tool;
   b. A list of technologies, measure or project types that may perform custom calculations using the tool;
   c. If several tools may be used to perform calculations for the same measure a clear description when one tool or another may be used will be provided;
   d. When available, a list of key input parameters for each tool and each technology covered by a tool and the utility guidance or review criteria for those input when ex ante values are calculated by users of the tool will be provided;
   e. the key user input parameters must include both baseline and installed measure values
   f. the allowed baseline guidelines for qualification for early replacement (pre-existing equipment) as the baseline.

Energy Division will review inputs to the tools as part of their ex ante values approval and freezing role. In this role, the Energy Division will also insure that the input values and methodologies are reasonable and consistent with common engineering practices at their discretion. This review will take place as the Utilities submit projects during the implementation period. It is expected that some tool information and documentation listed above will not be complete by the end of March. In these cases the Utilities shall make their best effort to submit more complete information and documentation on those tools at the earliest time and shall provide timely support to the Energy Divisions reviewers on use of the tools until such complete documentation is available.

Energy Division, as time permits during the review cycle, may choose to provide the utilities with comments on one or more of the tools, require more information or documentation on the tool. After review of a tool Energy Division may require changes to a tool or removal of a tool from future use if that review has concluded that the tool produces erroneous results or is not in conformance with DEER methods for technologies covered by DEER. Energy Division shall provide the IOUs reasonable opportunity to cure any tool deficiency prior to removal from the list.

3. **The utilities shall keep a complete electronic project archive of all custom measures or projects for which applications are approved and/or claims are made.** For each custom measure or project the archive will contain all documentation, information on tools used, tool input files or parameters used in the measure or project calculation, and description of the source of the tool input parameters. With this submission it is expected that IOUs will provide Energy Division with the same documentation its own reviewers had access to during their review for application approval such that Energy Division and its consultants are able to reproduce and review any selected project ex ante savings estimates or claims. All cost-effectiveness parameters shall be identified in the project files including the source of those parameters (including estimated incentive and participant cost, EUL, NTG for each measure included in the custom project.) Each utility claim or tracking data submission will include a reference for each custom measure or project to the archive entry for that item and the claim or tracking submission shall include the archive for all measures or projects claimed.

4. **For applications that meet or exceed the trigger points defined below the utilities will provide to Energy Division those custom project applications along with ex ante and incentive estimate supporting documentation in electronic format.** Energy Division expects these are the same applications along with the complete supporting documentation for the application ex ante impacts, incentive and cost-effectiveness estimates undergoing the utility internal review prior to the application approval. The applications and supporting documentation, in electronic format, shall be submitted to Energy Division at the website URL https://energydivision.basecamphq.com Energy Division and the Utilities will develop an agreed upon project identification system that will be used to uniquely name the files which are submitted.

The trigger for submission shall be effective at or prior to the time of utility customer application approval or acceptance into a program by the utility. The utilities normally schedule site visits during the pre-inspection period. The utilities will provide notification to ED within 1 business day of scheduling the site visit if the scheduled site visit date is more than 5 days away, or notification within that same day if the site visit is schedule for less than 5 days from the scheduling date. The submission is intended to allow Energy Division to review the application in parallel with the utility and allow Energy Division to coordinate any pre-installation inspections, customer interviews and pre-installation M&V or spot measurements with the utilities similar activities. For this reason it is required the applications that meet this trigger be submitted as early as possible to facilitate this coordinated activity. Energy Division will supply the IOUs with the results of their reviews and any M&V activities on an ongoing basis. Energy Division reviewers will interact with and provide feedback to IOU review staff on an ongoing basis such that IOU reviewer are aware as early as possible of any important issues. The IOUs are expected to consider the Energy Division review information in future application review and approval activities as well as future ex ante saving claims. However there is no requirement for any specific action in response to information provided to the IOUs from the Energy Division's ongoing review process.

The trigger values shall be at the site or project level not just a single application. For example, some projects are divided into multiple measures and submitted as multiple applications. All applications for a single customer site during the 2010-2012 cycle participating in any program shall be aggregated for comparison with the trigger values and once any trigger level is hit all applications for a customer site shall be submitted. The trigger values shall be:

a. 250,000 kWh
b. 200 kW
c. 10,000 therms

These values are intended to capture approximately 10-20% of the largest projects where the majority of the project savings are custom measures. These projects may represent 50-70% of the total custom measure ex ante savings. This submission will be an on-line submission to Energy Division and will be initiated as previously indicated. This submission will be done at the time of utility application approval. Although this trigger will require a utility electronic submission to Energy Division, the implementation may proceed once the submission is complete. If deemed necessary an Energy Division M&V contractor will coordinate with the utility to perform any combination of:

a. reviewing project savings estimate calculations including either parameter values or tool estimate methods;
b. coordinated pre-/post- site inspections;
c. coordinated pre-/post- M&V for this project.

