

## **Appendix J:**

**San Diego Gas & Electric Company**

**D11-07-030 Appendix J Alternative  
Custom Programs  
(Redline)**



**APPENDIX I**

**Custom Project Review Process**

**Energy Division Process for Review of Investor Owned Utility Custom Measure *Ex Ante* Values**

**Introduction:**

This document details how the California Public Utilities Commission (Commission) will review the *ex ante* energy savings claims of Investor-Owned Utilities (IOUs) and 3<sup>rd</sup> Parties implementing custom measures or projects in the 2010-2012 Energy Efficiency program cycle.

Custom measures and projects are energy efficiency efforts where the customer financial incentive and the *ex ante* energy savings are determined using a site-specific analysis of the customer's existing and proposed equipment, and an agreement is made with the customer to pay the financial incentive upon the completion and verification of the installation. The efforts are by definition unique, each with theirs own characteristics. Parameters that determine estimated energy savings from a custom measure or project are more variable and less predictable without a site-specific analysis than the more common deemed measures for which savings parameters can be predetermined. As such, it is necessary to establish a clear process by which *ex ante* energy savings estimates from custom measures and projects can be reviewed in real-time as such measures and projects are identified and implemented.

An effective custom measure and project review process balances the needs of program participants who are investors and beneficiaries, the IOUs and 3<sup>rd</sup> Party Implementers who administer the programs, and ratepayers who provide incentive funding contingent on adequate oversight of their investment. The process identified here aims to strike that balance. This review process is intended to be applied consistently throughout the program cycle; however, clarification may be made at the discretion of the Assigned Commissioner or Administrative Law Judge.

Chart A of this Attachment includes a graphical schematic depicting the process outlined in this document. In addition, the principles guiding this process and supporting resources are defined herein.

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Guiding Principles:

1. Energy savings are the paramount priority of custom measures and projects.
2. ~~The Customer~~Custom Measure and Project Review Process is a continuous improvement (i.e., quality control rather than project approval) collaborative process that involves the IOU, the Energy Division, the customer and the third party implementer (if applicable to a specific project). The process shall be conducted according to an annual Evaluation Plan, developed by the stakeholders, which outlines the areas concentration for the year's work (technologies, types of customers, industries, etc.); and a project review schedule, agreed in writing by all parties, that specifies the maximum expected turnaround times for the various steps in a project review.
3. Each project review shall also be a collaborative process, designed to improve the quality of individual projects and thus to continuously improve the quality of custom projects. For each selected project, the project review process shall start with an initial conference call with all parties to go over project parameters and help the ED reviewer gain a basic familiarity with the project description, measures and savings estimates in order to expedite the identification of issues on baselines, data submitted and timeliness of responses. During the review process, all parties shall have access to all project documents, including data requests, data submittals, review comments, etc. Customers and third party implementers shall have input into the discussions during the review process to assure that codes and industry standards are being applied in the most appropriate way to each project. All parties shall ensure that the final project reviews are written in a format that facilitates their application to future similar projects.
4. The Custom Measure and Project Review Process is intended to allow Energy Division (ED) to review customer projects in parallel with the IOUs, thereby allowing for maximum customer convenience and suggest savings methodologies and or ex ante values for Commercial projects above 500MWh or 250M Therms and above 1MM Therms for Industrial projects. For Commercial projects below 500MWh or 250M Therms and Industrial projects below 1MM Therms Energy Division may undergo prospective reviews intended to simplify the process of project implementation and program oversight. Prospective reviews by Energy Division shall include an objective engineering analysis along with site specific results for each Custom Project reviewed and evaluated by Energy Division. Each IOU shall provide all data available and in their possession (unless otherwise deemed confidential) to Energy Division in

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performance of their prospective engineering review.

35. The cost of the review and incremental M&V for a particular project shall be limited to a reasonable percentage (e.g., 10%) of the proposed project incentive, unless the project is considered an example of a number of similar projects, in which case the extra cost of the review can be spread across the similar projects or funded through EM&V allocation.

6. When ~~possible and applicable for a given project, and where~~ practical, custom measure and project calculation methodologies shall be based upon Database Energy Efficiency Resources (DEER) methodologies ~~as frozen for 2008 DEER version 2008.2.05~~ or upon methodologies documented within the most current Energy Division reviewed and approved IOU non-DEER deemed ~~workpapers.~~Workpapers.

4. For the 2013-2014 transition period, these final DEER methodologies are all those indicated below that are frozen for the duration of the program cycle:

- DEER 2011 Update report and appendices (except A) dated November 8, 2011
- DEER 2011 Appendix A dated May 16<sup>th</sup>, 2012
- 2011 DEER database – version 4.01 dated May 16, 2012
- Net To Gross tables dated May 23, 2012 (note that adjustments for spill over will be frozen later)
- HVAC interactive effects tables dated May 23, 2016\* (assuming 2012 was meant)
- Load shapes tables dated May 16, 2012
- READI tool version 0.99.7 dated May 25, 2012
- Cost values and comments dated June 2, 2008
- EUL/RUL values dated October 10, 2008
- EUL/RUL summary documentation posted April 2008

Additions for new measures and/or clarification of documentation above as agreed upon by ED and the IOUs may be considered as acceptable, with the intent that existing methodologies are to remain frozen for the program cycle.

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7. IOUs are responsible for effective record keeping such that calculation tools, documentation of how those tools were applied to custom measures and projects, and documentation of custom project *ex ante* savings calculations are submitted electronically (as permitted by confidentiality and security restrictions) to the Energy Division once IOU confidentiality and security concerns are satisfied.

8. Stakeholders shall conduct periodic EM&V studies, with allocated EM&V funding, to evaluate whether a custom measure offer shall be modified, moved to Deemed, or discontinued. Such changes would be implemented during the next cycle, with IOU Program Implementation Plans revised on a go forward basis only. Changes that are directed by Energy Division would take effect on future projects within the same cycle after sufficient time has been allowed to change program language and inform customers (i.e., 3-4 months). Identification of new "industry standard practice" baselines shall not impact customer commitments mid cycle.

#### **Supporting Resources:**

IOUs are directed to maintain the following supporting resources to enable timely, effective review of custom measures and projects by the Energy Division and their consultants.

#### **Calculation Tool<sup>1</sup> Archive (CTA):**

Each IOU shall maintain an archive of all generic tools used in calculating *ex ante* values such that they remain accessible to the Energy Division throughout the program cycle.<sup>2</sup> The archive shall contain all versions of all tools (except those tools that are proprietary and or licensed which shall be listed but not kept in the archive) used in the development of *ex ante* values for custom measures or projects claimed during the current program cycle. Project specific tools and processes will be stored in the Custom Measure and Project Archive described

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<sup>1</sup> Tools, in the context of this document, means software, spreadsheets, "hand" calculation methods with procedure manuals, or any automated methods used for estimating *ex ante* values for custom measures or projects.

~~<sup>2</sup> The Utilities must arrange access to any proprietary tools and software used in the development of *ex ante* values so that Energy Division can perform the review described in this document.~~

below.

The tool archive shall include:

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- a. All manuals and user instructions, where applicable. If the calculation tool is simply a generic spreadsheet, then all cell formulas and documentation shall be readily accessible from the tool, if available to the IOU
- b. A list of technologies, measures or projects for which custom calculations are performed using the tool, unless apparent from an engineering inspection of the given tool being used

The Calculation Tool Archive shall be updated by the IOUs on an ongoing basis during the ~~2010-2012~~2013-2014 program cycle as tools are publicly revised.

#### Custom Measure and Project Archive (CMPA):

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-Each IOU shall keep a complete up-to-date electronic archive of all custom measures and projects. Each project ~~should~~shall be added to the Archive ~~as soon as possible after either~~on the earlier of the date that it is identified in the pre-application stage or the date of the customer's application to the IOU, ~~whichever is earlier.~~ Each project ~~should~~shall be assigned a unique identifier that shall not be re-used or re-assigned to other projects.

The IOUs shall provide a summary list of all projects, in ~~pre-application stage and application stage, in~~pre-application stage their CMPA. Energy Division will provide the utilities with the format of the summary list. The summary list shall identify each project using its unique identifier ~~and provide a link to the detailed files of each project.~~ The summary list shall also reflect the date of the most recent entry into each project. The summary list shall include for each project the following (Energy Division and the IOUs will work out details of the meaning and specifics of each item below):

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- The customer type
- The project type
- Industry Type
- Status (pre-application, application received, application in review, agreement signed, completed, paid, claimed, etc.)
- ~~For pre-application stage projects, a best guess at probability the project will become an application (unknown, very low, low, medium, high, very~~

~~high; or a percentage probability 0-100% for none to definite) with this status updated as new information becomes available)~~

- Project location (address)
- Utility contact person (Primary IOU review contact and, if appropriate, primary IOU customer interface contact such as marketing representative)
- Customer segment
- Equipment or process involved
- General description of the proposed project and its energy saving premise
- Estimated *ex ante* energy savings
- ~~the target date when a customer agreement is expected to be issued for customer signature (Agreement Target Date)~~

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The summary list shall be updated at least on the first and third Monday of every month for the duration of the ~~2010-2012~~2013-2014 program cycle, however, the IOU shall provide the updated list more often as necessary to provide Energy Division with information on high priority or fast-tracked applications, so as to allow Energy Division to perform reviews of such projects at its sole discretion. The IOUs may provide the summary list by program instead of a consolidated list, ~~should~~shall they so desire.

For projects that, within a regular bi-monthly CMPA summary list submission, are projects for which applications have been newly received or projects that have moved from the pre-application state into the application state, Energy Division will inform the IOUs of projects which have been selected for review. Such notification shall be before or by the next regularly scheduled CMPA summary list submission. Thus Energy Division will have a minimum of approximately two weeks to decide if a new application measure or project, either in pre-application or application stage will be subject to review and included into its review "sample." An IOU may request that a project review decision be expedited for high priority or fast tracked projects and Energy Division will make its best effort to accommodate such requests. If Energy Division chooses not to review a project an IOU may request such a project be included in the Energy Division review sample. Energy Division shall consider such decision change requests but will limit such changes based upon available resources to ensure adequate coverage of the full cycle portfolio of measures and projects in its review sample. An IOU request for Energy Division project review may be accepted, denied or deferred into the Early Opinion process at Energy Division's discretion, however, Energy Division shall inform the IOU of its



decision as quickly as possible.

