

## 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:

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| <b><i>RTR for the Emerging Technologies Program Technology to Portfolio Evaluation</i></b><br><b>(Opinion Dynamics, Calmac ID #CPU0231.01, ED WO #17PS5017)</b> |
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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:** Emerging Technologies Program Technology to Portfolio Evaluation  
**Program:** ETP  
**Author:** Opinion Dynamics  
**Calmac ID:** CPU0231.01  
**ED WO:** 17PS5017  
**Link to Report:** [http://calmac.org/publications/CPUC\\_ETP-2\\_Technology\\_to\\_Portfolio\\_Report.pdf](http://calmac.org/publications/CPUC_ETP-2_Technology_to_Portfolio_Report.pdf)

| Item # | Page # | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Best Practice / Recommendations (Verbatim from Final Report)                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recommendation Recipient                             | PG&E (if applicable)                 |                                                                                                                    | SCE (if applicable)                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SCG (if applicable)                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SDG&E (if applicable)                |                                                                                                                    |
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|        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 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      | 4      | <b>Key Finding #3: ETP has been successful at supporting measure development for portfolio inclusion.</b> This study provided findings to support the Business Plan metrics, which indicated that ETP has impacted the Portfolio over the last decade. We developed baselines using all available historical data, which indicated that ETP-associated measures were associated with 51 measures (or 4% of new Portfolio measures) on average annually from 2009 to 2017 (Section 3.3). | <b>Results from this study should be used as to inform baselines for further metrics tracking.</b> However, given the transition of ETP to third-party implementation, future technology targets, and other factors, ongoing review of metrics will be required to ensure they are appropriate for the program as it evolves. Ongoing tracking of these metrics against this baseline will provide ETP PAs and implementers insight into the effectiveness of technology adoption to the portfolio as the program is deployed over time. | All IOUs                                             | Other                                | PG&E defers to the SW Leads.                                                                                       | Other                                | SCE understands the desire to establish a baseline leverage tracking metrics to monitor the program evolution. SCE advises not to use measure development as the only signal for program performance, as there are several influencing factors outside of the program's control that feed the technology transfer process. In general, it would be inappropriate to evaluate a program on outcomes that are beyond the program's control, as is the case with ETP and number of measures developed. If adopted, SCE suggests adding ODC's response to an earlier question from the IOUs that is not included in the recommendation. "In addition, while we recommend using 51 measures as the baseline, given the historical and future uncertainty of measures adopted into the Portfolio, we consider an acceptable range of measures to be 13 to 89 (or one standard deviation from the average)." (p. 26). This addition acknowledges that measure adoption is an uncertain outcome for any case. In the case of tracking metrics, the | Other                                | SCG agrees with SCE and also respectfully reminds Energy Division and their evaluators that metrics data must be actionable to be useful. The development of measures and resulting savings are outputs that are not tightly linked to ETP's processes. An abrupt increase or decrease in these metrics from one year to the next could be attributed to the processes of any of the organizations involved, or to an externality such as a global pandemic. Therefore, it is not possible for ETP to know which of ETP's processes needs adjustment, based on these metrics. We remind Energy Division that the Commission has provided long-standing regulatory direction that metrics should be useful, as the costs of obtaining these data are borne by ratepayers who expect that these data can be used to adjust ETP's activities.<br><br>Tracing the measure development path of individual projects or technologies to their eventual savings may be informative, but is unlikely to be useful as an ongoing program activity. | Other                                | SDG&E defers to the SW Leads.                                                                                      |

