# Resolution E-5115 Very Low and Low Rigor Tiers Program Influence Operationalization

# Preface

Participants in the Stakeholders Small Projects and Combined Subgroups in collaboration with CPUC staff 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. The Stakeholders Subgroups 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 program influence. The CPUC chose not to adopt a questionnaire, but rather provided preponderance of evidence guidance on the **minimum information** requirements for project developers to document support of program influence for an accelerated replacement for the customer incentive level thresholds.

For the very low and low rigor incentive tiers, demonstrating program influence can be met with a greatly reduced level of documentation while higher incentive tiers and more complex projects require more analysis and greater detail and supporting evidence.

# Very Low Tier

The Very Low tier includes two questions for this description that must together provide information that supports more likely than not for the influence to be acceptable and justify program eligibility. The responses to these two questions should begin with understanding the customer’s barriers and intentions at the initial engagement and continuing throughout the development process to be able to provide a thorough and complete response to the questions. Trying to answer these questions after the fact is not the appropriate pathway to document support for program influence.

## Question 1

From E-5115 - Describe this project’s development, including factors and decision points that led to the customer’s decision to replace the existing equipment or process. Important discussion factors to assess program influence:

* 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 the two questions.
* Describe the key financial or technical components (both program and non-program services) that were important in the customer’s decision.
* Description of the developer’s audit and/or recommendation process as it relates to the customer factors and decision points
* Important customer factors (For examples, see Very Low and Low Decision Criteria Table. Not all of these will be relevant for all projects.) in the customer interest for the project
* 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.

## Question 2

Describe the project developer’s services provided to the customer and timing of developer’s engagement compared to customer’s decision-making process.

Important discussion factors to assess program influence:

* Entry point of program related to Customer decision to proceed and any other parties’ involvement (i.e. vendors, manufacturers, design consultants, ESCOs)
* Brief description of the audit and/or recommendation process as it relates to the services provided
* 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.
* Show on the project timeline the project development and the customer decision making process including first contact, key financial and technical components in the decision, and what lead to the customer’s decision to proceed with the implementation of the proposed measures.

Documentation requirements

The narrative answering Questions 1 and 2 includes a discussion of the project development and facts illustrating the components that support and do not support the conclusion of program influence. Although this rigor does not require any further e-mail or other documentation to support the narrative, project developers should collect and maintain documentation. If there is a standard questionnaire used as part of the project development, that should be included to support the narrative.

# Low Tier

E-5115 directs the project developer to collect information from the customer and provide written responses to demonstrate program influence and the current maintenance and upgrade practices. The Low tier includes three questions that must together provide information that supports more likely than not for the influence to be acceptable to justify program eligibility. The influence determination is dependent on the overall balance of the evidence supporting and not supporting program influence presented within the responses.

The responses to these three questions should begin with understanding the customer’s barriers and intentions at the initial engagement and continuing throughout the development process to be able to provide a thorough and complete response to the questions. Trying to answer these questions after the fact is not the appropriate pathway to document support for program influence.

## Question 1

Describe this project’s development, including factors and decision points that led to the customer’s decision to replace the existing equipment or process.

Important discussion factors to assess program influence – augmented compared to Very Low

* 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 the two questions.
* 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 their normal replacement of the equipment. This may include avoidance of possible future problems or acceleration of the ability to handle future possible needs.
* Describe the customers decision making process, the decision maker(s), decision criteria, and any key limiting factors
* Description of the audit and/or recommendation process as it relates to the customer factors and decision points; include alternatives either presented to, or considered by the customer.
* Important customer factors (See Very Low and Low Decision Criteria Table) in the customer interest for the project
* 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

## Question 2

Describe the project developer’s services provided to the customer and timing of developer’s engagement compared to customer’s decision-making process.

Important discussion factors to assess program influence – augmented compared to Very Low

* Entry point of program related to Customer decision to proceed and any other parties’ involvement (i.e. vendors, manufacturers, design consultants, ESCOs)
* 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 the customer’s plans
* Brief description of the audit and/or recommendation process as it relates to the services provided
* 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
* Show on the timeline illustrating the project development and the customer decision making process including first contact, key financial and technical components in the decision, and what lead to the customer’s decision to proceed with the implementation of the proposed measures.

## Question 3

Describe the customer’s maintenance and/or upgrade practices associated with the equipment or process, if applicable.

