

Track 2 Working Group

DRAFT Report – v5

August 28, 2017

DRAFT

Revisions from Draft v4

We received comments from:

- Pacific Gas and Electric (PG&E), Ryan Chan, August 23, 2017
- PG&E, Tengfang (Tim) Xu, August 24, 2017
- Lockheed Martin, Spencer Lipp, August 24, 2017
- Office of Ratepayer Advocates (ORA), Daniel Buch, August 24, 2017
- Onsite Energy Corp, Rich Sperberg, August 25, 2017
- San Diego Gas and Electric, Shanna Dee, August 25, 2017
- California Efficiency + Demand Management Council (CEDMC), Melanie Gillette, August 25, 2017
- Applied Energy Group, Inc., Michael Daukoru, August 25, 2017
- Nexant, Mushtag Ahmed and Melina Usabiaga, August 25, 2017
- Southern California Gas Company (SCG), Mark Reyna and Al Lutz, August 25, 2017
- Ecology Action, Josiah Adams, August 25, 2017
- Southern California Edison (SCE), Anuj Desai, August 25, 2017
- Energy Solution, James Hanna, August 25, 2017
- Strategic Energy Technologies, Inc., Nikhil Gandhi, August 26, 2017

Summary of revisions:

- Completed comprehensive copyedit of draft report v4 (not in tracked changes)
- Incorporated comments received from T2WG participants
- Changed name of Task 4 from “Small Business Definition” to “Small-Sized Business” per request from Anuj Desai (SCE) to avoid confusion for new readers
- Expanded introduction section to describe format of the report, and added statement at the beginning of each “Background” section to clarify it is information from the T1WG report and Resolution E-4814
- Removed the chapter summarizing all proposals, and added the summary of proposals (and agreements) to the end of each task-specific chapter.
- Added Appendix of with attendance records and list of materials submitted to T2WG.
- Added more detail in the Task 5 and Task 6 sections to describe specific proposals

Table of Contents

1	Acknowledgements.....	6
2	Introduction	7
2.1	Background	7
2.2	T2WG Tasks.....	8
3	Approach.....	10
3.1	Working Group Meetings.....	10
3.2	Stakeholders and Participants	10
3.3	T2WG Report	14
3.4	Commission Review and Decision-Making Process	14
4	Task 1 – Standard Practice Baseline Definition.....	16
4.1	Background	16
4.2	T2WG Discussion.....	17
4.3	T2WG Recommendation.....	30
5	Task 2 – Tiered POE.....	31
5.1	Background	31
5.2	T2WG Discussion.....	32
5.3	T2WG Recommendation.....	45
6	Task 3 – Repair-Eligible/Repair-Indefinitely.....	47
6.1	Background	47
6.2	T2WG Discussion.....	48
6.3	T2WG Recommendation.....	53
7	Task 4 – Small-Sized Business	55
7.1	Background	55
7.2	T2WG Discussion.....	55
7.3	T2WG Recommendation.....	62
8	Tasks 5 – ISP Guidance	63
8.1	T2WG Discussion.....	63
8.2	Next Steps	64
8.3	T2WG Recommendation.....	64
9	Task 6 – Custom Streamlining Update	66
9.1	T2WG Discussion.....	66
9.2	Next Steps	69

9.3 T2WG Recommendation.....	70
10 Other T2WG Comments.....	71
Appendix A. T2WG Participation	73
Appendix B. T2WG Materials.....	76
Appendix C. Standard Practice Baseline Iteration History.....	78
Appendix D Example Proposals for Task 6.....	89
Communication and Collaboration.....	89
Service Level Agreements	90
EAR Dispute Resolution.....	90

DRAFT

Table of Tables

Table 1. T2WG In-Person Meetings	12
Table 2. Resolution E-4818 Findings and Orders on Task 1	17
Table 3. Resolution E-4818 Findings and Orders on Task 2	32
Table 4. Task 2 Proposal, POE Requirements by Tier	34
Table 5. Task 2 Proposal, Customer Questionnaire for Very Low/Low/Medium POE.....	40
Table 6. Task 2 Proposal, Affidavit Statement by POE Tier.....	44
Table 7. Resolution E-4818 Findings and Orders on Task 3	48
Table 8. Task 3 Proposal, POE Supporting Documentation	50
Table 9. Task 3 Proposal, POE Cost Documentation.....	51
Table 10. Resolution E-4818 Findings and Orders on Task 4	55
Table 11. Task 4, Eligibility Requirements for Small-Sized Business — Proposal 4A	58
Table 12. Task 4, Eligibility Requirements for Small-Sized Business — Proposal 4B	60
Table 13. Task 4, Eligibility Requirements for Small-Sized Business — Proposal 4C	61

Table of Figures

Figure 1. DRAFT Proposal for Service Level Agreement (SCE, July 2017)	69
Figure 2. DRAFT Proposal for Service Level Agreement (SCE, July 2017)	92
Figure 3. DRAFT Proposal for Service Level Agreement – Low Rigor (SoCalGas, August 2017)	93
Figure 4. DRAFT Proposal for Service Level Agreement – Medium Rigor (SoCalGas, August 2017)	94
Figure 5. DRAFT Proposal for Service Level Agreement – Full Rigor (SoCalGas, August 2017)	95

Glossary of Acronyms

Acronym	Description
AR	Accelerated replacement
CEDMC (CEEIC)	California Energy Efficiency and Demand Management Council (formerly California Energy Efficiency Industry Council)
CPUC	California Public Utilities Commission
DEER	Database for Energy Efficiency Resources
EAR	<i>Ex ante</i> review
EE	Energy Efficiency
EUL	Effective useful life
IOU	Investor-owned utility
ISP	Industry standard practice
ORA	Office of Ratepayer Advocates
PA	Program administrators
POE	Preponderance of evidence
RUL	Remaining useful life
T1WG	Track 1 Working Group
T2WG	Track 2 Working Group

1 ACKNOWLEDGEMENTS

Many individuals participated in the Track 2 Working Group (T2WG) between April and August 2017, including members of the investor-owned utilities (IOUs), implementation contractors, California Public Utilities (CPUC) staff and consultants, Office of Ratepayer Advocates (ORA) staff, *ex ante* technical reviewers, *ex post* evaluators, and other stakeholder groups.

T2WG participants attended more than 48 hours of working group meetings, not including time spent on meeting preparation, travel, or concurrent discussions on other working group topics. They contributed to in-depth discussions on topics ranging from broad policy goals to boots-on-the-ground program implementation.

Although perspectives frequently differed, causing some difficult conversations about the causes of problems or methods for solving them, stakeholders seemed to develop a better understanding of each other's important roles in the state's energy efficiency portfolio and contributions to driving increased adoption of energy efficiency throughout the state.

The T2WG facilitation team recognized among all T2WG participants a deep commitment to the goals of California's energy efficiency programs and to honest and effective use of ratepayer funds to influence change in California's markets. Many differences remain among stakeholders' perspectives on the *methods* for achieving their shared goals, some of which are reflected in this report, but T2WG participants have made progress in improving communication to identify and address those differences through idea-sharing and thoughtful solutions.

Stakeholders should continue their momentum to build a strong working relationship and to further progress identifying and implementing solutions that improve both communication and efficiency in achieving cost-effective energy efficiency savings in the custom programs.

The names, organization, and attendance of all T2WG participants is listed in Appendix A. T2WG Participation.

2 INTRODUCTION

California Public Utilities Commission (CPUC) Decision 16-08-019¹ directed CPUC staff to convene two stakeholder working groups to address several specific issues outlined in the Decision.

- **The Track 1 Working Group (T1WG)** convened in October 2016 to discuss measure-level baseline assignments and preponderance of evidence (POE) requirements and produced the Track 1 Working Group Report on December 12, 2016.² The T1WG report led to Resolution E-4818, issued by the CPUC on May 2, 2017.³
- **The Track 2 Working Group (T2WG)** was originally asked to recommend improvements to guidance on industry standard practice (ISP) and to propose opportunities to streamline California custom programs. However, the T2WG absorbed four additional issues assigned to the working group in Resolution E-4818 (the Resolution), the Commission's response to the T1WG Report.

This T2WG Report is the first report from the T2WG. It addresses the four issues assigned in the Resolution (referred to as Tasks 1 through 4 in this report) and provides an update on discussions to date and planned next steps for the two original issues (referred to as Tasks 5 and 6 in this report).

2.1 BACKGROUND

Decision 16-08-019 directed Commission staff to form a collaborative stakeholder working group to address to address multiple topics, including the custom review process, the definition of “preponderance of evidence, ISP guidance, and other baseline treatment details. The decision directed that working group provide recommendations on several topics to the Commission by the end of 2016—these items were assigned to the Track 1 Working Group. The remaining topics, assigned to the Track 2 Working Group, are:

- To collect “stakeholder input on the custom review process, and the development of a streamlined approach,” [E-4818 at 40] and
- To address “the development and application of Industry Standard Practice (ISP) determinations” [E-4818 at 41] and revise the current ISP Guidance Document⁴ [E-4818 at 41].

On March 2, 2017, the CPUC issued Resolution E-4818 in response to the T1WG Report, which included four new assignments for the T2WG.

¹ Decision 16-08-019, Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings, dated 8/18/2017 is available at: <http://docs.cpuc.ca.gov/DecisionsSearchForm.aspx>

² Track 1 Working Group Report, dated December 12, 2016, is available at: <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442451953>

³ Resolution E-4818, Measure level baseline assignment and preponderance of evidence guidance to establish eligibility for an accelerated replacement baseline treatment, dated March 2, 2017, is available at: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M179/K264/179264220.PDF>

⁴ See <http://www.cpuc.ca.gov/General.aspx?id=4133>.

E-4818 Ordering Paragraph 25 at 70: “In response to working group proposals we are not adopting today, we defer several issues to be addressed within the planned activities of upcoming Track 2 working group, ordered by D 16-08-019 to resolve issues related to the streamlining of ex-ante review processes and industry standard practice baseline. We ask the [T2WG] to address the following in their deliberations and recommendations, and that recommendations be presented to Commission staff no later than June 30, 2017:

- Consider and recommend clarifying policy for how to determine code baseline as they address issues related to industry standard practice.
- Develop qualification standards and documentation requirements to identify a small-sized business customer.
- Develop qualification standards and documentation requirements to identify repair eligible and repair indefinitely measure types.
- Develop recommendations for what should constitute Tier 1 and Tier 2 Preponderance of Evidence requirements.

Commission staff will review the recommendations and update the guidance documents, as appropriate. The update will be vetted through a public process and the final document will be posted to a publicly available website.”

2.2 T2WG TASKS

The T2WG convened in April 2017 to address the six issues ultimately assigned to the T2WG. To facilitate discussions, the T2WG assigned each issue a task number as follows.

Issues assigned in Resolution E-4818, originally due June 30, 2017, and extended for 60 days:⁵

- **Task 1. Standard Practice Baseline Definition** addresses the E-4818 order to “consider and recommend clarifying policy for how to determine code baseline while addressing issues related to ISP.”
- **Task 2. Tiered POE** addresses the E-4818 order to “develop recommendations for what should constitute Tier 1 and Tier 2 POE requirements.”
- **Task 3. Repair-Eligible/Repair-Indefinitely** addresses the E-4818 order to “develop qualification standards and documentation requirements for identifying repair-eligible and repair-indefinitely measure types.”
- **Task 4. Small-Sized Business Customers** addresses the E-4818 order to “develop qualification standards and documentation requirements for identifying small-sized business customers.”

Original T2WG issues, with no assigned deadline:

⁵ Between June 16 and June 19, T2WG participants voted (via an online survey) to request an extension on the deadline for the T2WG report on the issues assigned to tasks 1 through 4. T2WG confirmed this request during a working group phone call on June 19, 2017 after reviewing the survey responses from T2WG participants. On June 21, 2017, CEDMC submitted, on behalf of the working group, a request to the CPUC for a 60-day extension on the items due June 30, 2017. The CPUC approved this request on June 27, 2017.

- **Task 5. ISP Guidance** addresses Decision 16-08-109 direction to address “the development and application of Industry Standard Practice (ISP) determinations [D16-08-019 at 40]” and “revisions to the ISP guidance document [D16-08-019 at 41].”
- **Task 6. Custom Streamlining** addresses Decision 16-08-109 direction to “to allow stakeholder input on the custom review process, and the development of a streamlined approach [D16-08-019 at 40].”

DRAFT

3 APPROACH

The T2WG discussed issues and developed its recommendations through a series of in-person meetings and ad hoc phone calls with stakeholder groups including CPUC and IOU staff, implementation contractors, and other interested parties. A facilitation and reporting team—consisting of Rick Diamond and the Cadmus Group—organized and facilitated the meetings, documented discussions, and developed this report.

This section describes the working group meetings, participants, deliverable, and expected review process for the Commission.

3.1 WORKING GROUP MEETINGS

The T2WG commenced with a kickoff meeting on April 11, 2017 and conducted eight in-person meetings in various locations between May and August. T2WG also held nine phone meetings focused on specific issues as needed to clarify information or continue discussions, and T2WG organized several ad hoc meetings with individual stakeholder groups to clarify stakeholder perspectives on both the topics and working group progress.

Table 1 (page 12) shows the dates, locations, and key topics for each T2WG in-person and phone meeting. Appendix A. T2WG Participation (page 73) shows the attendance record for participants at the in-person meetings and Appendix B. T2WG Materials (page 76) shows materials submitted by participants to the T2WG throughout the working group process.

Information about the T2WG was disseminated through a T2WG mailing list, and material developed through the T2WG process was posted (and is available) at <http://t2wg.cadmusweb.com/>.

3.2 STAKEHOLDERS AND PARTICIPANTS

In this report, we use the term “stakeholders” to represent all parties affected by the issues discussed and proposals made by the T2WG and the term “participants” to represent those parties that actively participated in the T2WG process.⁶ In general, all participants—such as IOU staff, CPUC staff, and implementation contractors—are stakeholders in the issues tasked to T2WG. However, although invited to participate in the public process, not all stakeholders were active participants. For example, ratepayers who fund the programs and customers who participate in the programs did not actively participate during the T2WG process, but are widely recognized as key stakeholders who both fund and benefit from the programs.

For the T2WG, active participants included IOU staff, implementation contractors, and CPUC staff. In this report, we refer to participants in the following stakeholder groups:

- **IOUs** refer to all members of IOU staff working on different aspects of energy programs, including IOU staff focused on programs, policy, engineering and technical review, and evaluation.

⁶ We consider active participation regularly attending meetings and providing input during meetings or through other means of communication.

- **Program Administrators** includes IOUs as other program administrators, including members from the CCAs and/or RENs.
- **Implementers** refer to any non-IOU parties who identify and implement energy efficiency projects. This includes parties who contract with the IOUs or other program administrators to identify and implement energy efficiency projects and those who implement third-party programs. We include the California Energy Efficiency and Demand Management Council (CEDMC), a statewide trade association of non-utility companies that provide energy efficiency, demand response and data analytics products and services, in this group.
- **CPUC staff, or Staff**, refers to members of CPUC staff (except ORA and ex post reviewers) and consultants to the CPUC. Participating staff include members of the *ex ante* review (EAR) team, members of the ex post review team, technical advisors, and other Energy Division staff engaged in custom program activity.
- **ORA** refers to the Office of Ratepayer Advocates.
- **Technical reviewers** refer to IOU staff or contractors who complete technical review during the project development process.
- **Ex post reviewers** refers to participants who are primarily focused on ex post review; in particular, these working group participants had experience completing ex post reviews
- Other stakeholders include everyone else including observers, County of Los Angeles, small business utility advocates, energy producers and users coalition, community choice aggregators, National Resource Defense Council (NRDC), and market research companies.

Table 1. T2WG In-Person Meetings

#	Date	Location	Key Topics
1	April 11	Embassy Suites LAX El Segundo, CA	<ul style="list-style-type: none"> • Clarify the Commission’s direction from Resolution E-4818 OP 25 and D. 16-08-019 at p40. • Present CPUC staff roles in this activity and ground rules for the meetings • Discuss the process and schedule for resolving the four items ordered in in E-4818 • Initiate stakeholder input on the four topics, identifying, where possible the “sticky” issues for further discussion and resolution • Review of the other topics from D.16-08-019 assigned to the T2WG
2	April 26	DNV GL Offices Oakland, CA	<ul style="list-style-type: none"> • Clarify the process for Staff/Commission to respond to the T2WG outcomes • Establish method(s) for "consensus" and how we will represent consensus in the working group report. • Establish specific objectives and define “success” for T2WG • Establish an overall approach and schedule for T2WG • Review updates to Appendix B flow chart • Develop T2WG Recommendation for Task 1 • Clarify status and issues with T1WG recommendations and resolution for Task 2 and Task 3. • Develop T2WG Recommendation for Task 4 • Review scope for T2WG for Task 6; Establish the boundaries for [discussion and recommendations; • Define success for a streamlined review process
3	May 10	SoCal Gas Energy Resource Center Downey, CA	<ul style="list-style-type: none"> • Review updated recommendation; Document stakeholders’ positions on the Task 1 recommendation f • Understand issues with T1WG proposal; identify non-starter issues for Task 2 • Understand issues with T1WG proposal; identify non-starter issues for Task 3 • Review updated recommendation(s); Document stakeholders’ positions on the Task 4 proposals • Collect ideas for a streamlined review process for Task 6
n/a	May 22 3 p.m. to 5 p.m.	Phone meeting	<ul style="list-style-type: none"> • Identify the areas/items/issues that overlap with Task 1 • Discuss potential proposals to revolve those Task 5 issues that are key for Task 1 • Review documents PG&E has already distributed regarding ISP Guidance (“Task 5 – ISP Guidance Document” folder on http://t2wg.cadmusweb.com/)
4	May 24	SDG&E Energy Innovation Center San Diego, CA	<ul style="list-style-type: none"> • Clarify key areas of E-4818 Resolution and other policy related to Tasks 1-4 • Document stakeholders’ positions & any outstanding concerns on the Tasks 1 and 4 proposals • Clarify Staff perspective; Document recommendation(s); document positions and outstanding on the proposed recommendation(s) for Task 2 • Clarify Staff perspective; Document recommendation(s); document positions and outstanding on the proposed recommendation(s) for Task 3 • Document stakeholders’ positions and outstanding issues on the Task 4 proposals • Establish recommendations on issues affecting Task 1 proposal related to Task 5 • Clarify process for completing T2WG Report on Tasks 1-4

#	Date	Location	Key Topics
5	June 6	ARUP Offices Los Angeles, CA	<ul style="list-style-type: none"> • Update Stakeholders on status of Tasks 1-5 • Initiate discussion on Task 6: Streamlining the Custom Review Process • Identify specific data requirements/assignments to analyze the custom review process
n/a	June 14 2:30 to 4 p.m.	Phone meeting	Focus on Task 2: Discuss types of evidence for POE including accessibility and value; survey/questionnaire content and administration
n/a	June 14 4 to 5 p.m.	Phone meeting	Focus on Task 3: Discuss types of evidence to demonstrate repair viability ("can repair") and influence ("would repair")
n/a	June 15 2:30 to 4 p.m._	Phone meeting	Focus on Task 1: Discuss comments/concerns on current draft definition and how to address
n/a	June 15 4 to 5 p.m.	Phone meeting	Focus on Task 4: Discuss comments/concerns on current proposals and how to address
n/a	June 16 Noon to 1 p.m.	Phone meeting	Focus on Task 2; Share comments & ideas on specific proposals
n/a	June 16 1 p.m. to 2 p.m.	Phone meeting	Focus on Task 3; Share comments & ideas on specific proposals
n/a	June 19 3 p.m. to 4 p.m.	Phone meeting	T2WG check-in on the process, needs, and path forward; discuss T2WG survey and potential request for extension on the T2WG proposals for Tasks 1-4
n/a	June 27 2 p.m. to 4 p.m.	Phone meeting	<ul style="list-style-type: none"> • Review status and next steps on Tasks 1-4 • Discuss plan and prepare for Tasks 5 and 6
6	July 10	Pacific Energy Center San Francisco, CA	<ul style="list-style-type: none"> • Identify Issues to be Addressed for Tasks 5 & 6 • Identify and develop potential recommendations • Identify areas of potential conflict with proposals • Assign participants to develop proposals
7	July 24	Gas Company Tower Los Angeles, CA	<ul style="list-style-type: none"> • Identify the underlying issues and changes that the three main stakeholder groups are willing to commit to going forward to streamline the process? • Develop the process and protocols to address key issues from the previous meeting
8	August 16	Embassy Suites LAX El Segundo, CA	<ul style="list-style-type: none"> • Review/Clarify/Approve the final recommendations for Tasks 1-4 and discuss any remaining CPUC Staff comments • Review the status of Tasks 5 and 6 and identify the path forward
n/a	August 24 3 p.m. to 5 p.m.	Phone meeting	Discuss the draft report and final proposals

3.3 T2WG REPORT

At the start of the T2WG process, participants discussed the need for the T2WG report to reflect the different perspectives among stakeholders and for the Commission to review and consider all perspectives in its decision-making process. The group agreed that:

- The T2WG report should reflect the opinions of all participants, and all participants should feel the report adequately and fairly represents their perspectives.
- Where the T2WG participants have not reached consensus on a specific proposal, the T2WG report may reflect multiple proposals that the Commission should consider and provide guidance on.
- CPUC staff should clarify CPUC's perspective and recommendations during the working group process, and those perspectives and recommendations should be included in the report.

Therefore, this report is intended to reflect the perspectives of T2WG participants, including opposing perspectives on topics on which T2WG participants did not agree.

The main body of the report is organized by task, with a chapter for each task as defined in Section 2.2. Each chapter is presented in three sections:

- The first section, **Background**, provides a summary of the relevant T1WG discussions and the ensuing Resolution E-4818 findings and orders.
- The second section, **T2WG Discussion**, summarizes the relevant T2WG discussions, highlights the key concerns or issues raised by participants during the working group process, and references additional details in the appendices. This section presents T2WG proposal(s) and specific requests for guidance and clarification from the Commission in the context of the working group discussions. Additional background materials and detailed discussions are included in the appendices.
- The last section, **T2WG Recommendation**, summarizes the specific proposals or requests on while the T2WG requests the Commission's response.

Throughout the report, call-out boxes highlight areas where the T2WG requests clarification, guidance, or direction from the Commission. These T2WG recommendations or requests are also summarized at the end of each task-specific chapter.

3.4 COMMISSION REVIEW AND DECISION-MAKING PROCESS

It is the understanding of the T2WG that the Commission will review this T2WG Report to gain an understanding of the perspectives of T2WG participants, especially where participant perspectives differ, and to review the specific proposals and requests for clarification presented in this report. T2WG participants stressed the importance of having their perspectives communicated directly to the decision-making body in this process (i.e., the Commission) as part of their choice to commit the time and resources required to actively participate in the working group process.

To help facilitate this request, participating CPUC staff committed to clarifying CPUC perspective and recommendations both through the T2WG process and in the T2WG report and confirmed they would

not filter any of the T2WG report content that the Commission receives for its review or decision-making process.

T2WG participants understand the Commission will respond to this report with a resolution that may provide clarification or guidance on some issues and provide specific direction or orders on other issues. Especially in cases where T2WG participants disagree on existing policy or future direction, this report requests guidance or direction on specific issues, summarized at the end of each task-specific chapter.

DRAFT

4 TASK 1 – STANDARD PRACTICE BASELINE DEFINITION

E-4818 OP 25 at 70: “... We ask the Track 2 working group to... Consider and recommend clarifying policy for how to determine code baseline as they address issues related to industry standard practice.”

4.1 BACKGROUND

This section provides background information for Task 1, highlighting key discussions in the T1WG report and Commission responses in Resolution E-4818. T1WG materials are provided here for context only, and may or may not have been adopted in the Resolution.

The T1WG Report offered the following definition of “code baseline” in Section 2.1, Appendix A: Baseline Guidance Document v1.0 of T1WG Report):

T1WG Report, Appendix A at 3: “A code baseline is determined by an activity or installation that would take place absent the energy efficiency program—either as required by code, regulation, or law or expected to occur as a standard practice—that would provide a comparable level of service as the energy efficiency measure. An activity or installation used to establish a code baseline must:

- A. Meet the minimum requirements of California Building Energy Efficiency Standards (Title 24—Part 6) applicable to the baseline installation/activity
- B. Adhere to applicable existing approved Industry Standard Practice Guidance Document made publicly available by the CPUC or Program Administrator (for customers or project types not subject to Title 24—Part 6)
- C. Comply with applicable federal, state, and local regulations or requirements that are relevant to the baseline activity/installation
- D. Be a normal practice or otherwise viable option that meets the anticipated functional needs of the customer, building, or process.”

Resolution E-4818 agreed with multiple stakeholder comments that, although establishing clarity on the application of code baseline was not within the scope of the T1WG, the existing policy lacks a clear definition for code baseline. The Resolution therefore directed the T2WG to “consider and recommend clarifying policy for how to determine code baseline as they address issues related to industry standard practice [E-4818 OP 25].”.

Table 3 summarizes the Resolution findings and orders on this topic.

