

Summary of Baseline Selection and POE Guidance from Resolution E-4818

Contents

- I. Resolution E-4818 Overall Direction on Baseline Assignment 1
 - IA. Resolution E-4818 adopted baseline table 1
- II. Resolution E-4818 three subcategories of Accelerated Replacement..... 2
 - IIA. Resolution E-4818 direction on addition of “repair eligible” and “repair indefinitely” 2
- III. Resolution E-4818 direction on Preponderance of Evidence (POE)..... 3
 - IIIA. POE requirements apply to Accelerated Replacement (AR)..... 3
 - IIIB. Resolution E-4818 direction on adopting a POE approach for establishing AR versus NR..... 3
 - IIIC. Direct-to-Decision and Direct-to-Default “streamlined” POE treatment 4
 - IIID. T1WG POE Tier 1 and 2 proposed criteria 5
- IV. Commission staff to compile and publish a guidance document..... 7
- V. Updates required for previously adopted baseline assignment flowchart..... 8

I. Resolution E-4818 Overall Direction on Baseline Assignment

IA. Resolution E-4818 adopted baseline table

Resolution E-4818 adopted the below table 1.1 as the replacement for Table 1 (“Adopted Default Baseline Policy for All Sectors”) in D.16-08-019. The adopted table adds forms of POE criteria directly into the measure baseline assignment policy.

Table 1.1 Measure Level Baseline Guidance

Alteration Type	Delivery	Savings Determination	Customer Class	Installation Type		
				Weatherization / Add On / BRO	Efficient Equipment	
					AR	NR
No Existing Condition	All		Code			
Existing Buildings	Upstream/ midstream	All	Code			
	Downstream	NMEC, RCT, exp. design	Existing			
		Calculated	Existing	Direct-to-Decision/ Direct-to-Default POE**	Code	
		Deemed	Existing	Deemed POE	Code	
Non-Building projects including industrial and agricultural processes	SEM* programs	NMEC	All	Existing		
	Other (not-SEM) programs	All	Existing	Direct-to-Decision/ Direct-to-Default POE**	Code	

* Strategic Energy Management programs are currently under development in a collaborative

** “Incentive Tiered POE” will apply here only following Commission approval of Tier 1 and Tier 2 preponderance of evidence requirements. These requirements are not adopted in this Resolution but assigned to the Track 2 Working Group, per ordering paragraph 25.

Summary of Baseline Selection and POE Guidance from Resolution E-4818

II. Resolution E-4818 three subcategories of Accelerated Replacement

IIA. Resolution E-4818 direction on addition of “repair eligible” and “repair indefinitely”

Ordering Paragraph

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.

Finding 17 (p 64): 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 (p 64): 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.

Clarification on existing conditions baseline use as BRO not AR if equipment is degraded or broken Resolution E-4818 text (p 12) – implication AR can only be used a rated efficiency baseline for the pre-existing equipment

the following clarifying policies are part of the definition of an existing conditions baseline for use within a deemed or calculated savings determination:

- An existing conditions baseline reflective of poor maintenance and disrepair applies only to BRO installation types.
- All activities and installations that restore equipment performance to its nominal efficiency (i.e., rated, intended, or original efficiency) but do not enhance the nominal efficiency must be classified as BRO, and where applicable should adhere to the HOPPs Ruling and with the guidance presented on page 26 of this Resolution (in the subsection titled Repairs Including Replacement of Failed Add-On Equipment). However, we allow for Program Administrators to submit proposals for exceptions to this rule for Commission Staff review and approval.

Simplifying principles for dual baseline treatment under AR Resolution E-4818 text (p 31)

We consider the hypothetical example of a broken boiler, which does not function at all but could be cost effectively repaired. This represents a decision-point where the customer could be influenced by the program to replace the equipment instead of repair it. **Assume further that the customer could provide evidence of previous repairs and their costs, and has already obtained a reliable cost estimate for the repair.** In this scenario, if a program were to influence the customer’s decision to replace rather than repair, should this be considered an early replacement?