For each project sampled for a review, the specific types of documents to be maintained in the CMPA and parameters required to be in the supporting documentation may vary based on the type of project. *Examples* of the expected data elements are listed below.

- Documentation to support Baseline assignment (Code or Standard requirement, Early Retirement, Retrofit, Replace On Burnout, industry standard practice, CPUC policy, etc)<sup>3</sup>
- Existing system controls and operating status description
- Existing system output capacities – current output and maximum/design capacity
- Pre-installation inspection report
- ~~Post installation inspection report~~
- Proposed modifications with schematic as applicable
- Preliminary savings calculations and supporting data with documentation to ensure replicability
- Manufacturer’s cut sheets when used to estimate *ex ante* savings or when needed to ensure replicability
- Fuel switching considerations and any required analysis per CPUC policy regarding fuel switching projects (see Energy Efficiency Policy Manual)
- Other fuel savings and/or load increases resulting from the project
- Heating, Ventilation, and Air Conditioning (HVAC) interactive effects values and methods used to develop those values, when measures cause a change in HVAC system loads
- Interactions between multiple measures that act to increase or decrease savings relative to a measure stand-alone savings estimate
- ~~Pre/post production~~Production output data when used in savings calculations and the source of such records
- Billing history - one-year pre installation, with interval data required

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<sup>3</sup> The baseline parameters used are of primary importance in estimating project savings. Appendix I of this document provides the guidelines by which Energy Division will review baseline parameter selection.

when available; when *ex ante* estimated values rely upon a per-unit-production changes based on multi-year production data, corresponding billing histories are required

- IOU or implementer program manual (a single archive of these documents ~~should~~shall be referenced rather than including the documents in each project archive)
- M&V plans, reports and raw data archives, where applicable
- EUL/RUL value, analysis or source

Projects Energy Division selects for review will have their complete documentation from the IOU CMPA placed into an Energy Division Review CMPA which, with the Utility Custom Project Summary List, will be housed on an internet-accessible website that meets reasonable security and legal requirements. The Energy Division will be responsible ~~to~~for establishing and maintaining that website.

#### **Custom Measure and Project Review Process:**

There are two categories of Energy Division's Custom Measure and Project Review Process: general and claims. All reviews are at the Energy Division's discretion; however, if an IOUs *ex ante* values are not reviewed by the Energy Division, the IOU shall rely on those values in making energy savings claims before the Commission after adjusting those values using the gross realization rates as shown in Table 1 below.

IOU	kWh	kW	Therm
PG&E	0.9	0.9	0.9
SCE	0.9	0.9	
SDG&E	0.9	0.9	0.9
SCG			0.9

In applying the GRR values in Table 1 above, projects that adhere to comments made by Energy Division on previous similar projects of like kind shall apply a GRR of 1.0 to avoid double discounting.

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The **General Review** will include Energy Division's oversight of the CTA and CMPA. Energy Division, at its discretion, will review tools, measures, and projects, as well as inputs to the tools for selected projects. Energy Division may choose to provide the IOUs with input on one or more of the tools, measures, or projects. The tools reviews will be done on a prospective basis. IOUs shall adjust their subsequent use of the tools, where practical, to conform to Energy Division input, or will request a re-evaluation of the inputs to be conducted by an independent third party selected by consent of both Energy Division and the affected IOU.

The more specific **general project reviews** include a close examination of a selected subset of custom projects.

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#### **Data Requirements for a Project to be Reviewed**

The Evaluation Plan described above shall contain a definitive set of requirements for project documentation that the IOUs can implement (appendix 1). Clear requirements will minimize the back and forth, time delays and uncertainty in what is required. Note that a similar approach is being used in New York for the evaluation of custom and deemed measures, including a simplified approach for early retirement measures.<sup>4</sup>

- As noted above, costs of a project review shall be consistent with the impact and possible savings from the project. For instance, required EM&V work shall not exceed more than 10% of the project incentive. EM&V set aside shall be used for cases where ED wishes to conduct some more general analysis. The findings of this analysis may apply to multiple projects if they can be generalized.
- The requirements for documenting early retirement shall not be excessive (e.g., Appendix 1), requiring, for example, customer interrogation or investigation of the customer's finances.
- Cost documentation for incremental costs needs to be simple to apply. IOUs have proposed a conceptual approach that is reasonable to implement. Project-by project analysis of hypothetical costs is cost

<sup>4</sup> <http://www.dps.ny.gov/TechManualNYRevised10-15-10.pdf>

prohibitive.

- The IOUs may propose a method to simplify the Base case determination in the standard comments. The proposed approach could be termed the Base Case Ratio (BCR). The BCR would be a high level adjustment to the single baseline ex ante savings values, where both real costs and savings are known and can readily be measured and validated. This approach would eliminate the need for the complexity of calculating dual baselines by incorporating a simplified “average” life baseline adjustment. The exact formulation and use of the BCR to be determined in the IOU/ED working group (see below).

For all custom applications with *ex ante* values that are not reviewed by the Energy Division, the IOU shall apply an adjustment to the gross savings estimate values using the Default Custom Measure Gross Realization Rates (Table 1) above when making energy savings claims before the Commission, unless the project is similar in nature and has already incorporated previous Energy Division comments, in which case the applied GRR shall be 1.0

Energy Division will conduct general project reviews at three stages of the IOU custom project process: concurrent and collaborative pre-installation review, post-installation review, and claim review.

### Pre-Installation Review

~~The objective of the Pre-Installation Review is for Energy Division to perform a parallel review, with the IOUs, and then for Energy Division to provide to the IOUs input on the estimated custom measure or project *ex ante* savings. The Pre-Installation Review allows~~Projects selected by Energy Division for review at the Pre-Installation stage allow Energy Division to supplement the resources and information available through the CTA and CMPA in making its recommendations. The objective of the Pre-Installation Review is for Energy Division to perform a parallel review with the IOUs on Commercial projects above 500MWh or 250M Therms, and above 1MM therms for Industrial projects, and a prospective review for projects below that size. For the Commercial projects above 500MWh or 250M Therms and above 1MM Therms for Industrial projects Energy Division will provide IOUs input on the estimated custom measure or project *ex ante* savings.

For projects that are above 500MWh or 250M Therms for Commercial projects and 1MM Therms for Industrial Projects and selected for review ED will submit

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an initial data request and IOU's will submit a response. If ED requires additional information it may make one additional data request and must submit that data request within 5 working days of the IOU's initial data request response. ED must inform the IOU if it has not received all requested material within 5 days of IOU's data response. After the ED has received all requested material it has 20 working days to review the project. If a final project review is not submitted by ED within the timeframe listed than the project will be approved as submitted by the IOU. This review will inform the current project savings values as well as calculations for future similar projects.

For projects that are smaller than 500MWh or 250M Therms for Commercial projects and 1MM Therms for Industrial Projects ED may perform a prospective review. This prospective review will not inform the selected project energy savings values but will be used to inform future project calculations as specifically directed by ED.

Future projects are considered to be similar if they are identical to the reviewed project or so similar as to warrant inclusion of such comments and methodologies. The IOU shall be responsible for demonstrating, within a reasonable engineering judgment, that comments have been applied to future projects, or must reasonably demonstrate that Energy Division comments are not relevant to the future project, if requested.

For projects that are selected by Energy Division for prospective review for which savings and incentives to Customer are based on completed M&V results, Energy Division review will be focused on review of the M&V Plan and Baseline determinations, not quantification of *ex-ante* savings.

The IOUs shall provide the Energy Division the opportunity to participate in any site visits, pre-installation inspections, customer interviews, pre-installation M&V, or spot measurements that may occur during this and subsequent phases. ~~If such events are scheduled by IOUs more than five days in advance, the~~ The IOU shall provide notification to the Energy Division ~~within one business day of scheduling the event; the~~ as soon as possible for projects Energy Division ~~should be immediately notified for events scheduled less than five days away~~ has selected for review. The Energy Division will notify the IOUs prior to the event if they plan to send a representative. If the project is implemented by a third party, the IOUs shall coordinate and notify the third party as applicable.

During the Pre-Installation Review, the Energy Division will coordinate any of its Measurement & Verification (M&V) activities on these custom projects with

the IOU or its third party program implementer depending on who is the primary relationship manager for the customer and project in question. The Energy Division may choose to use the Utilities' or its own contractors, at Energy Division expense, to perform site inspections or pre-installation M&V.

~~The Energy Division will provide the IOUs with the results of its Pre-Installation Review, including recommended *ex ante* values and documentation to support its recommendation, at least ten days before the Agreement Target Date identified by the IOU in the CMPA summary list. However, the~~The IOU shall provide Energy Division with all CMPA documents that have been received by the IOU (or third party) in a timely manner ~~such that Energy Division has a reasonable ability to meet this timeline.~~ Energy Division and the IOUs agree to work together to allow timely review of expedited and high priority projects. If the Energy Division affirms the IOU's estimated *ex ante* values or suggests approaches which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values for the reviewed project and modify its approach when entering into future estimated incentive agreements for similar projects as soon as practical. If Energy Division approves a project with modifications it must present alternate *ex ante* values for IOU's to use for an incentive agreement and may not propose conditional approvals that rely on post installation data.

### Post-Installation Review

The objective of the Post-Installation Review is to provide the Energy Division with the opportunity [to] verify that the equipment installed by the customer conforms with that approved in the pre-installation review. The approved methodologies used to calculate *ex ante* energy savings values shall not be modified for the project under review. The IOU shall allow the Energy Division access to site visits, post-installation inspections, customer interviews, post-installation M&V, or spot measurements. ~~project.~~ Such access shall not impede or delay the established IOU process of executing an Agreement for Incentives with the specific customer. IOU and Energy Division notifications for these events shall follow the guidelines described above for Pre-Installation Review. Similarly, the Energy Division will work with either the IOU or the 3rd Party program implementer to coordinate the Post-Installation review to maintain consistent communication with the customer and manage customer expectations appropriately.

