

## 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 2019*** (Quantum Energy Analytics, DNV GL; Calmac ID #CPU0226.01)

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.) 07-09-043<sup>1</sup> and the Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan<sup>2</sup> 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.<sup>3</sup> 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.

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<sup>1</sup> 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.”

<sup>2</sup> 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>.

<sup>3</sup> 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 2019  
**Program:** Lighting  
**Author:** Quantum Energy Analytics; DNV GL  
**Calmac ID:** CPU0226.01  
**Link to Report:** [http://calmac.org/publications/PY2019\\_NonresLgtImpact\\_FinalRpt.pdf](http://calmac.org/publications/PY2019_NonresLgtImpact_FinalRpt.pdf)

| Item # | Sec. # | Findings  | Best Practice / Recommendations (Verbatim from Final Report)   | Recommendation Recipient                             | PG&E (if applicable)                 |  | SCE (if applicable)                  |  | SDG&E (if applicable)                |  |
|--------|--------|---|--|--|--------------------------------------|--|--------------------------------------|--|--------------------------------------|--|
|        |        |   |  |  | 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 200 sites surveyed, 31 sites (grocery stores, retail establishments, hospitals, 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 T-LEDs. 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      | 6      | In general, lighting measures exhibited medium program influence levels for both midstream and downstream approaches. NTGR values vary somewhat by measure type, delivery approach and PA and range from a low of 0.58 (PG&E Downstream Indoor LED Fixtures) to a high of 0.75 (SDG&E Downstream Indoor T-LEDs). Values for the   | The PAs should continue to utilize both the midstream and downstream approaches. Both approaches appear to be an effective means of influencing customers to install energy efficient lighting equipment, offering similar levels of influence over decision making.   | PG&E, SCE, SDG&E                                     | Other                                | PG&E sunset our midstream lighting back in 2019. However, we are still currently offering downstream measures.     | Rejected                             | In alignment with the transition to having at least 60% of SCE's portfolio under contract with third-party implementers, SCE's deemed midstream and downstream programs were closed effective July 1, 2021, at which time third-party implementer TRC Solutions became the statewide midstream lighting implementer. | Other                                | SDG&E will continue to utilize the downstream approach. We will defer to SCE the SW lead for the midstream approach. |

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|--------|---------------|---|---|--------------------------|----------------------|--|---------------------|--|-----------------------|--|
|        |               |   |   |                          | Disposition          | Disposition Notes  | Disposition         | Disposition Notes  | Disposition           | Disposition Notes  |
|        |               | midstream delivery approach show less variation between SCE (0.62) and SDG&E (0.65) but are only robust enough to report at the PA level. In most cases, ex post NTGR values are less than ex ante values. The mid-stream result is based on a combination of participant and distributor survey results, while the downstream result is based solely on participant survey results.  |   |                          |                      |  |                     |  |                       |  |
| 4      | 5, 6          | The quality of contact information for midstream 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 PAs 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         | Other                | Our midstream program was sunset back in 2019. Our downstream offering does require customer contact info. | Other               | This requirement was built into the CPUC approved third-party midstream Statewide Lighting program contract and will be collected as part of the project submission process. | Other                 | SDG&E will collaborate with SCE, the statewide lead, on future program updates.  |
| 5      | 5             | The evaluation team found evidence of some SCE programs 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 claimed units installed represent the total kilolumens installed rather than the total fixtures installed.   | PG&E, SCE, SDG&E         | Rejected             | The Linear Ambient Fixture workpaper which required kilolumen calculations was retired in 2020.            | Rejected            | The Linear Ambient Fixture workpaper which required kilolumen calculations was retired in 2020.  | Accepted              | SDG&E will continue to carefully review savings claims for measure rebated by kilolumens should it offer such measures in the future. SDG&E will also collaborate with SCE, the statewide lead, on future statewide program updates. |
| 6      | Over-Arch-ing | When comparing ex post results to ex ante parameter estimates, we could not always find complete documentation detailing the specific parameters comprised of the ex-ante claimed savings values. For example: some workbook calculations included only UES values, but did not make available the delta watts, HOU, CDF, and IE parameters that contributed to the UES values claimed.   | All workbook documentation (workbook calculations and supporting documents) should be posted on the workbook project archive (WPA) at <a href="http://www.deeresources.info">www.deeresources.info</a> .  | PG&E, SCE, SDG&E         | Rejected             | This is already required for workbook packages to receive CPUC approval.                                   | Rejected            | This is already required for workbook packages to receive CPUC approval.   | Other                 | According to the CPUC draft resolution, E-5152, the plan is to have eTRM be the system of record moving forward. Which will alleviate and address these issues.  |
| 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 select DEER values.   | Workbook calculations and supporting documents should also include the exact set of DEER parameters (building type/climate zone/lighting technology/occupancy sensor scenario) and a brief rationale as to why a given lighting measure used a certain selection.   | PG&E, SCE, SDG&E         | Rejected             | This is already required for workbook packages to receive CPUC approval.                                   | Rejected            | This is already required for workbook packages to receive CPUC approval.   | Other                 | SDG&E will collaborate with SCE, the statewide lead, on future workbook updates.   |