The working group members were in general agreement that what is at issue is whether the equipment could be cost effectively repaired, not simply whether it could be repaired, and that a comparison of repair costs and replacement costs was called for. With this it seems that in order to apply a dual baseline treatment for the replacement of a broken but repairable piece of equipment, at minimum the following data are needed:

- Repair cost
- Replacement cost
- Energy savings (needed for all claims)
- Effective useful life of installed equipment
- Remaining useful life of existing equipment

The draft measure-level baseline guidance document recommendation suggests screening broken equipment that is potentially repair eligible using a comparison of repair costs and replacement costs. It suggests the standard for determining repair eligible equipment be that the costs of repairs are less than 50 percent the costs of replacement. We observe that the higher this cut-off percent is, the closer the equipment is to being economically unsalvageable. We also observe that the difference between the cost of replacement versus repair in combination with the energy savings offered by the equipment replacement determines the project payback period for the customer. That is, for each combination of equipment cost, energy savings, and repair cost, it is possible to solve for the payback period.

Should the defining criteria be based on the payback period instead of only the repair and replacement cost? It seems that payback period offers more insight to customer decision-making.

...

We also consider a scenario where repair is relatively inexpensive in comparison to replacement, **but that this repair would need to be repeated at short intervals. In this case the best comparable repair cost would represent the discounted cost of a stream of repairs over the EUL of the replacement equipment.**

...

The full spectrum of cases to consider in dual baseline is intractable without simplifying principles. (Note these do not apply to NMEC or RCT/experimental design savings determinations.)

Summary of Baseline Selection and POE Guidance from Resolution E-4818

- 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.

... repair eligible/repair indefinitely equipment may have the following characteristics:

- They may be older than their EUL
- They may assume repair or replacement scenarios in the 2nd period of the dual baseline
- Equipment may be broken or performing sub-optimally in the 1st period.
- Savings credit is granted for equipment enhancements or performance optimization

... As discussed previously, determining the longevity and costs of hypothetical repairs, and applying baselines that assume a future repair rather than replacement add to the complexity of baseline policy. ... the number of scenarios to consider expands quickly creating additional complexity and potential for confusion and misinterpretation. **For these reasons, we do not adopt the use of repair cost in determining equipment eligibility-based definitions. Instead we ask the Track 2 working group tasked with streamlining custom ex-ante review and industry standard practice issues to address qualification standards and evidence to determine repair eligible / repair indefinitely equipment.**

III. Resolution E-4818 direction on Preponderance of Evidence (POE)

IIIIA. POE requirements apply to Accelerated Replacement (AR)

Resolution E-4818 directs that POE requirements are used to define eligibility to apply the Accelerated Replacement rather than Normal Replacement baseline treatment. These POE requirements are **not** adopted to assess program influence (free ridership) used in setting Net-to-Gross values.

Ordering Paragraph

17. We adopt the following eligibility criteria for the preponderance of evidence guidance: “This protocol applies to custom or deemed retrofit measures that are delivered through downstream programs, under conditions that meet Commission standards for having a defined existing condition and do not otherwise default to an existing conditions baseline per policy of D. 16-08-019 and Resolution E-4818.”

IIIB. Resolution E-4818 direction on adopting a POE approach for establishing AR versus NR

Ordering Paragraphs

19. We adopt Section 5 of the working group’s preponderance of evidence guidance, with modification to the examples of evidence presented in the guidance, as described in Section 1.5 of this Resolution.

20. We adopt the program-level preponderance of evidence guidance for deemed measures as described in Section 7 of the working group guidance document. We direct the Program Administrators to substantiate claims of accelerated replacements for deemed measures accordingly, on a program-specific basis and subject to Commission approval, per the requirements specified in Section 7.

21. Regardless of any approved streamlined preponderance of evidence process for deemed measures, if an incentive for a given project is more than \$100,000, a full-rigor preponderance of evidence investigation is required.

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.

23. For purposes of determining the appropriate tiered incentive treatment, CPUC staff have discretion to aggregate applications when they are from the same customer and appear to be the same project.

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.

T1WG proposed guidance document scoring of evidence Resolution E-4818 text (p 38)

Given this framing, the working group proposes that incentive applications that use an accelerated replacement baseline treatment offer evidence both for and against eligibility. The guidance also suggests that evidence be

Summary of Baseline Selection and POE Guidance from Resolution E-4818

scored by a reviewer and the resulting scores be used to weigh the evidence. That is, the total score for evidence supporting an accelerated replacement baseline treatment is compared to the total score for evidence against using a normal replacement treatment, and the greater score will determine the appropriate baseline.

We are concerned about the potential subjectivity of the scoring, and whether it is reasonable to expect implementers to bring evidence against their self-interest to the scoring.

Finding 20 (p 65): The proposed guidance for applying a preponderance of evidence standard relies on implementers to present evidence against their own interests. We share the concern of other stakeholders that this is not a prudent or preferred framework. In the absence of an alternative framework, however, we accept this proposal and will revisit its effectiveness in the future.