Important discussion factors to assess program influence

* Information pertaining to regular preventative maintenance activities performed to keep the existing equipment operation to meet the customer’s needs; an assessment of the customer’s concerns regarding past preventative maintenance experience
* Description of any recent repairs that have been completed to keep the equipment in operation; an assessment of customer concerns regarding equipment past repairs
* Information regarding the customer’s upgrade practices such as group replacement (e.g. re-lamp), capital improvement plans, and repair versus replacement).

Documentation requirements

The narrative answering Questions 1, 2, and 3 includes a discussion of the project development and facts illustrating the components that support and do not support the conclusion of program influence. Supporting the key facts in the narrative include summaries of meetings or discussions and/or standard questionnaire supporting the narrative descriptions. Note: including actual emails or meeting notes of summary of meetings or discussions would provide helpful supporting documentation.

# Very Low and Low Decision Criteria

The following table provides examples of common factors in the customer’s decision to move forward with descriptions of scenarios that support and do not support Program Influence (PI). Not all these factors may be important to or present on every project.

| PI Factors | Supports More Likely PI | Supports Less Likely PI | Tier Applicability | |
| --- | --- | --- | --- | --- |
| Very Low | Low |
| Customer Engagement | Prior to program engagement the customer has not sought and/or obtained bids for either all, some, or similar measures to those proposed. | Prior to program engagement the customer sought and/or obtained bids for either all, some, or similar measures to those proposed. | X | X |
|  | Engagement begins and program services provided prior to customer decision on proposed scope [1] | Engagement begins and program services provided after customer decision on proposed scope [1] | X | X |
| Program Incentive | Program incentive causes the project finances to cross the customer’s funding criteria (e.g. simple payback) | Program incentive does not cause the project finances to cross the customer’s funding criteria (e.g. simple payback) | X | X |
| Program incentive listed prominently in company internal documentation requesting project approval and dollar amount has significance in overall project funding requirement | Program incentive not listed prominently in company internal documentation requesting project approval and dollar amount has little significance in overall project funding requirement | X | X |
| Proposed project scope was identified prior to program engagement but had not moved forward due to budget limitation. Program incentive offered allowed reconsideration and project approval contingent on incentive. | Proposed project scope was identified prior to program engagement and had been given budget allocation. | X | X |
| Proposed project scope was identified prior to program engagement and had been given budget allocation but that allocation was over several years. Program incentive allowed project schedule to be moved up several years. | Proposed project scope was identified prior to program engagement and had been given budget allocation but that allocation was over several years. There is weak evidence that the program incentive allowed project schedule to be moved up several years. | X | X |
| Proposed project scope was identified prior to program engagement but was downgraded in efficiency due to cost considerations. The program suggested reinstating more efficient scope providing details and supporting incentive and energy savings documentation. | Proposed project scope was identified prior to program engagement and there is weak evidence that the program documentation supporting the more efficient scope had a significant impact on the decision process. | X | X |
| Project Funding Source | Customer has no internal access to approvable project funding sources in the foreseeable future. Developer provides non-incentive funding source support through utility (On-Bill Financing) or non-utility funding contacts | Customer has funding sources available. There is weak evidence that use of developer identified funding sources, if used, impacted the decision process. | X | X |
| Measure Identification | Developer identifies the measure through an audit or another intervention. There is no evidence that the primary recommendations were made previously. | Measure identification occurred outside of the program services. | X | X |
| Developer generates the project scope. | Developer has minimal or no input on the determination of the scope. | X | X |
| An alternate project scope was identified prior to program engagement but program suggested improvements to scope details and supporting cost and energy savings documentation that results in project scope changes leading to the selection of more efficient equipment and/or processes. | An alternate project scope was identified prior to program engagement. There were no significant program suggested improvements to scope details that were not previously under consideration. Program supplied supporting cost and energy savings documentation cannot be clearly shown to have influenced the decision to proceed. | X | X |
| Project Energy and Cost Savings | Customer either does not know the energy and cost savings, or does not fully trust previously obtained estimates and needs this information to be able to make the business decision to move forward. There is clear evidence that the developer provided information was accepted by the customer and assisted in the customer moving forward. | Customer knows the energy and cost savings or those are not important in the customer’s decision making process | X | X |
| Customer is reluctant to move forward and needs validation of a vendor’s energy and cost savings to be able to make the business decision to move forward. There is clear evidence that the developer provided information was accepted by the customer and assisted in the customer moving forward. | Customer believes or does not need validation of a vendor’s energy and cost savings to be able to make the business decision to move forward. | X | X |
| Contractor Identification | The customer was unsure on moving forward due to their inability to locate or evaluate the quality or qualifications of vendors to perform the project scope. The expected vendor to install the project was introduced to the customer through a Trade Ally network engagement or a direct list of vendors from the program. | The customer has past experience in locating and evaluating the quality or qualifications of vendors to perform the project scope. The expected vendor to install was introduced to or selected by the customer outside of the program. | X | X |
| Preventative Maintenance | Customer performs preventative maintenance to keep the equipment operational. Available evidence indicates that this practice will continue into the future for the equipment replacements proposed. | Customer does not perform preventative maintenance on the equipment. There is no evidence that indicates the customer intends to institute a regular maintenance in the future. |  | X |
| Recent Repairs | Recent repairs have been made to prolong the life of the equipment. Recent being the past 3-5 years. Available evidence indicates that this repair practice will continue into the future. | Recent repairs have not been made to prolong the life of the equipment. This includes if no repairs were necessary. |  | X |
| Recent significant repairs have been made to the equipment and continuing these types of repairs are not a concern to the customer | Recent repairs have been made and those are of concern to the customer. |  | X |
| Upgrade Practice | Customer appears to have a repair rather than replacement preference that is clearly demonstrated by a repair history for the equipment or similar equipment at the customer site. | Customer appears to have a replace rather than repair preference evidenced though a replacement history for the existing equipment or similar equipment at the customer site. |  | X |
| Capital Plans | Customer has a near term capital plan that does not include the system or equipment involved in the project. | Customer has a near term capital plan that has the system or equipment involved in the project. |  | X |
| Customer has a near term capital plan that includes the system or equipment involved in the project but those plans are several years out and have been delayed several time and likely will be delayed again. | Customer has a near term capital plan that includes the system or equipment involved in the project and there is no evidence that a delay is likely. |  | X |