Table 2. Resolution E-4818 Findings and Orders on Task 1

Location	Resolution Language
Finding 8	Code baseline and industry standard practice baselines both reflect the efficiency of equipment that would have been adopted without the program activities and influence. We do not have a clear policy regarding how to apply these alternative normal replacement baselines in cases where both apply, or how to develop baseline when neither are applicable.
OP 5	We do not adopt the draft policy concerning the application of a code baseline that is presented in the measure-level baseline guidance document.
OP 25	... We ask the [T2WG] ... Consider and recommend clarifying policy for how to determine code baseline as they address issues related to industry standard practice.

4.2 T2WG DISCUSSION

The T2WG has revised the text from “Section 2.1—Code Baseline” of the T1WG Report to clarify policy on determining code baseline. During discussions on this item, the T2WG confirmed the following:

- The term “code baseline” is confusing as a term for the broader baseline category since building or appliance code is only one of multiple baseline options within this category. T2WG agreed to use the term “standard practice baseline” instead of “code baseline” to refer to the category of baseline that applies to normal replacement or the second baseline for an accelerated replacement project.

4.2.1 Proposed Standard Practice Baseline Definition

Participants developed this new definition through an iterative process, discussing and revising the original text from the T1WG Report, Appendix A, Section 2.1 (copied above). The proposed definition is the tenth iteration after rounds of review, discussion, and revision among T2WG participants.

PG&E is the main author of proposed standard practice definition and has been revising the document on behalf of all stakeholders based on their input and recommendations throughout the T2WG process. Appendix C. Standard Practice Baseline Iteration History includes details of stakeholder discussions and a history of the document revisions.



Proposal 1, Standard Practice Baseline Definition

T2WG proposes that the Commission adopt the “T2WG Proposal for Standard Practice Baseline Definition” described below.

4.2.1.1 T2WG Proposed Standard Practice Baseline Definition

4.2.1.2 Background

The Standard Practice Baseline is synonymous with a “code” baseline and is generally [endnote 1] used as the single baseline for Normal Replacement (including New Load and New Construction) measures as well as the second baseline [endnote 2] for Accelerated Replacement (AR) measures. This document

only details the baseline selection process; it does not discuss measure eligibility or the review and verification of the selected baseline.

4.2.1.3 Definition

The Standard Practice Baseline is an estimate of the activity or installation that would take place absent the energy efficiency program, as required by code, regulation, or law, or as expected to occur as standard practice.

The Standard Practice Baseline activity or installation must meet the anticipated functional, technical, and economic needs of the customer, building, or process and provide a level of service comparable to that provided by the energy efficiency (EE) measure. Savings claims shall be generated based on equipment choices that operate at a level of service comparable to that provided by the EE measure. If there is not a viable and comparable baseline solution that offers a comparable level of service as the EE measure, the energy use of the baseline solution must be normalized to provide a level of service comparable to that provided by the EE measure.

4.2.1.4 Selection Process

The following describes the process that a project developer must step through to determine the Standard Practice Baseline for a given measure. While the project developer must substantiate each step of this process, the program administrator (PA) and/or CPUC may corroborate any baseline selected through this process. Project developers are encouraged to collaborate with the PA on this selection process for larger projects.

Step 1. Consider and apply any applicable and current CPUC published Standard Practice documents relevant to the anticipated functional, technical, and economic needs of the customer, building, or process. Such documents, which may include ISP study reports, DEER baseline values, or CPUC-issued memoranda or dispositions, will be publicly available on a single website with a date of issuance, applicability, and effective dates [endnote 3]. If applicable baseline information within these documents is found, apply it and stop here. If applicable information is not found, review and follow the ISP Guide document. When appropriate proceed to Step 2.

Step 2. Identify the options presented by the project developer, or that the customer considers functionally, technically, and economically feasible to implement, including any known options that are presently and commonly implemented. Options must comply with all codes, standards, and other requirements, with consideration for:

A. Applicable minimum building energy efficiency requirements (e.g., CA Building Energy Efficiency Standards (Title 24—Part 6) or ASHRAE Standard 90.1), and

B. Other applicable federal, state, and local regulations or requirements, e.g., Title 20, CARB Regulations, Federal Appliance Standards, and

C. Providing a comparable level of service as the EE measure for the EUL of the EE measure.

Functional, technical, and economic feasibility are perceived and defined by the customer but should take into account the need for performance and reliability, as well as any relevant operational, maintenance, and energy costs. The customer must consider any options considered under this step as reasonable to implement.

Step 3. If Step 2 yields only one feasible option, that option establishes the standard practice baseline. In this case, the measure is ineligible for Normal Replacement, and there is no second baseline savings for Accelerated Replacement. If Step 2 yields two or more feasible options, the option that is the lowest first-year cost to implement establishes the standard practice baseline.

Costs included in this process may be estimates, but their basis must be substantiated. Costs should include: "...the cost of any equipment or materials purchased, including sales tax and installation; any ongoing operation and maintenance costs; any removal costs (less salvage value); and the value of the customer's time in arranging for the installation of the measure, if significant." [endnote 4]

4.2.1.5 Endnotes

[1] For example, the baseline used for energy efficiency savings reporting and incentives shall not regress to a lower efficiency than the existing equipment.

[2] The second baseline applies to the time period from the end of the remaining useful life (RUL) of replaced equipment to the effective useful life (EUL) of the measure

[3] For example, the CPUC *Ex Ante* Review Custom Process Guidance Documents page at: <http://www.cpuc.ca.gov/General.aspx?id=4133>

[4] California Standard Practice Manual, Economic Analysis of Demand-side Programs and Projects, October 2001, www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=7741

This following section lists additional edits requested by stakeholders through written commentary or during the phone call hosted by the T2WG facilitators to discuss the draft report and final proposals. T2WG requests the Commission consider these edits when examining the adoption of the "Standard Practice Baseline" definition.

4.2.1.6 Revision Request 1

Several stakeholders (CEDMC, Onsite Energy, Lockheed Martin, Nexant) provided written commentary on the last two statements of Step 1, "If applicable information is not found, review and follow the ISP Guidance Document. When appropriate proceed to Step 2", indicating that the existing ISP Guidance is problematic and the new Guidance document doesn't exist yet. They all recommended the removal of the reference to the ISP Guidance:

- "If this definition is to be implemented now, it should not refer a document which is associated with a task not complete. And the current ISP Guide has several issues and all stakeholders agree that it needs change."
- "Our recommendation is to remove this language about following the ISP Guide document. The existing document is highly problematic and the new ISP Guide document doesn't exist yet since that is part of Task 5."
- "While it should be noted that revising the ISP Guide document is Task 5 which is not complete, the latest Task 5 documentation presented by PG&E includes a reference to follow this Task 1 process. It appears this would be a circular process with Task 1 and Task 5 referring back to one another on critical paths. I suggest deleting this reference to the ISP Guidance Document."
- "Reference to the ISP Guide document in Task 1 should be deleted, since there was no resolution on that document in Task 5. It seems that there was some consensus that the project

specific ISP should be removed from the ISP Guide document and the process for determining “Standard Practice Baseline” should follow the process in Task 1.”

In response to these comments, PG&E proposed revising the language in Step 1 as follows:

“Step 1. Consider and apply any applicable and current CPUC published Standard Practice documents relevant to the anticipated functional, technical, and economic needs of the customer, building, or process. Such documents, which may include ISP study reports, DEER baseline values, or CPUC-issued memoranda or dispositions, will be publicly available on a single website with a date of issuance, applicability, and effective dates. If applicable baseline information within these documents is found, apply it and stop here. If there is no existing ISP study available or applicable to the project, proceed to Step 2. With addition of the following note to Step 3:
“The option with the lowest first-year cost must be viable, common, and incremental to existing conditions (e.g., repairing or maintenance of existing equipment isn’t incremental to existing condition), not necessarily the most predominant in the market. It is necessary for developers to provide evidence to validate that it’s presently commonly purchased (e.g., collecting information or data from vendors and/or subject matter experts). When a market-based ISP study on such an option is necessary and justifiable, then the process in ISP study guidance document should be followed.”

4.2.1.7 *Revision Request 1*

CPUC staff requested and submitted a revised language for the Background section of the document to further clarify that the application of the Standard Practice Baseline definition. The revised language reads as follow:

Background

“The Standard Practice Baseline is synonymous with a “code” baseline and is generally used as the single baseline for Normal Replacement (including New Load and New Construction) measures as well as the second baseline for Accelerated Replacement (AR) measures. Determination of baseline for other measure types such as Add-On Equipment (AOE), Behavioral, Retro commissioning, and Operational “BRO”, Accelerated Replacement (first baseline), etc., must follow applicable CPUC policy and Program Administrator guidelines. This document only details the baseline selection process; it does not discuss eligibility or the review and verification of the selected baseline. Assessment of the evidence of program influence, followed by an assessment of measure eligibility, then determination of measure type are steps in the sequence of project development that are required prior to baseline determination.”

4.2.1.8 *Revision Request 3*

SoCalGas commented that the proposed Standard Practice Baseline definition does not include any verbiage on capacity expansion. They suggested to modify the language related to comparable level of service to read “If there is not a viable and comparable baseline solution that offers a comparable level of service as the EE measure, the energy use of the baseline solution must be adjusted to provide a level of service comparable to that provided by the EE measure.”

4.2.1.9 *Revision Request 4*

CEDMC noted that the proposed Standard Practice Baseline definition describes a process that a project developer must step through, and maybe the “Consider and apply” language in Step 1 also refers to project developers, but the language in Step 2 has more ambiguity: “Identify the options presented by the project developer or customer.” It would be helpful to clarify who is doing this identifying. We assumed it was the project developer, but it doesn’t read that way.

4.2.1.10 *Revision Request 5*

Lockheed Martin stated that some of the sources listed in Step 1 (ISP study reports, DEER baseline values, or CPUC-issued memoranda or dispositions) may not be consistent. In particular DEER baseline values may not coincide. This could be rectified by providing a hierarchy of documentation.

4.2.1.11 *Revision Request 6*

Referring to the statement at the end of Step 2, “The customer must consider any options considered under this step as reasonable to implement”, SCG asked whether CPUC staff would be able to overturn options that the customer deems reasonable if they disagrees? e.g. Staff believes the customer has to consider the normal replacement of a \$10 million equipment in their cost metrics, but the customer argues that they would rather repair the equipment indefinitely than replace it.

4.2.1.12 *Revision Request 7*

Regarding the lowest first year cost option, Nexant asked what would be a good substantiation? The way it is currently written, whether the estimates are substantiated or not, is totally dependent on the reviewer which brings us to the same ambiguities which we are trying to get away from.

4.2.1.13 *Revision Request 8*

A CPUC Technical Advisor commented that the proposal states, “If there is not a viable and comparable baseline solution that offers a comparable level of service as the EE measure, the energy use of the baseline solution must be normalized to provide a comparable level of service as the EE measure”. This sentence is internally inconsistent with Step 2 which states that if a feasible solution does not exist, the proposed solution is standard practice baseline and the measure is ineligible for Normal Replacement. If the quote in parenthesis is meant for some Accelerated Replacement scenario, its applicability should be qualified with a footnote to avoid guessing the intent of this clause. Similarly, a Step 3 provision, “ongoing operation and maintenance costs” should be clarified for applicability as there are no ongoing operation and maintenance costs for a Normal Replacement solutions.

4.2.1.14 *Revision Request 9*

Ecology Action requested to add the following clarifying statement to the comparable level of service statement: “Providing a comparable level of service as the EE measure for the EUL of the EE measure. When maintenance can extend the EUL of the standard practice baseline measure to match that of the EE measure, the EUL is considered comparable.”

An example of this is when Code baseline and presumed Standard Practice Baseline is a 28W T8 linear fluorescent fixture with a 20,000 hour EUL and the EE measure is a 13W linear LED fixture with 50,000 hour EUL. The “comparable level of service” clause as written says that, because EUL of the EE measure is longer than the EUL of the Code/Standard Practice Baseline, the measures are not comparable. The only comparable Code/Standard Practice Baseline measure would then be one that has the same or

greater EUL than the EE measure. Because most EE measures have longer EUL than Code/Standard Practice Baseline measures (they are higher cost, superior products), this clause effectively requires that the Code/Standard Practice Baseline is equal to EE baseline. How this would impact energy savings calculations has two interpretations:

- First interpretation: because the Code/Standard Practice Baseline is equal to the EE baseline, there would be zero energy savings for any EE measure with a lifetime longer than the Code/Standard Practice Baseline. While allowing zero energy savings because of differing EUL seems absurd, we have been denied savings in this scenario by project reviewers who took this interpretation. It is important to note that in this scenario, most customers will install the Code/Standard Practice Baseline measure rather than the EE measure as they are not receiving any incentive.
- Second interpretation: some energy savings should be allowed for Code/Standard Practice Baseline measures with shorter EUL, but that the energy savings for the EE measure should only be counted for the EUL of the Code/Standard Practice Baseline measure. This interpretation is also problematic. Continuing the example above, Energy savings for the EE measure would be measured from the Code/Standard Practice Baseline for the first 20,000 hours, but after 20,000 hours there would be no savings attributed to the EE measure. This assumes that, had the customer installed the 20,000 hour EUL measure instead of the 50,000 hour EE measure, at the end of that 20,000 hour EUL the customer would replace that fixture with new equipment that is of equal or greater efficiency than the EE measure. This assumption is obviously incorrect. In practice, many/most customers will simply install new lamps and ballasts/drivers when the light goes out rather than purchasing and installing an entirely new fixture. The proposed clarifying sentence corrects this false assumption that customers never maintain equipment and should be added to the definition.

4.2.1.15 *Revision Request 10*

Energy Solutions indicated that Standard Practice Baseline definition is too restricted and appears to disengage customers and sheds customers projects. The proposed definition does not simplify the process in support of SB350.

4.2.2 Transition Period

Question 1-1, Transition Period



T2WG asks the Commission to make a decision on the appropriate effective date or transition period for projects that trigger market-based ISP studies. Is it reasonable to hold the project⁷ under *ex ante* review until the study is complete, or can the project move to Step 2 of the Standard Practice Baseline selection process? (See Appendix C, Section 10.1.1.1.5, *Ongoing or Directed ISP Studies* for more detailed discussions on this topic.)

4.2.2.1 *CPUC Recommendation*

During the T2WG discussions around this topic, CPUC staff clarified that projects that trigger ISP studies should be held under *ex ante* review until the study is completed. At the last T2WG meeting, CPUC staff stated that they would consider a reasonable grace period to implement this transition period

⁷ One stakeholder added “and other projects not selected for ex ante review”

contingent on the IOUs having in place a statewide project development process, similar to the PG&E project development protocol⁸ and requiring their own program staff and implementers to conduct ISP assessment as part of the needs assessment in their program design. The transition period would be limited, starting at the time of the commencement of the statewide project development process. The grace period would allow consideration of projects already under development. Each utility would have to provide a list of projects under development and a brief description [1] to include brief but clear project description, application number if there is an application, and the most current status of the project at the time of preparing the list to CPUC staff.

During this transition period, a project identified under the project review stage (either under the utility's internal review or CPUC staff's ex ante review) as requiring an ISP study could proceed in project review stage⁹ while the ISP study is conducted. The results of the ISP study would apply to similar projects moving forward, not the project that triggered the study.¹⁰ Upon termination of the grace period, all new projects identified as requiring an ISP study during the project review stage would be placed on hold until completion of the ISP study. [2] The transition period would not apply to one-off type projects. The project development process is intended to identify issues such as requiring an ISP study early in the project development process to mitigate customer expectation issues at the project review stage. After the grace period, holding of new projects requiring an ISP study at the review stage would be the consequence of not having executed the project development process diligently.

Responses to CPUC Recommendation

[1] Several stakeholders (SCG and Nexant) commented that this recommendation has too many unknown variables (e.g., length of grace period, statewide project development process, etc.) which makes the implementation of this recommendation extremely difficult:

- “Slippery slope since this process and document are not yet approved and too many variables”
- “All this ambiguity will really be mitigated if a “bus stop” process is adopted. Every 6 months, all new rules from ISPs and dispositions become part of the program for projects going forward. This will go a long way in managing risks and to make implementation of programs less confusing.”
- “Need to get this statewide PD process to get the transition period in place and allow projects to proceed. This appears crucial. Just a note for action needed by all the IOUs.”

[2] A CPUC Technical Advisor commented that no change should be made to the current provisions until the ISP Guide document is revised and adopted.

4.2.2.2 PG&E Recommendation

PG&E staff notes that, for small projects in which savings are under 0.5 GWh/200 ktherm (current ISP triggers), the PG&E project development protocol directs the developers to provide their justifications

⁸ PG&E Project Development Protocol is available at: http://t2wg.cadmusweb.com/Documents/Task%205%20-%20ISP%20Guidance%20Document/T2WG_Task5_ISP_ProjectDevelopmentProtocol_PG&E_20170518.pdf

⁹ One implementer suggested to change “could proceed in project review stage” to “could proceed to implementation and payment under existing rules”.

¹⁰ Nexant asked: what about the other projects in the pipeline or any other projects included in the list previously sent to CPUC staff?

with some vendor information, following the PG&E project development protocol⁸. Essentially, project developers are required to first interview with the customers to address and document project eligibility, measure type, and influence issues; and follow the standard practice baseline steps outlined in Standard Practice Baseline Definition. The proposed option for baseline assumption must be selected from options that are common and viable.

PAs and CPUC reserve the right to review the project documents and may request a standard practice investigation if the proposed baseline lacks credible justification.¹¹ If such a request is made, the project in question should be held up until the standard practice investigation is completed. This gives the implementers an opportunity to move forward more efficiently, with the contingency that they must perform due diligence in the process of project development, including standard practice baseline choices, and present credible justification for their baseline option, not simply harvest or claim a project that has been decided by a customer.¹²

Although project developers are required to still do due diligence when making baseline assumptions, such as gathering information to justify standard practice baseline, for a large project in which savings are above 0.5 GWh/200 ktherm (current ISP triggers), the PG&E project development protocol recommends PAs' and CPUC's involvement early in the project development stage to investigate and validate standard practice options, which must be viable and functional while meeting the customer's needs. Interviews with vendors and/or subject matter experts¹³ will be required when there is more than one viable option that is incremental to the existing condition. The project development goes hand in hand with the custom review and standard practice investigation process. Outcomes of standard practice collaborative review and investigation will be in effect for the specific project.

Responses to PG&E Recommendation

[1] CEDMC commented that implementers strongly encourage clear determinations of project specific standard baselines and advocate for the “bus-stop” concept to be applied to ISP determinations. This way the market will have clear guidance and projects that are under development will be allowed to continue to completion. Under this proposal, every six months, all new rules from ISPs and dispositions become part of the program for projects going forward. This concept was discussed in the T2WG meetings and could be part of the market transition period for new determinations/dispositions that would impact future project development. CEDMC strongly advocate for this type of process as it removes ambiguity, helps manage risk and simplifies program implementation. Also, implementers strongly support PG&E's proposal on conducting and deploying ISP studies across programs. The proposal established that by September of a given year, there would be a decision on which topics (and how many) would be conducted; one year later, those ISP results would become part of the rules.

[2] Lockheed Martin noted that the current ISP process does not require ISP studies to be performed at this savings level (referring to 0.5 GWh/200 ktherm threshold in PG&E's recommendation). The ISP Guide indicates that at this threshold a low rigor study “may” be initiated. The concern is that this level

¹¹ Two stakeholders (CEDMC and Nexant) found the “credible justification” term ambiguous. They stated that including ambiguous terms allows reviewers to stop all projects for ISP studies to be completed for every project. These kinds of terms are only making this entire process more complex.

¹² Several implementers found the last statement to be accusatory and suggested the removal of “not simply harvest or claim a project that has been decided by a customer.”

¹³ One stakeholder suggested to include customers as well.

would require a lot of ISP studies. As part of the T2WG effort, Staff provided a summary of claims that are not broken out to this criterion. However, they do provide some clarity on the magnitude of this effort. According to this data, the total number of projects with greater than \$100k incentives for 2016 was 138. While the criteria listed here generally aligns with a \$50k incentive for electric and \$200k for gas, there are likely more electric projects in the \$50k-\$100k range than gas projects in the \$100k-\$200k range. Thus, I think at these criteria, the number of required ISP studies may be extensive. A review of past claims should be done to determine what savings criteria allows for a reasonable and manageable workload of ISP studies.

[3] Lockheed Martin stated that the current process, which appears somewhat arbitrary and is intractable should be changed. The proposal approach in this section adds quite a bit of complexity, while only addressing part of the issue. The policy should provide a balance between ensuring that ISP guidelines are developed and utilized and the ultimate impact on all the stakeholders involved in developing a project (customers, vendor implementers, etc.). A recommendation for the implementer approach is to add a mechanism to ensure that the study is completed, approved and implemented for newly developed projects. PG&E proposed a schedule to review claims to target measures, systems, and/or activities on an annual basis and Staff agreed that if this process were implemented, ISP studies could be prospective.

[4] Nexant commented that PG&E had a good proposal in regards to how ISP should be conducted and then deployed across programs. The idea was that during one year by September, it will be decided on how many different topics the ISP studies will be conducted and then by next year September, they will become part of the rules. This is far more elegant and clear way of conducting and implementing ISP studies.

4.2.2.3 *Implementer Recommendation*

CEDMC stated that implementers strongly disagree with the current language that includes threshold of 0.5 GW/200 ktherms. In large part, the reason for this disagreement is the number of ISP studies this would require, and the projects it would hold up waiting for them. CEDMC commented that per the data supplied by the CPUC consultants, approximately 140 ISP studies would be required annually using these thresholds. Based on the historical track record for ISP studies, it is extremely unlikely that the PAs have the bandwidth to create 140 ISP studies or that the CPUC has the bandwidth to adequately review and approve them. The delays this will introduce into an already problematic process are significant. If this is going to be a requirement, however, it is imperative that ongoing or directed ISP studies should be applicable to future projects and should not hold up projects already underway. Implementers suggest the following revised text for proceeding to Step 2: “If applicable baseline information is not found, proceed to Step 2.”

Onsite Energy commented that the determination of project specific standard baselines should be clear and should not be subject to the vagaries of arbitrary “judgments” by Staff. There should be a “bus-stop” concept applied to ISP determinations that give the market clear guidance and allow projects that are under development to continue to completion. The best way to accomplish this is to follow the Task 1 process to determine viable options for the individual projects and have a market transition period for any new determinations/dispositions that would affect future project development. The ability of Staff to hold up individual projects is the primary pain point for implementers. A “Bus Stop” process would eliminate this major pain point.

Ecology Action commented that for projects with incentives greater than \$100,000, projects should be held while ISP determination is completed. For projects with incentives below \$100,000, the project should be allowed to continue using the baseline determined through the Standard Baseline process. For these smaller projects, the eventual ISP should only be applied to future projects, not retroactively to the project that initiated the ISP. The requirement for and timing of ISP studies should be scaled to the size of the project. We currently have numerous small projects that are on hold due to IOU and Staff requests for an ISP study. In many of these situations the cost of conducting the ISP study far outweighs the potential over application of rebate.

Responses to Implementer Recommendation

None

4.2.3 Designated Website



Question 1-2, Designated Website

T2WG requests a designated website or a repository to deposit all published ISP studies.

The T2WG recommended that all published ISP study reports and CPUC-issued memoranda or dispositions be publicly available on a single website with applicability, a date of issuance, and effective dates. The website should include the following contents:

- Market-based ISP study reports in which a standard practice is determined
- CPUC dispositions determining a technology in a certain application to be standard practice
- CPUC memos notifying parties that a market-based ISP study is underway and that related projects may not be approved until completion of said ISP study
- CPUC memos notifying parties that a market-based ISP study is underway and that related new projects may continue until completion of said ISP study

The T2WG assumes that CPUC staff members have full authority to author and post any document to this site.

Some stakeholders recommended the “CPUC *Ex Ante* Review Custom Process Guidance Documents” page at <http://www.cpuc.ca.gov/General.aspx?id=4133> be used as a repository for all published ISP studies. Others requested a separated designated website for this purpose.

4.2.4 Lowest First-Year Cost Option vs. Most Common Option



Question 1-3, Lowest First-Year Cost Option vs. Most Common Option

What should be the standard practice baseline if Step 2 yields more than two feasible options? (See Appendix C, Section 10.1.1.1.11, *Lowest First-Year Cost Option*, for detailed discussions and supporting argument for each recommendation.)

4.2.4.1 PG&E Recommendation

PG&E proposed using the lowest first-year cost and several other stakeholders (SCE, Ecology Action, Lockheed Martin, and SCG) supported using lowest first-year cost option.

Responses to PG&E Recommendation

[1] An *ex post* evaluator disagreed with choosing the lowest first-year cost option to select the standard practice baseline, arguing that choosing the lowest first-year cost goes against the market-based (most common) choice being the baseline. The most common option is the definition of standard practice. The evaluator asked why the baseline should revert to the lowest first-year cost.

