# Resolution E-5115 Full Rigor Tier Equipment Viability and Program Influence Operationalization

# Preface

CPUC staff in collaboration with the Custom Projects Review Stakeholders Combined Subgroup developed this document to provide operational guidance on CPUC Resolution E-5115. Resolution E-5115 adopts guidance for the documentation required when implementing the preponderance of evidence process adopted in Resolutions E-4818 and E-4939 for custom “accelerated-replacement” energy efficiency (EE) projects. This guidance also applies to preponderance of evidence requirements for program influence for other measure application types. The Combined Subgroup included volunteers from the program implementation community, the program administrators (utility and non-utility) staff, and CPUC staff and CPUC staff consultants.

For those in the program implementation community, kindly provide any questions and feedback on this document to your program administrator. For program administrators, please collect any questions and feedback from your internal custom projects technical review team and your program implementers and provide the feedback to CPUC staff.

# Introduction

Resolution E-5115 directs the project developer to collect information from the customer and provide written documentation with supporting material to demonstrate existing equipment viability and program influence. This directed supporting documentation is expected to be collected as the project is being developed. The CPUC provided preponderance of evidence guidance on the **minimum information** requirements for project developers to document support of program influence for an accelerated replacement and any measure application type for the customer incentive level thresholds.

E-5115 states that “the evidence of program influence in general must demonstrate that an energy efficiency program more likely than not caused a customer to implement a more costly, more efficient equipment or process than they would have otherwise in absence of the program intervention. Program influence may be in the form of technical assistance and/or financial support. The information may be, for example, providing suggestions of alternative designs or products not already under consideration, or analysis of alternatives to demonstrate how the customer requirements can be met or exceeded by selecting an alternative. Qualified financial influence occurs when the availability of incentive support to the customer directly becomes the deciding factor in the selection of a more efficient alternative solution to the one or ones that would otherwise be selected.”

E-5115 further states that “convincing program influence is typically exhibited by the project developer’s actual actions and their impacts on a specific customer’s selection decision on the technology or process option(s) considered prior to or during the customer’s decision-making process. The preponderance of evidence determination should be conducted and documentation collected early in the project development phase when eligibility and measure type are being assessed. If a project fails the program influence preponderance of evidence assessment for accelerated replacement, it may still be eligible as a normal replacement project as long as it conforms with CPUC policy, CPUC staff guidance, and program administrator’s program rules. A project developer must not suggest to a customer to submit a ratepayer-funded energy efficiency incentive application when a customer has already chosen to purchase or install the energy efficiency measures or process absent the program intervention. To prevent free-ridership, implementers should not claim influence if their engagement for the specific project does not occur before or during customer’s decision-making process, or results in no additional efficiency improvement over what the customer was/is planning to do anyway to meet today’s needs.”

“The proposed technology or process option(s) must all meet the functional, technical, and economic needs of the customer. Effective influence is typically demonstrated through legitimate difference made by the project developer in encouraging the customer to do more than what the customer would have done as the current practice or had already planned to do. Actions such as technical assistance or financial assistance must happen before or during (not after) the customer’s decision-making process of selecting an energy efficient technology or process option. Therefore, documentation must be collected at the program intervention stage to demonstrate what the customer was planning to do prior to when the energy efficiency program intervened in the specific custom project. The documentation needs to demonstrate how the program interventions convinced the customer to accelerate the replacement of the existing equipment or process.”

This means that the viability evidence presented must demonstrate that the existing equipment meets a specific definition of viability, including evidence that existing equipment meets current and future customer requirements for the default or proposed remaining useful life (RUL) of the equipment.

Establishing customer requirements is a key step in the assessment of equipment viability. Customer requirements cannot be assumed to be static as business plans and requirements can change over time. The assessment of these needs and resultant requirements over the RUL of the existing equipment must be assessed in addition to current requirements. These requirements can vary by equipment type and purpose and the business type, size and plans.

