

## 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 Study of Deemed HVAC Measures Uncertainty Year 2 Report (HVAC4)*** (DNV GL, Calmac ID #CPU0145.02, ED WO #ED\_D\_HVAC\_4)

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:** Study of Deemed HVAC Measures Uncertainty Year 2 Report (HVAC4)  
**Program:** HVAC  
**Author:** DNV GL  
**Calmac ID:** CPU0145.02  
**ED WO:** ED\_D\_HVAC\_4  
**Link to Report:** [http://calmac.org/publications/HVAC4\\_Year\\_2\\_Report\\_2016-11-02.pdf](http://calmac.org/publications/HVAC4_Year_2_Report_2016-11-02.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	61	From the sensitivity analyses performed for each measure, DNV GL learned which of the studied factors had the greatest influence on the uncertainty of the savings forecasts as shown in Table 23. Knowing which parameters contribute the most to the uncertainty of deemed savings can be used to guide future research.  Strategies that could leverage these findings include:	The heating setpoint for residential furnaces should be a question on rebate applications or gathered by way of a survey by evaluators and used to true-up savings for a specific program population.	All IOUs	Accepted	The IOUs will support future Energy Division evaluators gathering this information via survey or other methods.
2	61		Data from ongoing studies such as HVAC 6 were used to inform the fan power index (the inverse of fan efficiency). Other data from that study can be used to inform the furnace sizing ratio. While, HVAC 6 was not designed to target these parameters it is an example of leveraging data to reduce ex ante uncertainty.	All IOUs	Other	This is not a recommendation.
3	61		The minimum airflow ratio is a simulation input used to capture fan system operation and zonal reheat for variable air volume systems. The results show that evaluation of boiler measures should not focus as much on verifying installed efficiency, but rather focus on the zonal controls that determine the heating load and influence the total savings.	All IOUs	Other	This recommendation does not apply to the IOUs, but rather the CPUC Energy Division as the manager of impact evaluations.
4	61		For VFD measures, it is important to study the operating conditions (pre- and post-retrofit) that influence fan power index as well as the zonal controls for air distribution.	All IOUs	Other	This recommendation does not apply to the IOUs, but rather the CPUC Energy Division as the manager of impact evaluations.