See PG&E's response to the use of the most common choice in Appendix C, Section 10.1.1.1.11 *Lowest First-Year Cost Option*, under "Use case where Step 2 yields more than two feasible options."

[2] SCG noted that we need to include the lowest cost as determined by customer.

[3] PG&E commented that to avoid proposed lowest first-year cost being perceived inadvertently as simply repairing or maintenance of existing equipment, we clarify that the lowest first-year cost must be viable, common, and incremental to existing conditions (e.g., repairing or maintenance of existing equipment isn't incremental to existing condition), not necessarily the most predominant in the market. It is necessary for developers to provide evidence to validate that it's presently commonly purchased (e.g., collecting information or data from vendors and/or subject matter experts). When a market-based ISP study on such an option is necessary and justifiable, then the process in ISP study guidance document should be followed.

4.2.4.2 CPUC Recommendation

CPUC staff referred to D.12-05-015 direction, at 351, which states that "for purposes of establishing a baseline for energy savings, we interpret the standard practice case as a choice that represents the typical equipment or commonly used practice, not necessarily predominantly used practice. We understand that the range of common practices may vary depending on many industry- and/or region-specific factors and that, as with other parameters, experts may provide a range of opinions on the interpretation of evidence for standard practice choice. Here again, we expect Commission Staff to use its *ex ante* review process to establish guidelines on how to determine a standard practice baseline." Therefore, the direction is to use typical equipment or commonly-used practice, but necessarily a predominant choice. The last phrase (predominate) was added due to the recognition that if there are two or more choices, there may be more than one choice that is common. In those cases, it may be appropriate to create a typical efficiency level for the standard practice that is a mix of efficiencies of the common choices, weighted by their current rate of selection (based on those currently or very recently making choices for installations or methods of operation). Certainly, cost figures into the selection process, but the proposers of using cost have provided no evidence that the lowest cost choice has any correlation to being the common or typical choice. Certainly when "first-year cost" is added as a qualifier to lowest cost, you start to get more into a customer decision process. But for major investment limiting the analysis to first year cost may not be useful as in many situation labor costs far exceed all other cost consideration. So labor productivity enter into decision on choice strongly in some cases and is not limited to first year costs. Major acquisition analysis usually involves multi-year analysis including, financing options, cash flow analysis as well as tax implications, and resale. Also, future flexibility for the business is often important including expandability. For less costly technologies, there may be other attributes that far outweigh equipment cost, such as appearance, details of performance, fit with other components where the new equipment will be used.

In many cases when there are two or more alternative choices we would consider using some type of weighted average efficiency as the baseline standard practice. Examples for simple equipment include the baselines for screw-in lamps where we currently use a mix of incandescent, Compact Fluorescent Lamp and LED lamps in the baseline. If there are choices that clearly have minor market share compared to the others it is reasonable to consider leaving those choices out of the weighting. For example, of choice 1, 2 and 3 have 10%, 40% and 50% current orders market share it may be reasonable to not consider choice one and mix 2 and 3 together to get a middle point between their efficiencies as the baseline. In very small markets (# of annual purchases very small) this can still be reasonable. The implication of this example (3 reduced to 2) is that only one item can get incentives and if that item already has ~50% of the new order market there is a risk of very low net-to-gross since perhaps the incentives that are able to be offered cannot really change any decisions.

Also, when there are few viable choices, such as two or three with no clear typical choice, and no great performance, first or life cycle cost difference, it is questionable why there is incentive support at all. Often if there is a cost difference that is also commonly coupled with a performance (production), size, or some other difference that cannot be ignored and simply take the first or first-year cost as the lowest. Manufacturers of equipment are not arbitrary in their pricing strategies, but they do need to recover development cost over time in their sales ... so amortize those costs over some level of sales then may be able to drop those costs a lot. So costing information must be current and baselines mix shifted as recent sales and orders change. We often see reports using out-of-date costs, thus another problem with that parameter being a major method of selecting baseline.

Staff stated that first-year cost, or other simple cost-based methods, are not very reliable unless there is clearly a case where the "lowest-cost" item (however that is defined) also clearly has the largest current sales market share by a significant margin.

Responses to CPUC Recommendation

[1] Lockheed Martin responded that although they understand that the lowest cost may differ from the standard practice baseline per the quoted decision, the program implementation cost to determine market share data for essentially every project including potentially multiple baseline scenarios should be included in the decision to define the standard practice baseline. It should be noted that the lowest cost option may not even be the least efficient. As we get more and more ISP studies and determinations, the options method should become less prevalent which reduces the risk.

[2] Nexant commented that this is extremely problematic. Why instead of using the most common, we have to have a hybrid that doesn't exist? The most common one should be the most common one, and not the weighted average. How does that add any kind of accuracy to calculations?

[3] SCG stated that sales numbers are unreliable and subject to inflation by the vendor. "Lowest cost as determined by the customer" is more appropriate.

[4] Applied Energy Group commented that the most common choice should be the standard practice baseline. However, the definition of "common" should be specified in an actionable form. For instance, if "most common" is to be determined by market shares, a consistent methodology or set of methods should be stipulated for such analyses and determinations.

[5] Ecology Action supported the lowest first year cost and commented that Requiring the "most common option" to be the baseline would defy the concept and definition of baseline established by California Energy Commission and used throughout the country, and would gravely complicate small projects by requiring complicated analysis and documentation for every project. Some exemption must be provided for projects below a certain threshold (suggest \$25,000) that would direct code baseline as the standard practice baseline without necessitating further investigation or proof. Failure to do so will significantly increase project development costs and extend timelines for smaller projects, prohibiting many of them from moving forward.

4.2.5 Repair-Eligible/Repair-Indefinitely Standard Practice

PG&E clarified that the Standard Practice Baseline definition is written such that tests for the repair-eligible and repair- indefinitely measure types may be handled through the Standard Practice Baseline definition. In Step 2, the project developer must identify the customer's feasible options. While the options considered in this process must be real options, they may represent solutions that do not involve the replacement of equipment.

Example 1: A customer has a failed piece of equipment. The customer may choose to repair it, or the customer may choose to replace it with a higher efficiency system. This is the repair-eligible use case, where the project developer must demonstrate that it is "more likely than not" that a repair of the failed equipment could and would occur. Evidence must be submitted to demonstrate that (a) the existing equipment could be repaired to meet the need, and that (b) the existing equipment would have been repaired if the program had not induced the replacement.

Example 2: A customer has a working piece of equipment, with no need to replace it or increase its level of service. The customer can maintain the existing equipment or can replace it with a higher-efficiency system. This is the repair-indefinitely use case, where the project developer must demonstrate that it is "more likely than not" that continued maintenance of the existing system could and would occur. Evidence must be submitted to demonstrate that (a) the existing equipment could be continually repaired to meet the need, and that b) the existing equipment would continually be repaired if the program had not induced the replacement.

In both cases, it is a POE test to determine if it is more likely than not that the customer could and would repair the equipment. If the measure passes that test, then the project developer may use a repaired state as the baseline. The following table describes the underlying questions explored in the various viability and influence tests:

Measure Category	Viability	Influence
Normal Replacement, New Load, Add-on Equipment	N/A	Is it more likely than not that the exact new equipment would not be installed without program intervention?
Early Retirement (Accelerated Replacement)	Is it more likely than not that the existing equipment has remaining useful life?	Is it more likely than not that the existing equipment would not be replaced without program intervention?
Repair-Eligible	Is it more likely than not that the existing equipment could be repaired?	Is it more likely than not that the existing equipment would be repaired without program intervention?
Repair-Indefinitely	Is it more likely than not that the existing equipment could be continually maintained and repaired?	Is it more likely than not that the existing equipment would be continually maintained and repaired without program intervention?

Note that a decision made in Step 1 can preempt any eligibility of repairable measures. For example, an ISP document may be posted determining that it is ISP to replace a specific type of failed equipment with a brand new one. In those cases, a repaired state for that equipment would not be an allowable option in Step 2 of the Standard Practice Baseline selection process.

The discussion of whether repair-eligible/repair-indefinitely can be used for Standard Practice Baseline is addressed in Section 6, Task 3 (page 47).

4.3 T2WG RECOMMENDATION

T2WG agreed to the following:

- Use the term “standard practice baseline” instead of “code baseline” to refer to single baseline for Normal Replacement (including New Load and New Construction) measures as well as the second baseline for Accelerated Replacement (AR) measures.
- The baseline used for energy efficiency savings reporting and incentives shall not regress to a lower efficiency than the existing equipment.
- Proposed Standard Practice Baseline definition only details the baseline selection process and it does not discuss measure eligibility or the review and verification of the selected baseline.
- All published ISP study reports and CPUC-issued memoranda or dispositions should be publicly available on a single website with applicability, a date of issuance, and effective dates.
- Conditionally agreed with the proposed Standard Practice Baseline definition, subject to clarifications on items listed in Section 4.2.1, Proposed Standard Practice Baseline Definition.

T2WG recommends the Commission:

- Adopt Standard Practice Baseline definition while considering additional edits listed at the end of Section 4.2.1, Proposed Standard Practice Baseline Definition.
- Provide direction regarding Question 1-1, Transition Period on page 22.
- Provide direction regarding Question 1-2, Designated Website on page 26.
- Provide direction regarding Question 1-3, Lowest First-Year Cost Option vs. Most Common Option on page 26.

5 TASK 2 – TIERED POE

E-4818 OP 25 at 70: “... We ask the Track 2 working group ... Develop recommendations for what should constitute Tier 1 and Tier 2 preponderance of evidence requirements.”

5.1 BACKGROUND

This section provides background information for Task 2, highlighting key discussions in the T1WG report and Commission responses in Resolution E-4818. T1WG materials are provided here for context only, and may or may not have been adopted in the Resolution.

Resolution E-4818 adopted the T1WG proposal for a tiered approach to preponderance of evidence (POE) for the determination of accelerated replacement as well as the proposed incentive size thresholds for each tier level.

Resolution E-4818 at 41:

“The working group developed a ‘Tiered’ approach in its [POE] guidance, whereby projects with smaller incentives would be held to a lower rigor standard. The working group agreed there should be three rigor tiers:

- Full Rigor” for the largest projects, with incentives greater than \$100,000,
- Tier 1, Medium Rigor” for projects with incentives between \$25,000 and \$100,000, and
- Tier 2, Lower Rigor” for projects with incentives less than \$25,000.

... We adopt this proposed tiered approach. We also adopt the proposed incentive size cutoffs for the tier categories.”

The Resolution did not adopt the proposed evidence and documentation requirements or methods of data collection for Tiers 1 and 2 due to the level of disagreement among stakeholders. The Resolution states that “parties could not agree as to whether the lowest rigor tier would involve an interview conducted by an independent third party, or program administrator, or implementer. There were also differing perspectives on whether the questionnaire should be program-specific or general, whether the language in the questionnaire should indicate there would be consequences for misrepresenting facts, and even whether an interview should be conducted at all [E-4818 at 42].”

Table 3 summarizes the Resolution findings and orders on this topic.

Table 3. Resolution E-4818 Findings and Orders on Task 2

Location	Resolution Language
Finding 21	It is reasonable to use a tiered approach to the preponderance of evidence, where three rigor levels (“Full Rigor”, “Tier 1, Medium Rigor” and “Tier 2, Lower Rigor”) are applied as a function of customer incentive size.
Finding 22	The working group recommends the tiers correspond to the following incentive ranges specifically: “Full Rigor” for incentives over \$100,000, “Tier 1 Medium Rigor” for incentives between \$25,000 and \$100,000, and “Tier 2 Lower Rigor” for incentives less than \$25,000. These are generally consistent with project size guidelines that determine the level of rigor for required project measurement and verification.
Finding 23	The criteria proposed in the working group guidance for determining whether the preponderance of evidence guidance (as a whole) is applicable or not are insufficient for the intended purpose.
Finding 24	We do not adopt the specific [POE] requirements for Tier 1 and Tier 2, as outlined in Section 6 of the working group guidance. For this reason, we prohibit the use of a tiered approach to the preponderance of evidence requirements until specific requirements for the tiers are adopted.”
Finding 27	Working group members did not agree to specific criteria defining the [POE] requirements for the lower rigor tiers (Tier 1 and Tier 2). Section 6 of the working group guidance document is a proposal authored by working group facilitators that reflects a middle ground and not a common ground and does not reflect a working group recommendation.
OP 22	We adopt a tiered approach to the preponderance of evidence, with three tier levels corresponding to the rigor of the assessment: Full Rigor for projects with incentives over \$100,000; Tier 1 Medium Rigor for projects with incentives between \$25,000 and \$100,000, and Tier 2 Lower Rigor for projects with incentives less than \$25,000.
OP 24	We do not adopt the specific preponderance of evidence requirements for Tier 1 and Tier 2, as outlined in Section 6 of the working group guidance. For this reason, we prohibit the use of a tiered approach to the preponderance of evidence requirements until specific requirements for the tiers are adopted.
OP 25	... We defer several issues to be addressed within the planned activities of upcoming [T2WG] ... We ask the [T2WG] ... Develop recommendations for what should constitute Tier 1 and Tier 2 Preponderance of Evidence requirements.”

5.2 T2WG DISCUSSION

To avoid confusion during T2WG discussions, the T2WG renamed the approved tier levels to “low,” “medium,” and “full”:

- **Full** rigor applies to projects with incentive levels greater than \$100,000.
- **Medium** rigor, called “Tier 1” in the T1WG report, includes projects with incentive levels between \$25,000 and \$100,000.
- **Low** rigor, called “Tier 2” in the T1WG report, includes projects with incentive levels less than \$25,000.

T2WG also introduced a “**Very Low**” (or “Tier 0”) rigor level for very small projects that warrant a less rigorous POE requirement than projects on the higher end of the Low rigor category.

This task involves developing the POE guidance for the very low, low, and medium tiers (i.e., for projects with incentive levels less than \$100,000).

5.2.1 Overall Approach to Tiered POE

In the first T2WG meeting, CPUC Staff clarified its expectation that POE include the following three types of evidence or documentation requirements, for which the level of rigor for each component should scale with the tier level:

- Evidence of equipment operation
- Survey, questionnaire, or interview to establish influence
- A customer affidavit to ensure the project documentation is accurate

To address these and the issues raised during the T1WG discussions, T2WG identified five sub-tasks to complete the Task 2 proposal.

- **Task 2-1, Tier thresholds**—whether the tier thresholds developed in T1WG and approved in Resolution E-4818 were sufficient to develop POE requirements that appropriately balanced rigor with project value and risk.
- **Task 2-2, Evidence for equipment viability**—the documentation requirements to demonstrate the equipment viability component of POE
- **Task 2-3, Evidence for influence**—the documentation requirements to demonstrate the program influence component of POE
- **Task 2-4, Questionnaire administration**—which party would administer a survey, questionnaire, or interview to collect information, balancing cost and complexity of administration with the potential impacts of bias
- **Task 2-5, Customer affidavit**—a statement to be signed by the customer to affirm accuracy of the information provided for POE

Table 4 (next page) shows the proposed POE approach for the medium, low, and a new “very low” tier and is followed by sections that provide additional detail about the proposal and relevant T2WG discussions.

Table 4. Task 2 Proposal, POE Requirements by Tier

Task	Description	Topic	Very Low [Note 1]	Low	Medium	Full [Note 2]
2-1	Tier Levels	Incentive threshold	Up to \$7,500	From \$7,500 to \$25,000	From \$25,000 to \$100,000	Greater than \$100,000
2-2	Evidence of Equipment Viability	Physical evidence	N/A	Photos	Photos, plus independent PA corroboration of viability [Note 5]	Photos, plus independent PA corroboration of viability
		Questionnaire [Note 3]	Q1-Q3	Q1-Q3	Q1-Q3	Q1-Q3, plus four additional questions
2-3	Evidence of Program Influence	Questionnaire [Note 3]	Q4-Q6	Q4-Q6	Q4-Q6	Q4-Q6, plus six additional questions
		Customer interview?	No	No	No	Optional
2-4	Questionnaire Administration	Who administers questionnaire?	Customer/Implementer	Customer/Implementer	IOU	Third-party, starting in 2018 (PA until then) [Note 6]
2-5	Customer Affidavit	Affidavit statement [Note 4]	Lines 1-5	Lines 1-5	Lines 1-5	Lines 1-6

[Note 1] The T2WG discussed the concept of a “very low” tier for very small projects that warrant extremely limited or no review for POE; but the current proposal for “very low” is the same as for “low.”

[Note 2] “Full rigor” POE is not in the scope of the T2WG task; we have included information on the full rigor approach in this summary table for reference.

[Note 3] See the proposed questionnaire in Table 5 on page 40.

[Note 4] See the proposed affidavit language on Table 6 on page 44.

[Note 5] PA corroboration means that the PA must independently assess the system and conclude that the existing equipment meets the current need (i.e., that the existing equipment is viable).

[Note 6] An IOU noted that beginning of 2018 is likely too soon, so this date would need to be Q4 2018 or Q1 2019.

Proposal 2-1, Approach for Tiered POE

T2WG recommends the Commission approach the describes the POE requirements for projects with incentives less than \$100,000 , as described in Table 4 (page Table 4). This proposal includes:



- A. A “very low” tier level with the incentive threshold at \$7,500.
- B. A customer questionnaire to collect evidence of equipment viability and program influence.
- C. The six-question questionnaire provided in Table 5 (page 40).
- D. Administration of the customer questionnaire by the IOU or implementer.
- E. A customer affidavit using language similar to that provided in Table 6 (page 44).

5.2.2 Task 2-1: Tier Levels

Although Resolution E-4818 approved the three tier levels (renamed in this report as “low”, “medium”, and “full”), the T2WG acknowledged that POE requirements for a \$5,000 should not be as rigorous at POE requirements for a \$20,000 project and discussed whether the \$25,000 incentive level was an appropriate cut-off between the low and medium tiers and whether there should be a lower threshold for very small projects. Although Resolution E-4818 accepted the tier levels defined in the T1WG Report, T2WG stakeholders agreed a well-reasoned proposal to modify the tier levels or propose a new tier level was appropriate for the T2WG report.

CPUC staff proposed a “Tier 0” or “Very Low” rigor level or a change to existing thresholds to distinguish rigor requirements within the lowest tier, acknowledging that POE requirements should differ between \$5,000 and \$25,000 projects. Staff agreed during the T2WG process that it should provide a simplified proposal for how to handle these small projects.

Implementers supported including the very low tier with a threshold ceiling of \$7,500 in incentives, with the potential to revise the threshold value in the future. Ecology Action proposed the \$7,500 threshold based the 15,000 retrofits it has installed in California in the last 15 years. This implementer noted that a very low tier with POE requirements that streamline retrofit delivery is “critically important for the small and medium commercial market” and should be established in this T2WG process. SoCal Gas requested that the threshold for “Very Low” or “Tier 0” projects be defined as \$5,000 for single fuel projects or \$10,000 for dual fuel projects.

Proposal 2-2, Very Low (Tier 0) POE



T2WG recommends the Commission adopt a “very low” or “Tier 0” with POE requirements as listed in Table 4 on page 34 for projects for projects with incentives less than \$7,500 total or for projects with incentives less than \$5,000 for single fuel projects or \$10,000 for dual fuel projects .

5.2.3 Task 2-2: Evidence of Equipment Viability

The POE requirement for equipment viability includes evidence of equipment operation and of its ability to remain in service meeting customer requirements for its remaining useful life (RUL). During T2WG meetings, CPUC staff often referred to this component of POE as asking: “Can the existing equipment continue to operate to meet customer needs?”

CPUC staff suggested the following examples of evidence for equipment viability:

- Photos and videos
- Operating data
- Current and past maintenance and repairs history or records, as well as costs
- Reliability history and issues
- Information on current plans or budgeting for expansions, remodels, replacements

The T2WG discussion on this topic weighed the need to balance rigorous screening against the value of information for different types or sizes of projects. Stakeholders also wanted to avoid making the POE policies more complex. For example, collecting documentation of the types of evidence listed above, especially of information not normally collected by the customer or readily available, increases the transaction costs and customer burden. While important to ensure appropriate use of ratepayer funds, the cost of evidence acquisition should not outweigh the potential value of the project or program.

An implementer noted that the last three items in Staff's list of evidence above could be collected through a customer questionnaire, and that baseline measurement and verification (M&V) data should demonstrate whether the existing equipment is operating and meeting current needs.¹⁴

Thus, the T2WG proposal addresses this topic with two types of POE evidence: physical evidence and self-report data through a questionnaire.

The T2WG agreed that, for projects with incentives less than \$25,000 (very low and low rigor), the evidence requirement for equipment condition may be met through photo documentation and a questionnaire, and that medium rigor projects required additional physical evidence beyond a photo.

5.2.3.1 *Physical Evidence*

The T2WG proposal (Table 4 on page 34) requires no physical evidence for the very low tier, photo evidence for the low tier, and "photos plus independent PA corroboration of viability" for the medium tier.

Implementers requested that photos should not be required for "very low" rigor projects, noting that CPUC Staff "has repeatedly stated that [photos] are of 'very low value' as evidence." Implementers noted that the idea of "very low" category arose from an acknowledgement by all stakeholders that the portfolio risk for these very small projects is small and that streamlined program delivery is imperative to enable custom projects for these underserved customers. Therefore, the additional burden and cost of photos to small projects "does not justify the low value of these photos."

An implementer also noted that some customers will not allow photos or videos due to security concerns, and requested that the POE requirements not exclude those customers from participation.

ORA recommended that the physical evidence requirement for all tiers be updated to require "photo, video, and/or operating data sufficient to demonstrate equipment operability," noting that "photographs may be sufficient evidence to establish some types of equipment (e.g., lamps) are operational, but is insufficient to establish the viability for other equipment types (e.g., most heating,

¹⁴ As an example, power data on a package HVAC unit will show how well the system is keeping up with the load at varying temperatures. If the unit is fully loaded at 75°F and the climate zone design is 95°F, it is reasonable to assume the equipment is not meeting the service needs for a significant part of its operation.

ventilation, and air conditioning equipment). The requirement to provide photographic evidence for all equipment types will therefore not be sufficient to meet a preponderance of evidence standard as the photograph will not actually establish whether the equipment is operating.”



Proposal 2-3, Tiered POE Requirements for Physical Evidence of Equipment Viability

T2WG recommends the Commission adopt the proposed physical requirements to satisfy the POE for each tier level as outlined in Table 4.



Proposal 2-4, Request to Waive Physical Evidence of Equipment Viability

T2WG requests the Commission confirmation that customers who cannot provide photo or video documentation due to security concerns be allowed to waive this requirement.

5.2.3.2 Questionnaire Questions on Viability

The T2WG proposal for the very low, low, and medium tier levels is to assess equipment viability using the following three questions:

1. Agree or disagree: My current equipment provides sufficient performance, capacity, and reliability to meet my current needs.
2. How likely is it that your equipment needs will significantly change within the next 3-5 years?
3. Agree or disagree: The required maintenance on this equipment has increased over the past three years.

The proposal includes these questions in a general six-question questionnaire (see Table 5) that also collects information for the program influence component of POE.

To meet the POE requirements for equipment viability and to be qualified for accelerated replacement, the customer must exceed a score of zero (using the scoring scheme outlined in Table 5). A negative or zero score means that the project is not qualified for early retirement claim and the measure is a normal replacement measure.



Proposal 2-5, Customer Questionnaire for Equipment Viability

T2WG recommends the Commission adopt the three questions and scoring methods outlined in Table 5 to assess equipment viability for very low, low, and medium rigor projects (i.e., projects with incentives less than \$100,000).

5.2.4 Task 2-3: Evidence of Program Influence

The second component of POE is evidence of program influence. During working group meetings, CPUC staff often referred to this component of POE as asking: “*Would* the customer continue to operate the existing equipment?” In other words, would the customer have continued to operate his or her existing equipment without the technical, financial, or other influence of the program.

Staff proposed that a survey, questionnaire, or interview could be used to collect information on the customer’s decision-making process and demonstrate how the program influenced a change in the customer’s choice (e.g., by providing information on alternate choices, financial support, or both). Staff

added that additional evidence of program influence could include documentation establishing the customer's choice of a lower-efficiency, lower-cost alternative prior to program intervention.¹⁵

T2WG struggled with the discussion of program influence acknowledging the need for a streamlined approach to assessing influence (especially for small projects) and the difficulty in assessing decision-making and influence. One stakeholder noted "This is a moving target that has countless difference permutations and variations. Program influence could be 100% or 5% (but is the tipping point that [pushes] the customer to replace vs repair. As such, the burdens here need to be streamlined to support S B350, capture stranded assets, and decrease sales of T24 units-which are an overwhelming majority of sales." The implementer noted that the burden of incremental documentation tends to drive customers away rather than increasing energy efficiency activity.

T2WG agreed that, for projects with incentives less than \$100,000, evidence of program influence should be collected through a questionnaire.

5.2.4.1 *General or Program-Specific Questionnaires*

Stakeholders differed in their perspectives on whether the questionnaire should be general or program-specific. CPUC staff provided an example questionnaire for HVAC projects as a guide on the types of questions an influence questionnaire should contain but indicated that the actual questions should depend on variables including the measure, market, and project size.

