

RTR Appendix

Southern California Edison, Pacific Gas and Electric, Southern California Gas, and San Diego Gas and Electric (“Joint Utilities” or “Joint IOUs”) developed Responses to Recommendations (RTR) contained in the evaluation studies of the 2013-2015 Energy Efficiency Program Cycle and beyond. This Appendix contains the Responses to Recommendations in the report:

RTR for the Final Impact Evaluation: NonResidential Lighting Sector—Program Year 2020 (Quantum Energy Analytics; DNV; Calmac ID #CPU0335.01, ED WO #GroupA_Lighting_YR4)

The RTR reports demonstrate the Joint Utilities’ plans and activities to incorporate EM&V evaluation recommendations into programs to improve performance and operations, where applicable. The Joint IOUs’ approach is consistent with the CPUC Decision (D.) 07-09-043¹ and the Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan² for 2013 and beyond.

Individual RTR reports consist of a spreadsheet for each evaluation study. Recommendations were copied verbatim from each evaluation’s “Recommendations” section.³ In cases where reports do not contain a section for recommendations, the Joint IOUs attempted to identify recommendations contained within the evaluation. Responses to the recommendations were made on a statewide basis when possible, and when that was not appropriate (e.g., due to utility-specific recommendations), the Joint IOUs responded individually and clearly indicated the authorship of the response.

The Joint IOUs are proud of this opportunity to publicly demonstrate how programs are taking advantage of evaluation recommendations, while providing transparency to stakeholders on the “positive feedback loop” between program design, implementation, and evaluation. This feedback loop can also provide guidance to the evaluation community on the types and structure of recommendations that are most relevant and helpful to program managers. The Joint IOUs believe this feedback will help improve both programs and future evaluation reports.

¹ Attachment 7, page 4, “Within 60 days of public release, program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings as they relate to potential changes to the programs. Energy Division can choose to extend the 60 day limit if the administrator presents a compelling case that more time is needed and the delay will not cause any problems in the implementation schedule, and may shorten the time on a case-by-case basis if necessary to avoid delays in the schedule.”

² Page 336, “Within 60 days of public release of a final report, the program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings. The IOU responses will be posted on the public document website.” The Plan is available at <http://www.energydataweb.com/cpuc>.

³ Recommendations may have also been made to the CPUC, the CEC, and evaluators. Responses to these recommendations will be made by Energy Division at a later time and posted separately.

Response to Recommendations (RTR) in Impact, Process, and Market Assessment Studies

Study Title: Final Impact Evaluation: NonResidential Lighting Sector—Program Year 2020
Program: Lighting
Author: Quantum Energy Analytics; DNV
Calmac ID: CPU0335.01
ED WO: GroupA_Lighting_YR4
Link to Report: https://www.calmac.org/publications/___AllSections_Final_w_Apps.pdf

| Item # | Sec. # | Findings | Best Practice / Recommendations (Verbatim from Final Report) | Recommendation Recipient | PG&E (if applicable) | | SCE (if applicable) | | SDG&E (if applicable) | |
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| | | | | | Disposition | Disposition Notes | Disposition | Disposition Notes | Disposition | Disposition Notes |
| | | | | If incorrect, please indicate and redirect in notes. | Choose: Accepted, Rejected, or Other | Examples: Describe specific program change, give reason for rejection, or indicate that it's under further review. | Choose: Accepted, Rejected, or Other | Examples: Describe specific program change, give reason for rejection, or indicate that it's under further review. | Choose: Accepted, Rejected, or Other | Examples: Describe specific program change, give reason for rejection, or indicate that it's under further review. |
| 1 | 5 | Overall, we found higher operating hours – especially within specific sectors like retail establishments – than the PAs claimed. Higher evaluated operating hours lead to more significant annual energy savings. Our evaluation team found HOU claims and associated energy/demand savings used a building type designation that do not correspond to the actual activity level within a facility. For example, out of 146 sites surveyed, 29 sites (retail establishments, hospitals, lodging, manufacturing facilities, and offices) operate 24-hours a day and had much greater reported HOU than claimed. | The ex ante/DEER team should consider utilizing the monitoring data, along with the business hour and self-reported operating schedules collected as part of this evaluation, to support the development of updated operating hour estimates for LED Fixtures and TLEDs. Furthermore, the ex ante/DEER team should consider having businesses that operate 24 hours a day be a unique case, and claimed operating hours should be updated to reflect higher activity within these facilities. | CPUC | | | | | | |
| 2 | 5 | As a result of the increased hours of operation, the life of the measure decreases, in terms of years. The more the lighting system is used, the sooner it is likely to fail or need to be replaced. This leads to less lifecycle energy savings, sometimes cancelling out the benefit of the increase in annual operating hours. | Future evaluations should continue to monitor the age and condition of existing fixtures like fluorescent technologies. LED tube lamps replace the fluorescent tube lamps, but the existing fixture remains. Understanding the age and condition of that existing fixture would provide more information regarding how long the whole fixture will last before it requires replacement. | CPUC | | | | | | |
| 3 | 5 | The workpapers indicate that measure life should be capped at 12 years for fixtures and 5 years for tubes. The PAs generally followed this guideline, with one exception: SCE and SDG&E capped measure life at 16 years for | It is important that eTRM ensure consistency between wording in the Workpapers and the eTRM tables that are in- | CPUC, eTRM | | | | | | |

