

## 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. This Appendix contains the Responses to Recommendations in the report:

***RTR for the 2015 Nonresidential ESPI Deemed Lighting Impact Evaluation (Itron, Calmac ID #CPU0167.01, ED WO #ED\_I\_LTG\_5)***

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 2013-2016 Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan<sup>1</sup> and CPUC Decision (D.) 07-09-043<sup>2</sup>.

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> 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>2</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>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:** 2015 Nonresidential ESPI Deemed Lighting Impact Evaluation  
**Program:** Lighting  
**Author:** Itron  
**Calmac ID:** CPU0167.01  
**ED WO:** ED\_I\_LTG\_5  
**Link to Report:** [http://calmac.org/publications/Deemedlighting\\_2015\\_20170330\\_with\\_Appendices.pdf](http://calmac.org/publications/Deemedlighting_2015_20170330_with_Appendices.pdf)

Item #	Page #	Findings	Best Practice / Recommendations (Verbatim from Final Report)	Recommendation Recipient	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.
1	4.2	High pressure sodium (HPS) and low pressure sodium (LPS) represented the self-reported baseline equipment for all LED streetlight retrofits.	While the municipal streetlight market is shifting toward LED technologies, the current ex ante assumption which uses HPS as the baseline should continue to be used.	PG&E, SCE, SDG&E	Accepted	The IOUs agree that HPS should continue to be used as the baseline for LED streetlight retrofits.
2a	5.2	Overall, ex post operating hours for LED downlight measures were dramatically different than ex ante claims (79% higher).	Future evaluations should consider conducting a large scale logger study, especially for technologies like LED downlights and reflector lamps installed in high usage areas. The annual operation of these technologies can have potentially significant impacts on realized energy and demand savings moving forward. Likewise, the presence of EMS and advanced dimming capabilities, along with the fact that these technologies are generally recessed into the ceiling, suggest that monitoring studies should consider alternative monitoring techniques (like panel metering and other connected devices) to augment traditional photocell logging techniques. The study should be conducted by technology and building type to capture differences across building type within a given technology.	CPUC	Other	While the CPUC is the recipient of this recommendation, the IOUs realize that currently, operating hours are only defined by building type, and not space type within building types. There is no current way to incorporate higher operating hours for high usage areas into the DEER and therefore measure savings. A mechanism to incorporate these recommendations into the DEER for operating hours would be appreciated. The IOUs are hopeful that advanced lighting controls will be treated in a way that helps us realize their energy savings potential.
2b	3.4.3	A number of sampled nonresidential facilities were on energy management systems (EMS) and many of the measure installations represented dimmable technologies.		CPUC		
3	5.3.1	The average replaced wattages for screw-in LED A-Lamps continue to decrease relative to prior evaluations, however, this is not necessarily true for reflector lamps and downlighting.	Future evaluations should continue to track and verify (where possible) the replaced/baseline wattage of all LED measure installations to determine, for LED A-Lamps, if the percentage of CFLs in the baseline continues to grow, and for reflector lamps and downlighting, if there are any significant changes in the distribution of baseline technologies moving forward.	CPUC	Other	While the CPUC is the recipient of this recommendation, the IOUs agree that Impact evaluations should continue to capture this information which then potentially inform future work paper updates through Energy Division dispositions on baseline technology mix and wattage reduction ratios for LED lamp measures.  Deemed programs are not set up to capture pre-existing baseline information. Pre-existing baseline information is only relevant for ER measures, not ROB measures.