T1WG proposed guidance document examples of evidence Resolution E-4818 text (p 38)

Comments on the Draft Resolution from Program Administrators and Implementers suggest that the guidance document should be adjusted so that it presents an equal number of examples of what would constitute evidence for and against program influence. We reiterate that the examples in the guidance document are just that, examples, and are not intended to limit the types of evidence that can be submitted. On the other hand, we see no reason not to provide a balanced set of examples.

... As such, we promote the adoption of these policies and withdraw from the guidance document the example of using a sustainability policy as evidence against program influence.

... For this reason, we withdraw from the guidance document the example of using a low relative incentive amount as evidence against program influence.

Guidance on shared risk when evaluating requests for AR treatment Resolution E-4818 test (p 43 – was general discussion on deemed but the principles apply to all activities)

Accelerated baseline treatment may increase savings by a substantial amount on a per unit basis, and the associated risks should be treated with appropriate caution and generally shared across stakeholders, not mitigated for one party at the expense of others.

We note that PAs may roll out small scale pilot programs, utilize market research funding, or orient their non-resource programs activities to test foundational ideas and theories. Programs may use any tool they prefer to screen projects and/or may elect to apply a blended baseline to hedge against the risk of normal replacement in the participant population.

Expectations for deemed program design and implementation Resolution E-4818 text (p 44)

The intent is for program administrators to:

1. Identify stranded savings potential using: market research, analysis of existing databases, research in other jurisdictions, existing experience and market expertise. Present the foundational research, analysis and/or hypothesis.
2. Develop a program theory, design and implementation plan:
 - a. Include customer eligibility requirements and evidentiary standards that are cost-effective and reasonable and ensure implementation is consistent with program design and intent.
 - b. The program implementation plan should establish the roles of the PA, implementer and/or other agents acting on behalf of the program and clarify the activities and respective responsibilities of each for collecting data or other evidence to assure high quality program delivery.

IIIC. [Direct-to-Decision and Direct-to-Default “streamlined” POE treatment](#)

Resolution E-4818 Direct-to-Decision and Direct-to-Default “streamlined” subcategories of POE treatment to determine Accelerated Replacement

Ordering Paragraph

18. We direct the Program Administrators to adhere to the direct-to-decision and direct-to-default standards as stipulated in the corresponding sections of this Resolution, and summarized below:

- Program designs, program rules and customer eligibility criteria are submitted to the Commission for approval, with a strong argument or data supported case indicative of inducing accelerated replacement.
- Program rules must specify eligibility criteria and the evidence of program eligibility and/or program influence that will be collected for each installation.
- Specified evidence must be collected for each installation as part of the program implementation, and this evidence be made available to the Commission upon request and submitted as supporting documentation with energy savings claims.
- All projects qualifying for an accelerated replacement baseline under a direct-to-decision or direct-to-default condition must fulfill appropriate tiered preponderance of evidence requirements for equipment viability.

Direct-to-Decision Resolution E-4818 text (p 45)

Summary of Baseline Selection and POE Guidance from Resolution E-4818

The criteria that would default a project to an accelerated replacement baseline are as following:

1. Custom measures installed through residential and small commercial direct install programs.**
2. Tenant space build-outs where the tenant, space purpose and equipment use patterns remain the same.
3. Pre-existing equipment was functional and the measure was proposed in an implementer-provided audit through a program that the Commission has approved as being designed to expressly target early replacement.

**Where CPUC Staff must pre-approve the direct install program as being appropriate for such classification. For deemed measures with these customer classes, see the deemed section.

Required conditions for above:

- Program designs, program rules and customer eligibility criteria are submitted to the Commission for approval, with a strong argument or data supported case that is highly indicative of inducing accelerated replacement.
- The program rules must specify the customer eligibility criteria and the evidence of customer and measure eligibility that will be collected for each program installation.
- The specified evidence must be collected for each installation as part of the program implementation, and this evidence must be made available to the Commission upon request and submitted as supporting documentation with related energy savings claims.

Small commercial (business) Resolution E-4818 text (at 47)

We are aware that there is not agreement across Program Administrators in how to identify and verify a small business customer. This standard would be needed to qualify programs for a direct-to-decision treatment where customer eligibility includes a small business designation. For this reason, we direct the Track 2 working group (assigned to address issues of streamlining custom ex-ante review and industry standard practice) to recommend a statewide definition of a small sized business and associated evidentiary requirements to verify this classification.