A more complete discussion of the viability requirements assessment can be found in the E-5115 Viability document.[[1]](#footnote-2) The Viability document presents requirements for projects falling into the Very Low, Low and Medium Rigor Tiers. As noted in the Viability Pilot document[[2]](#footnote-3) the project submission should include a discussion narrative presenting the evidence as required by the Rigor Tier and explain how the evidence supports existing equipment viability. When creating the narrative to address the full rigor equipment viability questions listed below, the developer must include the information and documentation required to complete an assessment of the existing equipment viability as described in that Viability Pilot document[[3]](#footnote-4) for the Medium level of rigor listed plus any added minimum requirements in the questions listed below.

The discussion narratives for both program influence and equipment viability must be a complete presentation of factors and facts which support as well as contradict (i.e., pros and cons) the premise of program influence and equipment viability. The narrative should discuss the relative importance or weight of these factors and facts and provide a reasonable conclusion on influence and viability based on the preponderance of the evidence. In the assessment of the preponderance of the presented evidence not all evidence necessarily has equal weight. Evidence supporting the program influence narrative has high weight when it clearly demonstrates the customer perspective on how the program influenced their decisions throughout the project development and implementation process. Similarly, evidence supporting equipment viability that originates from the customer facility would be given a high weight. This type of evidence comes from the statements and/or documentation originating from (as confirmed by) the customer (on influence or viability) or customer facility personnel (on viability) such as internal memos, email communications, project documents, picture, videos, control systems, and other directly related sources. High weight evidence is collected as project development events occur. The statements in the narrative presented as facts can only be given high weight if they are supported by evidence that is referenced in the narrative and included in the submission. References to evidence must list the specific supporting document(s), location of the document(s) in the submittal package, and location of the information within the document (including location such as page, tab, cell, picture, table, etc.).

# Full Rigor Tier

## Resolution E-5115 directs that “for the Full Rigor customer incentive level tier, in addition to the Customer Affidavit Statement for equipment viability discussed in Section 4.2 in this resolution, we direct the program administrators to require the project developer to collect information from the customer and provide a written response to the items and questions below to demonstrate equipment viability and program influence for the accelerated replacements measure application type. The guidance described below is also applicable minimum information requirements to support program influence for any measure application type and program delivery strategy in general.”

## E-5115 Questions

The following questions/information requests are those that Resolution E-5115 requires as the minimum responses from project developers for program influence and viability. Documentation included in the project submittal package should include key factors used in the determination of equipment viability and program influence. CPUC policy requires both program influence and equipment viability meet the “preponderance of evidence” or “more likely than not” standard for Accelerated Replacement (AR) measure application type (MAT) eligibility. The program influence eligibility requirement is also applied generally for custom projects and can be applied to deemed measures as provided in the approved deemed measure package documentation. As noted above, the responses to these questions/information requests are to be in a narrative format, citing supporting evidence, and treating the influence and viability components as separate compliance items. Below, each of the full rigor questions/information requests from Resolution E-5115 are listed and additionally classified as relating primarily to program influence, equipment viability, or both.

1. Describe this project’s development (for example, in a timeline format will be helpful). (Program Influence)
2. Describe the customer’s main motivating factors for the project development; include all factors that the customer considered as it planned, designed, and selected the project to replace the existing equipment. This should include the eligible and viable energy efficient measure options considered by the customer and the customer’s normal practice in operation and maintenance and availability of records and the range of relevant regulations and resources considered by the customer. (Program Influence)
3. Describe a set of problems the customer is trying to resolve, e.g., what are the business needs and wants of production, maintenance, reliability, capacity, competitiveness, productivity, and regulations, etc. for the proposed project/measure? (Program Influence and Viability)
4. Describe the decision-making process for determining and selecting a specific energy efficiency measure option(s)? What are the customer’s criteria in decision-making? What are the customer’s barriers (if any) to adopting a new energy efficiency measure? What are its resource constraints (if any)? Clarify the timing of the customer’s decision points and compare them to when the project developer was engaged and interacted with the customer to validate influence on the proposed project/measure. (Program Influence)
5. Describe the project developer’s services provided to the customer and timing of the project developer’s engagement compared to customer’s decision-making process. When and how did the program implementers get involved in the specific custom project (e.g., in which stage of the project development), and what information and technical resources did the program implementers bring to the customer during customer’s decision-making process for the specific energy efficiency measure option? Describe the customer’s decision-making process and points. (Program Influence)
6. Describe the age of the equipment along with its estimated remaining useful life and any major repairs performed on the existing equipment, not related to a full system overhaul, in the last 24 months. (Viability)
7. Describe any maintenance issues for the existing equipment in the last 36 months. (Viability)
8. Describe any regulations or standard practices and how they are applicable to the existing equipment or process and the relevant energy efficiency measure? (Program Influence)
9. Has the customer updated any of its existing systems? If yes, when and what was it? Explain the reasons for switching to the new measure/system. (Program Influence and Viability)
10. Describe the range of alternative solutions that the customer considered, if any? Describe the range of vendors, equipment efficiency, capacity, and costs. (Program Influence)