[1] Proposed scope is the PFS submitted scope. Engagement with a timeframe such that a customer had a proposal they were committed to implementing could still return a more likely if the proposal was changed through intervention to more efficient equipment selection.

# Very Low Tier Examples

The following examples include concepts for illustrative purposes. Additional details may be necessary based on the individual project specifics.

## Example VL-1

Q1 - Implementer engaged with the customer through a targeted marketing effort in January 2021. At that time, the customer was interested in energy efficiency projects to reduce utility cost. The customer was aware that LEDs and VFDs can save energy. However, the customer does not have the expertise to understand the associated cost savings specific to their facility. Thus, the customer was unable to make an informed decision to implement or not implement the energy efficiency measures. In February, the Implementer reviewed site specific information to provide energy savings estimates. These were presented to the customer in March 2021 and the customer decided to sign the utility application document to seek utility approval for the incentive.

Q2 - Implementer provided direct influence with technical services by auditing the customer’s facility and providing energy savings estimates for the measures prior to the customer’s decision to implement the measures. The audit occurred in February with the energy savings estimates being presented to the customer in March. Upon seeing the energy savings estimates and the associated incentive, the customer was able to make a business decision to move forward, pending utility approval, to implement the measures. This is a change from the customer’s actions of continuing to operate as is prior to the Implementer’s involvement.

*Proposed PI outcome – This example shows intervention prior to a decision from the customer. Additionally, pertinent information (in this case, energy cost savings) was provided by the implementer that was in important factor in the customer’s decision to implement the measures. Although the customer was already aware of cost savings strategies with the measures, without this information, the customer would not have been confident that implementing the measures was a sound business decision and likely would have continued to operate the existing equipment.*

## Example VL-2

Q1 - The Implementer was presented with a proposal from October 2020 by a lighting vendor in February 2021. The proposal was developed prior to implementer engagement and had a payback of 3.5 years without utility rebates/incentives. The vendor indicated that the customer had not moved forward because the payback was too long. The implementer discussed the program requirements with the vendor. In this discussion, the vendor indicated that the customer needs a shorter payback, <3 years, to implement the project. The implementer reviewed the proposal and indicated they could provide an incentive to reduce the project payback to 2.7 years.

Q2 – At the time of initiation intervention, the customer had shown an interest in the project by sourcing a proposal. However, the project was not proceeding because the payback was too long. The program offered an incentive to reduce the payback below the customer’s threshold. This allowed the Customer to implement the measure within the acceptable financial criteria of a payback <3 years.