If the Energy Division affirms the IOU's estimated *ex ante* values or suggests

values which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values when entering into future estimated incentive agreements for the projects similar projects. Energy Division must present alternate *ex ante* values for IOU's to use for an incentive agreement and shall also may not propose conditional approvals that rely on those values for subsequent energy savings claims before the Commission if no further *ex post*-installation adjustments are identified by either the IOUs or Energy Division, as described below. data.

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### **Post-Installation Review**

The objective of the Post-Installation Review is to provide the Energy Division with continued opportunity to review and provide input on the accuracy of *ex ante* values assumed by the IOU prior to the utility making its final incentive payment to its customer. Selection of either a pre-installation or a post-installation review by Energy Division shall not affect the IOU approved incentive or Agreement with the customer for the current project. The IOU assumes responsibility and risk associated with the non-performance of the current project and non-compliance on subsequent projects with specific direction from Energy Division to incorporate previously made comments on past identical projects or projects similar in nature. Subsequent projects are required to adhere to accepted direction from Energy Division regarding method of analysis, analytical parameters, and specific data to be collected that will allow such future projects to be adequately evaluated.

All written dispositions from Energy Division are to state one of the following: Acceptable or Update future similar projects as indicated.

~~The IOU shall allow the Energy Division access to site visits, post installation inspections, customer interviews, post installation M&V, or spot measurements. IOU and Energy Division notifications for these events should follow the guidelines described above for Pre-Installation Review. The IOUs shall continue maintenance of the CTA and CMPA in accordance with the direction provided above. If the post-installation M&V inspection results in an IOU adjustment of savings for projects that were reviewed by Energy Division during the pre-installation stage, Energy Division shall have the option to review and approve such adjustments. If, as a result of the post-installation inspection, the Energy Division affirms the IOU's estimated *ex ante* values or suggests values which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values for making energy savings claims before the Commission. Otherwise, no deliverables are due to either IOU or Energy~~

~~Division.~~

## IOU Claim Review

The IOU Claim Review allows the Energy Division to conduct a Quality Control review of energy savings for custom projects included into the IOU Quarterly Claim<sup>5</sup> to ensure that:

1. ~~appropriate~~Appropriate default realization rates were applied to *ex ante* gross savings estimates for projects that were not reviewed by the Energy Division; ~~and,~~
2. ~~recommendations~~Recommendations made by Energy Division for ~~previously~~ reviewed projects were accurately reflected in the claim.

The IOU Claim Review shall commence upon the IOU submittal of a quarterly reporting period claim containing those projects, and end at the later of ninety-days after that submission or the subsequent IOU quarterly submission. Energy Division shall notify the IOU of any errors found in their claim review and the IOU shall comply and revise the claims.

Custom projects that were not reviewed by the Energy Division prior to appearing in a Quarterly claim may be further reviewed for the purpose of gaining new information and prospective improvements to *ex ante* estimates and planning, but IOU's ~~will not be held accountable for energy savings adjustments for such reviews~~assumptions will be accepted as submitted for any projects covered by then existing customer agreements or already approved customer applications.

## Dispute Resolution of Disagreements:

~~1.~~ Should Energy Division and a ~~Utility~~an IOU have a ~~technical~~ disagreement ~~on~~regarding prospective comments or adjustments to a project's *ex ante* values, Energy Division and the Utility shall meet to discuss and resolve the differences ~~within two weeks.~~ If the ~~parties fail to come to agreement, and the~~ Energy Division recommended *ex ante* value is ~~less than~~within a plus/minus 20 percent of the utility estimated *ex ante* value, Energy Division and the utility shall split

<sup>5</sup> As a component their energy efficiency portfolio reporting requirements each IOU will submit a quarterly filing on EEGA which includes details of all measure *ex ante* savings values for all individual projects and measures which have been installed prior to that claim.

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the difference of the two values. ~~However, this does not apply if~~ the disagreement is where parties fail to come to agreement and the Energy Division determines that savings will not accrue at all or when a CPUC policy has not been followed. ~~However, in cases where the difference is greater than~~ are recommended *ex ante* value exceeds plus or /minus 20 percent, then Energy Division's value will be of the frozen utility estimated *ex ante* value., then an independent third party not associated with the project shall be contracted to determine the outcome at the expense of Energy Division. No party considered to have a conflict of interest shall be engaged.

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#### To facilitate future communication:

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Energy Division and the IOUs shall establish a working group to allow an ongoing dialog on the custom measure and project review process. This working group will provide a forum for all parties to exchange information on their current activities and future plan and to 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 arising in its custom measure *ex ante* estimation review process. ~~These issues may include items such as, including but not limited to~~ baseline definitions, ~~and~~ net versus gross savings definitions and other items as any party deems necessary. ~~To provide guidance for future projects,~~ Energy Division will maintain a public archive database of the summary of issues identified in its custom applications and projects reviews, and the Energy Division dispositions of those issues and will notify stakeholders how and where to access this information. Customer specific data and information will be removed from the Energy Division summary of issues and dispositions.

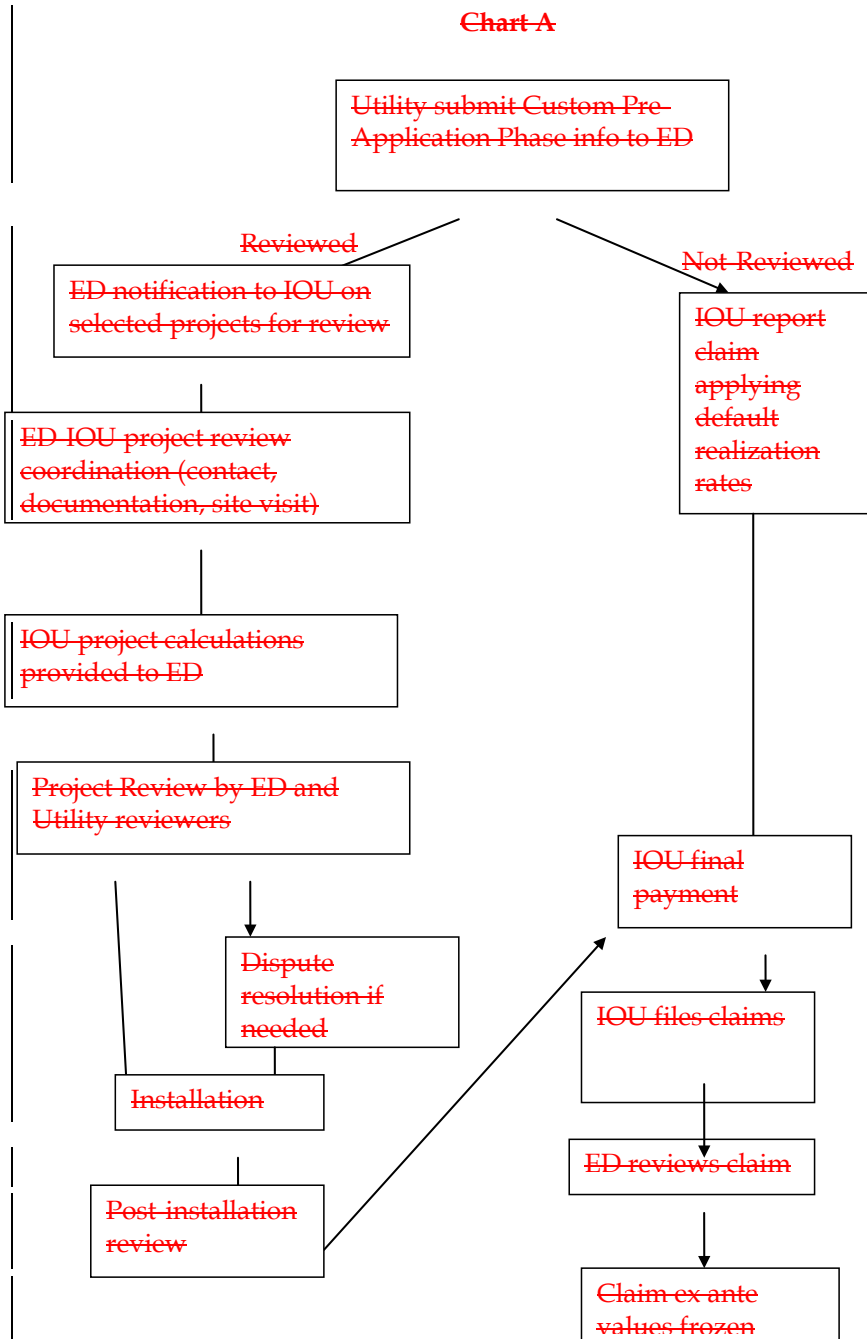
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At any time during their development of *ex ante* estimates for a specific custom measure or project the Utilities may submit to Energy Division a request for an early Energy Division review or opinion on a specific issue. This process has been established by Energy Division issuance of the "Custom Measure Early Opinion Process" document posted as "Custom Measure Early Energy Division Opinion Process v2.docx" on basecamp 9/30/2010 in the "Early Opinion Shared" project area. Energy Division shall respond to that request ~~in as expeditious a manner as possible~~ within five (5) business days to provide the IOUs with guidance and to allow ~~the Utilities~~ them to complete their *ex ante* estimates in a timely manner. However, this type of early guidance shall not

limit or constrain any later Energy Division review of *ex ante* claims submitted by the Utilities.