However, other stakeholders suggested that the concepts are similar enough that a general questionnaire should be sufficient. An implementer agreed and noted that measure-, program-, or industry-specific questionnaires would increase cost and time for program implementation because each questionnaire would need to be developed, possibly by a working group, and approved by CPUC staff. Another argued that, since POE is supposed to determine "more likely than not," and that "developing measure, market, and/or program specific questionnaires is above and beyond meeting the 'more likely than not' criteria." The participant noted that the six questions proposed by T2WG "provide enough general information to ensure the correct measure classification at least 51% of the time," and offered that more questions could be considered as long as the scoring criteria are objective."

The T2WG proposal is a general, statewide questionnaire for all projects with incentives less than \$100,000.

5.2.4.2 *Questionnaire Development*

Stakeholders differed in their perspectives on whether the T2WG should develop the questionnaire.

An *ex post* reviewer suggested that a questionnaire developed by the T2WG should be considered advisory and subject to testing and validation. Rather, this stakeholder suggested that the T2WG identify the guiding principles to be considered in developing a questionnaire and that the questionnaire be developed by an independent CPUC contractor as part of a study to be implemented in collaboration with the PAs.

¹⁵ Staff stressed that this survey, questionnaire, or interview should be performed by (or in lower-incentive projects, confirmed by) an independent party that has no financial interest in the results of the survey. This is discussed in the Questionnaire Administration section.

Several implementers expressed concern about continued delays if the T2WG did not create a general questionnaire that could be implemented immediately.

The T2WG proposal includes the set of questions—three each to assess equipment viability and program influence—that could make up the questionnaire for the very low, low, and medium thresholds. See the proposed questionnaire and scoring structure in Table 5 on page 40.

5.2.4.3 *Proposed Questions on Program Influence*

The T2WG proposal for the very low, low, and medium tier levels is to assess program influence using the following three questions:

4. Agree or disagree: I was planning this space renovation or equipment upgrade prior to contact with the program.
5. Agree or disagree: The potential availability of financial assistance presented meets our company's criteria to implement this project.
6. Agree or disagree: The technical information and services provided by the PA team are essential for my decision to approve this project.

The proposal includes these questions in a general six-question questionnaire that also serves to provide information on the equipment viability component of POE. (See Table 5 on page 40.) To meet the POE requirements for program influence and to be qualified for accelerated replacement, the customer must exceed a score of zero (using the scoring scheme outlined in Table 5).

Proposal 2-6, Customer Questionnaire for Program Influence



T2WG recommends the Commission adopt the three questions and scoring methods outlined in Table 5 to assess program influence for very low, low, and medium rigor projects (i.e., projects with incentives less than \$100,000).

5.2.4.4 *Customer Interview*

Participants differed in their perspectives on whether an interview should be conducted at all.

The T2WG proposal indicates no customer interview is required beyond the customer questionnaire for very low, low, or medium tier projects (i.e., projects with incentives less than \$100,000).

Table 5. Task 2 Proposal, Customer Questionnaire for Very Low/Low/Medium POE

#	Question	Response (and Score)*				
Equipment Viability						
Q1	Agree or disagree: My current equipment provides sufficient performance, capacity, and reliability to meet my current needs.	Strongly Agree (+2)	Agree (+1)	Neither agree nor disagreed (0)	Disagree (-1)	Strongly Disagree (-2)
Q2	How likely is it that your equipment needs will significantly change within the next 3-5 years?	Very likely (-2)	somewhat likely (-1)	Neither likely nor unlikely (0)	Somewhat unlikely (+1)	Very unlikely (+2)
Q3	Agree or disagree: The required maintenance on this equipment has increased over the past three years.	Strongly Agree (-2)	Agree (-1)	Neither agree nor disagree (0)	Disagree (+1)	Strongly Disagree (+2)
Program Influence						
Q4	Agree or disagree: I was planning this space renovation or equipment upgrade prior to contact with the program.	Strongly Agree (-2)	Agree (-1)	Neither agree nor disagreed (0)	Disagree (+1)	Strongly Disagree (+2)
Q5	Agree or disagree: The potential availability of financial assistance presented meets our company’s criteria to implement this project.	Strongly Agree (+2)	Agree (+1)	Neither agree nor disagreed (0)	Disagree (-1)	Strongly Disagree (-2)
Q6	Agree or disagree: The technical information and services provided by the PA team are essential for my decision to approve this project.	Strongly Agree (+2)	Agree (+1)	Neither agree nor disagreed (0)	Disagree (-1)	Strongly Disagree (-2)

* A customer's score for Q1-Q3 must exceed zero for to satisfy the equipment viability and score for Q4-Q6 must exceed zero to satisfy program influence. The scores associated with each response are shown here only to provide information on the scoring structure in this proposed questionnaire. The scores would not be visible to the customer when completing the questionnaire.

5.2.4.5 *Stakeholder Comments on the Questionnaire*

Stakeholders offered the following comments on the proposed questionnaire (Table 5):

General:

1. Questions 1 to 4 could be more targeted and avoid potential customer confusion by adding “related to the installed measure” to “equipment” or “equipment needs”. [Other]

On Question 2 (Equipment Viability):

2. Suggest adding "or I do not have plans to replace my equipment" after "needs". This is the most telling description of the customers state of mind. Many customers understand the current equipment does not meet needs (especially during peak periods), but they still don't have plans to replace. [Other]
3. This may be a guesswork. [Implementer]
4. We shouldn't ask this question; NO ONE knows how long a piece of equipment (e.g. air conditioner) will last and no one can legally attest in an affidavit saying it will last this long. [Implementer]
5. This timeframe may be very challenging for many customers; some implementers recommend changing this to “in the near future” or “in the foreseeable future” [Implementer]
6. Add language that says “I do not have plans to replace my equipment,” as that is often the best indicator of the customer’s state of mind. (However, I suspect Q1 is intended to address that eventuality.) [Implementer]
7. Some members find this question problematic because no one knows how long a piece of equipment will last so likely wouldn’t be willing to attest to that in an affidavit. [Implementer]

On Question 3 (Equipment Viability):

8. How will this answer be interpreted? Our implementation experience and surveys of customers/contractors (with deemed HVAC early replacement programs) tells us that high maintenance doesn't mean customers will replace. Just the opposite. It tends to show that customers have and will continue to "repair". High maintenance or no maintenance, BOTH, can and does lead to the POTENTIAL for and program-induced early-retirement. We must study to correct the 'assumption' behind this question or DELETE the question. [Implementer]
9. While we are generally OK with the question, there is a concern that this implies increased maintenance is an indicator that customers will replace the equipment. Our members have not found that to be true – it often indicates the customer is prepared to continue to repair. [Implementer]

On Question 4 (Program Influence):

10. This question seems to miss the core issue we are trying to uncover: Is the equipment capable of continuing to operate for "X period of time? Also, it is unclear how maintenance costs indicate equipment lifespan. Sometimes high maintenance costs will indicate equipment that is near failure, while high maintenance costs for other equipment will have put it back in great condition for the next many years. This question should explore the RUL issue directly: "Do you believe your equipment will continue operating for the next X?" [Implementer]

11. Suggested language: “I had concrete plans and approved budget for this space renovation or equipment upgrade prior to contact with the Program.” The questions about “planning” is vague; planning may be just an idea that shouldn’t be penalized. I don’t understand how the fact that a customer is planning a renovation is less influence for an implementer. Somebody may be thinking of replacing a chiller with a Title 24 compliant chiller. If the implementer comes and convinces the customer to install a high efficiency chiller, that would be a valid project with a lot of influence. We understand that Q6 covers some of the issues in this questions but the recommendation is to add a sub-question that specifically asks if the customer was ready to incorporate an energy efficiency upgrade in the planning. [Implementer]

On Questions 5 and 6 (Program Influence):

12. I at first had trouble seeing how the incentives or Technical Assistance could decelerate projects, but customers do wait for incentives and maybe assistance so projects can decelerate. These are non-leading questions, and I think they might be okay as is. [Other]

5.2.5 Questionnaire Administration

T2WG participants differed in their opinions on who should administer the customer questionnaire, but reached some agreement for the lower tier levels:

- CPUC staff and ORA indicated a strong preference that any survey, questionnaire, or interview be conducted by an independent party with no financial interest in the customer or project, but acknowledged this might not be pragmatic for lower tiers.
- IOUs and implementers acknowledged CPUC staff’s concern with a survey administered by an interested party (e.g., the project developer), but questioned the value that third party administration of questionnaire would add to the process.
- A participant also noted that allowing self-certification on the POE (i.e., by signing the affidavit discussed in task 2-5) is comparable to accepting self-certification for the business qualification (Task 4).

One stakeholder asked whether the questionnaire was necessary as a separate activity if all relevant data were collected in the program audit (or other existing program process). CPUC staff noted that, for some project sizes, data could be collected by the implementer during regular program activities, and for very small projects, the questions should be part of program design.

The T2WG proposal is that the customer or implementer would administer the questionnaire for the very low and low levels (i.e., projects less than \$25,000) and that the IOU (e.g., account representative, IOU technical reviewer, or other IOU representative) would administer the questionnaire for the medium tier level (i.e., projects between \$25,000 and \$100,000).

5.2.6 Customer Affidavit

The customer affidavit is intended to ensure that the information provided by the customer in the customer questionnaire (Task 2-3) is accurate. The T1WG discussions wrestled primarily with the severity of the statement language, specifically the reference to potential legal action against the customer.

CPUC staff recommended that the affidavit:

1. Inform customers that the treatment they are applying for involves requirements that exceed those of “standard” offerings and requires additional information to confirm eligibility, but that they may be eligible for the “standard” offerings independent of their eligibility for this offering;
2. Include legal language confirming the accuracy of the information they supply that is used to make the determination of eligibility for accelerated replacement; and
3. Include consequences of contrary findings, such as eligibility for accelerated replacement on the project impacted.

Other stakeholders commented that:

- The threat of perjury or other legal action may deter customers from participating in the programs.
- It is important that the affidavit notify participants about potential change in the amount of approved incentive should the affidavit be found to be erroneous and include a “clawing back” provision for paid incentives.
- Most customers will not know the difference between the different measure treatments (e.g., accelerated replacement vs. normal replacement) and should not have to acknowledge an understanding of the program rules.

The T2WG agreed that customers should be able to certify the accuracy of information they provide for a project application without the threat of criminal action or any references to “penalty of perjury.”

Proposal 2-7, Customer Affidavit Statement

The customer or customer representative who completes the POE questionnaire will sign an affidavit with some fraction of the following statement depending on the POE Tier Level, as outlined in Table 7:



[1] I, (name), hereby certify that I am authorized to make this declaration as the Customer or as an authorized representative of the Customer (name). [2] By signing below, I certify that the above is true and correct to the best of my knowledge. [3] I acknowledge that misrepresentation will result in a rejection of all or part of the project [4] and that I may be required to return the incentives associated with this project. [5] I further acknowledge that misrepresentation will result in future projects being subjected to additional scrutiny [6] and that repeated offenses may result in probation or suspension from current and future incentive programs.

Table 6 shows which lines of the affidavit statement would be required for each POE level.

- Lines 1 through 5 would be required for all levels.
- Line 6 would only apply for projects with incentives large enough to require the full rigor POE.
- The proposal specifically does not include the statement “I declare, under penalty of perjury under the laws of the State of California, that the foregoing is true and correct” due to stakeholder concerns about customer response to the threat of legal action.

Table 6. Task 2 Proposal, Affidavit Statement by POE Tier

#	Question	Addresses	Rigor			
			Very Low	Low	Med	Full
1	I, (name), hereby certify that I am authorized to make this declaration as the Customer or as an authorized representative of the Customer (name).	n/a	Y	Y	Y	Y
2	By signing below, I certify that the above is true and correct to the best of my knowledge.	n/a	Y	Y	Y	Y
3	I acknowledge that misrepresentation will result in a rejection of all or part of the project...	Consequence (current ineligibility)	Y	Y	Y	Y
4	...and that I may be required to return the incentives associated with this project.	Consequence (claw back)	Y	Y	Y	Y
5	I further acknowledge that misrepresentation will result in future projects being subjected to additional scrutiny...	n/a	Y	Y	Y	Y
6	...and that repeated offenses may result in probation or suspension from current and future incentive programs.	Consequence (future ineligibility)	N	N	N	Y
7	I declare, under penalty of perjury under the laws of the State of California, that the foregoing is true and correct.	Consequence (legal action)	N	N	N	N

5.2.6.1 *Stakeholder Comments on the Affidavit*

The majority of participants agreed on this approach to the Customer Affidavit. One implementer asked for clarification, regarding Line 6, on whether it is legal to bar rate-paying customer from participating in the programs.

ORA provided the following recommendations:

- ORA appreciates the diligent effort on the part of T2WG stakeholders to craft a Customer Affidavit statement that balances a variety of stakeholder concerns. However, the draft report does not include a justification for varying the application of the Customer Affidavit Statement by customer tier. ORA recommends that the full Customer Affidavit Statement apply to customers in all tiers.
- The language of the Customer Affidavit Statement should be modified to (1) clarify that remedial actions apply to the Customer and not individuals and to remove the suggestion that only repeated offenses may result in probation or suspension from incentive programs. The latter proposed requirement for repeated offenses is inappropriate for willful and/or misrepresentations and has no basis in California Public Utilities Commission decisions. ORA

recommends the following changes (strikethrough for deletions, underline for additions) [in table below].

Customer Affidavit, Proposed edits by ORA

The customer or customer representative who completes the POE questionnaire will sign an affidavit ~~with some fraction~~ of the following statement ~~depending on the POE Tier Level, as outlined in Table 7:~~

~~{1}~~I, (name), hereby certify that I am authorized to make this declaration as the Customer or as an authorized representative of the Customer (name). ~~{2}~~By signing below, I certify that the above is true and correct to the best of my knowledge. ~~{3}~~I acknowledge that misrepresentation will result in a rejection of all or part of the project ~~{4}~~and that I the Customer may be required to return the incentives associated with this project. ~~{5}~~I further acknowledge that misrepresentation will result in future projects submitted by the Customer being subjected to additional scrutiny ~~{6}~~and ~~that repeated offenses~~ may result in Customer probation or suspension from current and future incentive programs.

5.3 T2WG RECOMMENDATION

T2WG agreed to the following:

- Rename the tiers approved in E-4818 to “low”, “medium”, and “full” as described on page 32
- Introduce a “very low” tier for very small projects that warrant a less rigorous POE requirement than other “low” tier projects.
- for projects with incentives less than \$25,000 (very low and low rigor), the evidence requirement for equipment condition may be met through photo documentation and a questionnaire, and that medium rigor projects required additional physical evidence beyond a photo.
- For projects with incentives less than \$100,000, evidence of program influence should be collected through a questionnaire.

T2WG recommends the Commission:

1. Adopt Proposal 2-1, Approach for Tiered POE on page 35.
2. Adopt Proposal 2-2, Very Low (Tier 0) POE on page 35, and specify the accepted incentive threshold.
3. Adopt Proposal 2-3, Tiered POE Requirements for Physical Evidence of Equipment Viability on page 37.
4. Adopt Proposal 2-4, Request to Waive Physical Evidence of Equipment Viability on page 37.
5. Adopt Proposal 2-5, Customer Questionnaire for Equipment Viability on page 37.
6. Adopt Proposal 2-6, Customer Questionnaire for Program Influence on page 39.
7. Adopt Proposal 2-7, Customer Affidavit Statement on page 43.

8. Regarding Line 6 in Table 6 (which is not included in the proposed affidavit statement for projects with incentives less than \$100,000), clarify whether it is legal to bar rate-paying customer from participating in the program

DRAFT

6 TASK 3 – REPAIR-ELIGIBLE/REPAIR-INDEFINITELY

E-4818 OP 25 at 70: “... We ask the Track 2 working group ... Develop qualification standards and documentation requirements to identify repair-eligible and repair-indefinitely measure types.”

6.1 BACKGROUND

This section provides background information for Task 3, highlighting key discussions in the T1WG report and Commission responses in Resolution E-4818. T1WG materials are provided here for context only, and may or may not have been adopted in the Resolution.

In its proposed Baseline Guidance document,¹⁶ the T1WG report proposed three sub-types of accelerated replacement—early retirement, repair-eligible and repair-indefinitely—and proposed that all three sub-types are (1) “subject to proof of both program influence and the long-term viability of the existing equipment as demonstrated by the preponderance of evidence” and (2) must use “existing conditions and code [to] define the first and second baselines..., where the repaired state is considered existing conditions for the repaired measure.”

Resolution E-4818 adopted the sub-types and the dual baseline approach¹⁷ but did not accept the proposed definition of repair-eligible and did not adopt the use of repair cost in determining equipment eligibility-based definitions.¹⁸ The Resolution also offered the following “simplifying principles”:

E-4818 at 31:

- “For deemed and calculated savings determinations, existing conditions baselines must reflect rated equipment efficiency, or apply an adjustment factor to reflect the portion of savings that are retrocommissioning or operational in nature.
- Replacement of equipment that is broken, poorly performing or not able to meet its load requirement must apply a normal replacement baseline. This includes replacement of broken add-on equipment.
- All accelerated replacement types (repair eligible, repair indefinitely, early retirement) receive the same dual baseline treatment, consistent with the current definition of dual baseline in the Energy Efficiency Policy Manual. However, equipment older than its EUL may qualify for accelerated replacement baseline treatment if it is determined to be repair eligible or repair indefinitely.”

¹⁶ T2WG Report, Appendix A: Baseline Guidance Document V1.0, page 13.

¹⁷ E-4818 at 29: “We adopt the recommendation that accelerated replacement include three sub-categories, and that each be treated equivalently with respect to the dual baseline approach. However, we do not adopt the definition of repair-eligible that is proposed in the draft guidance document ...”

¹⁸ E-4818 at 32: “...we do not adopt the use of repair cost in determining equipment eligibility-based definitions. Instead we ask the [T2WG] to address qualification standards and evidence to determine repair eligible / repair indefinitely equipment.”

Several participants, including CPUC Staff, noted that “poorly performing” equipment should be able to have an accelerated replacement baseline if it can still meet customers’ needs.

Table 7 shows the Resolution findings and orders directly related to this topic.

Table 7. Resolution E-4818 Findings and Orders on Task 3

Location	Resolution Language
Finding 5	The broad application of existing conditions baseline demands clear distinctions between repairs that are eligible for ratepayer funded energy efficiency programs and those that are not.
Finding 15	It is reasonable to define the accelerated replacement installation type as three sub-categories: early replacement, repair eligible, and repair indefinitely.
Finding 17	Equipment that is older than its effective useful life may qualify for an accelerated replacement baseline treatment where it is determined the equipment is either repair eligible or repair indefinitely.
Finding 18	We do not have a process or evidence requirements for how equipment could be qualified as repair indefinitely. The working group also did not assign any measures to this category.
OP 14	We adopt the working group proposal that accelerated replacement is comprised of three sub-categories: early replacement, repair eligible, and repair indefinitely, which shall use equivalent dual baseline savings and cost effectiveness calculations for deemed and calculated downstream programs.
OP 16	We permit the Program Administrators to apply an accelerated replacement baseline treatment to equipment that qualifies as repair eligible or repair indefinitely where the equipment is older than its predetermined effective useful life.
OP 25	... We ask the Track 2 working group ... develop qualification standards and documentation requirements to identify repair eligible and repair indefinitely measure types.

6.2 T2WG DISCUSSION

The T2WG proposes simplifying the approach to repair-eligible and repair-indefinitely measure types by eliminating the distinct POE requirements for each sub-type—and therefore having a single POE requirement for any accelerated-replacement measure type. However, SoCalGas provided a proposal for a definition and specific requirements for qualification as repair-eligible or repair-indefinitely that it recommends be added to the current POE Preponderance of Evidence requirement.

T2WG also requires clarification from the Commission on two aspects of eligibility:

- (1) whether broken equipment may qualify as repair-eligible or as an accelerated replacement measure (if the customer can and would otherwise repair the equipment), and
- (2) whether the existing conditions can qualify as the standard practice second baseline, or whether the RUL for the existing conditioned can be extended, for a qualifying repair-indefinitely measure.

6.2.1 Are distinct sub-types for accelerated replacement necessary?

Commission staff suggested that Task 3 came about to address a common practice of automatically disqualifying equipment that was older than its EUL. Although there is no rule or policy that disallows the replacement of old equipment, some stakeholders thought there was a rule and/or practiced the rule that equipment older than its EUL could not qualify for a custom or deemed incentive.

CPUC staff confirmed there is no such policy, and Resolution E-4818 states, “Equipment older than its EUL may qualify for accelerated replacement baseline treatment if it is determined to be repair-eligible or repair-indefinitely [E-4818 at 31].” With this clarification, T2WG questioned whether there was need for more than one category of accelerated replacement. All equipment, regardless of age, is eligible for early retirement provided it meets the POE requirements for equipment viability (i.e., can the customer repair the equipment?) and influence (i.e., would the customer have repaired in the absence of the program?).



Proposal 3-1, Repair-Eligible/Repair-Indefinitely Measure Types

Eliminate the use of repair-eligible and repair-indefinitely as distinct measure categories with distinct policy results and, instead, create one simple measure category for accelerated replacement with a single set of policy rules.

6.2.2 Proposal for a definition and evidentiary requirements for repair-indefinitely

SoCalGas disagreed with the T2WG interpretation of Findings 5, 15, 17, and 18 and Ordering Paragraphs 14, 16, and 25 and stated its understanding that “the Commission has ordered the PAs and implementers to develop qualifications for determining the applicability of the repair-eligible and repair-indefinitely subcategories [of accelerated replacement]. Findings from the Commission imply that an equipment older than the EUL generally does not qualify for an accelerated replacement baseline unless evidentiary requirements are met. Ordering Paragraph 25 asks the T2WG to develop the qualification standards for the repair-eligible and repair-indefinitely sub categories.”

SoCalGas proposed the following repair-indefinitely definition and evidentiary requirements and POE scoring table “based on questions asked by the EAR team for EAR-selected projects involving long lived equipment” and clarified that the proposal “is intended to supplement the Task 1 Standard Practice definition and allow the repair of qualified equipment to be a viable option when determining feasible options for the customer.” SoCalGas requests this proposal be added to the current POE requirement.

6.2.2.1 *Proposal: Repair Indefinitely Definition and Evidentiary Requirements*

The “repair-indefinitely” equipment designation is intended to allow functional, long-lifecycle equipment that may be in service beyond the 20 year CPUC maximum EUL limit to be considered for the accelerated replacement measure category. This designation as repair-indefinitely would alter the EUL and RUL values to predetermined values (based on equipment categorization) to allow for dual-baseline consideration.

Definition

Repair-indefinitely is a status ascribed to an equipment in a facility where the customer asserts the following is true:

1. The equipment/process was designed such that regular and periodic maintenance is sufficient to maintain a constant level of service or meet the needs of the customer; and

2. The expected cost of equipment replacement far exceeds the cost of regular and periodic equipment maintenance to provide a constant level of service or meet the needs of the customer; and
3. The CPUC maximum EUL of 20 years does not correctly describe the full equipment useful life as the customer intends to operate it; and (a) The existing equipment was the ISP design at the time of development or (b) the facility replacing the existing equipment requires an extensive capital approval process that is intended to restrict the replacement of functioning equipment

Qualification

Confirmation of the repair-indefinitely designation is split into two parts: (1) the customer asserting that the repair-indefinitely designation applies to a specific equipment, and (2) a POE threshold that the PA uses to determine if “sufficient evidence” has been provided to support this assertion.

The minimum requirements to meet the “sufficient evidence” threshold, referencing Table 8 and Table 9 are as follows:

- For High Rigor (incentive >\$100,000):
 - Point total must exceed 6 points (including cost documentation)
 - Must include one Repair item from the Cost Documentation table
 - Must include one Replacement item from the Cost Documentation table
- For Low and Medium Rigor (incentive <\$100,000):
 - Point total must exceed 4 points
 - Must include one Repair item from the Cost Documentation table

Table 8. Task 3 Proposal, POE Supporting Documentation

Direct Evidence (3 points each)	Supporting Evidence (2 points each)	Indirect Evidence (1 point each)
Capital Budget planning Documentation with Maintenance specific outlays	Historical evidence of regular maintenance	Evidence unit is “grandfathered” under current local AQMD rules
Invoices of Equipment specific maintenance outlays (routine and significant)	Instance of a significant repair activity to critical systems that extended service life	Scoping documentation for impending repairs
Lifecycle design documentation	Customer developed Preventative Maintenance Plan for equipment	Evidence that modifications are not intended to mitigate AQMD violations on the equipment
Engineering Analysis comparing repair vs replacement of equipment	n/a	Customer affidavit indicating they intend to repair the equipment indefinitely
n/a	n/a	Self-imposed ROI limitations that prevent equipment replacement

Table 9. Task 3 Proposal, POE Cost Documentation

Proposal (2 points each)	Quote (1 point each)
Repair Proposal or Bid that includes a scope of work, timeline, materials, and cost of the project	Repair Estimate or Quote that approximates the cost of the project
Replacement Proposal or Bid that includes a scope of work, timeline, materials, and cost of the project	Replacement Estimate or Quote that approximates the cost of the project

Example Categories with EUL/RUL value adjustments:

Industrial Equipment (expected to be operated longer than 20 years from installation)

EUL: 20 years

RUL: default value of 1/3 EUL + remaining RUL period



Proposal 3-2, Definition and Evidentiary Requirements for Repair-Indefinitely

T2WG requests the Commission adopt the definition and evidentiary requirements outlined above to qualify projects as repair-indefinitely.

