

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 Impact Evaluation of Smart Thermostats: Residential Sector—
Program Year 2018 (EM&V Group A)*** (DNV GL, Calmac ID #CPU0205.01,
ED WO #19-Res-ED-003)

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: Impact Evaluation of Smart Thermostats: Residential Sector—Program Year 2018 (EM&V Group A)
Program: Residential
Author: DNV GL
Calmac ID: CPU0205.01
ED WO: 19-Res-ED-003
Link to Report: http://calmac.org/publications/CPUC_Group_A_Report_Smart_Thermostat_PY_2018_CALMAC.pdf

Item #	Findings	Best Practice / Recommendations (Verbatim from Final Report)	Recommendation Recipient	PG&E (if applicable)		SCE (if applicable)		SCG (if applicable)		SDG&E (if applicable)	
				Disposition	Disposition Notes	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.	Choose: Accepted, Rejected, or Other	Examples: Describe specific program change, give reason for rejection, or indicate that it's under further review.
1	Lower than expected gross savings.	Focus savings estimates on actual customer consumption of cooling and heating. Increase targeting and focus in Central Valley for customers with high cooling load. Recognize that smart thermostats have demonstrated demand response and direct load control capabilities that are not assessed in this report.	All PAs	Accepted	PLA is just one program that offers the Smart Thermostat measure. PG&E has other Direct Install programs, such as ResP4P, Enhanced Time Delay relay and Mobile and Manufactured Homes programs that primarily target the Central Valley and hotter climate zones, and which include Smart Thermostats in addition to other measures. As one channel among these programs, in 2018 the downstream PLA rebate represented 24% of Smart Thermostat installs at households with electrical savings, and 34% of installs at households with gas savings, and claimed savings of 19% and 40% respectively. PLA is a downstream program with mass marketing activities, there are some level of marketing and implementation challenges to adopting the targeted approach for this program.	Other	Since the inception of the Smart Thermostat workpaper SCE has recognized the lower savings in cooler climate zones and the higher savings in hotter climate zones. As a result, SCE has always focused marketing in the appropriate climate zones and zip codes. Since the savings have been further reduced the cost effectiveness for this measure has been further reduced, causing SCE to remove it from our residential PLA Program.	Accepted	SoCalGas acknowledges lower than expected gross savings and has focused marketing campaigns to address areas with colder climates, not necessarily in areas of the Central Valley. The majority of the Central Valley region is outside of SoCalGas service territory. SoCalGas plans to re-visit the EE strategy after our engineering group provides further review.	Other	While SDG&E agrees with the lower savings estimates we are limited by our geographic location and cannot focus efforts on the Central Valley area at this time. This strategy will be under further review once the PLA Program goes Statewide.
2	A majority of rebate (80%) and direct-install (60%) participants perform remote mobile app adjustments.	Provide customers with additional information that saving features can be lost if optimizing options are disabled and/or overridden by remote changes.	All PAs	Accepted	PG&E agrees that participants may override optimization settings. PG&E suggests that manufacturers emphasize to users that overriding optimization settings will lower energy savings. At install, our DI program implementers provide some guidance to customers for optimizing system performance. We also have other programs, i.e. Res Pay For Performance (P4P), that are performance and NMEC-	Other	Since the savings have been further reduced this measure's cost effectiveness has been further reduced, causing SCE to remove this measure from our residential PLA Program.	Accepted	Currently, when a thermostat is installed the contractor will review device features and settings as well as the energy benefits of maintaining the recommended settings.	Accepted	Discuss potential options with Implementer of SDG&E PLA Program, while avoiding overlapping with other behavioral offerings.