## Program Influence Narrative and Supporting Evidence

The program influence narrative parses out both the key attributes of the project development that have caused the customer to alter what they would have selected to do absent the involvement of the project developer, along with factors considered in the customer’s decision not related to the project developer’s involvement. The narrative should explain the rationale for the conclusion of meeting the “more likely than not” program influence. The explanation of the conclusion must include a discussion of the relative weights of evidence supporting as well as contradicting the conclusion.

Before proceeding with the program influence narrative, the project documentation should be compared to a list of “showstopper” items, as shown below:

* Noncompliance with customer, program or measure eligibility.
* Accelerated Replacement (AR): POE influence not documented.
* Normal Replacement (NR): Only one option available for retrofit, expansion, or new construction that meets applicable codes and regulations.
* Project efficiency does not exceed customer’s internal design criteria.
* Submitted design documents pre-date any interactions with program staff.
* The customer already decided on selecting a technology/equipment to install prior to any PA or PI’s engagement.
* The customer already installed the equipment before PA pre-install approval or before incentive offer signed and countersigned.
* Equipment ordered before application documentation, including savings estimates and cost submitted or before PA issues approval to proceed or exception was properly obtained.

Any project with showstoppers should be rejected or redesigned to eliminate any showstopper items. If the project has no showstopper issues, the program influence narrative should be developed. As noted above, the E-5115 questions/information requests that pertain to program influence include #1, #2, #3, #4, #5, #8, #9, and #10. The following table presents important discussion factors for this narrative as a guide. Project submissions are not expected to contain all of these factors. Project developers should bring forward the relevant factors in the narrative discussion. As noted above, the narrative and evidence related to the items in the tables below should include those related directly to program involvement as well as those related to the project before or independent of the involvement of the project developer that both support as well as contradict the conclusion that the project meets the preponderance of evidence for program influence.

