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 2017 Nonresidential ESPI Deemed Lighting Impact Evaluation (Itron, Calmac ID #CPU0197.01)

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[1] and the Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan[2] 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.

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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: 2017 Nonresidential ESPI Deemed Lighting Impact Evaluation
Program: Lighting
Author: Itron
Calmac ID: CPU0197.01
Link to Report: http://calmac.org/publications/2017_Nonresidential_ESPI_Deemed_Lighting_Impact_Evaluation_-_Final_Report.pdf

					PG&E (if applicable)		SCE (if applicable)		SDG&E (if applicable)	
Item #	**Sec. #**	**Findings**	**Best Practice / Recommendations (Verbatim from Final Report)**	**Recommendation Recipient**	**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.
1a	5	Overall, ex post operating hours for LED downlight measures were dramatically different than ex ante claims.	Based on these two conclusions, future evaluations should consider conducting a large-scale monitoring 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. Furthermore, 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						
1b	3	A number of sampled non-residential facilities were on energy management systems (EMS) and many of the measure installations represented dimmable technologies.		CPUC						
2	5	The average replaced wattages for screw-in LED A-Lamps continue to decrease relative to prior evaluations, and this is likely true for other reflector/downlight measures.	While ex ante savings claims move away from a dependence on lamp wattages and continue moving toward savings based on EISA wattages and lamp efficacy, future evaluations should continue to	CPUC						

					PG&E (if applicable)		SCE (if applicable)		SDG&E (if applicable)	
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			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/LEDs 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.							
3	Appx. D	A not insignificant percentage of program participants installing LED fixture measures self-reported metal halide (MH), mercury vapor (MV) and high-pressure sodium (HPS) as the baseline technology replaced as part of the retrofit—especially for outdoor LED fixture measures.	Further research should be conducted to continue to track the typical baseline and efficiency of equipment replaced with program rebated LED indoor and outdoor technologies.	CPUC						
4	Appx. D	A significant percentage of program participants installing LED fixtures self-reported the condition of the pre-existing equipment in NOT poor condition and/or that the program influenced them to retrofit the equipment prior to the burn-out or failure of the existing equipment.	Future studies and programs should consider a framework to recognize the age of the existing equipment and the likelihood that a program participant would have either 1) deferred installation and maintained or continually repaired their existing system or 2) installed equipment that was no more efficient than code at the time they did, in the absence of the program.	CPUC						
5	Overarching	When comparing ex ante parameter estimates to ex post results, not all documentation could be found detailing the specific parameters comprised of the ex ante claimed savings values. This caused unnecessary coordination with the PAs to find missing workpapers.	All workpaper documentation (workbook calculations and supporting documents) should be posted on the workpaper project archive (WPA) at www.deeresources.info.	PG&E, SCE, SDG&E	Accepted	The PAs will continue to upload all workpaper supporting documentation to the workpaper project archive (WPA) at www.deeresources.info. As the CPUC approves the workpapers, the CPUC will upload the files publicly to www.deeresources.net/workpapers	Rejected	All workpapers that have been reviewed and approved by the CPUC are found at http://deeresources.net/workpapers. Please refer to this website for more information. Also some unexpected delays may cause the files not to be found on the DEER website since the IOUs and CPUC review team are still coordinating changes as required.		
6	Overarching	The evaluation team sometimes found that the expected parameter values used in the ex ante savings	Ex ante IDs should match with parameters used in the *actual* reported ex ante savings.	PG&E, SCE, SDG&E	Other	IOUs follow the dispositions or preliminary review comments on a submitted workpaper and provide the appropriate dataset of ex ante values and associated tables as directed.	Other	IOUs follow the dispositions or preliminary review comments on a submitted workpaper and provide the appropriate dataset of ex ante values and associated tables as directed.		

					PG&E (if applicable)		SCE (if applicable)		SDG&E (if applicable)	
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		claims were not based on the reported ex ante IDs.				If a disposition requires a subsequent submission, then there may be differences in the claims and that is purely based on timing of workpaper submissions. Generally the key ID is the implementation ID that becomes the key for any ex-ante values.		If a disposition requires a subsequent submission, then there may be differences in the claims and that is purely based on timing of workpaper submissions. Generally the key ID is the implementation ID that becomes the key for any ex-ante values.		
7	Over-arching	The evaluation team found a significant percentage of claims and associated energy/demand savings used the "COM" building type designation in PG&E.	For ex ante HOU and CDF, the "COM" building type should be avoided and only used when necessary.	PG&E	Other	PG&E's LED midstream lighting program provides rebates to distributors to encourage stocking of more efficacious lamps and does not require the rebate be passed down to the end user. Therefore, the distributor may not have the end-use building type, and therefore indicates COM. This is a conservative approach as COM values are lower than other building types.				