*Proposed PI outcome – This example shows a stalled project at the time of Implementer intervention. The implementer did not identify the measure, perform any calculations for the customer, or identify contractors. Financial influence is provided with the energy efficiency program incentive lowering the payback below the customer’s payback threshold. Thus, driving the customer decision to move forward through interaction with a vendor.*

## Example VL-3

Q1 - The Implementer was presented with a proposal by a lighting vendor in February 2021. The proposal was developed prior to Implementer engagement. The project had a payback of 1.5 years, and did not include any utility rebates but already met the customer’s payback criteria of 2 years. The vendor indicated that the customer was ready to move forward on the proposal but asked if any rebates could be included. The implementer reviewed the proposal and noted that DLC premium LEDs were not included in the scope. They discussed the program requirements with the vendor and advised that Program funds are intended to incentivize projects that would not happen absent of the program. The implementer advised that if the vendors modified the proposal to higher efficacy LEDs, the project could receive an incentive based on the incremental savings from Standard Practice baseline. The implementer provided example LED products that are eligible to the vendor.

Q2 – At the time of initiation intervention, the customer was already going to install LED lighting to replace the older lighting. Through the intervention, the implementer suggested that the scope be revised to upgrade the project to higher efficacy LEDs. The vendors revised the proposal, and the customer chose to install more efficient LED lighting than was originally in the proposal.

*Proposed PI outcome – This example shows a project that the customer had already decided to implement. The Implementer changed the scope through intervention with the vendor. While Preponderance of Evidence is not compliant for AR due to the customer’s decision to install new lighting made prior to program intervention, this satisfies program influence for NR.*

## Example VL-4

Q1 - The Implementer developed a relationship with a lighting vendor to be a Trade Pro for the Implementer’s program. The Implementer provided training for the vendor on program rules, eligibility, and appropriate energy savings and rebate calculations. The vendor subsequently began marketing the program. The vendor visited the customer to audit the facility and proposed energy efficiency upgrade that the customer had not considered. The Implementer reviewed the proposal for product eligibility and identified the eligible incentive available for the project. A proposal was provided to the customer outlining the proposed eligible DLC rated LED equipment and included the incentive in the proposal. The customer agreed to install the LED project.

Q2 – The program provided training for the vendor on program rules, eligibility requirements and rebate levels. The vendor used this training to educate the customer on program eligibility and rebates to buy down the cost of the project prior to the Customer’s decision to proceed with the project.

*Proposed PI outcome – This example shows an interaction between the Implementer and a Trade Pro followed by a successful sale of the project to a customer who otherwise would have done nothing. The rebate was included in the proposal to the customer.*

## Example VL-5

Q1 - The Implementer solicited the customer through a direct marketing campaign. A site visit was conducted to evaluate the potential to perform Direct Install measures through the program. The implementer audited the facility to identify the T-LED opportunity. Following the audit, the Customer indicated that they were interested in the replacement of the fluorescent lighting with T-LED technology that were identified through Program intervention. The Implementer performed the installation that same day.

Q2 – The program initiated the intervention and audit through marketing and Direct Install (DI) services. Since the DI initiates measure identification, auditing, and installation at no or low cost to the customer, it is reasonable to assume that without this intervention, the Customer would continue to operate with like for like equipment replacements on burn out as they had been.

*Proposed PI outcome – This example shows an interaction between the Implementer and the customer with an audit followed by the installation. Thus, the program activity altered the action from the customer from business as usual to installing energy efficient equipment.*

## Example VL-6

Q1 - The Implementer was presented with a proposal by a lighting vendor in February 2021. The proposal was developed prior to Implementer engagement. The project had a payback of 1.5 years, did not include any utility rebates but already met the customer’s payback criteria of 2 years. The vendor indicated that the customer was ready to move forward on the proposal but asked if any rebates could be included. The implementer reviewed the proposal and noted that DLC premium LEDs were included in the majority of the scope. They discussed the program requirements with the vendor and advised that Program funds are intended to incentivize projects that would not happen absent of the program.

Q2 – At the time of initiation intervention, the customer was already going to install LED lighting. Through the intervention, the implementer was unable to convince the vendor to upgrade the project to higher efficacy LEDs.

