

## 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 Group A Impact Evaluation: PY2020 HVAC Fuel Substitution*** (DNV, Calmac ID #CPU0338.01, ED WO #GroupA\_HVAC\_Fuel\_YR4)

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<sup>1</sup> and the Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan<sup>2</sup> 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.<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> 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>2</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>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:** Group A Impact Evaluation: PY2020 HVAC Fuel Substitution  
**Program:** HVAC  
**Author:** DNV  
**Calmac ID:** CPU0338.01  
**ED WO:** GroupA\_HVAC\_Fuel\_YR4  
**Link to Report:** [https://www.calmac.org/publications/CPUC\\_Group\\_A\\_HVAC\\_Fuel\\_Substitution\\_Impact\\_Evaluation\\_PY2020\\_Final.pdf](https://www.calmac.org/publications/CPUC_Group_A_HVAC_Fuel_Substitution_Impact_Evaluation_PY2020_Final.pdf)

Item #	Findings	Best Practice / Recommendations (Verbatim from Final Report)	Recommendation Recipient	SCE (if applicable)		SDG&E (if applicable)	
				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.
1	<b>All Programs:</b> The breadth of the program documentation data was good, but the quality of additional documentation linking program data to utility customer database information can be improved.	To improve data quality, we recommend the PAs and their implementers increase efforts to train participating midstream program distributors on consistent and accurate data recording and on conducting regular quality control reviews of the data prior to submittal.	All PAs	Other	Since SCE has not administered the fuel substitution HVAC program since Q1 2021 due to the CPUC's mandate for statewide implementation, SCE must rely on the lead PA (SDG&E) to work with their selected implementer to ensure that consistent and accurate data is recorded by participating midstream distributors and to perform quality control reviews of the data prior to submittal. SCE has no direct program oversight role for this midstream program.  Further, SCE agrees with the evaluator's recommendation to improve data tracking to improve realization rates on Fuel Substitution offerings (via both Downstream and Midstream) which are <u>critical</u> for supporting statewide decarbonization goals.	Accepted	SDG&E and the third-party implementer of the SW-HVAC program for Program Year (PY) 2022 have instituted improved distributor training and increased data quality assurance practices. The third-party implementer has increased trainings with the participating distributors to perform their own quality assurance prior to invoice submission. The distributor staff who completes the uploads are walked through each data field to ensure clear understanding of what the data field requirements are, which includes formatting, data type (alphanumeric, selection, etc.), and steps for making corrections when needed. The implementer has also improved their program system to include increased automation to evaluate submitted data fields as a first stage review and then as a second stage review the project submission will go through a third-party implementer employee desktop review, so the project enrollment data will be evaluated further for potential discrepancies, all in an effort to improve accurate data recording.
2	<b>All Programs:</b> The breadth of the program documentation data was good, but the quality of additional documentation linking program data to utility customer database information can be improved.  <b>Additional Supporting Information:</b> Of the total 1,122 utility customer addresses reported to have installed the central HVAC heat pump technology, nearly 27% of electric accounts and 41% of gas accounts were dropped because the addresses provided could not be confidently linked to account information. For the ductless HVAC heat pump technology, 37% of electric accounts and 47% of gas accounts were dropped due to poor account identification.	To improve data quality, we recommend the PAs and their implementers design program documentation to include the PAs' premise and customer identifier fields	All PAs	Other	Since SCE has not administered the fuel substitution HVAC program since Q1 2021 due to the CPUC's mandate for statewide implementation, SCE must rely on the lead PA (SDG&E) to work with their selected implementer to design program documentation to include PA's premise and customer identifier fields. SCE has no direct program oversight role for this midstream program.  However, SCE agrees with the evaluator's recommendation to improve program documentation (with identifiers) to improve realization rates on Fuel Substitution program offerings (via both Downstream and Midstream) which are <u>critical</u> for supporting statewide decarbonization goals.	Other	For PY 2022, the program will not be collecting PA premise and customer identifier fields. Collecting utility account numbers is a barrier for midstream program delivery and will decrease the participation in the program. However, the program has increased data fields required for project submissions, including end-use customer first name, last name, business name, installation address, customer phone number and customer email and has improved quality assurance practices ensuring data is valid prior to invoicing.