Finding 26 (p 65): 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).

Direct-to-Default Resolution E-4818 text (p 50)

Adopted policy allows programs to qualify for a reduced level of rigor to determine direct-to-default accelerated replacement under the following conditions and requirements:

- Direct-to-default program design and program rules must be submitted to the Commission for approval, with a strong argument or data supported case that is indicative of inducing accelerated replacement.
- The program rules must specify the evidence of program influence and customer and measure eligibility that will be collected for each program installation.
- The specified evidence must be collected for each installation as part of the program implementation, and this evidence must be made available to the Commission upon request and submitted as supporting documentation with related energy savings claims.

IIID. T1WG POE Tier 1 and 2 proposed criteria

Tier 1 and tier 2 evidence requirements Resolution E-4818 text (p 42)

Despite agreement on using a tiered approach and in defining them with the incentives values in the bullets above, the working group was not able to agree on what would constitute sufficient documentation standards for the lower rigor tiers (i.e. Tier 1 and Tier 2). 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. Working group facilitators present their best approximation of a "middle ground" solution, representing no one perspective nor a negotiated compromise. We do not adopt these policies because there were such large differences in the related opinions of different stakeholder groups on these issues, and we feel the policy requires further development before it can be adopted.

Finding 27 (p 66): Working group members did not agree to specific criteria defining the preponderance of evidence 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.

Summary of Baseline Selection and POE Guidance from Resolution E-4818

The T1WG criteria was not adopted (PDF p 67, POE Guidance p 14 or Section 6 “Simplified Site-Based Preponderance of Evidence Protocol for Custom and Deemed Measures”)

The simplified Tier 1 requirements ($\geq \$25,000$ and $< \$100,000$) are specified as all of the following:

- 1) Photograph or short video showing the pre-existing equipment in place and operating in the condition described in the application, to establish pre-retrofit functionality. Photos of gauges indicating a system running at elevated temperature or current draw are options. If such visual evidence is not practical other alternatives such as operational data may be permissible.
- 2) Completion of a short (nominally eight questions or less) interview conducted with a facility operator or other technical equivalent that determines prior intent to continue operation in the pre-retrofit condition for at least one year. A general “core” questionnaire will be developed. It is recommended that this is pre-approved by CPUC staff prior to use. If there are concerns for individual measures, a customized questionnaire tailored to the specific measures or target market may be addressed.¹ Administration of this questionnaire should be conducted by an independent third party without financial interest in the outcome.
- 3) An affidavit, optionally incorporated into the questionnaire, signed by an individual with authority to represent the company or institution and direct knowledge of the decision-making process associated with the measure’s approval or a pre-agreed affidavit template signed by that individual and the implementer that affirms the accelerated replacement decision in both the viability and influence aspects. The text also must acknowledge a specific consequence for misrepresentation, including customer suspension from IOU efficiency programs for three years, reimbursement of any measure-related incentives with a 3-year statute of limitations on claims to any clawback, and possibly include language indicating that willful misrepresentations by any party may be prosecutable offenses under state law.

The simplified Tier 2 requirements ($< \$25,000$) are specified the same as for Tier 1 except that the photo/video evidence is optional and the questionnaire administrator is not required to be an independent third party.

¹ Example questionnaires that can be used as the basis for drafting a program-specific low rigor questionnaire are included in Appendix A.

Summary of Baseline Selection and POE Guidance from Resolution E-4818

IV. Commission staff to compile and publish a guidance document

Direction to Commission staff to compile and publish a guidance document on adopted policy Resolution E-4818 text (p 53)

Stakeholders have requested in their comments on the Draft Resolution that the CPUC publish a single, comprehensive guidance document reflective of the adopted policies. We agree with the value of such a document and direct staff to compile such a document following the Commission vote on the Final Resolution.

As part of this comprehensive guidance, Commission staff will also provide documentation of the review and approval process program administrators and implementers may use to submit programs or measures for deemed preponderance of evidence, or the direct-to-decision and direct-to-default accelerated replacement treatments.

... We direct Commission staff to work with PAs and stakeholders to clarify specific measure-level questions related to baseline classifications, and to document the questions and resulting clarifications in a publicly available document on the CPUC website.