*Proposed PI outcome – This example is not compliant because the customer’s decisions were not able to be altered through program intervention.*

## Example VL-7

Q1 - The Implementer developed a relationship with a lighting vendor to be a Trade Pro for the Implementer’s program. The Implementer provided training for the vendor on program rules, eligibility, and appropriate energy savings and rebate calculations. The vendor subsequently began marketing the program. The vendor presented the implementer with a proposal for the customer. The Implementer reviewed the proposal for product eligibility and identified the eligible incentive available for the project. A proposal was provided to the customer outlining the proposed eligible DLC rated LED equipment and included the incentive in the proposal. The customer was also considering two other vendor proposals. Some of these other proposals also included eligible LED products. The customer agreed to install the LED project from the vendor participating as a Trade Pro for the program.

Q2 – The program provided training for the vendor on program rules, eligibility requirements and rebate levels. The vendor used this training to educate the customer on program eligibility and rebates to buy down the cost of the project prior to the Customer’s decision to proceed with the project.

*Proposed PI outcome – This example shows an interaction between the Implementer and a Trade Pro followed by a successful sale of the project to a customer who otherwise would have done nothing. The rebate was included in the proposal to the customer. However, the customer appears to have been considering a similar product from other vendors not participating. This would lead to a less likely PI outcome.*

# Low Tier Examples

## Example L-1

Q1 - Implementer engaged with the customer through a targeted marketing effort in January 2021. At that time, the customer was interested in energy efficiency projects to reduce utility cost. The customer was aware that LEDs and VFDs can save energy. However, the customer does not have the expertise to understand the associated cost savings specific to their facility. Thus, the customer was unable to make an informed decision to implement or not implement the energy efficiency measures. In February, the Implementer reviewed site specific information to provide energy savings estimates. These were presented to the customer in March 2021 and the customer decided to sign the utility application document to seek utility approval for the incentive.

Q2 - Implementer provided direct influence with technical services by auditing the customer’s facility and providing energy savings estimates for the measures prior to the customer’s decision to implement the measures. The audit occurred in February with the energy savings estimates being presented to the customer in March. Upon seeing the energy savings estimates and the associated incentive, the customer was able to make a business decision to move forward, pending utility approval, to implement the measures. This is a change from the customer’s actions of continuing to operate as is prior to the Implementer’s involvement.

Q3 – The customer’s upgrade practices including replacing lights and ballasts on an as needed basis with like for like. A photo shows that there is not a significant number of non-operating lights (e.g. <10%) and that there are no more energy efficient lighting installed replacing burnt out ones. Package units to be equipped with VFDs receive regular maintenance described as filter changes and inspection as described by the customer. Necessary repairs are made on identified deficiencies critical to the ongoing operation of the package unit. The customer tends to repair HVAC units first before replacement.

*Proposed PI outcome – For Q1 and Q2, this example shows intervention prior to a decision from the customer. Additionally, pertinent information (in this case, energy cost savings) was provided by the implementer that was in important factor in the customer’s decision to implement the measures. . Although the customer was already aware of cost savings strategies with the measures, without this information, the customer would not have been confident that implementing the measures was a sound business decision and likely would have continued to operate the existing equipment. For Q3, the photo is evidence that the lights are maintained and not replaced with new more efficient lighting. Additionally, the customer’s upgrade practices are to replace like for like and repair HVAC units prior to replacement. No further documentation is needed because if they were not maintained, we would see non-ops or newer lighting. If there are non-ops in the photos, then additional purchasing history could be included. Additionally, the package units show that they are not completely neglected and identified issues critical to the operation are repaired. Thus, leads to more likely.*

## Example L-2

Q1 - The Implementer was presented with a proposal from October 2020 by an HVAC vendor in February 2021. The proposal had a payback of 3.5 years without utility rebates/incentives. The vendor, who had made first contact with the customer, indicated that the customer had not moved forward because the payback was too long. The implementer discussed the program requirements with the vendor. In this discussion, the vendor indicated that the customer needs a shorter payback, <3 years, to implement the project. The implementer reviewed the proposal and indicated they could provide an incentive to reduce the project payback to 2.7 years.

Q2 – At the time of initiation intervention, the customer had shown an interest in the project by sourcing a proposal. However, the project was not proceeding because the payback was too long. The program offered an incentive to reduce the payback below the customer’s threshold. This allowed the Customer to implement the measure within the acceptable financial criteria of a payback <3 years.