| Program Influence Topic Area | Topic Area Summary | E-5115 Related Question | Important Discussion Factors as Applicable for the Project | Examples of Common Items for Substantiation Relating to Key Decision Factors |
| --- | --- | --- | --- | --- |
| 1 | Project Development | Question 1  Question 4  Question 5 | Describe this project’s development including customer internal activities, outside vendors and the developer. A timeline format is helpful and should then be referenced or augmented by information outlined as relevant to each of the questions.   * Illustrate on the timeline, the project development and the customer decision making process including first contact, source of original project idea, source of first information on key financial and technical components in the decision, and what led to the customer’s decision to proceed with the implementation of the proposed measures, pending approval of the project. * Entry point of program related to Customer decision to proceed and any other parties’ involvement (e.g., vendors, manufacturers, design consultants, ESCOs) * Describe the developer’s audit and/or recommendation process as it relates to the customer factors and decision points * Describe any non-program services as it relates to the customer factors and decision points * The decision point of the customer to implement the measures which may include the point at which the customer agreed for implementer to finalize the project to submit for approval from the PA. | * Examples for key driving factors and non-energy benefits to be documented include: company sustainability or environmental policy; product line, type or mix changes; lifetime of the components (e.g., refurbishment, repair cycle); replacement schedule; equipment or process controllability, reliability, and automation; capacity expansion; new construction; major renovation; seasonality of production (incl. equip lead time); operating cost reduction; maintenance cost reduction; or new funding opportunity (e.g., CEC, DOE, utility incentive, Tax credits). * Project development timeline with notes indicating who initiated the interaction at each step * List of project development steps within the timeline including customer internal steps and key budgeting and implementation decision calendar dates along with interactions with project sponsors, implementers, and program administrator. * Emails, meeting notes, and call logs documenting the key communications listed in the timeline such as enrollment in the program, technical assistance of energy analysis, and/or proceeding with the project as it relates to interactions with the project developer or specific input from the project developer, the customer barriers and issues, with response from project developer answering the questions and providing proposed solutions. * Project feasibility study, audit report showing expected energy savings, energy cost savings, and possible program financial support for a set of alternatives as they relate to the customer’s decision-making process |
| 2 | Decision Making Process | Question 1  Question 4 | Describe the customer’s decision making process, the key decision maker(s), decision criteria, and any key limiting factors   * Describe the key financial or technical components (both program and non-program services) that were important in the customer’s decision. This includes an assessment of the main motivating factors that caused the customer to move forward with an acceleration to the normal replacement of the equipment, installation of add-on equipment or modifications to their processes. This may include avoidance of possible future problems or acceleration of the ability to handle future possible needs. * Describe how the developer’s activities were important in addressing any of the above listed key financial or technical components (both program and non-program services) that were important in the customer’s decision * Financial criteria and access to capital * Customer implementation of prior similar projects and related project scopes/descriptions, timing, and reasons for implementation | * Add decision making process steps to the Project development timeline described above with notes indicating who initiated the interaction at each step * List of project development steps within the timeline including customer internal steps and key budgeting and implementation decision calendar dates along with interactions with project developers and/or the program administrator. * Emails, meeting notes, and call logs documenting the key factors and communications. These may be listed in the timeline such as enrollment in the program and/or proceeding with the project as it relates to interactions with the project developer or specific input from the project developer. * Emails, meeting notes, and call logs documenting the customer barriers and issues with response from project developer answering the questions and providing solutions. * Financial analysis showing project financial performance relative to customer financial decision criteria inclusive of services or financial support from the project developer or outside program source such as by customer staff, vendors, or consultant. Define the financial criteria used by the customer to make investment decisions (e.g. simple payback period, return on investment, internal rate of return, and/or net present value). If multiple sources of financial analysis, discuss how the project developer’s analysis was important in the customer’s decision (e.g., more reliable, accurate) * Communications documenting internal customer decision process including customer financial decision criteria, non-financial criteria and the decision to proceed relating to the customer and project developer interaction dates. * Meeting documentation showing customer inquiries or the need for financing opportunities and/or OBF, as applicable * Meeting documentation or customer requests that illustrates a need for design assistance, energy and energy cost savings calculations, contractor selection assistance, or other technical services, as applicable * Any alternative options the customer considered for phasing the project, delaying the project or selecting alternatives to reduce cost or accumulate budget authorization over several budgeting cycles |