| Item # | Page # | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Best Practice / Recommendations (Verbatim from Final Report)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Recommendation Recipient | PG&E (if applicable) |                              | SCE (if applicable) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SCG (if applicable) |                                                                                                                                                                                                                                                                                                        | SDG&E (if applicable) |                               |
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| 2a     | 4-5    | <b>Key Finding #4: It is critical that ETP track its contributions to the portfolio.</b> The current data tracking and communication protocols for ETP-associated technologies do not allow for accurate and timely quantification of ETP contributions to the Portfolio, nor do they provide an adequate foundation for creating a streamlined, repeatable approach that the California Public Utilities Commission (CPUC) and IOUs can implement to readily track progress against metrics in the future. In particular, this analysis relied heavily on the ability to use measure codes to cross-reference the ETP and Portfolio databases, but ETP does not consistently record the eventual measure code that a technology is assigned once leaving the ETP program (Sections 2.2.3 and 4.1.1). We acknowledge that the measure-tracking processes may inherently differ as we transition to third-party implementers. This changing landscape, in addition to the challenges identified above, should be considered when | <b>Track linkages between ETP and EE programs.</b> The IOUs, program implementers, CPUC, California Technical Forum or CalTF, and other stakeholders should coordinate to put in place protocols to make ETP-associated measure reporting a standard practice. Given the movement to a third-party program design, we suggest convening a stakeholder workshop to identify the advantages of different models, including feedback from the stakeholders listed above. As an outcome from the stakeholder workshop, we recommend that the stakeholder workshop group produce recommendations for methods for tracking projects transferring from ETP to the portfolio, including interim stages such as workpaper development and CalTF documentation, for each entity involved in the process. We acknowledge that the measure development process can continue long after an ETP project is recommended for adoption, which makes it challenging to track down the outcome of the process, but by having third-party implementers | All IOUs                 | Other                | PG&E defers to the SW Leads. | Other               | SCE agrees that ETP's objective is to serve the programs in the EE portfolio. However, many other non-ETP entities, including the CPUC, have roles in deciding how technologies are developed, approved, deployed and promoted within a program. In Figure 1 of the prior ETP-3 "Emerging Technologies Handoff Process Evaluation" study, evaluators accurately depict ETP as having a role in only the first two stages of the five-stage "Technology Intake and Measure Development Process", specifically during the "Idea Generation" and "Technology Investigation" stages. ETP's contribution should be evaluated based only on the outputs and outcomes at the end of the first two stages. Other parties, including the CPUC, are active in the remaining 3 stages, "Workpaper De- | Other               | SCG agrees with SCE, and looks forward to discussing the benefits of tracking these data relative to the increased administrative costs to the PAs, in light of lack of tight link between these data and ETP's processes.                                                                             | Other                 | SDG&E defers to the SW Leads. |

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|        |        | developing third-party tracking processes.                                                                                                                                                                | establish communication and reporting protocols, we are confident that ETP can increase the number of measure codes it records for its projects (Section 4.1.2).                                                                                                                                                                                                                                  |                          |                      |                              |                     | velopment," "Workpaper Approval," and "Program Integration." It would be inappropriate to make a direct link between the first two stages of any process and the ultimate outcome of all the stages, since outcomes of the five-stage process represent the contribution of multiple divisions within the IOUs and CPUC. It would be more useful to find proximal indicators of ETP's value that can be directly tracked to improve ETP performance. Tracking number of measures or "associated savings" not only muddles ETP's performance with that of all other associated entities, it is also a lagging indicator. As the Statewide ETP Administrators vested in the success of our 3P ETP implementers, the thought that the 3P implementers might be held to targets beyond their control, or measured against any "associated savings" baseline, causes us great concern. That said, we look forward to discussing these tracking issues with other IOU and ED entities involved in measure development. |                     |                                                                                                                                                                                                                                                    |                       |                               |
| 2b     | 4-5    |                                                                                                                                                                                                           | <b>Track the outcome of each ETP project in the ETP database.</b> The ETP third-party administrator should collect the outcomes of each ETP project: (1) whether it was recommended for adoption; (2) whether a workpaper was developed, and if so, what the workpaper ID is; (3) the eventual measure codes associated with the technology; and (4) savings associated with those measure codes. | All IOUs                 | Other                | PG&E defers to the SW Leads. | Other               | We will conduct oversight over the ETP third party implementers to provide all feasible data that facilitates tracking. However, we gently point out that the immediately prior recommendation lists multiple non-ETP entities that are responsible for much of the tracking, since measure development involves multiple divisions and not just ETP and ETP's implementers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Other               | SCG agrees with SCE and looks forward to discussing the feasibility, as well as the costs and benefits of asking multiple organizations to change their tracking practices, in the absence of a tight link between these data and ETP's processes. | Other                 | SDG&E defers to the SW Leads. |
| 3      | 5      | <b>Finding #5: Portfolio data inconsistencies make comparisons over time difficult.</b> This historical analysis aimed to understand how effective ETP has been over the last decade, which ideally would | <b>To mitigate data tracking issues enumerated under Finding 4, and support historical tracking, ETP-associated savings should be evaluated on an annual basis going forward.</b> With consistent                                                                                                                                                                                                 | All IOUs                 | Other                | PG&E defers to the SW Leads. | Rejected            | As mentioned earlier, while SCE understands the challenges of monitoring ETP's performance, ETP's association to any savings is weaker and less immediate than those of other entities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rejected            | SCG agrees with SCE.                                                                                                                                                                                                                               | Other                 | SDG&E defers to the SW Leads. |