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| | | the fixtures where the quantity installed is the amount of light generated by the lighting system (in lumens.) The 16-year value reflects a version of the workpapers that was in effect before 2020, but is consistent with current eTRM tables. | tended for use by the PAs. Program goals planning and cost effectiveness analysis are virtually impossible when the measure life "of record" is ambiguous. | | | | | | | |
| 4 | 6 | Although, we found that the programs were fairly influential in the customers' decision to install indoor LEDs, the ex post NTGRs for Fixtures and Kilolumens were significantly less than the ex ante value typically used for these measures. | The ex ante NTGR for LED Fixtures should be reassessed as it is significantly higher than the ex post results. Potentially, the ex ante NTGR for LED tubes, or a number in that range, may be a more appropriate value to use as it was much in line with ex post results. | PG&E, SCE, SDG&E | Other | On this recommendation, PG&E defers to SCE as the statewide lead for non-residential lighting measures. | Other | NTG is determined by Deemed Ex Ante team. In general, it is acceptable if Ex Post finds a lower NTG value. Since this value will then eventually go back to the Deemed Ex Ante team as feedback and they adjust accordingly, in which they have done for PY2023 as 0.65. | Accepted | |
| 5 | 5, 6 | The quality of contact information for mid-stream program participating customers was drastically improved over prior evaluations. Although some participant contact information provided by the IOUs corresponded to distributors or contractors, rather than to the participants, the large majority of customer contact information was reliable. In previous evaluations, we found that some programs provided no customer contact information, or little reliable data. | With the transition to 3P programs that include a Midstream delivery approach, it is important that the PA's continue to reliably collect both customer and distributor contact information to support the evaluation process. The Midstream NTG framework generally calls for values that are based on a combination of customer and distributor survey results. | PG&E, SCE, SDG&E | Accepted | Obtaining the appropriate customer contact information for ex post auditing through mid-stream channels since there are multiple points of contact in the decision-making process and at times the decision maker is not the on-site facility manager. PG&E appreciates the note that the evaluator found contact information to be higher quality than in prior studies. | Accepted | SCE relies on its Third-Party Implementer (TRC) to collect and verify customer and distributor contact information for the midstream Statewide Lighting Program. Additionally, SCE will continue to verify the customer and distributor data in iEnergy against the Sales Data File and invoice included in the project submission. | Other | SDG&E had revised its processes from previous RTRs to collect customer data and agree with the outcome of this evaluation in this regard. SDG&E is not the lead IOU for the SW midstream lighting program and will not be able to comment on this implementation going forward. |
| 6 | 5 | The evaluation team found evidence of one SCE program incorrectly reporting the unit basis of claimed savings for measures rebated by the total lumens installed, rather than the total number of fixtures or lamps installed. | PAs should carefully review claims data for projects rebated with a unit basis of kilolumens, to confirm that the unit basis is correct, and that the claimed units installed represent the total kilolumens installed rather than the total fixtures installed. | SCE | | | Accepted | SCE systems have been enhanced to clearly differentiate between the way a measure is paid (pricing unit) and the way that savings are calculated (norm units). Prior to these changes, the pricing unit and norm units were required to be the same. In the case with previous lighting measures, the norm units for savings could be based on lamps, fixtures, or lumens. System enhancements were also implemented to display validation messages if the norm unit values per measure are outside of a predefined range. For example: <ul style="list-style-type: none"> • If the norm unit for Lighting Measure A is based on the number of fixtures, a validation would identify if the number of fixtures per fixture was not equal to 1. • If the norm unit for Lighting Measure B is based on the number of lamps per fixture, a validation would identify if the number of lamps per fixture was | | |

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| | | | | | | | | <p>outside a range of 1-4 lamps.</p> <ul style="list-style-type: none"> If the norm unit for Lighting Measure C is based on the number of lumens per fixture, a validation would identify if the number of lumens per fixture was outside a range of 4500 to 5400 lumens. <p>In all cases, the system now tracks and enforces if the pricing unit is multiplied by the number of measures or if the pricing unit is multiplied by the number of measures and then multiplied by the norm units per measure.</p> <p>Additionally, all remaining active lighting measures have norm units based on fixtures or lamps so challenges with quantifying lumens has been simplified for all IOU's.</p> | | |
| 7 | 5 | While researching and summarizing the DEER HOU, CDF and IE parameters that contribute to the claimed UES values, we confirmed that each PA uses its own system to populate ex ante UES values. | Workbook calculations and supporting documents should identify the exact combination of building type/location that is best suited for mass installations such as those found in the midstream channel. | PG&E, SCE, SDG&E | Other | On this recommendation, PG&E defers to SCE as the statewide lead for non-residential lighting measures. | Accepted | Effective in 2022, all IOUs and PAs now utilize the CPUC's eTRM system for savings values that are reported to the CPUC. The IOUs are actively working with the CPUC to resolve issues and gaps in the data provided from eTRM. | Other | SDG&E is not the lead for the SW Midstream lighting program so unable to comment on this topic. |