6.2.3 Approaches to qualify equipment as repair-eligible or repair-indefinitely

CPUC staff stated its preference for an approach that encourages pre-qualification of equipment types as eligible for repairs while allowing simplified site-specific criteria. CPUC staff proposed that CPUC develop a submission and approval process allowing the PAs to submit equipment types that are proposed for this treatment. The submittal would include the equipment types; the programs authorized to use the treatment; the evidence supporting the treatment; and the criteria to be used at the site, project, or measure level to qualify specific equipment. One stakeholder noted that this approach is similar to the direct-to-default option already authorized through the Track 1 Working Group process.

Stakeholders encouraged the concept of market studies to inform which measures were appropriate for repair baselines, as such studies could support other aspects of program design like identifying which measures are ISP and emerging technology.

Still, some stakeholders stressed the need to also allow project-specific qualification of measures as repair-eligible or repair-indefinitely, especially for unique industrial and agricultural customers or systems for which the market may be too small to warrant a market study. The proposal to process repair-eligible and repair-indefinitely measures through both the Standard Practice Baseline definition in Task 1 and the standard tiered POE approach in Task 2 satisfies this stakeholder request.



Proposal 3-3, Repair-Eligible/Repair-Indefinitely Qualification

T2WG requests confirmation that measures may qualify for accelerated replacement baseline (as repair-eligible or repair-indefinitely) through:

- Pre-qualification for classes of equipment, OR
- Case-by-case qualification for measures or projects

6.2.4 Does the intended repair-eligible category allow broken equipment?

Resolution E-4818 states in its “simplifying principles” noted above that “replacement of equipment that is broken, poorly performing or not able to meet its load requirement must apply a normal replacement baseline.” This statement caused confusion among stakeholders who interpreted the adoption of the repair-eligible measure type as an endorsement of the potential for a broken but repair-eligible equipment to qualify as accelerated replacement.

CPUC staff argued that the Commission policy is clear that broken or non-operational equipment is not eligible for an accelerated replacement baseline, and that the replacement of broken equipment can only qualify as a normal replacement scenario. Staff also suggested that the program-induced early replacement of broken equipment is an unlikely scenario. Considering the time and resource requirements to participate in the Custom Program, a customer—especially an industrial customer—is unlikely to wait around to fix a piece of equipment). Rather, the customer will either replace the equipment (introducing a normal replacement scenario) or repair the equipment (introducing a repair-eligible/repair-indefinitely scenario). If the customer repairs the equipment, then the measure or project could qualify as an early replacement (of repaired equipment).¹⁹

SoCalGas submitted the following description of the repair-eligible designation:

1. “Projects that receive the repair-eligible designation are repair projects occurring to equipment that is functional and currently operating at or above standard practice as defined in Task 1. These projects are eligible for Custom Incentive Program funding as an accelerated replacement project and have the same POE requirements as other projects of a similar POE level.
2. Repair projects to equipment that are operating below standard practice are not eligible for the repair-eligible designation within the Custom Incentive Program. These projects would not qualify for incentive using the Task 1 definition developed by the T2WG. We recommend that these projects be transferred to the applicable BRO delivery channel.
3. Repair projects to broken equipment do not qualify for incentive funding.”

However, some IOUs and implementers argued that the repair-eligible measure type was designed to address broken but repair-eligible equipment. A customer with broken equipment has two options: (1) replace the broken equipment; or (2) repair and continue using the broken equipment. The first case, in which the customer would choose to replace the broken equipment, is clearly a normal replacement scenario. However, the second case, in which the customer would choose to repair the broken equipment, should qualify for dual baseline as an accelerated replacement scenario.

¹⁹ One stakeholder also noted “a special case that requires consideration is the use of rental equipment to temporarily provide needed services. The POE questionnaire can be used to ascertain program influence. The baseline can be the repaired equipment or maybe even the rental equipment if it would remain in place for years (unlikely).”



Proposal 3-4, Repair-Eligible and Broken Equipment

Regarding the statement in E-4818 at 31 that “Replacement of equipment that is ... broken ... must apply a normal replacement baseline,” T2WG requests that the Commission clarify whether “broken” equipment should be eligible for accelerated baseline (as repair-eligible or repair-indefinitely equipment) if it meets the POE requirements and determine whether to adopt the SoCalGas proposed definition in the text above.

6.2.5 Does repair-indefinitely support existing conditions as standard practice baseline?

Repair-indefinitely refers to scenarios in which the customer continues to repair broken or degrading equipment rather than replace the equipment. Stakeholders indicated that this repair-indefinitely treatment is common in commercial sectors, where code compliance can be very expensive, as well as in industrial and agricultural sectors, where equipment may be too expensive and specialized to replace. Stakeholders also discussed classes of equipment, e.g., boilers, that often operate much longer than their EULs due to continual customer repair. One stakeholder noted that the **YEAR** Stranded Asset study²⁰ proved that “a significant portion of the install base is being repaired vs replaced.”

Where repair-indefinitely measures qualify as early retirement, the existing conditions represent the first baseline (RUL = 1/3 EUL), and the standard practice (defined in Task 1) represents the second baseline (2/3 EUL). Some stakeholders argued that, for repair-indefinitely scenarios (i.e., for which the customer would have continued to repair the existing equipment), the standard practice *may be* the existing conditions. An IOU pointed out that “the ISP development process should be able to adequately determine if the existing conditions represent ISP,” and in such cases “the customer should not be penalized for operating equipment at or in excess of the ISP.” An implementer also noted that, where boilers can be 50 to 70 years old, it does not make sense to limit the RUL to 1/3 EUL with a 20-year EUL.

CPUC staff disagreed that existing equipment or existing conditions could count as the second baseline because it did not agree that existing equipment or conditions could qualify as ISP.



Proposal 3-5, Repair-Eligible/Repair-Indefinitely as Standard Practice Baseline

T2WG requests Commission guidance on the following issue: For repair-indefinitely scenarios for which the customer would continue to repair equipment beyond the RUL and EUL of the equipment, can the RUL for the existing conditions be extended to match the EUL, or can existing conditions serve as the second baseline for a repair-indefinitely measure if evidence demonstrates that the existing condition is the standard practice baseline?

6.3 T2WG RECOMMENDATION

T2WG agreed to the following:

- Replacement rather than repair for individual projects or measures may qualify as accelerated replacement if the project or measure meets the Task 2 POE requirements.

²⁰ **CITE NAVIGANT STRANDED ASSET STUDY – need info from Jim Hanna**

- The CPUC Staff may pre-qualify classes of equipment or measures for replacement rather than repair if the PAs or IOUs provide required POE evidence.

T2WG recommends the Commission:

1. Adopt Proposal 3-1, Repair-Eligible/Repair-Indefinitely Measure Types on page 49.
2. Adopt Proposal 3-2, Definition and Evidentiary Requirements for Repair-Indefinitely on page 51.
3. Adopt Proposal 3-3, Repair-Eligible/Repair-Indefinitely Qualification on page 51.
4. Provide direction regarding the question in Proposal 3-4, Repair-Eligible and Broken Equipment on page 53.
5. Provide direction regarding the question in Proposal 3-5, Repair-Eligible/Repair-Indefinitely as Standard Practice Baseline on page 53.
6. Regarding the statement in E-4818 at 31 that “Replacement of equipment that is ... poorly performing ... must apply a normal replacement baseline,” clarify whether “poorly performing” equipment should be eligible for accelerated baseline (as repair-eligible or repair-indefinitely equipment) if it meets the POE requirements.

DRAFT

7 TASK 4 – SMALL-SIZED BUSINESS

E-4818 OP 25 at 70: “... We ask the Track 2 working group ... develop qualification standards and documentation requirements for identifying small-sized business customers.”

7.1 BACKGROUND

This section provides background information for Task 4, highlighting key discussions in the T1WG report and Commission responses in Resolution E-4818. T1WG materials are provided here for context only, and may or may not have been adopted in the Resolution. In its POE Guidance Document, the T1WG proposed “a simplified POE protocol to demonstrate accelerated replacement of small and medium size projects.”²¹ The T1WG report identified “custom measures installed through residential and small commercial direct install programs [where CPUC staff must pre-approve the direct install program as being appropriate for such classification]” as an example of a “direct-to-decision” qualification approach for which “the combination of site-specific or program-level evidence provided is sufficiently compelling such that further [POE] assessment is not necessary.”

Resolution E-4818 accepted the proposal for a simplified POE pathway for small-sized business customers, with specific conditions,²² and directed the T2WG to “recommend a statewide definition of a small-sized business and associated evidentiary requirements to verify this classification [E-4818 at 47].”

Table 10 summarizes Resolution findings and orders related to this topic.

Table 10. Resolution E-4818 Findings and Orders on Task 4

Location	Resolution Language
Finding 26	There is not a consensus across stakeholders in how to identify and verify a small business customer in a manner that can be cost-effectively replicated over many participating customers. Such a standard is needed to design and implement any ‘direct-to-decision’ treatment (per as outlined in this resolution, where the customer eligibility includes a small business designation.
OP 25	... We ask the Track 2 working group to ... Develop qualification standards and documentation requirements to identify a small-sized business customer.

7.2 T2WG DISCUSSION

This section describes key topics discussed and different perspectives resulting in multiple proposals for the small-sized business definition.

²¹ T1WG Report, Appendix B, page 6.

²² E-4814 at 46: “We adopt the proposals represented in items 1 through 3 [that would default a project to an accelerated replacement baseline] above only with the following conditions and modifications: Any approach that streamlines or automates the determination of accelerated replacement baseline must comply with the following guidelines...”

7.2.1 Purpose of the Small-Sized Business Pathway

T2WG participants generally agreed that the goal of the small-sized business definition is to provide a path for participation for small businesses customers that do not have the technical or financial means or for which projects aren't large enough to support rigorous data collection and review to participate in the custom programs. However, participants differed in their perspectives on the intended scope of the small-sized business pathway.

CPUC staff expressed that the goal of Task 4 was to create a simple process to support a category of hard-to-reach small customers who have not been served because they are too small, and the staff suggested that the small-sized business definition was not intended to apply to all small business customers. Staff clarified that the Commission's interest is to provide a small-sized business definition and default accelerated replacement designation to allow higher incentives and get new participation from that class of customer that previously has not participated because the offerings do not provide enough incentive to change their decisions. The new baseline policies are intended to get added participation, not to pay more for the current participation.²³

IOUs and implementers indicated that customers must still be large enough such that the customers' potential EE projects are large enough to warrant the administrative costs of participating in the custom programs. An implementer commented that the T2WG is responsible for proposing "an evidence-based, standardized, and broadly accepted definition of 'small business' that can be easily applied to EE programs," and that the Staff goal of limiting the small-sized business definition to a subset of small businesses is out of scope is inconsistent with the goals of the simplified POE pathway proposed in T1WG and adopted in E-4818.

7.2.2 Small Customers vs. Small Projects

Stakeholder perspectives differed on whether the small-sized business pathway was intended to apply to small customers, small projects, or both.

CPUC staff clarified that the small-sized business pathway was meant for small customers and not small projects, indicating that the intent was to allow a pathway for small customers to participate in the programs. Staff expressed concern that project developers could break large projects for large customers into multiple small projects and wanted to protect against that.

Stakeholders noted that the program should provide a simplified pathway for small projects to balance the cost of review with the value of the project, but they acknowledged that small projects still had an opportunity for simplified POE pathways through other "direct-to-default" program designs or through the "low rigor" POE pathway (see Task 2 – Tiered POE). An implementer indicated a strong preference for both options, since the small-sized business definition would apply to customers while a potential Tier 0 or very low rigor pathway would apply to projects.

T2WG participants agreed that Task 4 should focus on identifying and qualifying eligible small-sized customers rather than projects.

²³ CPUC staff referenced Decision 16-08-019, which states that the "experiment" will have failed and the policy will need to be changed if the only effect is that the programs pay more for the current participation.

7.2.3 Evidence/Data Requirements

IOUs and implementers urged the use of readily available data (e.g., utility metered energy consumption) to determine eligibility, noting that additional data collection is an additional cost to both the customer and project developers.

Participants encouraged the use of the following types of data to minimize the cost of data acquisition and to facilitate targeted implementation for small customers (for which potential projects are also small):

- Energy consumption, because IOUs have consistent access to these data
- Specific market segments, such as non-profits or municipal customers (e.g., a high school), that would benefit from an expedited review
- Project size relative to business size;

Participants discouraged the use (as the only criterion) of customer income or revenue, because project developers do not have access to these data, and a requirement to share revenue may deter customers from participating in an energy-efficiency project or programs.

7.2.4 Customer Size and Annual Consumption

T2WG participants agreed on the use of energy consumption data as a criterion for small business qualification but disagreed on appropriate energy thresholds for this definition. CPUC staff preferred to keep the thresholds low to limit the percentage of customers who would automatically qualify for the simplified POE pathway, while IOUs and implementers argued that the thresholds had to be high enough to qualify customers who warrant custom projects. The T2WG proposals, described in the next section, highlight these differences.

7.2.5 T2WG Proposals

The T2WG did not reach consensus on this task. Instead, this report presents three distinct proposals for the eligibility criteria through which a customer may qualify for a simplified POE pathway:²⁴

- Proposal 4A – California Small Business Tariff Definition
- Proposal 4B – T2WG Commercial/Industrial Definition
- Proposal 4C – T2WG Hybrid Definition



Proposal 4-1, Eligibility Criteria for Small-Sized Business Customers

The T2WG requests the Commission select one of the following proposals—4A, 4B, or 4C) or otherwise provide guidance based on the goals of the simplified POE pathway for small business customers.

7.2.6 Proposal 4A – California Small Business Tariff Definition

A customer qualifies as a small business customer if it meets the definition of small business adopted by the CPUC for use in IOU tariffs (Table 11).

²⁴ The T2WG also discussed a fourth proposal to use the California Small Business Certification. However, stakeholders rejected this proposal as too onerous for many small businesses, noting that the documentation requirements for certification contradicted the goal of a simplified participation process for small customers.

Table 11. Task 4, Eligibility Requirements for Small-Sized Business — Proposal 4A

Eligibility Requirements for Small-Sized Business²⁵

A small business customer is defined as a non-residential customer with an annual electric usage of 40,000 kilowatt hours (kWh) or less, or an energy demand of 20 kilowatt (kW) or less, or annual consumption of 10,000 therms of gas or less. Alternatively, a small business customer is a customer who meets the definition of “micro-business” in California Government Code Section 14837. Section 14837 defines a micro-business as a business, together with affiliates, that has average annual gross receipts of \$3,500,000 or less over the previous three years, or is a manufacturer, as defined in Section 14837 subdivision (c), with 25 or fewer employees. The California Department of General Services is authorized to amend the gross receipt amount. In January 2010 DGS increased the gross receipt amount from \$2,750,000 to the current amount of \$3,500,000. (see, California Office of Administrative Law, Regulatory Action Number 2000-1110-01S.) This definition does not include fixed usage or unmetered rate schedule customers.

OP 3: “... non-residential customers may self-certify as a micro-business under Government Code Section 14837.”

CPUC staff, who proposed and supported this proposal, clarified that:

- **The definition allows for multiple eligibility pathways.** For example, a manufacturer with 25 or fewer employees qualifies even if it exceeds the energy thresholds. Similarly, a business with gross annual receipts of \$3.5 million or less may qualify regardless of its energy consumption.
- **Customers may self-certify** by signing a “self-certification” form (e.g., similar to SCE Form 904) stating that they meet the small business eligibility requirements. An implementer noted that self-certification for this proposal is key to simplifying the qualification when using gross revenue and number of employees, which will likely be used most since the energy levels are so low.

A participant also requested clarification on whether or how a customer with less than three years of revenue data could qualify as a small-sized business using the revenue requirement.

Support for Proposal 4A

CPUC staff supported this definition for the following reasons:

- The definition is based on data specific to the California market.
- The definition has already been litigated and adopted by the CPUC.
- The definition is already in use by all four IOUs.

Opposition to Proposal 4A

Multiple participants, including both IOUs and implementers, strongly opposed Proposal 4A, and expressed concern that the Proposal 4A criteria, especially the energy levels, are too limiting to support the intent of Task 4 to create a pathway for increased energy efficiency activity for small customers who otherwise cannot participate in the programs. They noted that the Proposal 4A criteria are too limiting

²⁵ Decision 10-10-032 (as corrected by Decision 10-11-037) - DECISION REVISING TARIFF RULES FOR SMALL BUSINESS CUSTOMERS

to justify the administrative costs of any EE projects and, therefore, would result in zero added participation.

An implementer who focuses on the small-business market noted that the Proposal 4A energy thresholds (< 20 kW and < 40,000 annual kWh) are too low in practical terms and limit potential projects to a size too small to justify any program activity. For example, the 40,000 kWh per year threshold limits a project with 8% energy savings to a \$256 incentive,²⁶ which does not cover the administrative cost for a custom project and therefore would likely not be pursued. Implementers confirmed that “no implementer will be able to justify the administrative costs for that amount of incentive for a custom project”, that “no program can implement cost effective custom projects for these size customers [who meet the Proposal 4A criteria],” and that Proposal 4A would “result in zero uptake by ‘small’ businesses.”

Several participants noted that the stringent criteria effectively render the Task 4 solution useless for most small-sized customers. IOUs commented that few customers would qualify under these criteria, requiring IOUs to pursue other pathways, such as developing market-specific direct-to-default programs that must be approved by CPUC staff or using the standard POE requirements, to support many small business customers. The “small business” definition 4A proposed by Staff is inappropriately limiting and should not be adopted.

Another implementer commented that it is not practical to ask a small customer to “show you receipts or their balance budgets to participate in an incentive program.” However, this should not be required since Proposal 4A allows customers to self-certify that they meet the eligibility criteria. In response to Staff’s preference to use an existing definition for small business that has “already been litigated and adopted by the CPUC,” IOUs and implementers also suggested that the T2WG should not limit proposals to existing definitions of small business since the Resolution’s direction to “develop qualification standards and documentation requirements to identify a small-sized business customer” invited the T2WG to develop a new definition designed to meet the intent of the simplified POE pathway for small businesses. One implementer argued that T2WG should not use the CA Government Code definition of “micro-business” as the definition “small business” without compelling justification and that no evidence has been presented to justify adopting a definition of “small business” that diverges from the above widely accepted definitions used for small business energy efficiency programs in other jurisdictions (see discussion for Proposal 4C).

7.2.7 Proposal 4B – T2WG Commercial/Industrial Definition

A customer qualifies as a small business customer if it satisfies any one of the criteria in Table 12.

²⁶ 40,000 kWh/year * 8% energy savings * \$0.08 per kWh savings = \$256.

Table 12. Task 4, Eligibility Requirements for Small-Sized Business — Proposal 4B

Criteria	Commercial Customers	Industrial Customers
Low Energy User	< 250 kW of average demand < 1.5 million kWh/year < 50,000 therms/year	< 400 kW of average demand < 2.5 million kWh/year < 100,000 therms/year
Facility Size	< 50,000 sq. ft.	n/a
Number of Employees	n/a	< 10
Registered or Certified Small Business in California ²⁷	Yes	Yes

Support for Proposal 4B

An implementer proposed these criteria based on the types of customers and projects served in the programs, as well as feedback from T2WG participants. The implementer described that the energy thresholds for customers are based on the size of projects that can occur at those customers' facilities. For example, a customer that consumes 1.5 million kWh annually can complete an EE project that saves 75,000 kWh or 100,000 kWh per year (5% to 7% savings). A project of this size corresponds to a ratepayer-funded incentive of \$6,000 to \$8,000 (at eight cents per kWh) and should be eligible for the simplified POE approach. Any energy thresholds lower than those presented in Proposal 4B would limit to smaller projects.

The proposal also provides distinct qualifying criteria for commercial and industrial customers and offers multiple qualification pathways. For example, a customer may qualify by meeting the "Low Energy User" criteria or the "Facility Size" criteria but is not required to meet both.

Opposition to Proposal 4B

CPUC staff opposed the energy thresholds in Proposal 4B as too high (i.e., allowing too many customers to qualify) and requested stakeholders provide evidence to support the proposal for these higher energy thresholds.²⁸

7.2.8 Proposal 4C – T2WG Hybrid Definition

A customer qualifies as a small business customer if it meets any one of the criteria in Table 13.

²⁷ Weblink: <http://www.dgs.ca.gov/pd/programs/osds/sbeligibilitybenefits.aspx>

²⁸ Supporters of Proposal 4B (and 4C) responded that they did provide evidence in the estimations of potential size of projects based on the energy thresholds and did not understand Staff's basis for the concern about energy thresholds being "too high".

Table 13. Task 4, Eligibility Requirements for Small-Sized Business — Proposal 4C

Eligibility Requirements for Small-Sized Business

A customer who meets any of the following criteria qualifies as a small-sized business customer:

- Customer is a registered or certified small business in California²⁹
- Customer meets any of the Proposal 4A criteria
- Electric customer has < 100 kW of average demand or usage of <500,000 kWh per year
- Gas customer has gas consumption < 50,000 therms per year

Support for Proposal 4C

An implementer focused on the small business market offered this “hybrid” proposal, which pairs Proposal 4A with higher energy thresholds calculated based on incentives limits (as a way to gauge portfolio risk) and comparable to national and state definitions of small business. The implementer offered the following benefits of Proposal 4C:

- **Proposal 4C sets the energy thresholds based on expected size and value of projects for small business customers.** The 500,000 kWh/year threshold limits the simplified small-business POE pathway to a \$3,200 maximum possible incentive for a project that saves 8% of the customer’s annual energy consumption.³⁰ Conversely, the 40,000 kWh/year threshold in Proposal 4A limits the simplified small-business POE pathway to a \$256 maximum possible incentive for a project that saves 8% of the customer’s annual energy consumption.
- **Proposal 4C defines small business customers similarly to other jurisdictions.** The federal definition of small business is based on revenue and/or number of employees and, although it varies by sector, is approximately equivalent to CA Government Code definition of small business. States such as Oregon, Massachusetts, Connecticut, Washington, Wisconsin, and Michigan define small business at or above 100 kW or 500,000 kWh; no states limit “small business” thresholds below 100kW or 500,000 kWh.
- **An examination of small business energy efficiency programs across the county found that three-quarters of the 25 studied small-business programs used peak demand as the eligibility criterion with 100 kW as the most common threshold** (32%) followed by 200 kW (24%). Just over 10% of programs used a facility square footage limit (e.g., <25,000 or 50,000 sq. ft.) and 12% of programs used total employees and/or annual spending.

Opposition to Proposal 4C

As with Proposal 4B, CPUC staff expressed concerns that the expanded energy thresholds are too high and open the simplified POE pathway—intended for underserved markets—to too many customers.³¹ Staff maintained that the energy consumption thresholds should be limited to the Proposal 4A criteria.

²⁹ Weblink: <http://www.dgs.ca.gov/pd/programs/osds/sbeligibilitybenefits.aspx>

³⁰ 500,000 kWh/year annual consumption * 8% savings * \$0.08 per kWh saved = \$3,200.

³¹ It was unclear to stakeholders how Staff determined what energy thresholds were “too high” or whether Staff had a specific number of customers that should be served by this small-sized business simplified POE pathway.

7.3 T2WG RECOMMENDATION

T2WG recommends the Commission respond to Proposal 4-1, Eligibility Criteria for Small-Sized Business Customers on 57 by selecting among the following proposals or otherwise provide guidance based on the goals of the simplified POE pathway for small business customers:

- Proposal 4A – California Small Business Tariff Definition (page 57)
- Proposal 4B – T2WG Commercial/Industrial Definition (page 59)
- Proposal 4C – T2WG Hybrid Definition (page 60)

DRAFT

8 TASKS 5 – ISP GUIDANCE

T2WG discussions for Task 5 build on previous work lead by PG&E staff members to identify issues and propose improvements to the Industry Standard Practice Guidance Document. Throughout T2WG meetings, in a several task-specific phone meetings, the working group has discussed both issues and recommendations—especially where Task 5 overlaps with Task 1—and expects to continue developing recommendations to update the guidance document and ISP protocols

This section provides an update on the Task 5 discussions to date and describes the working group’s proposed next steps for each task.