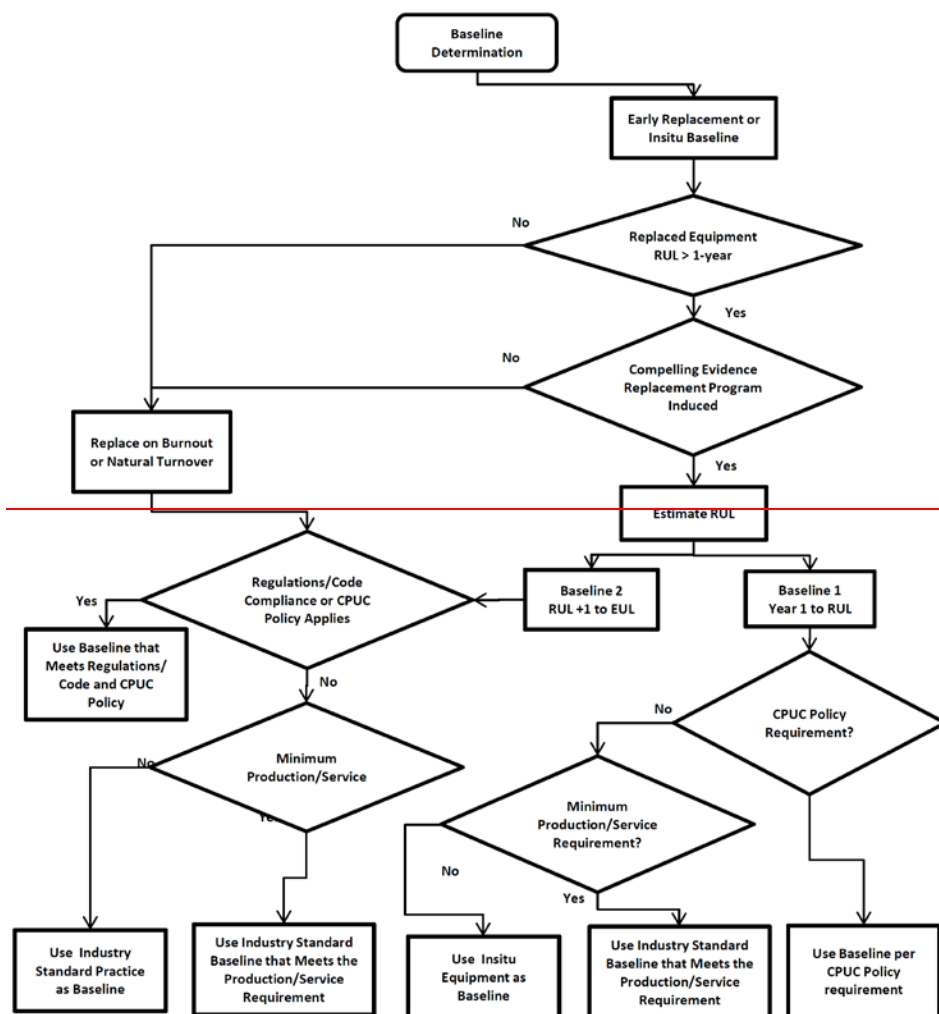
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Chart A



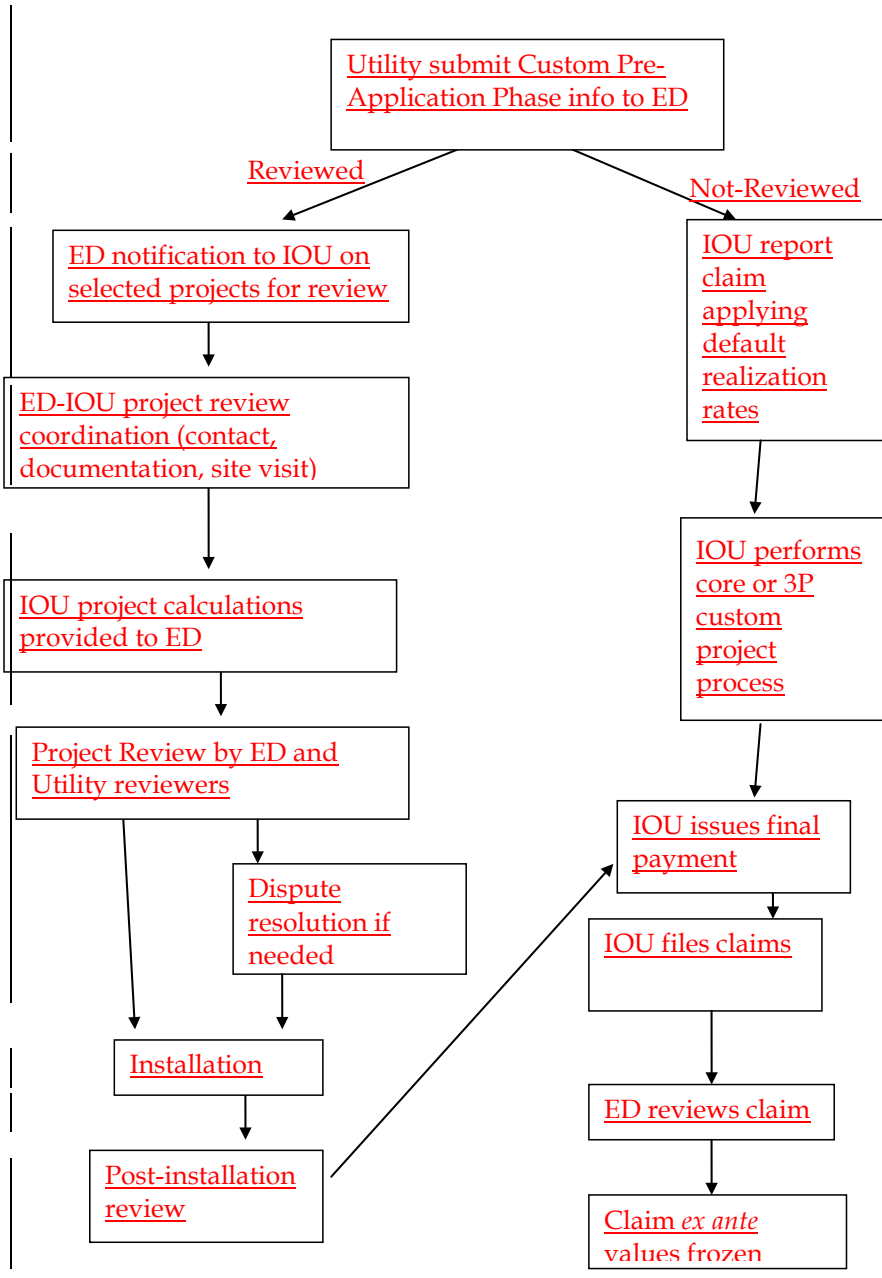
## Appendix 1

### Energy Division Methodology for Determination of Baseline for Cross Savings Estimate



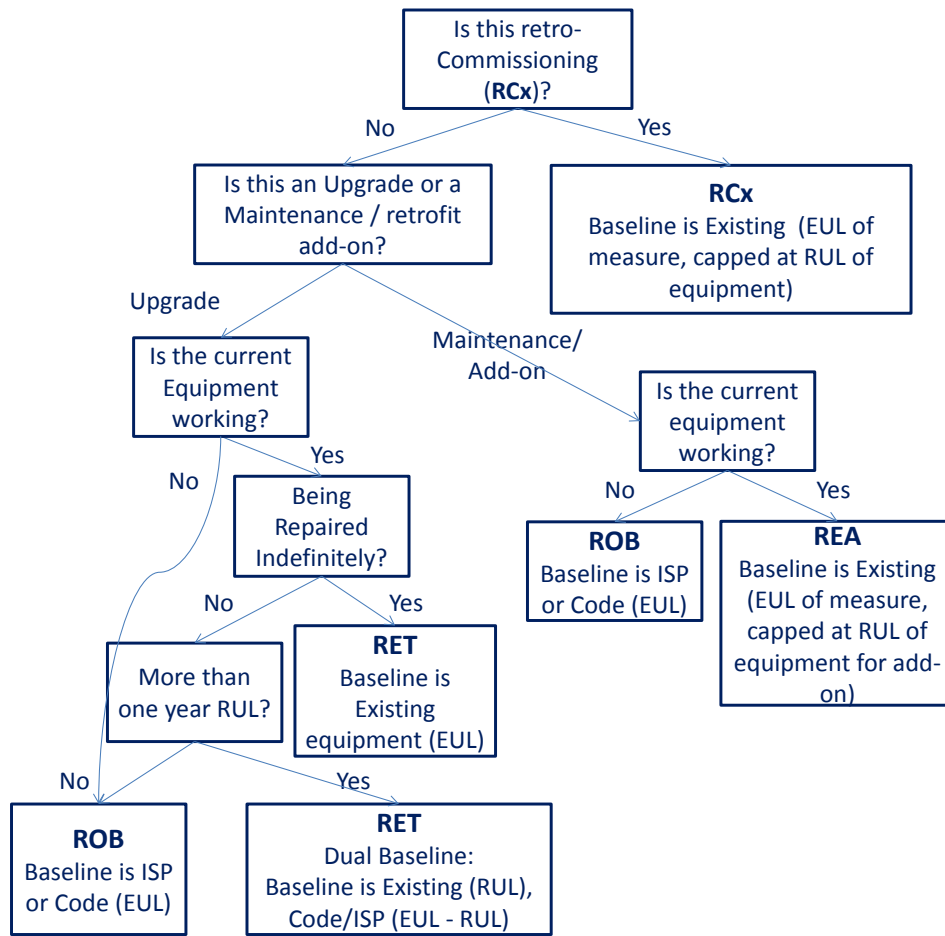
Energy division and the IOUs will undertake a focused collaborative effort for the first three months of the program cycle to develop a guidance document for establishing all *ex ante* values for customized projects. This document will be a

living document, updated on a quarterly basis, which will be the means by which Energy Division conducts its quality control. Energy Division's reviews will use this document as the means by which the QC will be evaluated. Appendix 1 along with content provided by the IOUs to the collaborative working group will be the starting basis for this document.



