

# **Energy Division – Joint Investor-Owned Utilities Custom Application Review Process and Protocols**

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Energy Division (ED) and Joint-Utilities (Utilities) have agreed to the custom applications ex ante value review and reporting process described here. 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. Additional objectives of the process documented here are for Energy Division to review the utilities ex ante custom project estimates early so as to provide real time feedback to the utilities and also to allow Energy Division to collect project pre-implementation data to improve the accuracy of program impact evaluations, without interrupting the program application process or project implementation activity.

The process outlined in this document describes the specific protocols for Energy Division review of custom applications which 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 described here is meant to be frozen, although specific details will be added/modified as appropriate to allow Energy Division to perform the required review without disrupting normal program implementation 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 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 implementation of the freeze is 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 reporting. That process must allow an opportunity for Energy Division review and feedback to the IOUs. Additionally, it is expected that there will be a need to alter existing methods or add new methods when specific custom projects are encountered that are not adequately addressed by the available methods 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.

## **Process 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.**

Basing custom measure calculations upon DEER methods shall mean 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 shall 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. This is not intended to require the IOUs to utilize out-of-date codes or standards in their custom measure baseline calculations. It is expected that the IOU calculation methods will utilize DEER methods but incorporate current code requirements or minimum standards in effect the time a custom measure project is either permitted or implemented when 2008 DEER 2.05 methods pre-dated those codes or standards changes; thus, did not incorporate the current applicable codes or standards.

Energy Division will instruct the DEER team to maintain an up-to-date posting of all DEER analysis tools, models and documentation on changes to parameters or methodologies on the DEERresource.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, in the context of this document, shall mean software, spreadsheets, “hand” calculation methods with procedure manuals, or any automated methods. By March 31, 2010 the IOUs were to have submitted to Energy Division a list of all tools expected at that time to be used for estimating ex ante values for custom projects. Each IOU shall maintain an archive of all tools on their website described under step 3 below. The archive shall contain all current and previously utilized versions of all tools used in custom measures or projects claimed during the current program cycle.

Tools that are freely available to the public via website download, which cannot be legally re-distributed on the IOU website, will be referenced by providing links to the public download website so any versions referenced on the IOU submitted list may be downloaded. However, the IOUs must ensure that all such previously used tools are archived in the event the public availability is discontinued for any reason. In that event the IOUs shall furnish Energy Division with those tools. Tools that are created by the IOUs or their contractors must be supplied to Energy Division along with any available documentation by making them available on the IOU website described in Step 3 below.

The submitted list of tools, tool weblinks, and the tool archive shall be updated by the IOUs on an ongoing manner during the 2010-2012 implementation activity. The contents of the archive shall ensure that Energy Division can acquire any tool used in the production of ex ante estimates for any accomplishment claim or submittals to Energy Division under item 4 below.

The tool archive shall include:

- a. All manuals and user instructions, where applicable. If the calculation tool is simply a spreadsheet, then all cell formulas and documentation shall be readily accessible from the tool;
- b. A list of technologies, measures or projects 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 (default or site-specific) for each tool and each technology covered by a tool and the utility guidance or review criteria for those inputs will be provided;
- e. The key user input parameters must include both baseline and installation-specific values;
- f. The baseline guidelines, as outlined in Appendix I, for qualification for early replacement (pre-existing equipment) as the baseline versus normal retrofit or replace-on-burnout (minimum equipment allowed by

applicable codes or standards or standard industry practice or CPUC policy, if no codes or standards apply to the equipment or project.)

Energy Division, at its discretion, will review tools as well as inputs to the tools for selected projects as part of its ex ante values review and freezing role. This review will encompass all aspects of custom project ex ante measure value development by the IOUs including that the input values and methodologies are reasonable and consistent with common engineering practices. This review will take place as the IOUs submit projects during the implementation period. Some tool information and documentation listed above was not completed 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 Division's reviewers on use of the tools until complete documentation has been 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 of acceptable tools.

**3. The utilities shall keep a complete up-to-date electronic project archive of all custom measures or projects for which applications are either approved or claims are made.**

Each IOU shall maintain a complete and up-to-date custom measure and project archive on its internet-accessible website. Energy Division and its specifically designated consultants who have executed non-disclosure agreements shall be given ongoing access to the IOU archives. The archives shall contain entries for all approved or committed projects as well as entries for all projects in the approval process for those measures or projects whose estimated savings exceed any of the trigger values listed in Step 4 below.

For each custom measure or project the archive entry for that measure or project shall contain all documentation, information on tools used, tool input files or parameters used in the measure or project savings estimates, and description of the source of the tool input parameters. Via this archive it is expected that the IOUs will provide Energy Division with the same documentation its own reviewers had access to during its internal review for application approval. Energy Division and its consultants should be able to reproduce savings

estimates and review ex ante savings estimates for selected projects or claims from the archived documentation. 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.)

Although the specific types of documents and parameters required to be in the supporting documentation will vary based on the type of project, examples of the expected data elements are listed below.

