

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 California Statewide Multifamily Boiler Market Assessment (Cadmus, Calmac ID #SCG0225.01, ED WO #2174)

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: California Statewide Multifamily Boiler Market Assessment
Program: MF
Author: Cadmus
Calmac ID: SCG0225.01
ED WO: 2174
Link to Report: http://calmac.org/publications/CA_Statewide_MF_Boiler_Market_Assessment_Cadmus.pdf

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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	8	While Cadmus did not find evidence suggesting that a majority of boilers are old and operating beyond their EULs, boiler-age data suggested that 22% and 25% of dedicated space-heating boilers in PG&E and SoCalGas territories, respectively, operated at or beyond their EULs. Additionally, data suggest that 30% of pool-heating boilers in PG&E's territory operate at or beyond their EULs.	In their efforts to replace older, less-efficient boilers, PG&E and SoCalGas should consider focusing on dedicated space-heating boilers, and PG&E should consider focusing on pool-heating boilers. PG&E and SoCalGas may consider increasing program marketing or incentive amounts for high-efficiency replacements in these boiler categories.	IOUs (PG&E, SCG, SDG&E)	Rejected	PG&E rejects this recommendation with qualification. Cadmus provides data evidencing that its service territory has approximately 167 pool-heating boilers total in its entire service territory (Table 1) of which 48 (29%, see Figure 1) are operating at or beyond their 20-year EUL. PG&E's MF Program implementer, TRC, concurs that the small size of this market segment does warrant attention, but that it is not sufficiently large to merit restructuring marketing efforts or raising incentive amounts.	Accepted	SoCalGas agrees that opportunities remain in the SoCalGas territory to assist customers in making space-heating boiler upgrades. SoCalGas has updated its marketing materials to promote the recommended upgrades. Since the study was instituted, SoCalGas has experienced an increase in the number of rebates for this program. Currently SoCalGas incentivizes Water and Space Heating Boilers. SCG believes the market for dedicated space heating boilers is limited because of cost, and lack of customer knowledge of measures and their benefits. SoCalGas currently offers the Whole Building Program, through which it promotes the installation of space-heating boilers, among others, by providing substantial incentives.	Other	Not applicable
2	9	A comparison of technical potential savings calculated in this study and in the 2019 Energy Efficiency Potential and Goals Study (2019 P&G study) for the on-demand circulation pump control measure suggests that per-dwelling unit savings and initial saturation assumptions for this measure should be reevaluated in the next P&G study.	To increase the accuracy of its potential estimates in the multifamily water heating sector, the CPUC should consider re-evaluating estimates of per-dwelling unit savings and initial saturation for the on-demand pump control measure in the next P&G study.	CPUC, Energy Division	Accepted	PG&E agrees with the conclusion that the technical potential for MF on-demand circulation pump control measures (Navigator, 2019) is wildly overestimated due to over-estimates of the saturations of pump controls and per-dwelling unit savings.			Accepted	SDG&E agrees with the findings which compare the two most recent studies pertaining to market potential for on-demand circulation pump control measures and the discrepancy in the findings of each. Furthermore, SDG&E agrees with the recommendation for re-evaluation so that accuracy in findings may better inform the CPUC & ED on the IOUs' ability to meet the goals set forth in the said P & G Study.
3	9	Multifamily building decision-makers remain hard to reach. A coordinated phone outreach campaign, coupled with high incentives (\$200 per site	Given the difficulty in reaching multifamily building decision-makers and the high cost of data collection, Cadmus recommends future researchers and the IOUs consider a coordinated	IOUs (PG&E, SCG, SDG&E), CPUC, Energy Division	Accepted	The difficulty in reaching MF building decision-makers to participate in this study underscores the value for embedded M&V and the coordination of market studies with program implementation,	Accepted	SoCalGas agrees with Cadmus that data collection is key to learning more about the Multifamily market and that decision makers are primarily motivated by financial compensation. Furthermore, SoCalGas	Other	SDG&E agrees with the conclusion that Multifamily building decision-makers remain hard-to-reach (HTR) and that higher costs are incurred by the IOUs to serve this market segment. Nevertheless,