Q3 – Although the vendor indicated the equipment was working, the vendor was not aware of any regular maintenance activities on the equipment. The implementer was unable to contact the customer to get any further information.

*Proposed PI outcome – This example shows a stalled project at the time of Implementer intervention. The implementer did not identify the measure, perform any calculations for the customer, or identify contractors. Financial influence is provided with the energy efficiency program incentive lowering the payback below the customer’s payback threshold. Thus, driving the customer decision to move forward through interaction with a vendor. This satisfies the more likely categorization for Q1 and Q2. The lack of knowledge of any maintenance activities might imply less likely for Q3. The project overall in consideration of all three questions satisfies a more likely than not determination based on the weight of the importance of the financial influence of the stalled project in comparison to the lack of evidence based on maintenance and upgrade practices.*

## Example L-3

Q1 - The Implementer was presented with a proposal from October 2020 by an HVAC vendor in February 2021. The proposal was developed prior to implementer engagement and had a payback of 3.5 years without utility rebates/incentives. The vendor indicated that the customer had not moved forward because the payback was too long. The implementer discussed the program requirements with the vendor. In this discussion, the vendor indicated that the customer needs a shorter payback, <3 years, to implement the project. The implementer reviewed the proposal and indicated they could provide an incentive to reduce the project payback to 2.7 years.

Q2 – At the time of initiation intervention, the customer was interested in the project, but the payback was too long. The program offered an incentive to reduce the payback below the customer’s threshold. This allowed the Customer to implement the measure within the acceptable financial criteria of a payback <3 years.

Q3 – The customer performs regular equipment maintenance on the HVAC equipment. On a quarterly basis, typical maintenance activities include, but are not limited to, changing filters, cleaning evaporator and condenser coils as necessary, check and replace all pulleys and belts as necessary, checking refrigerant charge, and lubrication of moving parts. Repairs are made as needed to maintain system operation. The customer’s general upgrade strategy is to repair and replace as needed with like for like standard efficiency equipment.

*Proposed PI outcome – This example shows a stalled project at the time of Implementer intervention. The* *implementer did not identify the measure, perform any calculations for the customer, or identify contractors. Financial influence is provided with the energy efficiency program incentive lowering the payback below the customer’s payback threshold. Thus, driving the customer decision to move forward through interaction with a vendor. This satisfies the more likely categorization for Q1 and Q2. Q3 response implies more likely with regular maintenance activities being performed on the HVAC systems and like for like upgrade practices.*

## Example L-4

Q1 - The Implementer solicited the customer through a direct marketing campaign. A site visit was conducted to evaluate the potential to perform Direct Install measures through the program. The implementer audited the facility to identify the T-LED opportunity. Following the audit, the Customer indicated that they were interested in the replacement of the fluorescent lighting with T-LED technology that were identified through Program intervention. The Implementer performed the installation that same day.

Q2 – The program initiated the intervention and audit through marketing and Direct Install (DI) services. Since the DI initiates measure identification, auditing, and installation at no or low cost to the customer, it is reasonable to assume that without this intervention, the Customer would continue to operate with like for like equipment replacements on burn out as they had been.

Q3 – The Customer confirmed that they replace lamps and ballasts as needed on a like for like basis. They utilize existing maintenance staff for lamp replacement and hire an electrician for any ballast replacement. For this reason, they only have lamps in backstock. The Implementer took pictures of the lighting system in operation and the non-operating equipment was less than 10% and that no new more energy efficient lighting had been installed. This confirms that maintenance is occurring, and that the customer had not on its own installed the more energy efficient lighting in the past.

*Proposed PI outcome – This example shows an interaction between the Implementer and the customer with an audit followed by the installation. Thus, the program activity altered the action from the customer from business as usual to installing energy efficient equipment. Additionally, the customer is performing regular maintenance of the system and did not have a practice to upgrade to the more energy efficient lighting.*

## Example L-5

Q1 - The Implementer solicited the customer through a direct marketing campaign. A site visit was conducted to evaluate the potential to perform Direct Install measures through the program. The implementer audited the facility to identify the T-LED opportunity. Following the audit, the Customer indicated that they were interested in the replacement of the fluorescent lighting with T-LED technology that were identified through Program intervention. The Implementer performed the installation that same day.

Q2 – The program initiated the intervention and audit through marketing and Direct Install (DI) services. Since the DI initiates measure identification, auditing, and installation at no or low cost to the customer, it is reasonable to assume that without this intervention, the Customer would continue to operate with like for like equipment replacements on burn out as they had been.