8.1 T2WG DISCUSSION

PG&E staff members shared with T2WG two documents they had previously developed:

- Redline mark-up of existing ISP Guidance Document indicating issues with the document,³² and
- Statement of problems and recommendations.³³

Through review of these documents and working group discussions, T2WG participants developed a list of issues that need to be addressed for a revised ISP guidance document. These issues cover six main categories:

- Definitions
- Multiple Types/Applications of ISP Studies
- Custom/Site-Specific Baseline (related to Standard Practice Baseline selection process in Task 1)
- Application of ISP Findings
- ISP Study Process
- Leaders vs. Laggards

T2WG compiled a document summarizing the issues to facilitate discussions and collect additional input.³⁴ Based on stakeholder input, PG&E developed a table to outline key components of ISP—including ISP study triggers, research justification, sample size, and applicability—for different ISP study types. The group envisions use of this table as a blueprint for actual editing of the existing ISP guide.³⁵

The table has been updated through an iterative process but requires further discussion. The current version of the table (version 4) includes three types of ISP studies:

1. Measure sunset (for retiring existing deemed measures)
2. Market-based (for new measure entry)
3. Project-based (Custom or site-specific)

The table includes the following information for each study type:

³² ISPGuidance-PGEComments_20170106.pdf is available in the Task 5 folder at: <http://t2wg.cadmusweb.com/>.

³³ ISP-Issues-PGESummary-v2_20161222.pdf is available in the Task 5 folder at: <http://t2wg.cadmusweb.com/>.

³⁴ The working document “Task 5 Issues and Recommendations” is available at: <http://t2wg.cadmusweb.com/>

³⁵ Version 4 of ISP table in the Task 5 folder at: <http://t2wg.cadmusweb.com/>

- Research Justification
- Intent and applicability
- Interviewees
- Sample size
- Breadth and depth
- Requester
- Applicable segment
- Party performing due diligence
- Party to oversee, revise, and approve
- When to perform the study
- Effective date
- Metrics for judging ISP
- Qualifiers for becoming ISP

As stated above, the ISP table is still under review by stakeholders and likely requires additional revisions. During the last meeting, CPUC staff suggested that PAs should proactively set aside annual budget to support and systematically perform ISP studies. Selection of systematic ISP studies can be based upon proactive reviews of savings claims to date to target measures, equipment/systems, and activities on an annual (or semi-annual) basis.

Staff indicated that performing and managing ISP studies should be responsibilities for PAs as part of program/portfolio design and/or business plans. Staff also clarified that if PAs commit to this process, the ISP study outcomes from project-based effort may be apply prospectively.

One implementer proposed the elimination of custom or site-specific ISP studies from the ISP Guide and replacing it with the Standard Practice Baseline selection process. Since this is an ongoing conversation, and it is noncommittal since the group has not reached consensus in this regard.

Although this work has helped the group to resolve some of the underlying issues with the ISP process and develop solutions for issues tied to Task 1 and Task 6, PAs recommend continuing the incorporation of project development protocol (including Task 1) into the ISP study process to address existing gaps and to tackle project specific issues. At the same time, the T2WG participants require additional time to resolve all identified ISP issues and to create an action plan to revise the ISP guide based on that.

8.2 NEXT STEPS

Stakeholders will continue discussions to address outstanding issues, complete a final version of the ISP table, and complete a list of recommended updates and additions to the ISP Guidance Document.

Also, PG&E recommends adopting a statewide project development process to be incorporated into the ISP process, with additional clarifications provided in Task 1.

8.3 T2WG RECOMMENDATION

T2WG recommends that the Commission:

- Direct the T2WG to develop and deliver complete recommendations to the commission no later than **DATE**.
- Direct the T2WG to incorporate recommendations in an updated ISP Guidance Document no later than **DATE**.

T2WG also requests guidance or direction on the following proposed concepts related to ISP:

1. Prioritize proactive, market-based ISP studies and minimize reliance on project-based ISP
2. Prospective application of project-based ISP study results (to eliminate delays when a project based ISP study is triggered)

DRAFT

9 TASK 6 – CUSTOM STREAMLINING UPDATE

Task 6 was assigned to the T2WG with no specific deadline. Although the T2WG prioritized Tasks 1 through 4, the working group continued discussions and made progress on Task 6. This section provides an update on the Task 6 discussions to date and describes T2WG's recommended next steps.

9.1 T2WG DISCUSSION

Throughout the T2WG process, participants have identified multiple pain points and opportunities to improve the custom *ex ante* review process. Through multiple T2WG brainstorming sessions, existing documentation, and other communication, the T2WG compiled a document outlining the current custom EAR process; “issues” that need to be addressed to improve the custom process; and potential solutions to those issues.³⁶ The T2WG used this working document to discuss and prioritize issues and potential solutions. These discussions have helped generate and advance solutions for some issues, and some solutions are emerging with support from participating stakeholders groups.

Although participants require more time to further discuss and develop proposals, several solutions emerged as high-priority and high-value solutions for all or a majority of stakeholders. These include:

- Developing a statewide project development documentation template, including the necessary elements such as eligibility, influence, measure type, baseline, and M&V plans. (Stakeholders will need to develop definitions and criteria for these elements.)
- Establishing and committing to fixed timeframes for reviews (e.g., through a service level agreement) to increase transparency in review time and minimize delays
- Improving communication on projects, through early-reviews and project kick-off meetings for EAR of large projects, to catch issues early and minimize delays in information transfer
- Improving feedback on dispositions and performance to ensure custom program stakeholders understand and learn from EAR findings
- Improving information sharing across all stakeholders to maximize stakeholder access to EAR findings, facilitate stakeholder training, and reduce repeated issues.

9.1.1 Emerging Themes for Custom Streamlining

The T2WG discussions around custom process pain points generally fit into two themes:

- Improving usability (helping concerned stakeholders better perform *ex ante* review); and
- Improving transparency and communications (helping concerned stakeholders better understand roles and responsibilities in *ex ante* project review).

Each theme has been well documented in the past.³⁷ In future work, T2WG expects to use these themes as focus areas for categorizing pain points, prioritizing action plan efforts, and evaluating and mapping proposed solutions. This approach will yield a future work product containing proposals for Commission review that will address documented *ex ante* review challenges for custom projects.

³⁶ The working document “Task 6 Issues and Recommendations” is available at: <http://t2wg.cadmusweb.com/>

³⁷ D.15-10-028, p.94-102; D.16-08-019, p. 38.

9.1.2 Improving Usability

For this focus area, there are two key ideas currently under discussion:

- Standardizing materials, and
- Centralizing information

The first idea—**standardizing materials**—encapsulates an effort to create, where possible, consistent statewide custom project materials for development through review phases. T2WG participants have identified such standardization as a key way to improve the experience of *ex ante* review for all stakeholders, including the customer, implementer, technical reviewer, and other IOU staff. Example items that may benefit from standardization include:

- project development templates,
- savings calculation guidelines,
- technical review forms, and
- project feasibility reports.

This standardization effort also has the potential to improve quality by adopting what is already working across different PAs, while helping to streamline the *ex ante* review effort. An indirect byproduct of such standardization may include contributions towards meeting timeline commitments made under a service level agreement (SLA) while reducing overall timelines for the custom process.

The second idea—**centralizing information**—is a well-documented challenge,³⁸ but one that T2WG has identified as existing beyond the need for collecting disposition guidance. Due to the complexity and uniqueness of the California custom *ex ante* review process and the frequency of changes, active and new stakeholders need a resource such as an online landing page for understanding historical policy on the custom process, subsequent technical guidance issued based on project-type reviews, approved engineering calculation and tools, and other elements that enable a comprehensive understanding of the custom program policy rules and processes.

The success of a comprehensive resource for accessing *ex ante* review information lies in developing its subcomponents in a manner where the organization and searchability of the information is prioritized. This will likely mean that sources of information such as dispositions are redesigned or modified in format to support public access and searchability where needed. If done right, a comprehensive *ex ante* review resource will serve as a critical component to improving usability.

9.1.3 Improving Transparency

For this focus area, there are two key ideas under discussion:

- Increased high-value collaboration and communication, and
- SLAs for the *ex ante* review process.

As part of the first idea—**communication and collaboration**—T2WG participants have developed several ideas and continue to discuss ways to collaborate and communicate better to help streamline the custom process. These ideas include:

³⁸ D.11-07-030, Attachment B, p. B10; D.15-10-028, p. 97-98.

- Opportunities for Implementers to seek early input from PAs and or EAR team on projects,
- Kick-off meetings for large projects selected for *ex ante* review to share key information about the project and project materials,
- EAR team posting of questions to CMPA before holding meetings on projects to make conference calls with PAs and implementers more productive and efficient, and
- Improving feedback, including positive feedback, from CPUC to project developers to ensure project developers understand critical CPUC findings and how to improve future projects.

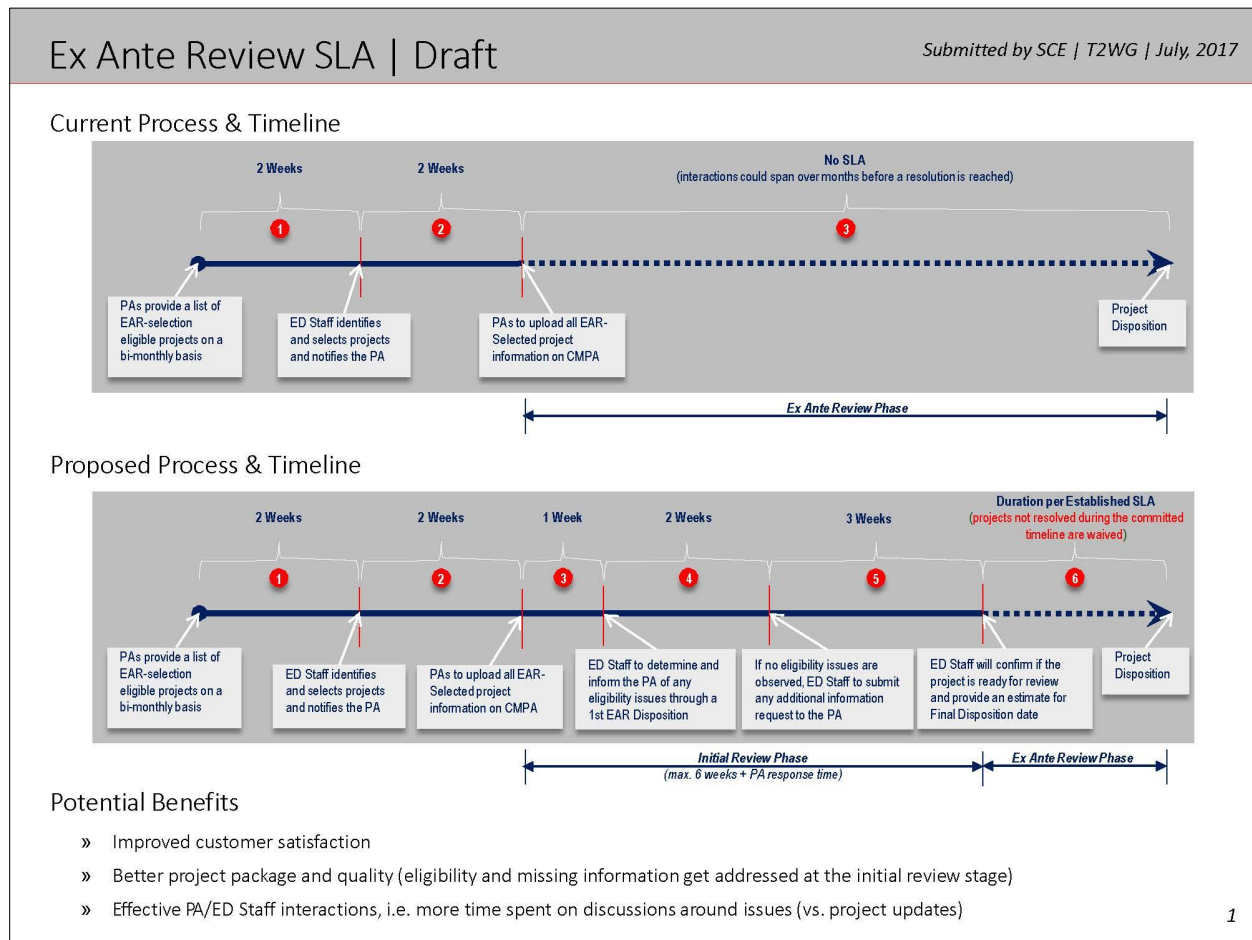
Current focus is on developing targeted mechanisms for project collaboration that might help improve overall quality without burdening any party excessively with high-volume, low-benefit activity. Examples include structured early collaboration meetings on high-impact projects, and improving information - sharing among all stakeholders on *ex ante* review dispositions and lessons learned. Once identified and successfully developed, additional high-value collaboration is envisioned to help with transparency plus overall *ex ante* project quality and timing.

For the second idea—**SLAs for EAR**--stakeholders have proposed an SLA model of establishing the duration for various steps in the custom process. An example model tied to steps in the custom review process is provided in Figure 1 below (for illustrative purposes only). Appendix D Example Proposals for Task 6 (page 89) provides additional draft proposals for the SLA solution.

T2WG participants are continuing to discuss acceptable timeframes for various steps in the custom *ex ante* review process as well as expectations for advancing a project after a lapse in schedule.

A finalized SLA among parties is at present thought to be a critical component of establishing greater transparency in the *ex ante* review process, allowing implementers, PAs, and the CPUC to manage expectations with each other and their customers. Equally important, an SLA model has the potential to improve timing for reviews and track performance of various parties against agreed-upon timelines.

Figure 1. DRAFT Proposal for Service Level Agreement (SCE, July 2017)



9.1.4 Dispute Resolution

Participants recognized a need for a dispute resolution process for instances where parties cannot come to agreement on the disposition for a project. CEDMC provided a draft proposal for a “Special Review Request” for such a process. See Appendix D Example Proposals for Task 6 for the draft proposal for this “Special Review Request.”

Participants expect to continue developing this proposal and to develop a formal recommendation in the future.

9.2 NEXT STEPS

T2WG participants require additional time to complete their review of the long list of issues and proposals developed to date, identify where consensus exists for proposals, develop an appropriate shortlist of priority proposals from the current long list, and design an action plan to implement solutions to streamline the custom review process.

T2WG participants have developed a spreadsheet to characterize and organize the many proposals generated to streamline the custom process. Participants will use this spreadsheet workbook to identify

level of agreement and priority for each proposal, determine assignments for proposal development, and timeframes for implementation.

T2WG proposes a specific extension from the Commission for completion of Task 6.

Proposal 6-1, Custom Streamlining



The T2WG recommends the Resolution include an Ordering Paragraph as follows: “We order the Track 2 Working Group to continue the work underway to address streamlining of *ex ante* review processes, delivering its recommendations to the Commission no later than April 2, 2018. These recommendations will be vetted through a public process, and the final document will be posted to a publicly available website.”

9.3 T2WG RECOMMENDATION

The above documentation of T2WG Task 6 work to date is intended to represent the robust discussion and ideas development but is neither a comprehensive list of ideas under discussion nor a representation of final proposals. Participating stakeholders remain committed to advancing custom process improvements over a timeframe that extends through the first quarter of 2018, with various improvements envisioned to be implemented where possible prior to that date. The desire is to continue working, producing a work product due on or before April 2, 2018, that would be subject to Commission review and adoption in resolution form where needed.³⁹

T2WG recommends that the Commission:

- Adopt Proposal 6-1, Custom Streamlining on page 70 to direct the T2WG to develop and deliver complete recommendations to the commission no later than April 2, 2018.

Also, the T2WG requests guidance or direction on the following proposed *concepts* as potential solutions to streamlining the custom review process:

1. Develop statewide materials to improve consistency and usability,
2. Centralize information using shared databases, scheduled stakeholder meetings, or other means to help disseminate and archive critical information to share with all relevant stakeholders.
3. Early-review and EAR kick-off meetings with relevant parties to improve and quicken communication during EAR,
4. Service Level Agreements (see section 9.1.3, Improving Transparency on page 67), and

A Dispute Resolution process (see section 9.1.4, Dispute Resolution on page 69).

³⁹ T2WG stakeholders acknowledge that, depending on final proposals for custom *ex ante* improvement ideas, there may be instances where Commission review is not required (D. 16-08-019, p. 41). The future final work product would report out and document these types of improvements in brief, but focus only on proposals requiring Commission review and approval.

10 OTHER T2WG COMMENTS

This section provides additional Stakeholder comments and recommendations that are not explicitly related to one of the assigned tasks.

- **Stakeholders stressed the need to balance restrictive policies and rigorous review to mitigate ratepayer risk with the ensuing administrative costs and customer disengagement.** An implementer noted that “it’s challenging to overcome the strong forces at hand that support restrictive and overly protective policies” and requests that, for each task, the Commission consider how it balances ratepayer risk vs customer disengagement and how these proposed policies supports SB350.” The implemented noted, “If the policy disengages a majority of the customers,” then we minimized may have successfully mitigated ratepayer risk, but also “harmed the environment (through missed energy savings projects).”
- **Stakeholders, including CPUC staff, expressed concern that the policy has become too complex.** Any newcomer to the programs—especially a customer—has a steep learning curve to understand eligibility rules and other policies. The complexity also adds administrative costs and opens the programs to inconsistencies and potential for error. T2WG requests the Commission prioritize a simplification of policies.
- **Stakeholders are concerned that the policy remains too vague in some cases or not objective enough.** The policy should be clear and objective and not subject to potential mis-interpretation or inconsistent application.
- **Stakeholders requested more feedback, especially positive feedback, to guide improvements in project development.** Through Task 6 discussions on issues hindering the custom review process, stakeholders frequently noted a disconnect between what their understanding of the program policies and EAR team expectations. Stakeholders acknowledged that this can be fixed, in part, though better feedback. Several of the potential solutions identified in Task 6 discussions address the issue of feedback. T2WG has among its potential solutions several ideas that improve and share relevant feedback (or findings from dispositions). T2WG requests the Commission support the effort to increase communication with and feedback from the EAR review team and to direct the EAR team provide positive feedback and examples, where possible, of measures, projects, materials that meet EAR team expectations.
- **Stakeholders frequently commented that the current process is not conducive for the state to reach its 2030 efficiency goals.** Stakeholders lamented that there seems to be a disconnect between the statewide policy goals—which ask for a doubling of energy efficiency statewide—and the “boots-on-the-ground” implementation of energy efficiency programs—which seems to make the acquisition of energy efficiency savings more and more difficult.
- **Stakeholders stressed the need to expedite reviews.** The review process can significantly slow the project development process, and both program administrators and implementers noted that the delays in the review process can cause some projects to get lost. This issue is the basis for the prioritization of Task 6 solutions like the “Service Level Agreement” proposal that establishes fixed timeframes and accountability to improve transparency in review schedules and ensure reviews do not delay project development.

- **Stakeholders frequently stressed the need for prospective review; specially for EAR findings to be implemented prospectively rather than retrospectively to the selected project and other concurrent projects.**
- Some stakeholders felt that the Commission staff and consultants were not flexible on some topics. However, stakeholders also expressed appreciation for the EAR teams' active participation in the T2WG and for their sharing, throughout the process, of the EAR team principles and perspectives.

DRAFT

APPENDIX A. T2WG PARTICIPATION

The table below shows the participation records for T2WG in-person meetings.

Full Name	Organization	Stakeholder Group	Meeting 1 Apr-11	Meeting 2 Apr-26	Meeting 3 May-10	Meeting 4 May-24	Meeting 5 June-6	Meeting 6 Jul-10	Meeting 7 Jul-24	Meeting 8 Aug-16
Ahmad Ganji	BASE Energy	Implementer		X			X (phone)			
Alfredo Gutierrez	SoCalREN/ICF	Program Administrator	X	X	X	X	X	X	X	
Alice Beltran	SoCalGas	IOU		X	X	X	X	X	X	X
Alok Singh	SCE	IOU	X	X	X	X	X	X	X	X
Andrew Meiman	ARC Alternatives	Implementer	X (phone)							
Ann McCormick	Newcomb Anderson McCormick	Implementer	X							
Anuj Desai	SCE	IOU	X	X	X	X	X	X	X	X
Arlis Reynolds	T2WG Team (Cadmus)	T2WG Facilitation Team	X	X	X	X	X	X	X	X
Athena Besa	SDG&E	IOU		X		X	X	X	X	
Ben Lipscomb	National Comfort Institute	Implementer			X (phone)	X (phone)	X (phone)			
Bhaskar Vempati	CLEAResult	Implementer		X	X	X (phone)			X	
Brian Maloney	SCE	IOU		X	X			X	X (phone)	
Brian McAuley	Itron	Ex post Reviewer	X (phone)							
Briana Rogers	AESC	Implementer	X	X (phone)	X					
Bryan Pena	CPUC	CPUC Staff	X	X (phone)	X	X (phone)	X		X	
Bryan Warren	SoCalGas	IOU	X (phone)	X (phone)	X	X (phone)			X (phone)	
Caroline Chen	StatWizards	Other			X (phone)					
Cassie Cuaresma	SCE	IOU								X
Christina Torok	CPUC	CPUC Staff		X	X (phone)	X (phone)				
Cody Coeckelenbergh	Lincus Energy	Implementer	X		X		X	X		
David Reynolds	ERS	Other	X (phone)	X (phone)						
Elizabeth Baires	SoCalGas	IOU	X	X						
Elsia Galawish	Galawish Consulting Associates	Implementer		X (phone)		X (phone)				
Halley Fitzpatrick	PG&E	IOU	X	X	X (phone)					
Hob Issa	Lincus Energy	Implementer					X (phone)			
James Liu	PG&E	IOU		X (phone)						
Joshua Williams	SDG&E	IOU								X

Full Name	Organization	Stakeholder Group	Meeting 1 Apr-11	Meeting 2 Apr-26	Meeting 3 May-10	Meeting 4 May-24	Meeting 5 June-6	Meeting 6 Jul-10	Meeting 7 Jul-24	Meeting 8 Aug-16
Jay Bhakta	SCE	IOU						X		
Jeff Barnes	SEMPRA	IOU					X (phone)			
Jeff Guild	Enovity	Implementer		X						
Jeff Hirsch	CPUC Contractor	CPUC Staff	X	X	X	X	X		X	X
Jeffrey Seto	AESC	Implementer		X (phone)						
George Tagnipes	CPUC	CPUC Staff				X (phone)	X (phone)			
Jesse Monn	Cascade Energy	Implementer	X	X	X		X (phone)			
Jim Hanna	Energy Solution	Implementer	X (phone)	X (phone)	X (phone)	X (phone)	X (phone)		X (phone)	X (phone)
Jim McMahon	(unknown)	(unknown)			X (phone)					
Jerry Meek	Genentech	(unknown)						X		
Jonathan Lien	SCE	IOU		X (phone)		X (phone)				
Jonathon Stage	Newcomb Anderson McCormick	Implementer	X (phone)							
Josiah Adams	Ecology Action	Implementer	X	X	X	X				
Justin Westmoreland	(unknown)	Implementer		X	X (phone)					
Karen Mills	(unknown)	(unknown)	X (phone)			X (phone)				
Katherine Hardy	CPUC	CPUC Staff	X	X	X	X	X	X	X	
Kathryn F. Kriozere	Small Business Utility Advocates	Other					X (phone)			
Katie Abrams	MCE	Program Administrator	X (phone)	X (phone)						
Katie Wu	CPUC	CPUC Staff	X	X						
Katy Morsony	Energy Producers & Users Coalition	Other		X						
Keith Rothenberg	CPUC Contractor	CPUC Staff	X	X	X	X	X	X	X	X
Kevin Wood	SCE	IOU	X				X		X	X
King Lee	CLEAResult	Implementer	X	X (phone)	X (phone)	X (phone)				
Kris Bradley	Itron	Ex post reviewer		X					X (phone)	
Laura Cummins	CLEAResult	Implementer				X	X	X		
Leonel Campoy	Itron	CPUC Staff	X	X	X	X	X (phone)			
Lisa Mau	SCE	IOU		X (phone)						
Mark Nelson	SCE	IOU	X							
Mark Reyna	SoCal Gas	IOU	X	X	X	X	X		X	
Melanie Gillette	CEEIC	Implementer	X		X	X (phone)	X	X		X
Michael Daukoru	AEG	Implementer							X (phone)	
Michelle Vigen	(unknown)	(unknown)			X (phone)					
Milena Usabiaga	Nexant	Implementer	X (phone)	X (phone)		X (phone)	X (phone)	X		