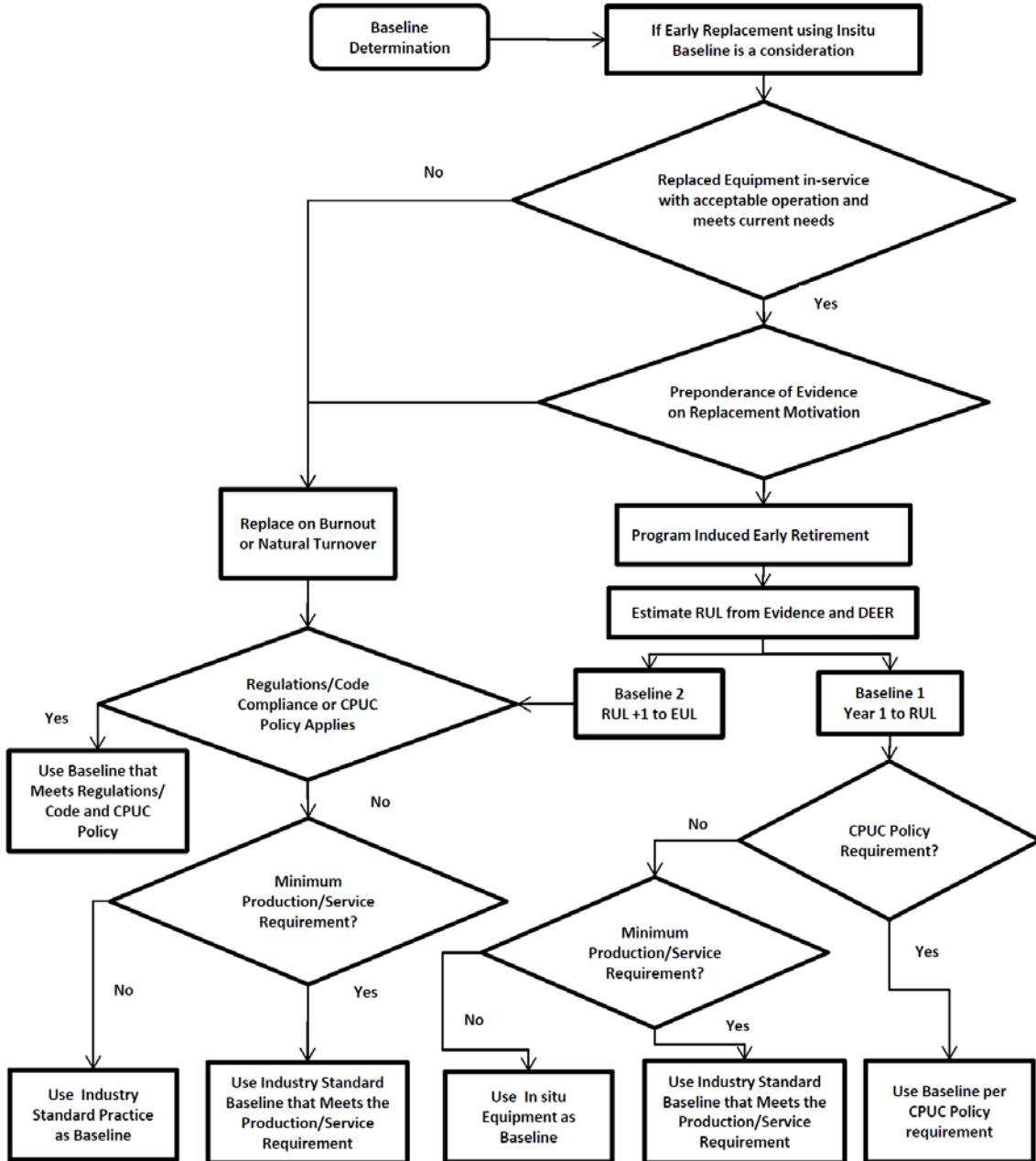
Summary of Baseline Selection and POE Guidance from Resolution E-4818

V. Updates required for previously adopted baseline assignment flowchart

Resolution R-4818 changes to adopted baseline policy suggest updates to the baseline assignment flowchart previously adopted as Appendix 1 to Decision 11-07-030 Attachment B are needed. Below are the existing and an example of a possible update format. The new policy is more complex than the previous policy, so some work is needed to simplify the diagram from the example; possible breaking into multiple components.

Existing Attachment B Appendix I of D.11-07-030 as Updated per D.12-05-015

Energy Division Methodology for Determination of Baseline for Gross Savings Estimate



Example Update to Attachment B Appendix I of D.11-07-030 per D.16-08-019 and Resolution E-4818