| Item # | Page # | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Best Practice / Recommendations (Verbatim from Final Report)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recommendation Recipient | PG&E (if applicable) |                   | SCE (if applicable)                                                                                                                                                                                                                                                                                                                                                                                       |                   | SCG (if applicable) |                   | SDG&E (if applicable) |                   |
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|        |        | allow for examining trends in ETP-associated measure performance over time (e.g., understanding how well measures persist). When examining trends in claims and savings over time, we found that ETP's proportion of the Portfolio database highlights data inconsistencies due to lack of standardized tracking systems or possibly trends seen in the portfolio at large, which makes it difficult to isolate ETP-associated savings of the program over time. For example, it is not possible to assert that an increase in ETP-associated measure savings relative to the Portfolio year over year is due to the demand for ETP-associated measures, because it could also be due to a decrease in overall Portfolio savings, as demonstrated in Section 3.3. Trends in overall Portfolio savings could be attributed to a range of causes, including how and when claims were entered into the Portfolio database (i.e., if they are not entered in the year in which the project took place), variability in the accuracy of record keeping and measure code assignments over the years, the market influence on the Portfolio, and effects of our analysis (Section 3.3). Section 2.2.3 details the limitations to this study. | tracking in each year, as well as the establishment of data tracking protocols, many of the data challenges faced in this study would be alleviated or eliminated. This analysis used historical data across multiple tracking systems to determine historical trends. If a similar analysis is conducted regularly, supported by ongoing tracking, it will increase the ability of evaluators and program implementers to isolate first-year measures in the Portfolio and examine the performance of ETP-associated measures against non-ETP associated measures of the same vintage, which are subject to the same market conditions. |                          |                      |                   | Roles & responsibilities need to be clearly established, as there are many parties involved in data tracking from ETP to claims. Limitations per EM&V firewalls (D.05-01-055) restrict SCE and Implementer from performing some of these tasks. SCE recommends workshops or working sessions to establish roles/responsibilities and appropriate data tracking process to accomplish this recommendation. |                   |                     |                   |                       |                   |

# Comments for IOU Response to Recommendations (RTR) - ETP-2 (Calmac ID #CPU0231.01)

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## Energy Division Response to ETP-2 IOU RTR

Energy Division understands the IOUs' concerns about evaluating the Emerging Technologies Program based on factors at least partially out of its control, but reiterates that there are reasons for this level of scope in evaluation. Metrics that look at the efficacy of ETP delivering technologies into incentive program and tracking their savings can give a general sense of whether the broader technology pipeline is functioning, as well as give indications of how that system may be faltering, even outside of ETP. This pipeline consists of ETP technology selection, ETP evaluation, ETP technology transfer, measure development, program inclusion, and program implementation, along with other possible influencing activities and groups. ETP can leverage this data to identify weaknesses in their processes and optimize their technology selection, evaluation, and technology transfer. It is especially relevant to track program efficacy and establish a baseline while shifting to 3rd party implementation to understand how this transitions impacts program output moving into the future. The study results will also be used to conduct deep dives into measures that moved into the portfolio and under- or over-performed, providing further insights for both ETP and the subsequent groups in the technology development pipeline. Energy Division stands by the usefulness of understanding the most important output of ETP: technologies that succeed in accruing cost effective savings in the portfolio. In response to the IOUs' concerns, Energy Division understands that these metrics need to be evaluated in context and should not be used as the sole factor in determining the efficacy of ETP.

— Comment by *Alexander Merigan* on Sep 28, 2021

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