Full Name	Organization	Stakeholder Group	Meeting 1 Apr-11	Meeting 2 Apr-26	Meeting 3 May-10	Meeting 4 May-24	Meeting 5 June-6	Meeting 6 Jul-10	Meeting 7 Jul-24	Meeting 8 Aug-16
Mohit Chhabra	NRDC	Other	X	X			X (phone)			
Mushtaq Ahmed	Nexant	Implementer	X	X	X					
Napallo Gomez	PG&E	IOU						X		
Nick Brod	CLEAResult	Implementer	X	X	X	X (phone)				X (phone)
Nikhil Gandhi	CPUC Contractor	CPUC Staff								
Paden Cast	SoCal Gas	IOU	X		X	X	X		X	X
Patsy Dugger	CBI	Implementer	X (phone)							
Peter Lai	CPUC	CPUC Staff	X	X	X	X	X		X	X
Phil Toth	SCE	IOU	X							
Rafael Friedmann	PG&E	IOU		X		X (phone)				
Reggie Wilkins	SCE	IOU	X	X (phone)	X	X (phone)	X (phone)			X
Rich Sperberg	Onsite Energy	Implementer	X	X	X	X	X	X	X (phone)	X
Rick Diamond	T2WG Team (LBL)	T2WG Facilitation	X	X	X	X	X	X	X	X
Ricson Chude	SCE	IOU				X (phone)	X			
Robert Guajardo	SCE	IOU	X	X	X					
Rod Houdyshel	SDG&E	IOU	X	X	X	X	X	X	X	X
Ronald Mohr	County of Los Angeles	Implementer	X	X (phone)						
Ryan Chan	PG&E	IOU	X	X	X	X	X	X	X	X
Ryan Cho	SCE	IOU								X
Sabarish Vinod	Lincus Energy	Implementer		X	X					
Sasha Cole	CPUC ORA	ORA	X	X	X (phone)	X	X			
Scott Mitchell	SCE	IOU	X	X			X			
Sepideh Shahinfard	T2WG Team (Cadmus)	T2WG Facilitation	X		X	X	X	X	X	X
Shahab Azizi	Lincus Energy	Implementer		X (phone)						
Shanna Dee	SDG&E	IOU						X	X	X
Shawn Fife	SoCal Gas	IOU		X	X	X	X	X	X	X
Siva Sethuraman	Cascade Energy	Implementer							X	
Spencer Lipp	Lockheed Martin	Implementer	X	X	X	X	X	X	X	X
Steven Long	Lockheed Martin	Implementer			X	X (phone)				
Szilvia Doczi	Arup	Implementer					X			X
Tim Xu	PG&E	IOU	X (phone)	X	X (phone)	X (phone)	X (phone)		X (phone)	X
Yang Hu	CBI	Implementer		X (phone)						

APPENDIX B. T2WG MATERIALS

#	Name	Org	Date Submitted	Description	Task
1	Jeff Hirsch	CPUC Staff and Consultants	8/25/2017	Example “pre-qualification” survey provided to SCE in 2016 for use in their early retirement program screening process.	2
2	Mark Reyna	SoCalGas	8/25/2017	Proposals for EAR SLA	6
3	Mark Reyna	SoCalGas	8/25/2017	Proposal for Task 2 POE Approach	2
4	Mark Reyna	SoCalGas	8/25/2017	Proposal for Task 3 Definition and Evidentiary Criteria	3
5	Anuj Desai	SCE	8/23/2017	EAR Improvements List	6
6	Ryan Chan	PG&E	8/21/2017	Notes on Task 1, Detailed responses to T2WG stakeholder comments	1
7	Tim Xu	PG&E	8/15/2017	ISP Table	5
8	Tim Xu	PG&E	8/15/2017	Task 6 Project Template and Streamlining	6
9	Anuj Desai	SCE	8/15/2017	Potential Joint T2WG Custom Improvements Proposal	6
10	Ryan Chan	PG&E	8/14/2017	Task 2 - Comments and Replies	2
11	Ryan Chan	PG&E	8/14/2017	Task 2 - POE Tier Sample Language	2
12	Tim Xu	PG&E	7/19/2017	Task 6 Definitions	6
13	Tim Xu	PG&E	7/19/2017	Task 6 Template v1	6
14	Ryan Chan	PG&E	7/18/2017	PG&E Customized Rulebook v1.3	6
15	Rich Sperberg	OnSite Energy	7/9/2017	Task 6 Input - Implementer Issues/Proposed Solutions	6
16	Alok Singh	SCE	7/6/2017	SCE DRAFT Proposal for EAR SLA	6
17	Tim Xu	PG&E	7/6/2017	ISP Study Request Form	5
18	Tim Xu	PG&E	6/30/2017	PG&E Recommendations for T2WG Task 5 and 6	5, 6
19	Peter Lai	CPUC Staff and Consultants	6/27/2017	CPUC Letter granting T2WG Extension	All
20	Tim Xu	PG&E	6/19/2017	T2WG Task 5 ISP Presentation	5
21	Tim Xu	PG&E	6/16/2017	PG&E PD Protocol V3 - commented for T2WG	6
22	Paden Cast	SoCalGas	6/14/2017	SoCalGas Proposal for Task 3	3
23	Peter Lai	CPUC Staff and Consultants	6/5/2017	CPUC Meeting Presentation - Ex Ante Review	All
24	Rod Houdyshel	SDG&E	6/5/2017	SDG&E Custom Process Flowchart	6
25	Alok Singh	SCE	6/2/2017	SCE Custom Process Flowchart	6
26	Anuj Desai	SCE	6/1/2017	Sample Market ISP Study Template	5
27	Anuj Desai	SCE	6/1/2017	Sample ISP Study Cover Page	5
28	Jeff Hirsch	CPUC Staff and Consultants	5/24/2017	CPUC Meeting Presentation	All
29	Jeff Hirsch	CPUC Staff and Consultants	5/24/2017	Resolution E-4818 - Use of a Degraded Equipment Performance Baseline	3

#	Name	Org	Date Submitted	Description	Task
30	Peter Lai	CPUC Staff and Consultants	5/23/2017	SCG Custom Process Flowchart	6
31	Peter Lai	CPUC Staff and Consultants	5/23/2017	PG&E Custom Process Flowchart	6
32	Peter Lai	CPUC Staff and Consultants	5/23/2017	Clarification on Direction Provided in Resolution E-4818	All
33	Leonel Campoy	Other	5/23/2017	Measure Type Baseline Flowchart	All
34	Tim Xu	PG&E	5/22/2017	T2WG Task 5 ISP Presentation	5
35	Jeff Hirsch	CPUC Staff and Consultants	5/22/2017	Clarification on Direction Provided in Resolution E-4818	All
36	Anuj Desai	SCE	5/18/2017	SCE 2017 Project Completion Certificate	2
37	Tim Xu	PG&E	5/16/2017	PD Protocol v3	6
38	Spencer Lipp	Lockheed Martin	5/16/2017	DRAFT POE Questionnaire v1.0	2
39	Brian Maloney	SCE	5/10/2017	Sketch of Flow Chart	All
40	Jeff Hirsch	CPUC Staff and Consultants	5/9/2017	IOU and Custom Program Data	All
41	Mushtaq Ahmad	Nexant	5/8/2017	DRAFT Small Business Definition	4
42	Brian Maloney	SCE	5/8/2017	Resolution E-4818 Flow Chart	All
43	Sabarish Vinod	Lincus Energy	5/3/2017	D1107030 Appendix B Flowchart Update	All
44	Peter Lai	CPUC Staff and Consultants	5/1/2017	CPUC Custom Process Flowchart	6
45	Jeff Hirsch	CPUC Staff and Consultants	5/1/2017	D1107030 Appendix B Flowchart	All
46	Jeff Hirsch	CPUC Staff and Consultants	4/25/2017	Custom Project Count by Incentive Size	All
47	Mushtaq Ahmad	Nexant	4/25/2017	DRAFT Small Business Definition	4
48	Jeff Hirsch	CPUC Staff and Consultants	4/24/2017	Summary of Baseline Selection and POE Guidance from E-4818	All
49	Rich Sperberg	OnSite Energy	4/24/2017	Repair-Eligible Repair-Indefinitely Proposal	3
50	Jeff Hirsch	CPUC Staff and Consultants	4/24/2017	CPUC Meeting Presentation	All
51	Tim Xu	PG&E	4/24/2017	PG&E Data for CPUC T2WG	All
52	Tim Xu	PG&E	4/24/2017	ISP Guidebook v12 - High level comments	5
53	Ryan Chan	PG&E	4/21/2017	PG&E Custom Work Flow	6
54	Josiah Adams	Ecology Action	4/21/2017	Proposal for Tiered POE	2
55	Halley Fitzpatrick	PG&E	4/19/2017	Proposal for Task 1 Standard Practice Baseline	1
56	Jeff Hirsch	CPUC Staff and Consultants	4/18/2017	D1107030 Attachment B, Appendix 1	All

APPENDIX C. STANDARD PRACTICE BASELINE ITERATION HISTORY

This section shows a redline version of the Standard Practice Baseline document and summarizes revision history of the document section by section, based on T2WG discussions and comments.

Section 1: Background

"The Standard Practice Baseline is synonymous with a "code" baseline and is generally [1] used as the single baseline for Normal Replacement ~~(including, Replace on Burnout, New Load and New Construction)~~ measures as well as the second baseline [2] for Accelerated Replacement (AR) ~~measures as well as the second baseline for Accelerated Replacement measures.~~ This document only details the baseline selection process; it does not discuss measure eligibility or the review and verification of the selected baseline."

[1] *"For example, the baseline used for energy efficiency savings reporting and incentives shall not regress to a lower efficiency than the existing equipment"*

[2]: *"The second baseline applies to the time period from the end of the remaining useful life (RUL) of replaced equipment to the effective useful life (EUL) of the measure"*

10.1.1.1.1 Discussion Summary

Staff stated that when establishing a baseline, the following should be considered:

- Baselines cannot be regressive or have lower efficiency than existing equipment. The consideration here should be the existing equipment's rated efficiency, not degraded performance.
- Projects proposing "like-for-like" replacement of existing equipment are not authorized.

In response to the comment, an endnote (endnote 1) was added to the Background section indicating that "the baseline used for energy efficiency savings reporting and incentives shall not regress to a lower efficiency than the existing equipment." Also, a clarifying statement was added to the Background section to indicate that this document explains the step-by-step baseline selection process and does not discuss eligibility issues or the review and verification of the selected baseline.

[outstanding comment] One stakeholder disagreed with inclusion of "*the review and verification of the selected baseline*" in the clarifying statement and stated that there is no need to discuss review and verification of selected baseline, since It's already part of the process. Suggested the removal of this part of the text.

Section 2: Definition

"The Standard Practice Baseline is an estimate of the activity or installation that ~~what~~ would take place absent the energy efficiency program, as required by code, regulation, or law, or as expected to occur as standard practice.

The Standard Practice Baseline activity or installation must meet the anticipated functional, technical, and economic needs of the customer, building, or process and provide ~~while providing~~ a comparable level of service as comparable to the EEfficient measure. Savings claims shall be generated based ~~(reference decision on~~ equipment choices that operate at a comparable level of service as the EE measure. If there is

not a viable and comparable baseline solution that offers a comparable level of service as the EE measure, the energy use of the baseline solution must be normalized to provide a comparable level of service as the EE measure. reach codes”

10.1.1.1.2 Discussion Summary

On the use of terms “Anticipated Functional, Technical, and Economic Needs” and “Comparable Level of Service”

Stakeholders stated that any proposed baseline must be commonly available in the marketplace and meet the anticipated technical, functional, and economic needs of the customer. In response to the comment, the phrase “anticipated functional, technical, and economic needs” was incorporated into the definition of the Standard Practice Baseline.

One stakeholder stated that comparable level of service should be defined for industrial processes. In response to the comment, the following statement was added to the Definition section:

“Comparable level of service includes production increases that can be met with existing equipment/systems that will be replaced with more efficient equipment/systems.”

This statement was later revised and combined with the preceding statement to the following based on the language in version 5 of EE Policy Manual:

“The Standard Practice Baseline activity or installation must meet the anticipated functional and economic needs of the customer, building, or process while maintaining a comparable level of service as perceived by the customer”

Later during the process, additional comments were received on the revised statement above indicating that customer perception cannot override specifications for equipment capable of producing at X rate per hour with Y product characteristics. An example is computing and networking equipment that has basic specifications. How can customer perception that X terra flop operation of standard baseline equipment is comparable to Y terra flops operation of the installed equipment constitute equivalent functional needs? Also, the words “anticipated” and “maintaining” do not go together in a single sentence. When standard practice baseline represents a future state of operation, the original text worked better: “providing a level of service comparable to the selected energy-efficient option.” In response to these comments, the “comparable level of service” statement was revised to the following:

*“The Standard Practice Baseline activity or installation must meet the anticipated functional, technical, and economic needs of the customer, building, or process and **provide** a comparable level of service **as the EE measure**”* with the addition of an endnote to address the cases when standard practice baseline represents a future state of operation:

Endnote: *“Savings claims shall be generated based on equipment choices that operate at a comparable level of service as the EE measure. If the EE measure provides **an enhanced level of service** (e.g., a new load project that allows for increased production), savings must be normalized to comparable levels of service.”*

Other stakeholders commented that the added endnote was not completely accurate with the following argument: the first sentence says that the baseline must provide comparable levels of service. If that’s

the case, as it should be, then normalization for “an enhanced level of service” should not normally be needed. They suggested the following language:

“Savings claims shall be generated based on equipment choices that operate at a comparable level of service as the EE measure. If the market does not support a viable and comparable baseline solution and the EE measure provides a different level of service compared to the selected baseline, savings must be normalized to comparable levels of service.” In response to this comment, the author added this sentence to the Definition section:

“If there is not a viable and comparable baseline solution that offers a comparable level of service as the EE measure, the energy use of the baseline solution must be normalized to provide a comparable level of service as the EE measure.”

[Outstanding Comment 1] One stakeholder stated that the current criteria consider functional, technical, and economic needs of the customer, building, or process. It is not clear if this covers an ISP that could consist of a non-policy allowed option (e.g., that does not meet three-prong test if fuel switching is an option). Perhaps this should be clarified to include “...that meets CPUC Policy requirements.”

10.1.1.1.3 On the use of the word “Economic”

Other stakeholders asked to clarify “economic needs of the customer, building, and process,” stating that the term economic is not specific enough. The implementation of an energy efficiency project is economic and the intent is not to prevent energy efficiency projects from being considered and implemented with incentives. In response to this comment, Endnote 3 was added to the document.

PG&E argued that the phrase “economic needs” does not necessarily mean “the most economical option.” The Standard Practice Baseline must be an option that the customer considers economically reasonable. The baseline is supposed to represent what would happen in absence of the program.

Energy costs must be taken into consideration when assessing the customer’s feasible options. If an option is functionally and technically feasible, but the energy costs are so high that the customer would never consider it, then that option should not be used as the Standard Practice Baseline. If an option has higher energy costs than an alternative but is still considered reasonable by the customer (e.g., due to familiarity with incumbent technologies), that option may be considered for the Standard Practice Baseline.

Section 3: Selection Process

“The following describes the process that a project developer must step through to determine the Standard Practice Baseline for a given measure. While the project developer must substantiate each step of this process, the PA and/or CPUC may corroborate any baseline selected through this process. Project developers are encouraged to collaborate with the PA on this selection process for larger projects.”

Section 4: Selection Process – Step 1

“Consider ~~and apply~~ any applicable ~~and current~~ CPUC published Standard Practice ~~documents~~ ~~baseline assumptions~~ relevant to the anticipated functional, ~~technical, and economic~~ needs of the customer, building, or process. Such ~~The two current sources are CPUC-approved ISP guidance documents, which may include ISP study reports, or~~ DEER baseline values, ~~or CPUC-issued memoranda or dispositions, will~~

be publically available on a single website with a date of issuance and effective dates.[3] If applicable baseline information within these documents assumption is found, apply it and stop here. If applicable information is not found, review and follow the ISP Guidance Document. When appropriate, proceed to use that as the baseline. STOP. Step 2.

[3]: [For example, the CPUC Ex Ante Review Custom Process Guidance Documents page at: http://www.cpuc.ca.gov/General.aspx?id=4133](http://www.cpuc.ca.gov/General.aspx?id=4133)

10.1.1.1.4 Discussion Summary

10.1.1.1.5 Ongoing or Directed ISP Studies

Stakeholders stated that in the case where there is an ongoing or directed ISP study related to the proposed project, it should be determined whether a low or high rigor Standard Practice study is required by guidance, is underway, or has been directed by either the PA or CPUC staff. If such a requirement exists, the study result determines the baseline for this project and all similar future projects 60 days after the date of the ISP or the direction to perform the study, whichever is sooner. In response to this comment, the phrase “CPUC-issued memoranda” was added to include the possibility of ongoing or directed ISP relevant to the project.

Other stakeholders stated that the document does not clearly address when it makes sense to hold the project under *ex ante* review for an ISP study to be completed and when it makes sense to move to Step 2 of the Standard Practice Baseline selection process. In response to this comment, the following statements were added to Step 1:

“If applicable baseline information within these documents is found, apply it and stop here. If applicable information is not found, review and follow the ISP Guidance Document. When appropriate, proceed to Step 2”.

[Outstanding Comment 2] Later during the process, other stakeholders raised the same issue stating that Step 1 and the term “when appropriate, proceed to Step 2” don’t adequately define when it makes sense to hold a project for ISP determination. The document needs to explicitly state if an ISP study is underway or needed. They recommend the following revised text:

“If a pre-established, published baseline is NOT identified, if an ISP study is NOT already underway, and the need for and ISP study has NOT been identified (following review and procedures outline in the ISP Guidance Document), then proceed to Step 2. Otherwise, the project must either apply the already established baseline guidance or await the result of the pending ISP study.”

[Outstanding Comment 3] Other stakeholders disagreed and stated that the current language allows for pausing until a market-based study is completed. Ongoing or directed ISP studies should be applicable to future projects and should not hold up projects in-flight. They suggested the removal of endnote 6 and the following revised text for proceeding to Step 2:

“If applicable baseline information is not found, proceed to Step 2. [Need transition period language]”

[Outstanding Comment 4] The use of “CPUC-issued memoranda or dispositions,” which are typically not vetted full rigor studies, has generated timing and interpretation issues in the past, as they are done inconsistently with the other guidance used to establish ISP studies. This not only creates inconsistency

in ISP determination from project to project, but it also creates a goal inconsistency because the potential studies do not discount this informal level of rigor. CPUC memoranda and dispositions should reflect adherence to the guidelines and published studies, but should not be used alone to introduce “ad hoc” ISP studies. Ideally, the goal setting process should be aligned with the outcome of this process to remove that inconsistency as well.

[Outstanding Comment 5] Suggest changing the phrase “ISP Study Reports” in “ISP study reports, DEER baseline values, or CPUC-issued memoranda or dispositions” to “ISP Determination” since we need objective determinations, not studies. Studies provide basis for determinations.

10.1.1.1.6 Designated Website

Stakeholders requested that any directed or ongoing ISP activity be in writing and publicly available, so that the project developers have a repository to verify whether an IS study related to their project exist. In response to this comment the following language was added to Step 1:

“Such documents, which may include ISP study reports, DEER baseline values, or CPUC-issued memoranda or dispositions, will be publicly available on a single website with a date of issuance and effective dates.” Endnote 5 was added suggesting the use of the CPUC *Ex Ante* Review Custom Process Guidance Documents page as a repository of all published ISP studies.

PG&E explained that the project developers must review a designated website to see if any ISP guidance is available that might guide the project. If guidance is found, the developer follows the guidance and stops. The developer does not proceed to Steps 2 or 3 and does not identify any options associated with the customer’s decision-making process.

The author expects guidance on this website to include all the following:

- Market-based ISP study reports where a standard practice is determined
- CPUC dispositions determining a technology in a certain application to be standard practice
- CPUC memos notifying parties that a market-based ISP study is underway, and that related projects may not be approved until completion of said ISP study
- CPUC memos notifying parties that a market-based ISP study is underway, and that related projects may continue until completion of said ISP study

It is expected that CPUC staff has full authority to author and post any document to this site.

The group recommended that each document appearing on this site have the following information associated with it:

- A definitive effective date (for example: June 30, 2017; not “60 days upon completion”)
- The date the document was uploaded
- The date a document is no longer effective (if applicable)

The author provided an illustrative example of how this recommendation should be implemented (note that dates are illustrative only):

- Uploaded April 1: CPUC memo A is posted, notifying parties that a market-based ISP study for X measure in both Y and Z types of buildings is underway. Projects involving X measure may not be approved after June 1 until completion of this study.
 - Projects involving this measure may be approved up until June 1, but are on hold indefinitely after June 1.
- Uploaded September 1: Completed market-based ISP study is complete, determining that X measure is ISP in Y buildings, but is not ISP in Z buildings. Projects involving X measure in Y buildings may not be approved after November 1.
- Updated September 1: Memo A is amended to no longer be effective as of September 1.

The author envisioned that having these dates would facilitate accurate and repeatable implementation of ISP guidance and suggested the group design a process that ensures timely upload of these files.

Section 5: Selection Process – Step 2

~~“Identify the options presented by the project developer, or that Determine at least one viable option the customer considers functionally, technically, and economically feasible to implement, including any known options that are presently and commonly implemented. Options must comply has to meet the anticipated functional needs of the customer, building, or process while complying with all codes, standards, and or other requirements, with consideration for:~~

~~A. Applicable minimum building energy efficiency requirements, e.g., A. Any applicable federal, state, and local regulations or requirements that are relevant to the baseline activity / installation, and~~

~~B. Minimum requirements of California Building Energy Efficiency Standards (Title 24 – Part 6) or ASHRAE Standard 90.1 applicable to the baseline installation / activity, and~~

~~B. Other applicable federal, state, and local regulations or requirements, excluding reach codes, e.g., Title 20, CARB Regulations, Federal Appliance Standards, and~~

~~C. Providing a comparable an equivalent level of service as the EE measure for the EUL of the EE measure.~~

~~Functional, technical, and economic feasibility is perceived and defined by the customer, but should take into account the need for performance and reliability, as well as any relevant operational, maintenance, and energy costs. The customer must consider any options considered under this step as reasonable to implement.~~

10.1.1.1.7 Discussion Summary

10.1.1.1.8 Viable Options

One stakeholder stated that it seemed inappropriate to say that a single option can be identified irrespective of the actual available viable options. The suggested alternative language was to “Identify the common currently being installed viable options available to meet the anticipated technical, functional, and economic needs of the customer, building, or process while complying with all codes, standards, or other requirements or constraints of the customer’s project.” In response to this comment, the starting statement of Step 2 was changed from “Determine at least one viable option the customer must meet the anticipated functional needs of ...” to “Identify the options presented by the

project developer, or that the customer considers functionally, technically, and economically feasible to implement, including any known options that are presently and commonly implemented.”

10.1.1.1.9 Performance and Reliability

Regarding Option C, stakeholders commented that the equivalent level of service should include performance and reliability. In response to this comment, the following statement was added to Option C:

*“Functional, technical, and economic feasibility is perceived and defined by the customer, but should take into account the need for **performance and reliability**, as well as any **relevant operational, maintenance, and energy costs**. The customer must consider any options considered under this step as reasonable to implement.”* End note 8 was added to this language.

[**Outstanding Comment 6**] regarding “The customer must consider any options considered under this step as reasonable to implement,” what happens when Staff second-guesses customer judgment?

Section 6: Selection Process – Step 3

“If Step 2 yields only one ~~feasible option, that viable~~ option ~~establishes that option defines~~ the standard practice baseline. ~~In this case, the measure is ineligible for Normal Replacement, and there is no second baseline savings for Accelerated Replacement.~~ [4] If Step 2 yields two or more ~~feasible viable~~ options, the option that is the lowest first-year cost to implement ~~establishes defines~~ the standard practice baseline.

Costs included in this process may be estimates, but their basis must be substantiated. Costs should include: “...the cost of any equipment or materials purchased, including sales tax and installation; any ongoing operation and maintenance costs; any removal costs (less salvage value); and the value of the customer's time in arranging for the installation of the measure, if significant.”

[4] *“Standard Practice Manual, October 2001”*

10.1.1.1.10 Discussion Summary:

10.1.1.1.11 Lowest First-Year Cost Option

One stakeholder stated that any proposed baseline is expected to be less costly than the proposed equipment, where costs must include full implementation costs as well as maintenance and operating costs for those projects where such costs are a key decision factor. The following revised language was suggested: *“Depending on the cost and type of the equipment alternative, ‘maintain in operation’ cost should be included. In residential projects this may either not be a consideration or the time may be very short, such as months or a year. In non-residential projects this may be an important consideration and may require one or several years of considered cost due to ongoing labor or maintenance costs. Also, in non-residential projects equipment that is a critical component of the customer’s operation, where service interruption or down time is very costly, reliability of service and the cost of failure must be considered in the ‘maintain in operation’ cost.”* In response to this comment, the **first-year cost** was incorporated in Step 3 with addition of endnote 10.

[**Outstanding Comment 7**] Regarding endnote 10, one stakeholder stated that the standard practice baseline is for anticipated operation and maintenance, not ongoing operation and maintenance. The process should allow a comparison of first costs or lifecycle costs that forms the basis of customer decision. The following revised language was suggested:

*“Energy efficiency options have always been required to use less energy and cost more than baseline options. First **or lifecycle costs used by the customer for decision-making** should include: “...the cost of any equipment or materials purchased, including sales tax and installation; ~~any ongoing anticipated~~ operation and maintenance costs; any removal costs (less salvage value); and the value of the customer's time in arranging for the installation of the measure, if significant.”*

[Outstanding Comment 8] Other stakeholders stated that we assume Step 2 is only relevant where ISP research is not undertaken (following review and procedures outlined in the ISP Guidance Document). That is, Step 2 is when there is no applicable ISP guidance available and the project does not warrant ISP research, and the customer practices/options will be assessed against mandatory regulations to determine the baseline. Otherwise we **don’t** endorse the Step 3 selection of lowest first cost to establish baseline. Also, if it is clear that one of the customer practices considered is the typical practice for a given industry and application, then that would be the best feasible option to choose as baseline, NOT the lowest cost option.