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		visit completed), proved key in reaching this group of IOU customers and in achieving the targeted sample size for site visits.	phone outreach approach, coupled with incentives, that allows for data collection about multiple research topics, or about the building and equipment as a whole, as opposed to data collection focused on a specific technology.			process evaluations, and impact evaluations. Having program implementation and multiple evaluation activities conducted in a disjointed fashion results in poorer research outcomes and greater ratepayer expense.		would be willing to consider a coordinated phone outreach campaign, coupled with incentives, with the other IOU's, if it would increase energy efficiency and program cost effectiveness.		SDG&E's Multifamily market segment remains a key component to its EE and Low Income Portfolios. Therefore, SDG&E has already, and will continue to engage the decision makers of this segment via our Single Point of Contact (SPOC) process that we have developed over the past two years. This should better enable SDG&E to collect and maintain more comprehensive sets of data which can then be leveraged when attempting to reach these HTR multifamily decision makers. SDG&E through SPOC will also be collecting better consumption data to help benchmark and target customers that have more potential for savings opportunities.
4	9	Additional research is needed to understand multifamily building owner/operator decision-making processes to assist in targeted program planning and utility intervention to encourage replacements of older boilers and installations of retrofit measures.	The IOUs and the CPUC should consider additional research to assist in targeting programs for multifamily customers in response to current state decarbonization priorities in the building sector. This additional research should build upon data collected through previous IOU multifamily customer segmentation and needs assessment studies, in addition to insights gathered from previous California multifamily program process evaluations.	IOUs (PG&E, SCG, SDG&E), CPUC, Energy Division	Accepted	PG&E agrees with this recommendation, with the caveat that any additional research should begin with a formal literature review that documents the current state of knowledge of the MF market, with recommendations for follow-on research based on knowledge gaps identified. PG&E is aware of and participated in a recent study completed by UC Berkeley Center for Law, Energy & the Environment (CLEE) http://liob.cpuc.ca.gov/Docs/Low-Income-High-Efficiency-June-2019%20Policies%20to%20Expand%20Low-Income%20Multifamily%20Energy%20Savings%20Retrofits.pdf . PG&E believes that multifamily owner decision making is well documented and that findings from recent studies should be studied and implemented before further research is recommended. Specifically, prior to any new research study being scoped that would require collection of more data, PG&E would recommend that the following steps be taken: 1) A comprehensive review of previously-completed evaluations conducted of MF programs within the last five years with a focus on needs assessment studies, both within California and in other states; 2) secondary research of the MF sector published within the past five years, including that published by governmental agencies and in academic publications; 3) in-depth	Accepted	SoCalGas would consider additional research efforts with the CPUC to encourage retrofitting and replacement of older boilers, in response to current state decarbonization priorities in the building sector. The lack of understanding of multifamily building owner/operator decision-making is indeed a barrier for program planning and participation target. SoCalGas has proposed phase 2 of this study in 2020 EM&V Plan and is awaiting on collaboration from other IOUs.	Accepted	SDG&E agrees with the conclusion that additional research is still needed to better understand multifamily building owner/operator decision making processes so that program offerings can be better tailored to fit the needs of this segment. Furthermore, we agree that it would be an added benefit if this research can align itself with current state decarbonization priorities. With this said, SDG&E also agrees with PG&E's caveat in their response to this recommendation that such research should begin with a formal literature review that documents the current state of knowledge versus what the recommendation seemed to be heavily dependent on (i.e. previous needs assessment studies).

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						interviews with MF program implementers active within the past five years within California, Massachusetts, New York, and other states, to determine implementer assessments of the current state of program delivery models, existing segmentation models and their utility, and knowledge gaps.				