Item #	Findings	Best Practice / Recommendations (Verbatim from Final Report)	Recommendation Recipient	PG&E (if applicable)		SCE (if applicable)		SCG (if applicable)		SDG&E (if applicable)	
				Disposition	Disposition Notes	Disposition	Disposition Notes	Disposition	Disposition Notes	Disposition	Disposition Notes
					based which incentivizes the implementer to monitor the participant's usage. This allows for the Res P4P implementers to coach the participant to maintain optimal settings.						
3	The participant population may have different consumption trends than available comparison group households. This is also supported by evidence from the survey. The potential for self-selection affecting savings estimates is unavoidable when randomized experimental designs are not practical.	Differences between participants and comparison group households point to potential increasing trends in baseload consumption among participants. The next smart thermostat evaluation should develop methods for identifying trends in pre-installation consumption to include as a matching variable as well as other methods to minimize potential self-selection bias. Also, the current study could be updated with a new matched comparison group comprised of more recent program participants who were not available for inclusion within the existing evaluation timeframe.	CPUC ED EM&V								
4	Load savings shapes provide additional insight into what time of day smart thermostat savings occur. The shape of smart thermostat savings appears to diverge from the shape of overall cooling consumption.	Load savings shapes are an increasingly important outcome from studies like this and further research is required to move them beyond the exploratory phase. This should not only provide better estimates of load savings shapes but also provide annual savings estimates that are consistent with those obtained from other methods, including the two-stage method used in this study.	All PAs, CPUC ED	Other	The report presents exploratory research that shows a divergence between load savings shapes (that identify the periods during which savings occur) for smart thermostats and typical cooling measures. Cooling savings from smart thermostats appear to peak around mid-day (much earlier than peak cooling hours) and appear to yield little savings when people are at home in the early evenings (when people tend to cool for comfort). Some of these differences in load savings shapes (but not all) can be explained by the upward trend in energy consumption that was observed in the participant groups, but not in the comparison groups. We agree with DNV GL that more research should be	Other	Since the savings have been further reduced this measure's cost effectiveness has been further reduced, causing SCE to remove this measure from our residential PLA Program.	Other	Data from the three electric IOU's were utilized in the load savings shapes evaluation. Therefore, the recommendation is not applicable to SoCalGas.	Accepted	More information is required. SDG&E submitted comments to the DEER 2022 Scoping Memo to the EAR Team. The memo describes the timeline of when the impact evaluations would be included in DEER updates when giving an example about "[l]oad shapes applicable to measures updated through 2019 EM&V efforts or via DEER 2022 will be available for use in 2022." 2019 EM&V efforts aka PY2018 impact evaluations, the available for "use year" or "Effective Program Year" is 2021 and not year 2022. It should be included in DEER2022 as noted.

Item #	Findings	Best Practice / Recommendations (Verbatim from Final Report)	Recommendation Recipient	PG&E (if applicable)		SCE (if applicable)		SCG (if applicable)		SDG&E (if applicable)	
				Disposition	Disposition Notes	Disposition	Disposition Notes	Disposition	Disposition Notes	Disposition	Disposition Notes
					done to reach a more definitive understanding of the savings load shapes of the smart thermostat measure, given the importance of load savings shapes in calculating the avoided cost of energy and carbon impacts of savings.						We also recommended to include the PY2018 Smart Thermostat study and add to Table 1-2 as it is a priority to help forecast for upcoming 2021 ABAL.
5	Customer information files do not provide a complete picture of customer dwelling types. While such information is included in Customer Information Systems dataset, there are many instances where the designation does not match what is reported in program tracking data. DNV GL has attempted to identify and match on housing types with mixed success due to the quality of the data.	DNV GL recommends that PAs provide reliable housing type information for the residential population so that future evaluations may include savings estimates that provide insights on where the measure delivers maximum savings.	All PAs	Other	Not applicable to PG&E. PG&E captures and reports all CPUC required information in our CEDARS uploads.	Other	SCE captures and reports all CPUC required information. This information is provided to the CPUC in our CEDARS uploads.	Accepted	Housing data is kept in our customer database and is linked to the installation via the bill account or facility ID.	Other	SDG&E currently captures and reports building type when referencing what program the measure is going through. If data is requested to compare those that did not participate in SDG&E's programs, clarification will be needed.