Appendix 1

Custom Project Decision Tree (proposed)



See Notes below

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## Review of Baseline for Gross Savings Estimates

The estimation of *ex ante* saving values requires the selection of a baseline performance for every project. ~~The baseline selection and specific baseline parameters are of primary importance to establishing the *ex ante* savings estimates. Early retirement measures driven by a code or policy requirement shall use a typical industry compliant baseline.~~ The baseline parameters are selected by establishing the project category from the possible alternatives including New Construction or Major Renovations, program-induced Early Retirement, Standard Retrofit ~~or~~, Normal/Natural Replacement/Turnover, and Replace On Burnout. ~~These alternative categories result~~ The establishment of the project category results in the utilization of an alternative baseline ~~parameters~~ parameter set by Code or Standard requirements, industry standard practice, CPUC policy, or other considerations. In ~~theirs~~ review of IOU projects, Energy Division will follow the guidelines as presented here in establishing the baseline for all gross savings estimates.

~~Notes to above flowchart~~

The process for selecting the applicable baseline parameter is depicted in the graphic above. Descriptions of the alternative baseline parameters are given below.

**Pre-existing equipment<sup>6</sup> baselines are only used in cases where there is clear evidence the program has induced the replacement ~~rather than merely caused an increase in efficiency in a replacement that would have occurred in the absence of the program prior to the end of its useful life~~.**

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Pre-existing equipment baselines are ~~only~~ used for the portion of the remaining useful life (RUL) of the pre-existing equipment that was eliminated or the function replaced by new, more efficient equipment due to the program. These early or accelerated retirement cases may require the use of a “dual baseline” analysis that utilizes the pre-existing equipment baseline with annualized first year energy savings during an initial RUL period and a code

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<sup>6</sup> Here the term equipment is intended to cover all technology cases including envelope components, HVAC components and process equipment and may also include configuration and controls options.



requirement/~~industry standard practice~~ baseline for the balance of the EUL of the new equipment.

- A pre-existing equipment baseline is used as the gross baseline ~~only~~ when there is ~~compelling~~clear evidence that the pre-existing equipment has a remaining useful life and that the program activity induced or accelerated the equipment replacement. This baseline can only apply for the RUL of the pre-existing equipment.
- A code ~~requirements~~requirement or industry standard practice baseline is used for replace-on-burnout, natural turnover and new construction (including major rehabilitation projects) situations. Industry standard practice is defined as an accepted/approved EM&V study for the specific industry or application. In the absence of such study, the baseline defaults to the existing equipment. This baseline applies for the entire EUL as well as the RUL+1 through EUL period of program induced early retirement of pre-existing equipment cases (the second period of the dual baseline case.)

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#### CPUC policy rules and IOU program eligibility rules govern the baseline

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A careful review of utility and third-party program and CPUC policy rules must be undertaken and adjustments applied to gross savings in some cases.

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Adjustments are indicated for gross savings when there was clear evidence from program or policy rules that savings claims could not be made nor rebates paid for the baseline in question. Program rules come into play with respect to gross baseline requirements, for example, when those rules specify:

- ~~a~~A minimum required efficiency level;
- ~~a~~A minimum percentage improvement above applicable minimum code requirement;
- ~~a~~A minimum RUL of the existing equipment;
- ~~the~~The type or range of retrofits that are allowed be included in a program.

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CPUC policy may apply to establishing the gross baseline when Policy Manual Rules, a CPUC Decision or a ~~decision maker~~ Ruling from an Administrative Law Judge or Assigned Commissioner includes special requirements or consideration for the situation or technologies of a measure. For example, projects or sites that involve fuel switching, co-generation or renewable technologies are usually subject to special baseline considerations (~~or other considerations~~) that must be considered in the savings estimates.

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**Minimum production level or service requirements govern the baseline**

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In some situations, a measure for which savings might be claimed could be determined to be the only acceptable equipment for an application. In such cases, the baseline must be set at the minimum needed to meet the requirements, which may be the same as the equipment planned for installation. An example would be an industrial process where only a variable-speed drive pumping system could meet the production requirements. For situations where the baseline conditions or requirements were changed (such as production level changes), the baseline equipment is defined as the minimum equipment needed to meet the revised conditions. If the pre-existing equipment is not capable of reliably meeting the new requirement (such as production change) for its remaining life, then a new equipment baseline must be established utilizing either minimum code requirement or industry standard practice equipment, whichever is applicable.

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**Industry standard practice baselines are established to reflect typical actions absent the program**

Industry standard practice baselines establish typically adopted industry-specific efficiency levels that would be expected to be utilized absent the program. If the Customer is not required to make a change to Industry Standard practice by code or other compelling market reasons (e.g. non-availability of replacement parts or equipment), pre-existing equipment use shall be the basis of baselines for RUL of existing equipment. Standard practice determination ~~must~~shall be supported by ~~recent studies or market research~~reasonable evidence that reflects current market activity. Typically market studies (or IOU work papers if no market studies are available) should be less than five years old; however this guideline is dependent on the rate of change in the market of interest relative to the equipment in question. For example, the lighting markets may change significantly in the next two years while larger process equipment markets might change more slowly. Regulatory changes might cause very rapid market practice shifts and must also be considered. For example, ~~forthcoming~~ changes in Federal Standards relating to linear fluorescent ballasts will result in rapid market shifts of equipment use.

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**(END OF APPENDIX J)**



**D11-07-030 Appendix J Alternative  
Custom Programs  
(Clean)**



## APPENDIX J

### Custom Project Review Process

#### **Energy Division Process for Review of Investor Owned Utility Custom Measure *Ex Ante* Values**

##### **Introduction:**

This document details how the California Public Utilities Commission (Commission) will review the *ex ante* energy savings claims of Investor-Owned Utilities (IOUs) and 3<sup>rd</sup> Parties implementing custom measures or projects in the 2010-2012 Energy Efficiency program cycle.

Custom measures and projects are energy efficiency efforts where the customer financial incentive and the *ex ante* energy savings are determined using a site-specific analysis of the customer's existing and proposed equipment, and an agreement is made with the customer to pay the financial incentive upon the completion and verification of the installation. The efforts are by definition unique, each with its own characteristics. Parameters that determine estimated energy savings from a custom measure or project are more variable and less predictable without a site-specific analysis than the more common deemed measures for which savings parameters can be predetermined. As such, it is necessary to establish a clear process by which *ex ante* energy savings estimates from custom measures and projects can be reviewed in real-time as such measures and projects are identified and implemented.

An effective custom measure and project review process balances the needs of program participants who are investors and beneficiaries, the IOUs and 3<sup>rd</sup> Party Implementers who administer the programs, and ratepayers who provide incentive funding contingent on adequate oversight of their investment. The process identified here aims to strike that balance. This review process is intended to be applied consistently throughout the program cycle; however, clarification may be made at the discretion of the Assigned Commissioner or Administrative Law Judge.

Chart A of this Attachment includes a graphical schematic depicting the process outlined in this document. In addition, the principles guiding this process and supporting resources are defined herein.

## Guiding Principles:

1. Energy savings are the paramount priority of custom measures and projects.
2. The Custom Measure and Project Review Process is a continuous improvement (*i.e.*, quality control rather than project approval) collaborative process that involves the IOU, the Energy Division, the customer and the third party implementer (if applicable to a specific project). The process shall be conducted according to an annual Evaluation Plan, developed by the stakeholders, which outlines the areas concentration for the year's work (technologies, types of customers, industries, etc.); and a project review schedule, agreed in writing by all parties, that specifies the maximum expected turnaround times for the various steps in a project review.
3. Each project review shall also be a collaborative process, designed to improve the quality of individual projects and thus to continuously improve the quality of custom projects. For each selected project, the project review process shall start with an initial conference call with all parties to go over project parameters and help the ED reviewer gain a basic familiarity with the project description, measures and savings estimates in order to expedite the identification of issues on baselines, data submitted and timeliness of responses. During the review process, all parties shall have access to all project documents, including data requests, data submittals, review comments, etc. Customers and third party implementers shall have input into the discussions during the review process to assure that codes and industry standards are being applied in the most appropriate way to each project. All parties shall ensure that the final project reviews are written in a format that facilitates their application to future similar projects.
4. The Custom Measure and Project Review Process is intended to allow Energy Division (ED) to review customer projects and suggest savings methodologies and or *ex ante* values for Commercial projects above 500MWh or 250M Therms and above 1MM Therms for Industrial projects. For Commercial projects below 500MWh or 250M Therms and Industrial projects below 1MM Therms Energy Division may undergo prospective reviews intended to simplify the process of project implementation and program oversight. Prospective reviews by Energy Division shall include an objective engineering analysis along with site specific results for each Custom Project reviewed and evaluated by Energy Division. Each IOU shall provide all data available and in their possession (unless otherwise deemed confidential) to Energy Division in performance of their prospective engineering review.



5. The cost of the review and incremental M&V for a particular project shall be limited to a reasonable percentage (*e.g.*, 10%) of the proposed project incentive, unless the project is considered an example of a number of similar projects, in which case the extra cost of the review can be spread across the similar projects or funded through EM&V allocation.

6. When applicable for a given project, and where practical, custom measure and project calculation methodologies shall be based upon Database Energy Efficiency Resources (DEER) methodologies or upon methodologies documented within the most current Energy Division reviewed and approved IOU non-DEER deemed Workpapers.

For the 2013-2014 transition period, these final DEER methodologies are all those indicated below that are frozen for the duration of the program cycle:

- DEER 2011 Update report and appendices (except A) dated November 8, 2011
- DEER 2011 Appendix A dated May 16<sup>th</sup>, 2012
- 2011 DEER database – version 4.01 dated May 16, 2012
- Net To Gross tables dated May 23, 2012 (note that adjustments for spill over will be frozen later)
- HVAC interactive effects tables dated May 23, 2016\* (assuming 2012 was meant)
- Load shapes tables dated May 16, 2012
- READI tool version 0.99.7 dated May 25, 2012
- Cost values and comments dated June 2, 2008
- EUL/RUL values dated October 10, 2008
- EUL/RUL summary documentation posted April 2008

Additions for new measures and/or clarification of documentation above as agreed upon by ED and the IOUs may be considered as acceptable, with the intent that existing methodologies are to remain frozen for the program cycle.

7. IOUs are responsible for effective record keeping such that calculation tools, documentation of how those tools were applied to custom measures and

projects, and documentation of custom project *ex ante* savings calculations are submitted electronically (as permitted by confidentiality and security restrictions) to the Energy Division once IOU confidentiality and security concerns are satisfied.

