

## 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 Net-to-Gross Evaluation of 2013-14 Upstream HVAC Programs (HVAC1)***  
(DNL GL, Calmac ID #CPU0116.003, ED WO #ED\_D\_HVAC\_1)

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:** Net-to-Gross Evaluation of 2013-14 Upstream HVAC Programs (HVAC1)  
**Program:** HVAC  
**Author:** DNV GL  
**Calmac ID:** CPU0116.003  
**ED WO:** ED\_D\_HVAC\_1  
**Link to Report:** [http://www.calmac.org/publications/HVAC1\\_Upstream\\_HVAC\\_NTG\\_Report\\_Final\\_Public.pdf](http://www.calmac.org/publications/HVAC1_Upstream_HVAC_NTG_Report_Final_Public.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	30	<p>The 35% attribution on the distributor side of the causal path indicates that stocking habits are changing, although 65% of what is being stocked is the same as before the program. Distributors are responding to the program, just not with the majority of their stock.</p> <p>One possible reason for this is that stocking these units becomes riskier when there is uncertainty around whether program rebates will be available in the near future. Below are a couple of thoughts distributors shared during their interviews:</p> <ul style="list-style-type: none"> <li>• One distributor noted that if the rebate is available and they can count on it, they will stock the high efficiency equipment.</li> <li>• Another distributor mentioned that if a given HVAC unit does not qualify for a rebate, they do not stock it.</li> <li>• Several distributors mentioned the lack of clarity on rebate timing impeded their ability to sell the units.</li> <li>• Another distributor described a situation where they bid and win a job two years before the work gets done, but by then the rebate is not available. This interviewee pointed out that this is difficult to explain that to customer because they have factored that rebate into the price paid by the customer.</li> </ul>	<p><b>Reduce uncertainty on how long the incentives will remain in place.</b></p> <p>Reducing uncertainty regarding how long the incentives will remain in place at a given level would likely increase the trust which distributors have in the program, and, in turn, increase their willingness to change their stocking practices. Program practices which would increase participant certainty about how long the incentives will remain in place would include informing the distributors when the program is going to run out of money ahead of time, and honoring rebates for HVAC purchases that are already registered in the system.</p>	PG&E, SCE, SDG&E	Accept	<p>As a regulated entity, IOUs are required to be good stewards of the ratepayer's dollars. Incentive changes and equipment eligibility is wholly dependent on Impact Evaluation recommendations and Ex-Ante direction through DEER. If a measure is not cost effective, the program must either decrease incentives to slow uptake in the market or sunset the measure altogether. The IOUs' goal is to limit changes to the program and inform distributors of budget limitations, including implementing a reservation and incentive cap system for the different technology categories in the program with regular communication of updates.</p> <p>Additionally, this program is slated to become a Statewide program in 2018. Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt best practices.</p>

2	30	<p>During our interviews, multiple distributors asked for additional sales tools and marketing materials to help them sell high efficiency units.</p> <p>The fact that many distributors are still seeking additional marketing assistance indicates that some need exists. We believe it is important to point out that the buyer surveys only reflected the perspective of customers who bought energy-efficient units, whether due to previous disposition or due to distributor salesmanship (whether program-influenced or not). The comments from distributors may not be focused on those buyers, but rather on the customers who did not choose the energy-efficient units. It is likely for these “lost sales” that the distributors are seeking additional program marketing tools, and therefore we recommend providing them these tools.</p>	<p><b>Provide more marketing tools to distributors.</b></p> <p>We believe that the CPUC and IOUs should consider hosting trainings and providing online savings calculators to distributors in the program.</p> <p>This recommendation may seem counterintuitive based on some of the evidence we provided which indicated that much upselling is already occurring, with or without the program’s influence. This evidence includes the fact that only 26% of distributors said that their upselling was attributable to the program, that less than 30% of buyers stated that the distributors discussed more than one efficiency option (this suggests that the upselling was already happening for the majority of buyers presented with only one option) and that only 4% of buyers were considering other efficiency types.</p> <p>Several distributors mentioned in their interviews that they desire better tools and information for their marketing and selling tactics. The CPUC and IOUs should consider some tools to help distributors upsell these units more effectively:</p> <ul style="list-style-type: none"> <li>• One distributor requested a simple calculator (from an unbiased third party such as the Department of Energy) that determines savings in dollars (with inputs like: tonnage, weather, county, utility rate) would be helpful. He thinks it should be a quick and simple rule of thumb calculator. Even if the calculator provides a comparison between a 10 EER vs 13 EER unit and shows the dollar savings associated with each unit that would be helpful (“\$ savings” is a better selling point than “XX% higher efficiency”)</li> <li>• A large distributor mentioned the trainings they hold for their staff to educate them on why high efficiency is better than the baseline equipment, and how to market these facts.</li> </ul>	PG&E, SCE, SDG&E and CPUC	Accept	<p>Implementers and Administrators are developing additional marketing tools to assist distributors. Currently the IOU WE&amp;T teams are collectively working on developing and organizing an education/training showcase event that focuses on identifying and selling the value proposition of EE for commercial HVAC.</p> <p>Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt these best practices. Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt best practices.</p>
3	31	<p>Since pass-through incentives had the highest attribution score for both distributors and buyers, clear communication on program changes can help distributors make better decisions on the incentives they pass on to buyers.</p> <p>Our interviews revealed that many distributors sought better communications on program timing and changes in general, in addition to their more specific demands for better information about rebate availability. Because the sales cycle for some of</p>	<p><b>Provide more clarity on program timing and changes.</b></p>	PG&E, SCE, SDG&E	Accept	<p>The IOUs’ goal is to limit changes to the program and inform distributors of budget limitations, including implementing a reservation and incentive cap system for the different technology categories in the program with regular communication of updates. IOUs recognize that current challenges include different timetables for workpaper and program implementation, which runs on a calendar year. For example, it can take over 6 months for distributors to adjust their unitary AC, VRF, and chiller projects and inventories in response to changes in measure eligibility and incentive levels.</p>