- baseline information: Baseline assignment (ER, Retrofit, ROB, industry standard practice, CPUC policy, etc), schematic diagram, any research or baseline study per Appendix I guidance
- existing system controls and operating status description
- existing system output capacities – current and maximum
- pre-installation verification report
- proposed modifications with schematic as applicable
- preliminary savings calculations and supporting data with full documentation to ensure replicability
- manufacturer’s cut sheets
- fuel switching considerations and any required analysis
- other fuel savings
- interactive effects
- Pre/post production output records when used in savings calculations and the source of such records
- billing history
- program manual
- pre- and post-inspection reports
- M&V plans, reports and raw data archives
- EUL/RUL value, analysis or source

On an ongoing basis each IOU will maintain this archive current for all applications which have been approved. It is understood that the contents of the archive for a project may be augmented as the project moves from an initial approval status to a final reported claim status. These additions are required to reflect the changes in a project from the planning stage to final installation and operation. 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 an extraction of the archive for all measures or projects contained within that tracking submission claim.

Each IOU website shall maintain a list or directory of all custom measure or project applications. This list shall include the project or measure classification

information (the ED-IOU jointly established measure naming and classification system is to be used), site and customer information (location, contacts, unique customer and unique site identifiers<sup>1</sup>, etc), preliminary, approved and claimed (as available) savings estimates, site inspection dates and status, and IOU and IOU contractor contact information. Utilities will develop an agreed upon project identification system that will be used to uniquely name the name the detailed project files which are maintained. This name shall not be re-used or re-assigned to a later project. Each list entry shall contain an item that is the date of the most recent change to any information in that entry. This list shall also contain a link to the detailed project file archive entry for this measure or project entry as well as the last date there was a change to the project detail file archive data. The project list shall be updated weekly with all projects entering preliminary review for approval if the estimated savings on the application or cumulative for the site or cumulative for the customer exceeds the trigger values found in Step 4 below. This weekly update shall also apply to projects under approval review if their preliminary savings estimates are altered such that the new estimates exceed any step 4 trigger values. This list is to be updated monthly to include all approved or committed applications.

The detailed project archive files need only contain a project application for those projects not subject to the requirements of Step 4 below. That is projects with current savings estimates that meet all of these criteria: 1) fall below all step 4 trigger values; 2) have not been approved; 3) are not expected to be included in as a savings claim in the current reporting period. The detailed project archive shall be maintained as complete as possible for those projects that meet any step 4 trigger values. The detailed project file must be complete for any included in a quarterly accomplishment claim.

**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.**

As described in step 3, the IOU custom measure and project archive will have special requirements for projects having current savings estimates which exceed

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<sup>1</sup> Each IOU shall develop, in consultation with Energy Division, unique customer identifier system and shall assign an identifier that remains unique to each customer/participant from year-to-year. Additionally each IOU shall develop, in consultation with Energy Division, unique site identifier system and shall assign an identifier each site that remains unique to each site from year-to-year. Both these unique identifiers shall be used to identify all projects and measures, of any type (either custom or deemed), claimed by any IOU core program, any IOU 3<sup>rd</sup> party or any government partners. No customer or site shall have more than one identifier under the systems developed. A customer and site definition shall be developed that meets the Energy Division intent for the purpose of aggregating projects and measure savings estimates for the defined trigger purpose. These unique identifies shall be used to aggregate cumulative site or customer measure and project savings for use as the trigger values in step 4 of this document process.

any trigger values defined later in this step. These special requirements are triggered at any time once the project savings estimates exceed any trigger value listed later in this section, including initial application submittal or any time during the application review, approval or post-approval process. Those special requirements include: 1) early (as immediate as reasonably possible) addition of all supporting documentation to the project archive accessible to Energy Division and its approved consultants; 2) notification to Energy Division (and/or its designated consultants) of the scheduling of any site visits (either pre-inspection, ongoing inspection or M&V, or post-inspection) with the reasonable ability of Energy Division consultants to participate in the activity (either as inspection observers or M&V participants).

Energy Division expects the project archive contents for these projects 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 and updated on an ongoing basis with supplemental information and inspections data received and utilized by the IOU during the measure or project implementation and payment approval process. The archive will contain any plans or data related to site M&V performed. The applications and supporting documentation, in electronic format, shall be maintained upon the IOU project archive site.

On a weekly basis each IOU shall submit a list of measures or projects which have reached the trigger threshold since the prior such list submission. This submission shall be made to Energy Division at the website URL <https://energydivision.basecampHQ.com>. The submitted list shall be of the same format as the IOU complete project list/directory file described in step 3, but shall contain only those projects which newly meet the trigger criteria listed below. The submitted list shall include a link to the project detail archive on the IOU project archive website where the project application and all supporting documentation currently available are located.

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 scheduled 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 staffs 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 level not just a single application. For example, some projects are divided into multiple measures and submitted as multiple applications which can be a combination of deemed and custom measures in some cases. 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 ex ante site-level savings:

- a. 250,000 kWh
- b. 200 kW (per DEER definition)
- 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 or before 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 any 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.

#### **5. Energy Division Early Feedback To IOUs**

During the custom measure review process described herein, Energy Division may develop information regarding specific projects, types of measures or general program performance that may be of high value to the IOUs and their implementers and reviewers. Energy Division will setup an informal mechanism to allow direct feedback to the IOUs on a regular basis. One of those mechanism will be the Energy Division/IOU working group described below.

#### **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 I

## Guidance for Determination of Baseline for Gross Savings

Take Most Efficient of All Applicable Cases