8. Stakeholders shall conduct periodic EM&V studies, with allocated EM&V funding, to evaluate whether a custom measure offer shall be modified, moved to Deemed, or discontinued. Such changes would be implemented during the next cycle, with IOU Program Implementation Plans revised on a go forward basis only. Changes that are directed by Energy Division would take effect on future projects within the same cycle after sufficient time has been allowed to change program language and inform customers (*i.e.*, 3-4 months). Identification of new "industry standard practice" baselines shall not impact customer commitments mid cycle.

### **Supporting Resources:**

IOUs are directed to maintain the following supporting resources to enable timely, effective review of custom measures and projects by the Energy Division and their consultants.

### **Calculation Tool<sup>1</sup> Archive (CTA):**

Each IOU shall maintain an archive of all generic tools used in calculating *ex ante* values such that they remain accessible to the Energy Division throughout the program cycle. The archive shall contain all versions of all tools (except those tools that are proprietary and or licensed which shall be listed but not kept in the archive) used in the development of *ex ante* values for custom measures or projects claimed during the current program cycle. Project specific tools and processes will be stored in the Custom Measure and Project Archive described below.

The tool archive shall include:

- a. All manuals and user instructions, where applicable. If the calculation tool is simply a generic spreadsheet, then all cell

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<sup>1</sup> Tools, in the context of this document, means software, spreadsheets, "hand" calculation methods with procedure manuals, or any automated methods used for estimating *ex ante* values for custom measures or projects.

formulas and documentation shall be readily accessible from the tool, if available to the IOU

- b. A list of technologies, measures or projects for which custom calculations are performed using the tool, unless apparent from an engineering inspection of the given tool being used

The Calculation Tool Archive shall be updated by the IOUs on an ongoing basis during the 2013-2014 program cycle as tools are publicly revised.

### **Custom Measure and Project Archive (CMPA):**

Each IOU shall keep a complete up-to-date electronic archive of all custom measures and projects. Each project shall be added to the Archive on the earlier of the date that it is identified in the pre-application stage or the date of the customer's application to the IOU. Each project shall be assigned a unique identifier that shall not be re-used or re-assigned to other projects.

The IOUs shall provide a summary list of all projects, in their CMPA. Energy Division will provide the utilities with the format of the summary list. The summary list shall identify each project using its unique identifier. The summary list shall also reflect the date of the most recent entry into each project. The summary list shall include for each project the following (Energy Division and the IOUs will work out details of the meaning and specifics of each item below):

- The customer type
- The project type
- Industry Type
- Status (pre-application, application received, application in review, agreement signed, completed, paid, claimed, etc.)
- Project location (address)
- Utility contact person (Primary IOU review contact and, if appropriate, primary IOU customer interface contact such as marketing representative)
- Customer segment
- Equipment or process involved
- General description of the proposed project and its energy saving premise
- Estimated *ex ante* energy savings

The summary list shall be updated at least on the first and third Monday of every month for the duration of the 2013-2014 program cycle, however, the IOU shall provide the updated list more often as necessary to provide Energy Division with information on high priority or fast-tracked applications, so as to allow Energy Division to perform reviews of such projects at its sole discretion. The IOUs may provide the summary list by program instead of a consolidated list, shall they so desire.

For projects that, within a regular bi-monthly CMPA summary list submission, are projects for which applications have been newly received or projects that have moved from the pre-application state into the application state, Energy Division will inform the IOUs of projects which have been selected for review. Such notification shall be before or by the next regularly scheduled CMPA summary list submission. Thus Energy Division will have a minimum of approximately two weeks to decide if a new application measure or project, either in pre-application or application stage will be subject to review and included into its review "sample." An IOU may request that a project review decision be expedited for high priority or fast tracked projects and Energy Division will make its best effort to accommodate such requests. If Energy Division chooses not to review a project an IOU may request such a project be included in the Energy Division review sample. Energy Division shall consider such decision change requests but will limit such changes based upon available resources to ensure adequate coverage of the full cycle portfolio of measures and projects in its review sample. An IOU request for Energy Division project review may be accepted, denied or deferred into the Early Opinion process at Energy Division's discretion, however, Energy Division shall inform the IOU of its decision as quickly as possible.

For each project sampled for a review, the specific types of documents to be maintained in the CMPA and parameters required to be in the supporting documentation may vary based on the type of project. *Examples* of the expected data elements are listed below.

- Documentation to support Baseline assignment (Code or Standard requirement, Early Retirement, Retrofit, Replace On Burnout, industry standard practice, CPUC policy, etc)<sup>2</sup>

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<sup>2</sup> The baseline parameters used are of primary importance in estimating project

*Footnote continued on next page*

- Existing system controls and operating status description
- Existing system output capacities – current output and maximum/design capacity
- Pre-installation inspection report
- Proposed modifications with schematic as applicable
- Preliminary savings calculations and supporting data with documentation to ensure replicability
- Manufacturer’s cut sheets when used to estimate *ex ante* savings or when needed to ensure replicability
- Fuel switching considerations and any required analysis per CPUC policy regarding fuel switching projects (see Energy Efficiency Policy Manual)
- Other fuel savings and/or load increases resulting from the project
- Heating, Ventilation, and Air Conditioning (HVAC) interactive effects values and methods used to develop those values, when measures cause a change in HVAC system loads
- Interactions between multiple measures that act to increase or decrease savings relative to a measure stand-alone savings estimate
- Production output data when used in savings calculations and the source of such records
- Billing history - one-year pre installation, with interval data required when available; when *ex ante* estimated values rely upon a per-unit-production changes based on multi-year production data, corresponding billing histories are required
- IOU or implementer program manual (a single archive of these documents shall be referenced rather than including the documents in each project archive)
- M&V plans, reports and raw data archives, where applicable
- EUL/RUL value, analysis or source

Projects Energy Division selects for review will have their complete documentation from the IOU CMPA placed into an Energy Division Review CMPA which, with the Utility Custom Project Summary List, will be housed on

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savings. Appendix I of this document provides the guidelines by which Energy Division will review baseline parameter selection.

an internet-accessible website that meets reasonable security and legal requirements. The Energy Division will be responsible for establishing and maintaining that website.

**Custom Measure and Project Review Process:**

There are two categories of Energy Division’s Custom Measure and Project Review Process: general and claims. All reviews are at the Energy Division’s discretion; however, if an IOUs *ex ante* values are not reviewed by the Energy Division, the IOU shall rely on those values in making energy savings claims before the Commission after adjusting those values using the gross realization rates as shown in Table 1 below.

IOU	kWh	kW	Therm
PG&E	0.9	0.9	0.9
SCE	0.9	0.9	
SDG&E	0.9	0.9	0.9
SCG			0.9

In applying the GRR values in Table 1 above, projects that adhere to comments made by Energy Division on previous similar projects of like kind shall apply a GRR of 1.0 to avoid double discounting.

The **General Review** will include Energy Division’s oversight of the CTA and CMPA. Energy Division, at its discretion, will review tools, measures, and projects, as well as inputs to the tools for selected projects. Energy Division may choose to provide the IOUs with input on one or more of the tools, measures, or projects. The tools reviews will be done on a prospective basis. IOUs shall adjust their subsequent use of the tools, where practical, to conform to Energy Division input, or will request a re-evaluation of the inputs to be conducted by an independent third party selected by consent of both Energy Division and the affected IOU.

The more specific **general project reviews** include a close examination of a selected subset of custom projects.

## Data Requirements for a Project to be Reviewed

The Evaluation Plan described above shall contain a definitive set of requirements for project documentation that the IOUs can implement (appendix 1). Clear requirements will minimize the back and forth, time delays and uncertainty in what is required. Note that a similar approach is being used in New York for the evaluation of custom and deemed measures, including a simplified approach for early retirement measures.<sup>3</sup>

- As noted above, costs of a project review shall be consistent with the impact and possible savings from the project. For instance, required EM&V work shall not exceed more than 10% of the project incentive. EM&V set aside shall be used for cases where ED wishes to conduct some more general analysis. The findings of this analysis may apply to multiple projects if they can be generalized.
- The requirements for documenting early retirement shall not be excessive (*e.g.*, Appendix 1), requiring, for example, customer interrogation or investigation of the customer's finances.
- Cost documentation for incremental costs needs to be simple to apply. IOUs have proposed a conceptual approach that is reasonable to implement. Project-by project analysis of hypothetical costs is cost prohibitive.
- The IOUs may propose a method to simplify the Base case determination in the standard comments. The proposed approach could be termed the Base Case Ratio (BCR). The BCR would be a high level adjustment to the single baseline *ex ante* savings values, where both real costs and savings are known and can readily be measured and validated. This approach would eliminate the need for the complexity of calculating dual baselines by incorporating a simplified "average" life baseline adjustment. The exact formulation and use of the BCR to be determined in the IOU/ED working group (see below).

For all custom applications with *ex ante* values that are not reviewed by the Energy Division, the IOU shall apply an adjustment to the gross savings estimate values using the Default Custom Measure Gross Realization Rates (Table 1)

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<sup>3</sup> <http://www.dps.ny.gov/TechManualNYRevised10-15-10.pdf>

above when making energy savings claims before the Commission, unless the project is similar in nature and has already incorporated previous Energy Division comments, in which case the applied GRR shall be 1.0

Energy Division will conduct general project reviews at three stages of the IOU custom project process: concurrent and collaborative pre-installation review, post-installation review, and claim review.

### **Pre-Installation Review**

Projects selected by Energy Division for review at the Pre-Installation stage allow Energy Division to supplement the resources and information available through the CTA and CMPA in making its recommendations. The objective of the Pre-Installation Review is for Energy Division to perform a parallel review with the IOUs on Commercial projects above 500MWh or 250M Therms, and above 1MM therms for Industrial projects, and a prospective review for projects below that size. For the Commercial projects above 500MWh or 250M Therms and above 1MM Therms for Industrial projects Energy Division will provide IOUs input on the estimated custom measure or project *ex ante* savings.