		<p>these high efficiency units can be several months, distributors want to keep their staff and buyers informed of any changes to the rebates. Below are some excerpts from the distributor surveys that highlight this sentiment, and the implications on their sales:</p> <ul style="list-style-type: none"> <li>• One distributor interviewee said it would be helpful if someone could clarify process in terms of timing. For instance, they noted that if they sell a job, it would be good to tell the consumer that they can expect the process to happen in a certain time range. While the interviewee said that providing a window of rebate availability would be helpful, the interviewee also noted that the window cannot be too large because then it becomes pointless.</li> <li>• One distributor requested that the program give them more lead time on changes. This interviewee claimed that sometimes there was only a week notice about upcoming changes to the program, which impacted what they were planning to stock.</li> </ul>				<p>Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt best practices.</p>
4	32	<p>Our interviews allowed the distributors to provide useful suggestions on how the upstream HVAC program could be improved. Some of their suggestions, in addition to those mentioned above, included involving small municipalities in this program, offering different incentives and technologies based on climate zones, and including new technologies in the program such as pressure-independent valves and adiabatic cooling on air-cooled chillers. Three comments in particular stuck out as interesting ideas to consider:</p> <ul style="list-style-type: none"> <li>• One distributor noted that small municipalities are not involved in this program. He felt that the program should provide the same incentives for some of the “little guys,” and give them the same program access and rebate support.</li> <li>• Another distributor noted that the program should get feedback from manufacturers about where the market is going. This interviewee claimed that the upstream HVAC program is too generic across the state. He noted that different climates (e.g., coast vs. valley) have different drivers for efficiency and operating conditions</li> </ul>	<p><b>Solicit regular program feedback.</b> We recommend that the IOUs and CPUC set up a mechanism (if one does not exist) to solicit distributor feedback more regularly.</p>	PG&E, SCE, SDG&E and CPUC	Accept	<p>This mechanism does exist for all IOUs. The IOUs or their implementers meet with distributors to ascertain what is happening in the marketplace and what new technologies are available. The distributors encourage them to send new technologies to the ETCC (Emerging Technology Coordinating Council) which includes industry stakeholders. Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt best practices.</p>

		<p>are dramatically different. He said that the current program does not take these differences into account and that the program should differ based on climate zone</p> <ul style="list-style-type: none"> <li>Several distributors discussed new technologies that the program should consider. One listed a few new technologies would help benefit in growing market including sensor-less pump control allow VFD to be integrated in pump itself, pressure-independent valves, adiabatic cooling on air-cooled chillers, hybrid cooling towers, and air handler fans.</li> </ul>				
5	32	<p>Nearly 50% of the buyer program tracking data we received was missing distributor names and buyer contact information. As a result, we could not match several completed distributor interviews to buyers, resulting in their omission from our NTG analysis. However, we believe that the data from these unmatched distributor interviews should be used for future analysis.</p>	<p><b>Expand research scope and improve data quality.</b></p> <p>We recommend that a process evaluation be conducted for this HVAC upstream program to further analyze the distributor interview responses (from both “matched” and “unmatched”) distributors. Our evaluation, by necessity, focused on distributor responses most relevant to program attribution, but other interview responses could also be useful for identifying interesting market trends and for providing insights on how to improve upstream HVAC program design.</p>	PG&E, SCE, SDG&E	Accept	The IOUs are assessing the opportunity of the process evaluation of the HVAC Upstream program in preparation of SW implementation. Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt best practices.
6			<p>We also recommend that the programs strive to collect higher quality buyer tracking data, with special emphasis on collecting information relating buyers to the distributors that sold them their units. This will help increase the number of buyers matched to distributors that we can use for our NTG causal pathway analysis in future studies. For example, the program application form should have the contact information for the distributor, contractor, and buyer, as well as indicate who was present at the time of purchase.</p>	PG&E, SCE, SDG&E	Other	The recommendation does not reflect the HVAC sales distribution channel in the market. With limited exceptions, distributors do not sell to “buyers”, they sell to contractors. Contractors are not obligated to provide distributors with information on the “buyer.” Therefore, this information can be difficult to collect on many job types. Imposing a requirement misaligned with the sales process will result in low compliance with the requirements and further depress overall program participation. Requiring “buyer” information would likely cause further decrease in participation because distributors would not be able to collect this information for certain job types, and require additional time and money to collect for other jobs, decreasing the effectiveness of the incentive. The IOUs collect and match installation site address to service account ID to ensure they are within the IOU territory. Although IOUs will not design the SW PA Upstream program, it is anticipated that the PA will adopt best practices.