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				Disposition	Disposition Notes	Disposition	Disposition Notes
3	<p><b>Ductless HVAC Fuel Substitution:</b> The midstream program delivered ductless HVAC fuel substitution systems fell short of expectations for gas savings, most probably because they are often not being installed or used to replace existing gas heating as the program intends.</p> <p><b>Additional Supporting Information:</b> The evaluated gross gas (therm) savings is only 5% of the reported savings, while the evaluated gross electric (kWh) increase is 68% of the value the PA-reported value. Evaluation results indicate that the ductless HVAC fuel substitution is not meeting expectations to significantly offset pre-retrofit gas heating, yet it is adding year-round electric energy consumption.</p> <p>These results also imply that only about one-fifth (21%) of these systems were installed where there was an existing ductless furnace, but 50% of the time there was already a central furnace, while 13% already had a ductless heat pump and 5% had a central ducted heat pump.</p>	To ensure the gas savings expectations are met, we recommend only direct install and downstream delivery pathways should offer ductless HVAC systems. Additionally, we suggest the PAs revise the measure eligibility to follow the requirement for decommissioning the existing gas system before installing the new ductless HVAC system.	All PAs	Other	<p>SCE does NOT agree with evaluator's recommendation.</p> <p>Statewide Fuel Substitution program offerings (via both Downstream and Midstream) are <u>critical</u> for supporting statewide decarbonization goals. Future Fuel Substitution HVAC programs should NOT discontinue supporting "Ductless HVAC Fuel Substitution" measures via Midstream channels. Per latest DEER (E-5152) policy requirements, data collection and tracking requirements for Upstream and Midstream Programs (including decommissioning of existing gas systems eligibility requirements) are expected to improve program realization rates on future FS offerings including, but not limited to Ductless HVAC measures incentives.</p> <p>However, SCE agrees with DNV's recommendation to improve measure eligibility requirements to ensure the de-commissioning of the existing gas system is performed before installing the new ductless HVAC system.</p>	Other	The midstream statewide HVAC program does not offer the residential SWHC044 Ductless HVAC fuel substitution measure in its program plan for offerings. The recommended guidance related to this measure package will be shared with the third-party implementer for them to understand the expectations from the Commission for this measure.
4	<p><b>Ductless &amp; Central HVAC Fuel Substitution:</b> Program staff indicated that the mid-stream program they run had no mechanisms to control the type of installations that occurred or checks/controls on the application of the installations.</p>	We recommend program designs that target actual replacement applications to improve gross saving and market influence. PAs should use downstream applications where decarbonization controls can be enforced for ductless systems.	All PAs	Rejected	<p>SCE does not agree with evaluator's recommendation.</p> <p>Statewide Fuel Substitution program offerings (via both Downstream and Midstream) are <u>critical</u> for supporting statewide decarbonization goals. Future Fuel Substitution HVAC programs should NOT discontinue supporting "Ductless HVAC Fuel Substitution" measures via Midstream channels. Per latest DEER (E-5152) policy requirements, data collection and tracking requirements for Upstream and Midstream Programs (including decommissioning of existing gas systems eligibility requirements) are expected to improve measure's realization rates for all Residential HVAC FS measures including, but not limited to Ductless HVAC measures.</p>	Other	The midstream statewide HVAC program does not offer the residential SWHC044 Ductless HVAC fuel substitution measure in its program plan of offerings. However, it has inserted SWHC045 Residential Heat Pump fuel substitution for PY 2022. As part of its expanded data collection and increased data quality rigor, SDG&E and the third-party implementer have increased data fields required for project submissions and quality assurance practices adopted to improve data quality, while complying with the measure package data requirements for the SWHC045 fuel substitute measure.
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6	<p><b>Ductless &amp; Central HVAC Fuel Substitution:</b> The evaluation identified a NTGR of 57% for central HVAC fuel substitution systems delivered through the midstream design program.</p> <p><b>Additional Supporting Information:</b> Unlike for the ductless HVAC, when asked about central systems, distributors reported that high-efficiency central heat pump sales increased approximately 50% due to the program. Survey responses indicate utility customers purchasing central HVAC heat pump systems are more willing to do so without the program's incentive than those purchasing the ductless systems. This suggests the program is strongly influencing the distributors and contractors but only moderately influencing the utility customers decision to purchase qualifying central heat pumps.</p>	The central HVAC fuel substitution measure package NTGR should be revised to use a 60% NTGR, rounding up 57% finding from the evaluation, for the upstream delivery type. We recommend the NTGR for the revised ductless HVAC measure package be evaluated and then considered for revision.	All PAs	N/A	No comments	Accepted	There are barriers to overcome with offering an upstream/midstream HVAC fuel substitution measure and until future evaluations become available the recommended 60% NTGR seems reasonable. SDG&E is collaborating with the third-party statewide HVAC program implementer because this is one of the fuel-substitution measures that are in the queue for marketed to HVAC distributors with the intent that HVAC distributors, in concert with HVAC contractors, are willing and able to meet the data collection and eligibility requirements so the program influence is well documented and established.