For projects that are above 500MWh or 250M Therms for Commercial projects and 1MM Therms for Industrial Projects and selected for review ED will submit an initial data request and IOU's will submit a response. If ED requires additional information it may make one additional data request and must submit that data request within 5 working days of the IOU's initial data request response. ED must inform the IOU if it has not received all requested material within 5 days of IOU's data response. After the ED has received all requested material it has 20 working days to review the project. If a final project review is not submitted by ED within the timeframe listed than the project will be approved as submitted by the IOU. This review will inform the current project savings values as well as calculations for future similar projects.

For projects that are smaller than 500MWh or 250M Therms for Commercial projects and 1MM Therms for Industrial Projects ED may perform a prospective review. This prospective review will not inform the selected project energy savings values but will be used to inform future project calculations as specifically directed by ED.

Future projects are considered to be similar if they are identical to the reviewed project or so similar as to warrant inclusion of such comments and



methodologies. The IOU shall be responsible for demonstrating, within a reasonable engineering judgment, that comments have been applied to future projects, or must reasonably demonstrate that Energy Division comments are not relevant to the future project, if requested.

For projects that are selected by Energy Division for prospective review for which savings and incentives to Customer are based on completed M&V results, Energy Division review will be focused on review of the M&V Plan and Baseline determinations, not quantification of *ex-ante* savings.

The IOUs shall provide the Energy Division the opportunity to participate in any site visits, pre-installation inspections, customer interviews, pre-installation M&V, or spot measurements that may occur during this and subsequent phases. The IOU shall provide notification to the Energy Division as soon as possible for projects Energy Division has selected for review. The Energy Division will notify the IOUs prior to the event if they plan to send a representative. If the project is implemented by a third party, the IOUs shall coordinate and notify the third party as applicable.

During the Pre-Installation Review, the Energy Division will coordinate any of its Measurement & Verification (M&V) activities on these custom projects with the IOU or its third party program implementer depending on who is the primary relationship manager for the customer and project in question. The Energy Division may choose to use the Utilities' or its own contractors, at Energy Division expense, to perform site inspections or pre-installation M&V.

The IOU shall provide Energy Division with all CMPA documents that have been received by the IOU (or third party) in a timely manner. Energy Division and the IOUs agree to work together to allow timely review of expedited and high priority projects. If the Energy Division affirms the IOU's estimated *ex ante* values or suggests approaches which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values for the reviewed project and modify its approach when entering into future estimated incentive agreements for similar projects as soon as practical. If Energy Division approves a project with modifications it must present alternate *ex ante* values for IOU's to use for an incentive agreement and may not propose conditional approvals that rely on post installation data.

## **Post-Installation Review**

The objective of the Post-Installation Review is to provide the Energy Division with the opportunity [to] verify that the equipment installed by the customer conforms with that approved in the pre-installation review. The approved methodologies used to calculate *ex ante* energy savings values shall not be modified for the project under review. The IOU shall allow the Energy Division access to site visits, post-installation inspections, customer interviews, post-installation M&V, or spot measurements. Such access shall not impede or delay the established IOU process of executing an Agreement for Incentives with the specific customer. IOU and Energy Division notifications for these events shall follow the guidelines described above for Pre-Installation Review. Similarly, the Energy Division will work with either the IOU or the 3rd Party program implementer to coordinate the Post-Installation review to maintain consistent communication with the customer and manage customer expectations appropriately.

If the Energy Division affirms the IOU's estimated *ex ante* values or suggests values which would result in greater or lower savings than the IOU's estimated *ex ante* values, then the IOU shall rely on those values when entering into future estimated incentive agreements for similar projects. Energy Division must present alternate *ex ante* values for IOU's to use for an incentive agreement and may not propose conditional approvals that rely on *ex post* data.

Selection of either a pre-installation or a post-installation review by Energy Division shall not affect the IOU approved incentive or Agreement with the customer for the current project. The IOU assumes responsibility and risk associated with the non-performance of the current project and non-compliance on subsequent projects with specific direction from Energy Division to incorporate previously made comments on past identical projects or projects similar in nature. Subsequent projects are required to adhere to accepted direction from Energy Division regarding method of analysis, analytical parameters, and specific data to be collected that will allow such future projects to be adequately evaluated.

All written dispositions from Energy Division are to state one of the following: Acceptable or Update future similar projects as indicated.

### **IOU Claim Review**

The IOU Claim Review allows the Energy Division to conduct a Quality Control review of energy savings for custom projects included into the IOU Quarterly

Claim<sup>4</sup> to ensure that:

1. Appropriate default realization rates were applied to *ex ante* gross savings estimates for projects that were not reviewed by the Energy Division; and,
2. Recommendations made by Energy Division for previously reviewed projects were accurately reflected in the claim.

The IOU Claim Review shall commence upon the IOU submittal of a quarterly reporting period claim containing those projects, and end at the later of ninety-days after that submission or the subsequent IOU quarterly submission. Energy Division shall notify the IOU of any errors found in their claim review and the IOU shall comply and revise the claims.

Custom projects that were not reviewed by the Energy Division prior to appearing in a Quarterly claim may be further reviewed for the purpose of gaining new information and prospective improvements to *ex ante* estimates and planning, but IOU's assumptions **will be accepted as submitted** for any projects covered by then existing customer agreements or already approved customer applications.

### **Dispute Resolution**

Should Energy Division and an IOU have a disagreement regarding prospective comments or adjustments to a project's *ex ante* values, Energy Division and the Utility shall meet to discuss and resolve the differences within two weeks. If the parties fail to come to agreement, and the Energy Division recommended *ex ante* value is within a plus/minus 20 percent of the utility estimated *ex ante* value, Energy Division and the utility shall split the difference of the two values. If the parties fail to come to agreement and the Energy Division recommended *ex ante* value exceeds plus/minus 20 percent of the utility estimated *ex ante* value, then an independent third party not associated with the project shall be contracted to determine the outcome at the expense of Energy Division. No party considered to have a conflict of interest shall be engaged.

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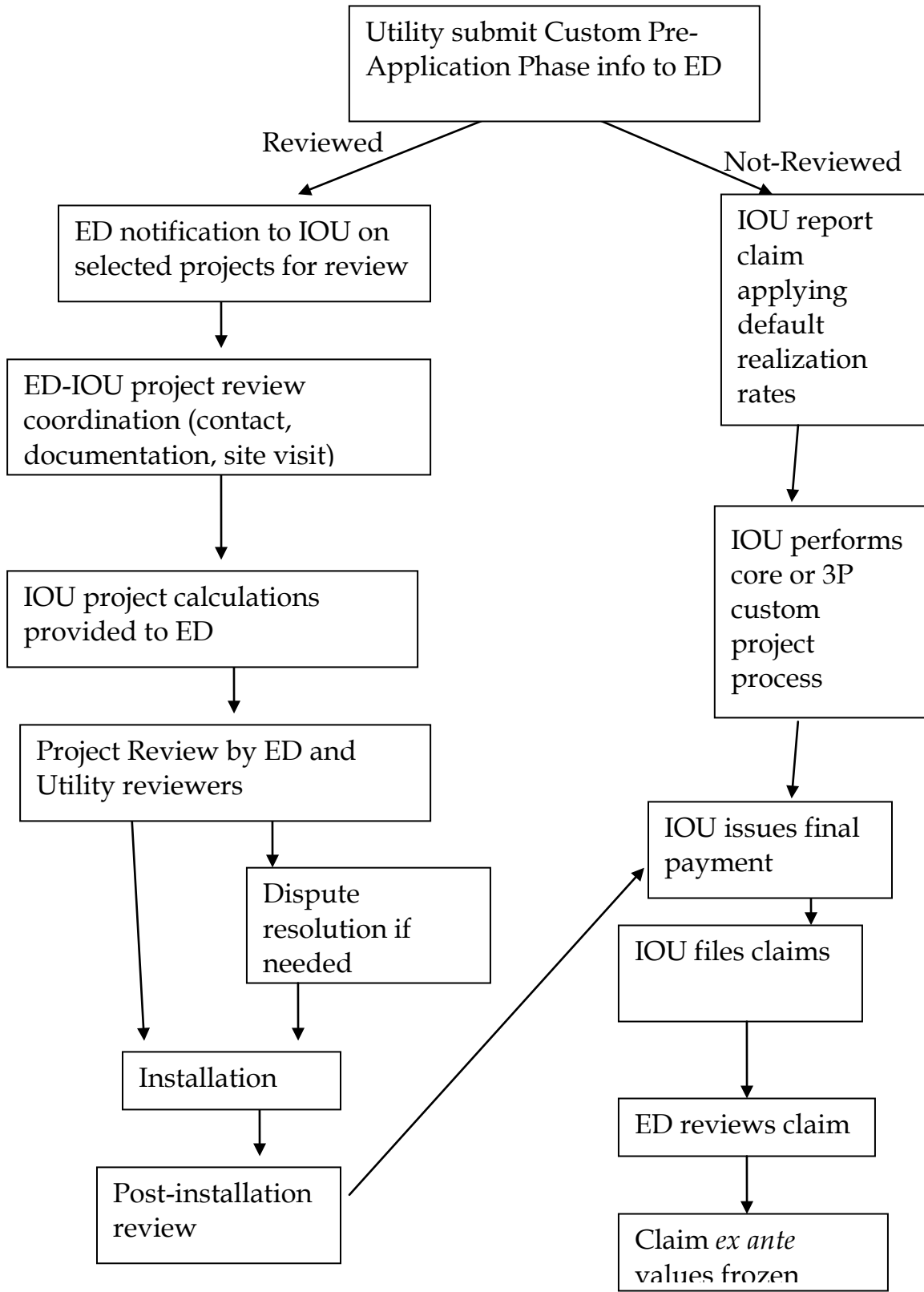
<sup>4</sup> As a component their energy efficiency portfolio reporting requirements each IOU will submit a quarterly filing on EEGA which includes details of all measure *ex ante* savings values for all individual projects and measures which have been installed prior to that claim.