Also, we disagree with Step 3 choosing the lowest first cost option to select the standard practice baseline. This goes against the market-based (most common) choice being the baseline. That’s the definition of standard practice. Why are we reverting to lowest first cost?

[PG&E’s Response to the Use of Most Common Option]

1. Use case where Step 2 yields exactly two feasible options

One of the two options will be the baseline, and the other option will be the measure. Any options considered in this process need to be real options.

Example: A customer has to replace a mechanical unit, whose installation is governed by Title 24. However, physical constraints prevent the installation from satisfying Title 24 requirements; the customer has a letter from the authority having jurisdiction that such is true and has been exempted from those Title 24 requirements. In this case, the Title 24 minimally-compliant installation is NOT an eligible standard practice baseline. The baseline MUST be a real option that is reasonable to install for the customer, and it is impossible for this customer to exactly meet Title 24.

Example: A customer needs 75,000 MBTU of output. Suppose that a high efficiency 75,000 MBTU model exists, but the standard efficiency models are only manufactured with 50,000 and 100,000 MBTU sizes. The baseline should be a 100,000 MBTU model operating at 75% load, not a hypothetical 75,000 MBTU model with an efficiency rating interpolated between the two models. The baseline must be a real option that exists.

2. Use case where Step 2 yields exactly one feasible option

The measure is ineligible for Normal Replacement. Normal Replacement measure type presumes that some replacement is necessary, whether it be because the equipment has failed (the replace on burnout use case), the customer’s needs have changed (the new load use case), or the equipment is naturally due to be replaced (the normal replacement use case). If replacement is necessary, and there is only one option that meets the need, then there is no decision point for the customer and therefore no reason to provide an incentive or claim any savings. The measure is ineligible.

However, if the project developer can successfully demonstrate that it is “more likely than not” that the existing equipment could AND would remain in service, then a POE has been provided and the measure can be eligible for early retirement. Early retirement claims assume that the existing equipment would remain in operation through its RUL, and after that, the customer is compelled to conduct a replacement. At the RUL point, if only one option meets the need, there is again no decision point for the customer. No savings should be claimed for anything after the RUL point. Therefore, if POE has been provided, savings can only be claimed up to the RUL point.

This is stated in footnote 7. For cases where Step 2 yields only one viable option, normal replacement claims are ineligible, and early retirement claims shall have no second baseline savings.

3. Use case where Step 2 yields more than two feasible options [in response to outstanding comment 2]

PG&E argues that one of these options will be the measure, that is the end state that the customer desires, and proposes the lowest first-year cost option to be selected as the baseline between the remaining options.

In response to the comment that suggests using the most common choice (i.e. market-based) as the standard practice baseline, rather than the lowest first cost, the author agrees that the most common choice would be ideal; however, there is rarely an agreed-upon most common choice. One party may survey some vendors and come to one conclusion; another party may survey some other vendors and come to a different conclusion. This also assumes that the installation is homogeneous enough that a relevant question can be posed to a valid sample of vendors, and that a relevant and conclusive study can be completed. Such studies are only cost-effective to carry out for measures that have multiple applications across many markets.

In cases where a large enough sample of vendors can be surveyed and a conclusion on the most common choice can be determined, the author recommends that the process and results be documented and posted publicly for use in Step 1 of this process. Such research typically requires a decent amount of time to assemble and should be applied broadly. That way, the project developer finds and applies this baseline upfront and never gets to Steps 2 and 3 of exploring different customer options.

In the author’s experience, parties rarely agree on a conclusion after vendors are surveyed. The purpose of the selection process is to provide an answer of how to select the baseline, regardless of whether the measure is eligible or not. PG&E’s proposal always provides the project developer with an answer; this commenter’s proposal does not. The author prefers the lowest first-year cost method, as it produces a counterfactual baseline that reviewers can more easily evaluate. This is especially preferred when the process in Step 1 provides a forum to specifically address situations where Step 3 would yield a non-ideal answer.

In Step 1, the CPUC still has ultimate authority over the ISP documents posted in the publicly available website. The CPUC may declare any technology as ISP or on hold until further notice, so long as it is posted on this website. As noted above, such documents will govern Step 1 of the process and prevent any projects from moving through to Steps 2 or 3. PG&E thinks this provides the necessary CPUC oversight; if it suspects that a lowest cost option is not the standard practice, it may post a memo to the

website as described above. CPUC ISP declarations are not required to be rooted in research, although stakeholders would hope that supporting documentation is provided.

For those reasons, the author disagrees with the suggestion to amend Step 3 to use the most common choice as the standard practice baseline and stands by a preference for lowest first cost.

[Outstanding Comment 9]

Staff stated that first, we must consider the most recent CPUC Decision that addresses this issue, D.12-05-015, at 351: “For purposes of establishing a baseline for energy savings, we interpret the standard practice case as a choice that represents the typical equipment or commonly used practice, not necessarily predominantly used practice. We understand that the range of common practices may vary depending on many industry- and/or region-specific factors and that, as with other parameters, experts may provide a range of opinions on the interpretation of evidence for standard practice choice. Here again, we expect Commission Staff to use its *ex ante* review process to establish guidelines on how to determine a standard practice baseline.”

The direction is typical equipment or commonly used practice, but [not] necessarily a predominant choice. The last phrase (predominant) was added due to the recognition that if there are two or more choices there may be more than one choice that is common and in those cases, it may be appropriate to create a typical efficiency level for the standard practice that is a mix of efficiencies of the common choices weighted by their current selection (those currently or very recently making choices for installations or methods of operation) share. Commission staff has never used the cost as the (or sole) criteria. Certainly, cost figures into the selection process, but the proposers of using cost have provided no evidence that the lowest cost choice has any correlation to being the common or typical choice. Certainly when “first-year cost” is added as a qualifier to lowest cost, we start to get more into a customer decision process. But for major investment, limiting the analysis to first-year cost may not be useful, as, in many situations, labor costs far exceed all other cost consideration. Thus, labor productivity enters into decision on choice strongly in some cases and is not limited to first-year costs. Major acquisition analysis usually involves multi-year analysis including financing options, cash flow analysis as well as tax implications, and resale. Also, future flexibility for the business is often important, including expandability. For less costly technologies, there may be other attributes that far outweigh equipment cost, such as appearance, details of performance, or fit with other components where the new equipment will be used.

In many cases when there are two or more alternative choices, we would consider using some type of weighted average efficiency as the baseline standard practice. Examples for simple equipment include the baselines for screw-in lamps where we currently use a mix of incandescent, compact fluorescent lamps, and LED lamps in the baseline. If there are choices that clearly have minor market share compared to the others, it is reasonable to consider leaving those choices out of the weighting. For example, if choices 1, 2, and 3 have 10%, 40%, and 50% current orders market share, respectively, it may be reasonable to not consider choice one and mix 2 and 3 together to get a middle point between their efficiencies as the baseline. In very small markets (where number of annual purchases is very small) this can still be reasonable. The implication of this example (3 reduced to 2) is that only one item can get incentives. If that item already has close to 50% of the new order market, there is a risk of very low net-to-gross since the incentives that can be offered cannot really change any decisions.

Also, when there are few viable choices, such as two or three with no clear typical choice, and no great performance, first or life cycle cost difference, it is questionable why there is incentive support at all. Often, if there is a cost difference that is also commonly coupled with a performance (production), size, or some other difference, that cannot be ignored and simply take the first or first-year cost as the lowest. Manufacturers of equipment are not arbitrary in their pricing strategies, but they do need to recover development cost over time in their sales ... so amortize those costs over some level of sales then may be able to drop those costs a lot. Therefore, costing information must be current and baselines mix shifted as recent sales and orders change. We often see reports using out-of-date costs, thus another problem with that parameter being a major method of selecting baseline.

Bottom line, first cost, first-year cost, or other simple cost-based methods are not very reliable unless there is clearly a case where the “lowest cost” item (however that is defined) also clearly has the largest current sales market share by a significant margin.

DRAFT

APPENDIX D EXAMPLE PROPOSALS FOR TASK 6

This section includes a sample of draft proposals presented during T2WG discussions for Task 6, to improve and streamline the custom process. These proposals are drafts and are presented for illustrative purposes only.

The T2WG summary document on Task 6—“Task 6 Issues and Recommendations”—is a working document that outlines the current custom EAR process; “issues” that need to be addressed to improve the custom process; and potential solutions to those issues.⁴⁰

COMMUNICATION AND COLLABORATION

DRAFT Proposal to Improve Communication during EAR (OnSite Energy, July 2017)

Onsite Energy proposed using a clearly-defined process for Custom Measure Review (CMR) Process with direct Implementer input:

1. Use Project Scoping Document (PSD) or early project summary document for posting on CMPA and ED Selection and initial review
2. PSD or early project summary document used for initial meeting/conference call with Implementer/PA/3P Reviewer/ED
 - a. Identify threshold issues
 - b. Establish Project parameters (timeline, ISP issues, eligibility, etc.)
3. Project Feasibility Study (PFS) Kick-off Presentation (for larger projects)
 - a. 1-2 hours immediately upon submittal of PFS to PA (prior to 3P review)
 - b. Implementer presentation of project/How issues from b. above are addressed in PFS
4. Project allowed to proceed immediately upon PA approval (not affected by ED Review disposition)
5. ED disposition affects future similar projects (60 day “grandfathering” or “bus-stop” concept where dispositions are implemented annually or semi-annually)

DRAFT Proposal to Improve Training and Transparency (OnSite Energy, July 2017)

1. Single Website used to post all dispositions (redacted)
 - a. Establishes grandfathering trigger date (or bus-stop trigger)
 - b. Applicability/recommendations
 - c. Posted CMR Statistics
2. Quarterly workshop/webinar
 - a. Review dispositions from previous quarter
 - b. Allow discussion/training
 - c. Include Implementers/PA’s/3P Reviewers/(ED and consultants)

⁴⁰ The working document “Task 6 Issues and Recommendations” is available at: <http://t2wg.cadmusweb.com/>

SERVICE LEVEL AGREEMENTS

T2WG participants drafted SLA proposals to establish fixed timeframes for custom ex ante review. T2WG is reviewing these draft proposals to develop and consensus-based final proposal for an SLA for the EAR process.

- SCE's draft proposal is presented in Figure 2.
- SoCalGas's draft proposal is presented in Figure 3, Figure 4, and Figure 5.
- On Site Energy's proposal is described below.

Draft Proposal for Service Level Agreement (Onsite Energy, July 2017)

1. After CMPA Energy Division Selection:
 - a. 2 weeks – Program Administrator uploads documents
 - b. 2 weeks – Preliminary Energy Division (ED) Review/Needs Requirement Document; ED review findings sent to Program Administrator and Implementer simultaneously
 - c. 2 weeks – Program Administrator and Implementer
 - d. 2 weeks – Energy Division issues final disposition
 - e. Dispute Resolution Process to follow (no longer than 4 weeks)
2. Exception to above timeline only with joint approval of Energy Division, Program Administrator and Implementer
 - a. If Energy Division exceeds SLA timeframe, project proceeds as if approved.
 - b. If Implementer exceeds SLA, project rejected.

EAR DISPUTE RESOLUTION

Draft proposal for a Special Review Request (CEDMC, July 2017)

- Criteria/Triggers for Special Review Request (SRR)
 - Implementer can demonstrate that the customer or customer's agent take issue with a disposition and requests further review. Demonstration would consist of customer letters, emails or other communications stating customer disagreement
 - Customer, Implementer and/or PA (program manager and/or customer care representative) believe the disposition requires further review due to clearly defined issues such as inappropriate sample size, outdated supporting documentation, etc.
 - Proposed discount of reduction to savings/incentive is greater than 10% of initial estimates
 - Time elapsed since ED initiated pre or post-installation review has exceeded 1 months
 - Disposition is the result of a policy change
 - Disposition is the result of an ISP decision
- Documentation
 - Implementer and/or IOU must complete a simple process and fill-out a document that includes the minimum information needed to be included in a review request and put into the queue:
 - Project name, ID
 - Project summary and savings totals

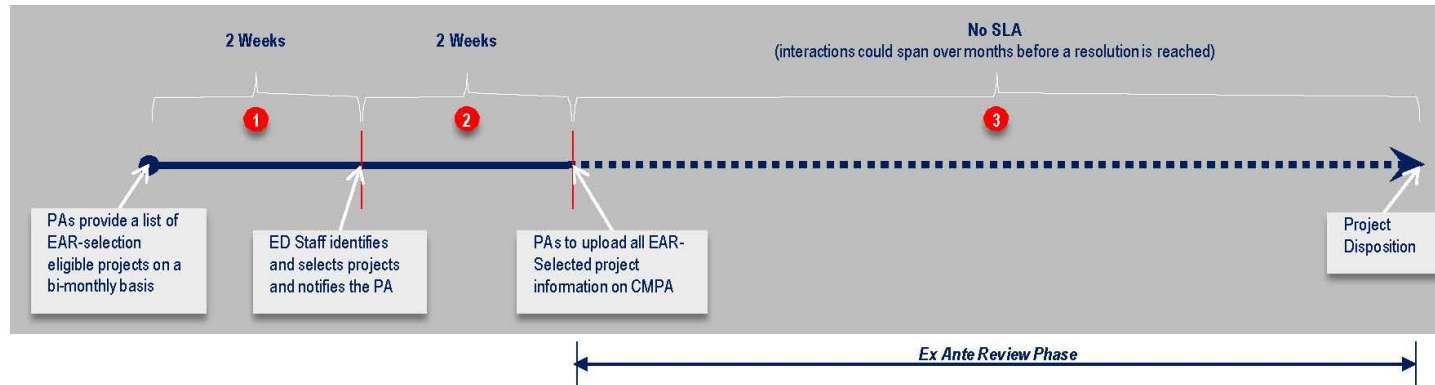
- A list of supporting documentation from all parties used to arrive at the current disposition as well as an electronic copy of the project package to be used by the review committee
 - Implementer project package
 - IOU review documents
 - ED supporting documentation, case studies, etc
 - Upon final disposition, ED must provide the following
 - Specific response to the motivating factor that triggered the request for special review
 - Documentation (case studies, data, calculations) supporting the point in question
 - Anecdotal evidence from one Subject Matter Expert may only be used for guidance to identify citable source documentation and not used as the sole evidence for a decision
- Timing and Process
 - Special Review may be requested
 - After ED provides a show stopper (rejection) or disposition at the pre-installation or a disposition at the post-installation phase.
 - IOU(s) and Implementers have 2 weeks to raise objection based on the criteria outlined above
 - Within two weeks of objection raised, all stakeholders (IOU, Implementer, ED) must schedule a project review meeting (to convene within 1 month of the objection) to discuss the project and key items at issue and come away with specific action items for clarifications, supplemental data, etc.
 - IOU(s) and Implementers have 1 month (or otherwise depending on direction from review team meeting) after project review meeting to make the case for further review and provide reiteration of key data/information and/or supplemental data/information to support their claim
 - ED has 2 weeks to review and respond to the project review team. The ED review is performed by an independent entity, such as the California Technical Forum, who was not involved in the original review.
 - The ED provides a transparent calculation and/or clear rationale (such as citing specific engineering principles, data needs, or precedents) that address the issues raised by the Implementer and/or IOU.
- Background and support/notes
 - Discuss the current review process (perhaps using two examples of a disputed projects/measures)
 - Develop a simple draft process for escalating, reviewing, assessing, and taking final action on the issue
 - Key steps leading up to and potentially minimizing the need for Issue Resolution Protocol
 - Include implementers in early conversations - before inspections
 - Ensure all stakeholders have a Summary doc and supporting docs before sending a project through Issue Resolution

Figure 2. DRAFT Proposal for Service Level Agreement (SCE, July 2017)

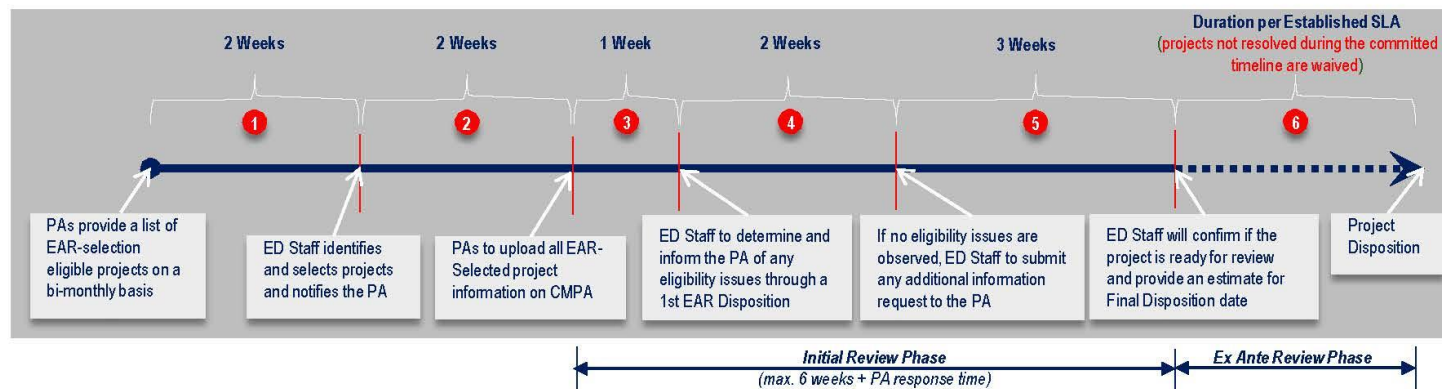
Ex Ante Review SLA | Draft

Submitted by SCE | T2WG | July, 2017

Current Process & Timeline



Proposed Process & Timeline

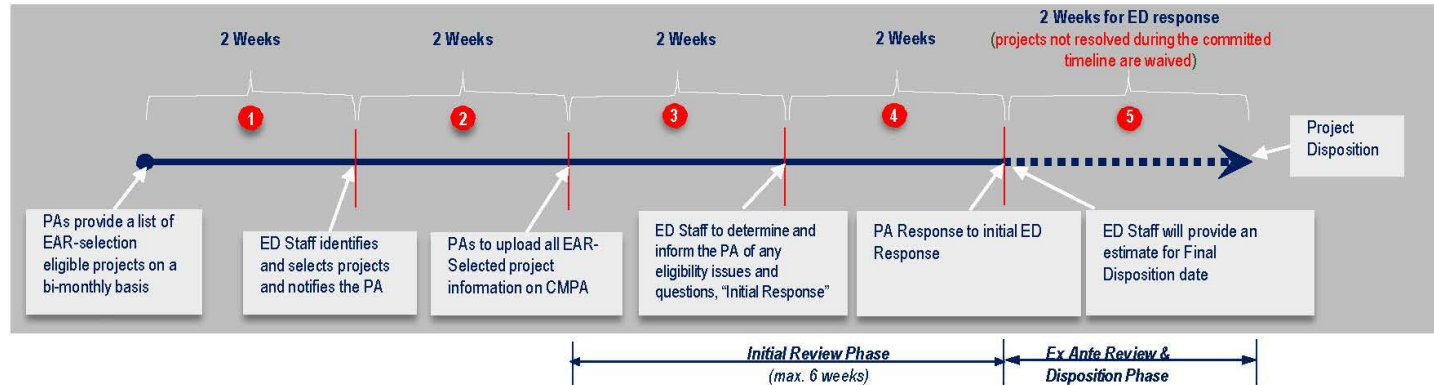


Potential Benefits

- » Improved customer satisfaction
- » Better project package and quality (eligibility and missing information get addressed at the initial review stage)
- » Effective PA/ED Staff interactions, i.e. more time spent on discussions around issues (vs. project updates)

Figure 3. DRAFT Proposal for Service Level Agreement – Low Rigor (SoCalGas, August 2017)

Tier 2 (Low, <\$25k)

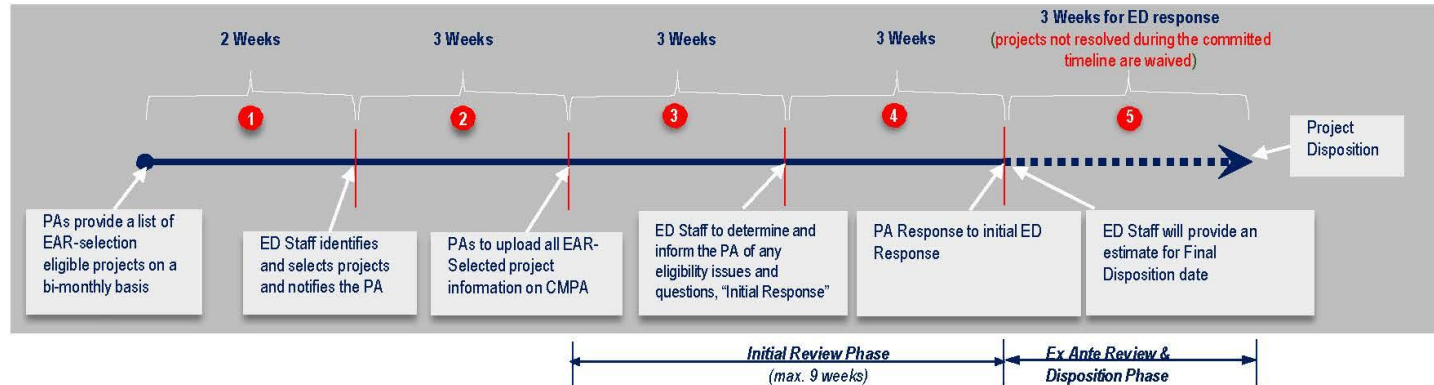


- Lower tier projects should have an abbreviated timeline since the project scope would be smaller and less complex
- Higher level scrutiny for lower tier projects does not correlate with the risk factor for these project types
- Timeline: 2 weeks for upload, 2 weeks for initial response, 2 weeks for PA response, 2 weeks for disposition, max total time for disposition is 6 weeks

SoCalGas Proposal – T2WG – 8/11/17

Figure 4. DRAFT Proposal for Service Level Agreement – Medium Rigor (SoCalGas, August 2017)

Tier 1 (Medium, \$25k - \$100k)

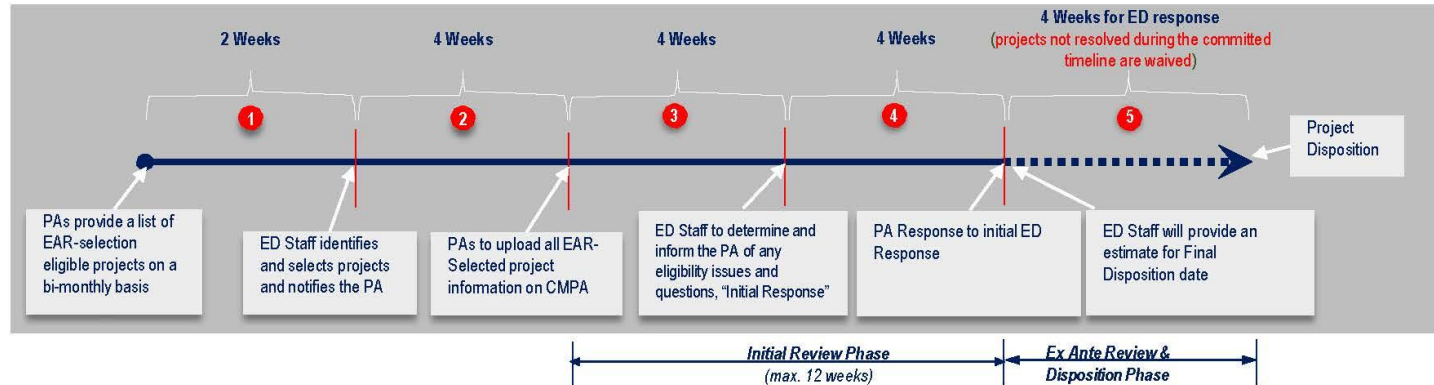


- Mid tier projects tend to be a combination of more complex and technical than lower tier projects but less complex and technical than higher tier projects. This timeline will allow for response times from both PA and ED to correlate with the overall project scope. The overall intent is to have a defined timeline to better manage expectations.
- Timeline: 2 weeks for upload, 3 weeks for initial response, 3 weeks for PA response, 3 weeks for disposition, max total time for disposition is 9 weeks

SoCalGas Proposal – T2WG – 8/11/17

Figure 5. DRAFT Proposal for Service Level Agreement – Full Rigor (SoCalGas, August 2017)

Full Rigor (>\$100k)



- Higher tier projects tend to be more complex and technical which may require additional response times from both PA and ED. The overall intent is to have a defined timeline to better manage expectations.
- Timeline: 4 weeks for upload, 4 weeks for initial response, 4 weeks for PA response, 4 weeks for disposition, max total time for disposition is 12 weeks

SoCalGas Proposal – T2WG – 8/11/17