Energy Division will coordinate and M&V activities on these custom projects with the IOUs and may choose to utilize the Utilities or its own contractors, at Energy Division expense, to perform site inspections or pre-installation M&V.

Not all projects submitted for early review as a result of the above trigger will be subject to an Energy Division M&V activity. However, those projects selected for

review may be later included as sample points into Energy Division's impact evaluations. Energy Division acknowledges that applications submitted as a result of meeting the trigger thresholds defined above may have ex ante estimates updated prior to being included in a portfolio savings claim submission. The assumptions made by a utility for ex ante claims would be frozen based on the utility's actual claim for that application including any modifications made prior to final incentive payment such as those based upon utility ex ante "true-up" from post-installation inspections, M&V or other adjustments as the utility deems necessary.

To facility future communication:

Energy Division and the IOU will establish a working group to allow an ongoing dialog on issues and problems in any aspect of the custom measure impact estimation process. This working group will provide a forum for all party's exchange information on their current activities as well as future plan as well as discuss and resolve problems and issues with the process outlined in this document. The working group will also provide a forum for Energy Division to inform the IOUs on issues related to its impact evaluation activities that relates to the custom measure ex ante estimation process. These issues include items such as baseline definitions, net versus gross savings definitions and other items as any party deems necessary.

Appendix III

Energy Division DEER 2008 fixes and additions Proposal Document

Embedded is the most recent document circulated between Energy Division and the Utilities. Click the object to open the full document.

Jan2010 DEER
Measure Database U

Appendix IV

Utility Response to DEER 2008 fixes and additions Proposal

Embedded is the most recent document provided by the Utilities to Energy Division with their responses to the proposed DEER corrections and additions. Click the object to open the full document.

Joint IOU comments
re upgrades to DEER 3

Appendix V
High Level Analysis of DEER Bug fixes on SCE Portfolio Savings

The following method was used to approximate the difference in portfolio level impact of the DOE2.2 fixes on lighting measures between 2008 DEER version 2008.2.05 and the values found in the work books supplied to the utilities by the Energy Division (ED).

2008 DEER version 2.05 used limited heating/cooling types in the analysis of measures. More specifically for residential measures two choices were available (Gas Furnace with or without Split System DX Cooling) and for non residential building types there was only one system type available (Packaged DX with Gas furnace). In order to compare like values and eliminate the introduction of various new system types into DEER, values needed to be selected from the work books that represent the values/system types in 2008 DEER version 2008.2.05.

In order to accomplish this, for residential measures, the measures selected from 2008 DEER version 2008.2.05 were the measures with the system type Split System DX Cooling with Gas Furnace and the SCE Territory (Weighted) climate zone. From the work books V 3.02, the kWh and kW values were taken from the column that supplied values for the same system type. To achieve a climate zone weighted value the weighting per climate zone of that particular system type was taken from the work book tab titled "Selected Weights".

With two comparable values based on the same system type and climate zone weighted, the resulting delta in kWh and kW must primarily result from fixes/changes to DOE2.2, although some other minor changes are a part of these values as well.

For non residential building types, the logic for achieving climate zone weighted values for various systems types seems to be much more complicated. In order to weight the particular system types by climate zone, columns Q through AW were unhidden on the "Impacts Review" tab. It appears that in rows 71 though 86 and columns AK through AW are the climate zone weighting factors for the various system types. These values were extracted for each climate zone in column AK which appears to coincide with the column in Table 2. for Gas Heat – PSZ.

The weighting and comparison were then done very similarly to the residential approach. To obtain a very high level percentage, a few key building types were sampled. The percentage reduction in kWh and kW were averagde to come up with a single value for this analysis.

Overall the results were:

-0.03% kWh and -2.83 % kW projected for the 2006-2008 SCE portfolio.

General assumptions for this analysis are:

- Portfolio Analysis is limited to typical SCE HIM lighting measures from the 2006-2008 program cycle.
- Other minor changes in the workbook vs 2008 DEER version 2008.2.05 that could not be disaggregated are implicitly included within the analysis above. Data from the large office lighting building type was excluded to avoid this particular error.
- Variations to other IO portfolios and the new cycle may impact these impacts.