### **To facilitate future communication:**

Energy Division and the IOUs shall establish a working group to allow an ongoing dialog on the custom measure and project review process. This working group will provide a forum for all parties to exchange information on their current activities and future plan and to 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 arising in its custom measure *ex ante* estimation review process, including but not limited to baseline definitions and net versus gross savings. To provide guidance for future projects, Energy Division will maintain a public archive database of the summary of issues identified in its custom applications and projects reviews and the Energy Division dispositions of those issues and will notify stakeholders how and where to access this information. Customer specific data and information will be removed from the Energy Division summary of issues and dispositions.

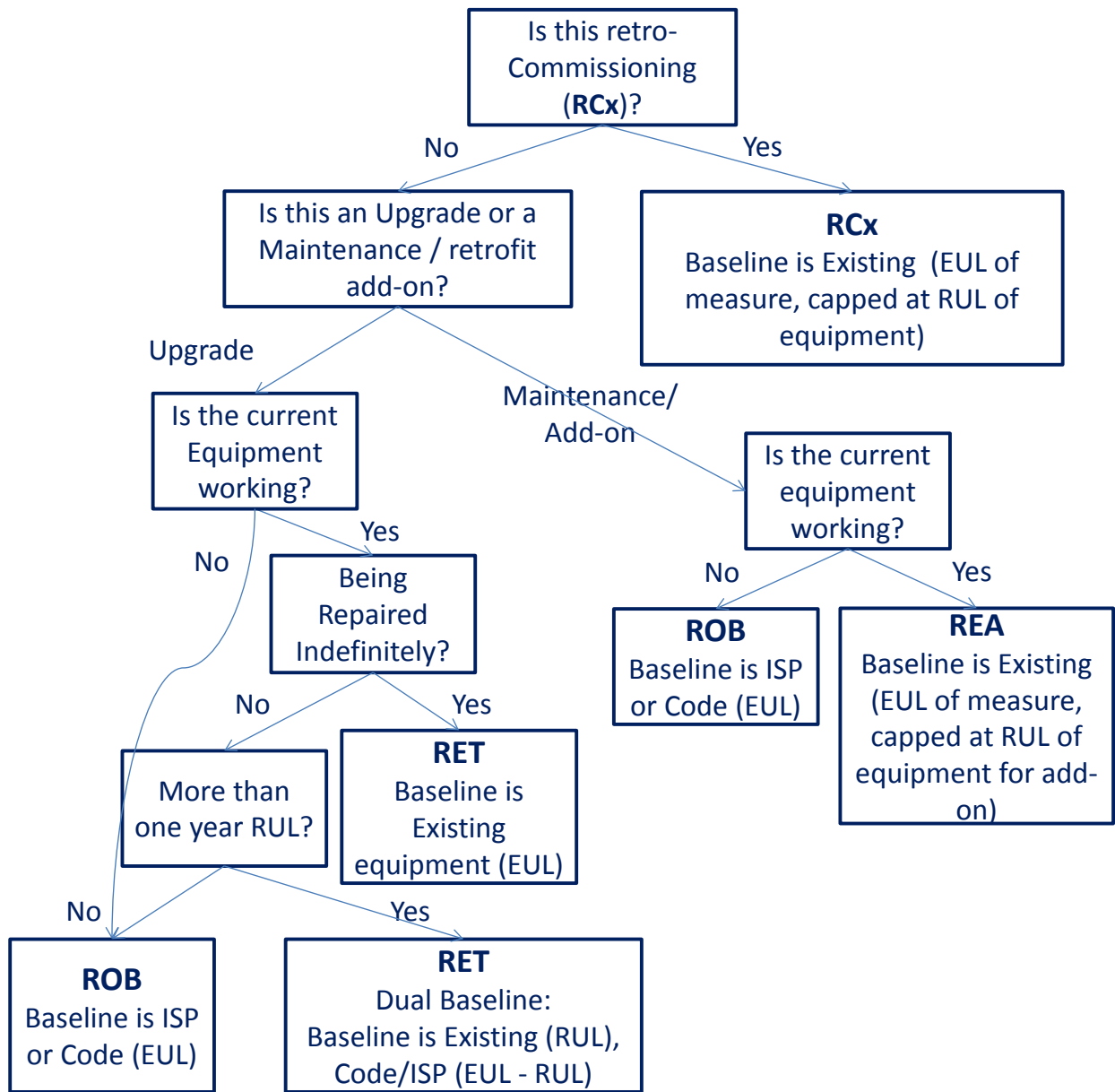
At any time during their development of *ex ante* estimates for a specific custom measure or project the Utilities may submit to Energy Division a request for an early Energy Division review or opinion on a specific issue. This process has been established by Energy Division issuance of the "Custom Measure Early Opinion Process" document posted as "Custom Measure Early Energy Division Opinion Process v2.docx" on basecamp 9/30/2010 in the "Early Opinion Shared" project area. Energy Division shall respond to that request within five (5) business days to provide the IOUs with guidance and to allow them to complete their *ex ante* estimates in a timely manner. However, this type of early guidance shall not limit or constrain any later Energy Division review of *ex ante* claims submitted by the Utilities.

Energy division and the IOUs will undertake a focused collaborative effort for the first three months of the program cycle to develop a guidance document for establishing all *ex ante* values for customized projects. This document will be a living document, updated on a quarterly basis, which will be the means by which Energy Division conducts its quality control. Energy Division's reviews will use this document as the means by which the QC will be evaluated. Appendix 1 along with content provided by the IOUs to the collaborative working group will be the starting basis for this document.



# Appendix 1

## Custom Project Decision Tree (proposed)



See Notes below

## Review of Baseline for Gross Savings Estimates

The estimation of *ex ante* saving values requires the selection of a baseline performance for every project. Early retirement measures driven by a code or policy requirement shall use a typical industry compliant baseline. The baseline parameters are selected by establishing the project category from the possible alternatives including New Construction or Major Renovations, program-induced Early Retirement, Standard Retrofit, Normal/Natural Replacement/Turnover, and Replace On Burnout. The establishment of the project category results in the utilization of an alternative baseline parameter set by Code or Standard requirements, industry standard practice, CPUC policy, or other considerations. In its review of IOU projects, Energy Division will follow the guidelines as presented here in establishing the baseline for all gross savings estimates.

The process for selecting the applicable baseline parameter is depicted in the graphic above. Descriptions of the alternative baseline parameters are given below.

### **Pre-existing equipment<sup>5</sup> baselines are only used in cases where there is clear evidence the program has induced the replacement prior to the end of its useful life**

Pre-existing equipment baselines are used for the portion of the remaining useful life (RUL) of the pre-existing equipment that was eliminated or the function replaced by new, more efficient equipment due to the program. These early or accelerated retirement cases may require the use of a “dual baseline” analysis that utilizes the pre-existing equipment baseline with annualized first year energy savings during an initial RUL period and a code requirement/ baseline for the balance of the EUL of the new equipment.

- A pre-existing equipment baseline is used as the gross baseline when there is clear evidence that the pre-existing equipment has a remaining useful life and that the program activity induced or accelerated the equipment replacement. This baseline can only apply for the RUL of the pre-existing

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<sup>5</sup> Here the term equipment is intended to cover all technology cases including envelope components, HVAC components and process equipment and may also include configuration and controls options.

equipment.

- A code requirement or industry standard practice baseline is used for replace-on-burnout, natural turnover and new construction (including major rehabilitation projects) situations. Industry standard practice is defined as an accepted/approved EM&V study for the specific industry or application. In the absence of such study, the baseline defaults to the existing equipment. This baseline applies for the entire EUL as well as the RUL+1 through EUL period of program induced early retirement of pre-existing equipment cases (the second period of the dual baseline case.)

### **CPUC policy rules and IOU program eligibility rules govern the baseline**

A careful review of utility and third-party program and CPUC policy rules must be undertaken and adjustments applied to gross savings in some cases.

Adjustments are indicated for gross savings when there was clear evidence from program or policy rules that savings claims could not be made nor rebates paid for the baseline in question. Program rules come into play with respect to gross baseline requirements, for example, when those rules specify:

- A minimum required efficiency level;
- A minimum percentage improvement above applicable minimum code requirement;
- A minimum RUL of the existing equipment;
- The type or range of retrofits that are allowed be included in a program.

CPUC policy may apply to establishing the gross baseline when Policy Manual Rules, a CPUC Decision or a Ruling from an Administrative Law Judge or Assigned Commissioner includes special requirements or consideration for the situation or technologies of a measure. For example, projects or sites that involve fuel switching, co-generation or renewable technologies are usually subject to special baseline considerations that must be considered in the savings estimates.

### **Minimum production level or service requirements govern the baseline**

In some situations, a measure for which savings might be claimed could be determined to be the only acceptable equipment for an application. In such cases, the baseline must be set at the minimum needed to meet the requirements, which may be the same as the equipment planned for installation. An example would be an industrial process where only a variable-speed drive pumping system could meet the production requirements. For situations where the baseline conditions or requirements were changed (such as production level



changes), the baseline equipment is defined as the minimum equipment needed to meet the revised conditions. If the pre-existing equipment is not capable of reliably meeting the new requirement (such as production change) for its remaining life, then a new equipment baseline must be established utilizing either minimum code requirement or industry standard practice equipment, whichever is applicable.

**Industry standard practice baselines are established to reflect typical actions absent the program**

Industry standard practice baselines establish typically adopted industry-specific efficiency levels that would be expected to be utilized absent the program. If the Customer is not required to make a change to Industry Standard practice by code or other compelling market reasons (*e.g.* non-availability of replacement parts or equipment), pre-existing equipment use shall be the basis of baselines for RUL of existing equipment. Standard practice determination shall be supported by reasonable evidence that reflects current market activity. Typically market studies (or IOU work papers if no market studies are available) should be less than five years old; however this guideline is dependent on the rate of change in the market of interest relative to the equipment in question. For example, the lighting markets may change significantly in the next two years while larger process equipment markets might change more slowly. Regulatory changes might cause very rapid market practice shifts and must also be considered. For example, changes in Federal Standards relating to linear fluorescent ballasts will result in rapid market shifts of equipment use.

**(END OF APPENDIX J)**