| 3 | Services Provided | Question 2  Question 5 | Describe the audit and/or recommendation process as it relates to the customer factors and decision points; include any alternatives either presented to or considered by the customer by either the project developer or other consultants or vendors involved previously or concurrently with the project developer’s interactions with the customer.  Why was any alternative measure presented or proposed considered a less attractive choice than the selected measure? | * Project feasibility study, audit report, or other documentation showing expected energy savings and energy cost savings for the project and alternatives (if any) as they relate to the customer’s decision-making process. * Energy and cost savings analysis, project costs, expected incentives for different alternatives (if applicable) with reference to customer financial criteria * Any vendor proposals for various alternative projects * Analysis of non-energy benefits (water savings, reduced waste, reduced disposal costs, differences in labor or other costs per unit of production, difference in lifetime maintenance costs, difference in project schedule, difference in expected down-time for annual maintenance or during initial installation, etc.). |
| 4 | Alternatives | Question 10 | Describe the range of alternatives available to the customer, including the range of technology type, vendors, equipment efficiency, capacity, and costs as appropriate for the technology. | * Any calculations or reports documenting performance of alternative solutions not otherwise covered in the PFS. * References to vendors websites or equipment specifications. |
| 5 | Project Requirements | Question 3 | Describe customer’s current requirements related to the impacted systems or equipment (production, reliability, maintenance, room for expansion, productivity metrics) | * Emails, meeting notes, and call logs or design documents that define performance requirements (production, reliability, comfort, aesthetics, maintenance) for the project boundary * Any project design documents that illustrate changes from the initial design to the more energy efficient design for the project boundary. |
| 6 | Developer Engagement | Question 5  Question 8 | * Describe sequential implementer actions and how implementer's relevant actions affected customer's decision-making. * Describe the customer’s project plan prior to developer engagement and describe how the developer’s engagement with the customer altered the customer’s otherwise planned activity; what information, technical resource, or financial resources played a role in altering or accelerating the customer’s plans * Describe any codes, standards and regulations as well as standard practices and how they are applicable to the existing equipment or process and the relevant energy efficiency measure (e.g., OSHA, AQMD, Title-24, etc.) * Standard Practices including ISP source (e.g., DOE market assessments and CPUC/IOU initiated studies) and ISP type (market or customer specific), with reference to the ISP Guidance Document for formal, informal, and the appropriate rigor level, as appropriate. * Company policies directly related to the project decision (e.g., sustainability plans relevant to the customer decision process, green purchasing guidelines, LEED certification, maintenance and replacement policies, capital improvement plans, etc.) * Federal or State emissions reduction requirements or targets or proposed actions that impact the customer’s planning process related to the equipment. * Consistent use of Standard Practice baselines in program influence narrative and gross savings calculations, | * Customer statement (for example in an annual report or capital expansion plans) of future requirements such as capacity expansion that would impact the systems or equipment being modified or replaced. * ISP studies with reference to ISP Guidance Document * Company purchasing guidelines or design standard documents. * Discussion relating to the impact of customer sustainability or, ISO certification plans or requirements. * Sustainability plans relevant to the customer decision process, business plans or annual reports when related directly to the project implementation decision. * Specific project goals such as LEED rating with reference to PA/PI role in attaining the stated goals * Maintenance policy or maintenance plans * Identification of related activity through customer conversations or noticed during project development or audit activity * News releases, websites or other communications about efficiency projects at this or other sites * Assessment of project impacts on regulatory requirements (e.g., environmental, safety regulations) * Copies of regulations documents applicable to the project * Statements of compliance with environmental or other regulations related to the equipment or systems proposed to be modified * Fines or other actions taken by code enforcement entities related to the equipment or systems proposed to be modified |