Q3 – The Customer confirmed that they intend to replace lamps and ballasts as needed on a like for like basis but are having issues finding adequately priced replacement products. They utilize existing maintenance staff for lamp replacement and hire an electrician for any ballast replacement. Electrician prices have escalated due to a shortage of capable workers. The Implementer took pictures of the lighting system in operation and the non-operating equipment was around 10% with some less occupied rooms having more burnt out lamps and ballasts.

*Proposed PI outcome – This example shows an interaction between the Implementer and the customer with an audit followed by the installation. The customer indicates that they perform regular maintenance of the system, but the increase costs and the presence of significant non-operating equipment may imply that some maintenance has been neglected recently. Although the program activity drove the direct install activity in a quick time frame, the maintenance practices with non-operating equipment outweighs this intervention as it is likely they would have replaced lamps and ballasts in the near future. The like for like replacements implies standard efficacy LEDs would likely be installed and a Normal Replacement measure application type.*

## Example L-6

Q1 - The Implementer solicited the customer through a direct marketing campaign. A site visit was conducted to evaluate the potential to perform Direct Install measures through the program. The implementer audited the facility to identify the T-LED opportunity. Following the audit, the Customer indicated that they were interested in the replacement of the fluorescent lighting with T-LED technology that were identified through Program intervention. The Implementer performed the installation that same day.

Q2 – The program initiated the intervention and audit through marketing and Direct Install (DI) services. Since the DI initiates measure identification, auditing, and installation at no or low cost to the customer, it is reasonable to assume that without this intervention, the Customer would continue to operate with like for like equipment replacements on burn out as they had been.

Q3 – The Customer confirmed that they intend to replace lamps and ballasts and prefer high efficiency equipment but are having issues finding adequately priced replacement products. They utilize existing maintenance staff for lamp replacement and hire an electrician for any ballast replacement. Electrician prices have escalated due to a shortage of capable workers. The Implementer took pictures of the lighting system in operation and the non-operating equipment was around 10% with some less occupied rooms having more burnt out lamps and ballasts.

*Proposed PI outcome – This example shows an interaction between the Implementer and the customer with an audit followed by the installation. The customer indicates that they perform regular maintenance of the system, but the increase costs and the presence of significant non-operating equipment may imply that some maintenance has been neglected recently. Although the program activity drove the direct install activity in a quick time frame, the maintenance practices with non-operating equipment outweighs this intervention as it is likely they would have replaced lamps and ballasts with high efficiency products in the near future.*

## Example L-7

Q1 - The Implementer was presented with a proposal from October 2020 by an HVAC vendor in February 2021. The proposal had a payback of 3.5 years without utility rebates/incentives. The vendor, who had made first contact with the customer, indicated that the customer had not moved forward because the payback was too long. The implementer discussed the program requirements with the vendor. In this discussion, the vendor indicated that the customer needs a shorter payback, <3 years, to implement the project. The implementer reviewed the proposal and indicated they could provide an incentive to reduce the project payback to 2.7 years.

Q2 – At the time of initiation intervention, the customer was interested in the project, but the payback was too long. The program offered an incentive to reduce the payback below the customer’s threshold. This allowed the Customer to implement the measure within the acceptable financial criteria of a payback <3 years.

Q3 – The customer performs regular equipment maintenance on the HVAC equipment. On a quarterly basis, typical maintenance activities include, but are not limited to, changing filters, cleaning evaporator and condenser coils as necessary, check and replace all pulleys and belts as necessary, checking refrigerant charge, and lubrication of moving parts. Significant repairs have been made three times in the last 1.5 years to maintain system operation. The customer has not replaced this equipment in the two years owning the building.

*Proposed PI outcome – This example shows a stalled project at the time of Implementer intervention. The vendor identified the measure outside of the program services. Financial influence is provided with the energy efficiency program incentive lowering the payback below the customer’s payback threshold. Thus, driving the customer decision to move forward through interaction with a vendor. This satisfies the more likely categorization for Q1 and Q2. Although the customer is performing regular routine maintenance, they have had costly repairs three times recently which would imply that they may consider replacing the unit regardless of the extra cost above their payback threshold. This outweighs the financial incentive. There may be opportunities for eligible savings through a Normal Replacement measure application type if it can be shown that the customer would have installed standard efficiency equipment.*