## Equipment Viability Narrative and Supporting Evidence

The equipment viability narrative examines equipment attributes and customer needs, concerns, and plans that are used to assess if the existing equipment would be expected to remain in service for its Remaining Useful Life (RUL). The narrative should weigh evidence for and against the continued service of the existing equipment to make a “more likely than not” determination. The explanation of the conclusion must include a discussion of the relative weights of evidence supporting as well as contradicting the conclusion. As noted above, Resolution E-5115 questions pertaining to equipment viability include #3, #6, #7, and #9. The table below presents important discussion factors for this narrative as a guide. Projects are not expected to contain all of these factors. Project developers should bring forward the relevant factors in the narrative discussion.

As noted above, the narrative and evidence related to the items in the below tables should include those relating to equipment condition and capability or capacity as well as short- and long-term identified customer needs and concerns that both support as well as conflict with the ability of the requirement to remain in service for the RUL. It is the responsibility of the project developer to fully and faithfully investigate, identify, and document customer’s current and future needs.

| Equipment Viability Topic Area | Topic Area Summary | E-5115 Related Question | Important Discussion Factors as Applicable for the Project | Examples of Common Items for Substantiation Relating to Key Decision Factors |
| --- | --- | --- | --- | --- |
| 1 | Satisfaction with Existing Equipment | Question 6 | The identified future project requirements (production, reliability, maintenance, room for expansion, productivity metrics) affecting the systems and equipment involved in the project | * Emails, meeting notes, and call logs or other communication that describe the ability of the existing equipment to meet current and future performance requirements (production, reliability, comfort, aesthetics, maintenance) for the project boundary * Emails, meeting notes, and call logs or design documents that define performance requirements (production, reliability, comfort, aesthetics, maintenance) for the project boundary * The identified Capital improvement/expansion plans and any associated budgets * Documentation from meetings and other communications with customer personnel that would reasonably know of such requirements. |
| 2 | Regulatory Constraints | Question 3 | Regulatory constraints such as local codes, environmental regulations (US-EPA and/or AQMD), OSHA compliance or other expected future changes that require advanced planning (such as established emission reduction requirements and targets or expected product requirements) | * Assessment of regulations, codes and standards currently in force, adopted for future application, or in process and likely to be adopted and thus impacting customer planning * Regulations, codes and standards (any kind of regulatory requirement) documents that impact systems or equipment of the project |
| 3 | Existing Equipment Age and Remaining Life | Question 6 | Describe the age of the equipment and how the age was determined  Provide an estimate remaining useful life (or default RUL if the EUL has already been adopted by CPUC policy or CPUC staff guidance) and how the RUL was determined. Also, include:   * An assessment of customer concerns regarding equipment past repairs * Describe any concerns the customer may have regarding future reliability of the equipment and its ability to meet current and future needs for the RUL period * Describe any competitive pressures or considerations that impact the equipment viability over the RUL period (e.g., the need to reduce cost per unit production, increase production, any identified plans to change or addition of alternative products to the production that would affect the systems or equipment targeted by the project) | * Existing equipment make, model, and serial number * Documentation of original purchase date or customer provided estimated installation date * Documentation from meetings and other communications discussing the equipment age and estimated or default RUL * Photos and videos of equipment in operation * Customer statement of acceptable equipment performance (production, reliability, comfort, maintenance) * Documentation of existing equipment performance or operating data (trend logs, equipment efficiency and safety tests) * Affidavit required by Resolution E-5115, signed by the customer to affirm the accuracy of the information provided for the preponderance of evidence of accelerated replacement. |
| 4 | Major Repairs and Maintenance Issues | Question 6  Question 7 | Describe major repairs performed on the existing equipment in past 24 months excluding full overhaul and include   * Period where data is available * Description of how the need for major repairs were identified * Description of repair tracking systems and/or record keeping   Describe any maintenance issues for the existing equipment during past 36 months and include   * Period where data is available * Describe how maintenance issues were identified * Describe repair tracking systems and/or record keeping   Describe regular preventative maintenance activities performed to keep the existing equipment operational to meet the customer’s needs; an assessment of the customer’s concerns regarding past preventative maintenance experience and repairs. | * Maintenance records for systems or equipment targeted by the project * Repair records for systems or equipment targeted by the project * Major overhaul invoice(s) and scope(s) of work for systems or equipment targeted by the project * Customer maintenance policy or maintenance plan (for example, ASHRAE Standard 180 Maintenance Plan) |
| 5 | Customer Upgrade Practices | Question 7 | Describe the customer’s upgrade practice such as group replacement (e.g. re-lamp, capital improvement plans, and repair versus replacement).  Information regarding any other sites where the customer performs similar or related business activities and projects at those sited to upgrade or replace similar equipment | Documentation of upgrade and replacement activities at customer’s site |

1. E-5115 POE Viability – Very Low – Low – Medium – Sept 2023.docx [↑](#footnote-ref-2)
2. E-5115 POE Viability – Very Low – Low – Medium – Sept 2023.docx [↑](#footnote-ref-3)
3. E-5115 POE Viability – Very Low – Low – Medium – Sept 2023.docx [↑](#footnote-ref-4)