

**PUBLIC UTILITIES COMMISSION**

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Date: March 27, 2019

To: Southern California Gas Company (SoCalGas)

From: Peter Lai, California Public Utilities Commission

Cc: R.13-11-005 Service Lists

Subject: 2018 Efficiency Savings and Performance Incentive (ESPI) Performance Scores

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**Table of Contents**

I. Summary of 2018 ESPI Scores- Custom Projects and Workpapers ..... 1

II. Commission Staff Findings 2018 Activities ..... 2

    A. Custom Projects Review Overview..... 2

    B. Workpaper Review Overview ..... 3

III. Discussion ..... 3

    A. Custom Projects Performance Review ..... 3

    B. Workpapers Performance Review..... 5

IV. The Scoring Methodology ..... 7

Attachment A: Final ESPI Performance Scores ..... 10

Attachment B: Custom Project Scores and Feedback..... 13

Attachment C: Workpaper Scores and Feedback ..... 15

Attachment D: 2018 Performance Annual Ratings ..... 19

## I. Summary of 2018 ESPI Scores- Custom Projects and Workpapers

Pursuant to Decision (D).13-09-023, D.15-10-028 and D16-08-019, Commission Staff and consultants score the investor owned utilities (IOUs) based on their performance during the pre-approval phase (or “ex ante” phase) of developing an energy efficiency project or measure. This performance score is a component of the annual Efficiency Savings and Performance Incentive (ESPI) awarded to each utility. Commission Staff and consultants completed the 2018 ESPI performance review scoring as prescribed in Table 3 of D.16-08-019. D.16-08-019 established a consolidation of categories of metrics on which the utilities are evaluated. Ordering Paragraph 19 of this decision states that the ESPI scores “shall be weighted for the utility program administrators based on the proportion of deemed savings and custom measures in each utility’s portfolio”. The scores contained in this memo are final, and Southern California Gas Company (SoCalGas) shall use the total final performance points from the table below together with the weighting<sup>1</sup> for each category to calculate the 2018 ESPI performance review component award.

A breakdown of SoCalGas’ 2018 ESPI performance score of 56.18/100 for workpapers and custom projects is shown below in Table 1. SoCalGas’ 2018 total points increased over its 2017 total points of 46.34. Scores for 2017 are provided in Table 2 below.

Table 1: 2018 ESPI Scoring for Workpapers and Custom Projects

SCG 2018 ESPI Ex-Ante Review Performance Scores and Points		Workpapers				Custom			
Metric	Metric Area of Scoring	2018 Metric Score	Metric Weight Factor	2018 Points	Max Points	2018 Metric Score*	Metric Weight Factor	2018 Points	Max Points
1	Timing and Timeliness of Submittals	1.52	10%	1.52	5	2.00	10%	2.00	5
2	Content, Completeness, and Quality of Submittals	1.07	30%	3.21	15	2.00	30%	6.00	15
3	Proactive Initiative of Collaboration	4.38	10%	4.38	5	4.00	10%	3.45	5
4	Due Diligence and Quality Assurance/Quality Control Effectiveness	1.88	25%	4.69	12.5	5.00	25%	7.5	12.5
5	Responsiveness to Needs for Process and Program Improvements	4.38	25%	10.94	12.5	5.00	25%	12.50	12.5
<b>Total</b>				<b>24.73</b>	<b>50</b>			<b>31.45</b>	<b>50</b>

<sup>1</sup> D16-08-019 Ordering Paragraph 19 specifies that “Energy Savings Performance Incentive scores shall be weighted for the utility program administrators based on the proportion of deemed savings and custom measures in each utility’s portfolio.” Therefore, the final score cannot be determined until the utilities have submitted and CPUC staff has compiled their final 2017 savings claims and published for each utility the weights for the custom and deemed categories.

Table 2: 2017 ESPI Scoring for Workpapers and Custom Projects

SCG 2017 ESPI Performance Scores and Points		Workpapers				Custom			
Metric	Metric Area of Scoring	2017 Metric Score	Metric Weight Factor	2017 Points	Max Points	2017 Metric Score	Metric Weight Factor	2017 Points	Max Points
1	Timing and Timeliness of Submittals	5.00	10%	5.00	5	3.32	10%	3.32	5
2	Content, Completeness, and Quality of Submittals	1.00	30%	3.00	15	3.19	30%	9.57	15
3	Proactive Initiative of Collaboration	3.50	10%	3.50	5	1.00	10%	1.00	5
4	Due Diligence and Quality Assurance/Quality Control Effectiveness	2.09	25%	5.23	12.5	2.79	25%	6.98	12.5
5	Responsiveness to Needs for Process and Program Improvements	1.25	25%	3.13	12.5	2.25	25%	5.63	12.5
<b>Total</b>				<b>19.85</b>	<b>50</b>			<b>26.49</b>	<b>50</b>

The metric scoring area descriptions are expanded in [Attachment A](#). The final category scores are explained in more detail below as well as in Attachments B through D to this memo. As required by the ESPI decision D. 13-09-023, the relative weighting of performance during custom project development versus workpaper (or “deemed”<sup>2</sup>) development of the performance component of the ESPI will be published by Commission Staff in June 2019 after reviewing the utilities’ final 2018 savings claims to be filed on May 1, 2019.

## II. Commission Staff Findings 2018 Activities

### A. Custom Projects Review Overview

In 2018, Commission Staff issued two custom project dispositions and six review waivers<sup>3</sup>. A review of the two projects dispositions and the Review Process Score Enhancements points resulted in SoCalGas’ custom project score increasing by 4.96 points over 2017 scores (26.49 in 2017 vs. 31.45 in 2018). Since relatively few dispositions and waivers were issued in 2018, most of the custom project review activities upon which ESPI scores are based were focused on meetings between SoCalGas and Commission Staff where various ongoing projects and policy issues were discussed.

#### 1. Summary of 2018 Achievements

SoCalGas continues to demonstrate efforts to improve its performance. Commission Staff’s observations of improved performance include:

- SoCalGas staff’s commitment to improve its internal quality assurance and quality control processes.
- SoCalGas staff continues to collaborate, hold productive discussions to clarify various Commission Staff guidance.
- SoCalGas made a good effort to provide data requested by Commission Staff related to CPUC Project ID number 0017, a process heating project.

<sup>2</sup> Deemed are a set of predetermined savings values for efficiency measures that are developed from commonly accepted data sources and analytical methods.

<sup>3</sup> Review waivers are issued where Commission staff have not conducted an in-depth review of all of the submitted project documentation. CPUC staff neither approves nor disapproves any aspects of the project. The project application is directed to proceed without further Commission staff review.

## **2. Summary of Areas Requiring Improvement**

Areas in need of improvement include:

- For the systematic errors in the EnergyPro™ calculation tool, SoCalGas must take more care to review the results provided by the tool and not rely only on vendors or other agency's reviews to ensure the accuracy of the tool.

### **B. Workpaper Review Overview**

#### **1. Summary of 2018 Achievements**

SoCalGas' workpapers scores have increased compared to last year by 4.88 points, from 19.85 in 2017 to 24.73 in 2018. SoCalGas continues to demonstrate efforts to improve its performance. Commission Staff's observations include:

- SoCalGas has provided leadership for workpaper development and updates, including Smart communicating Thermostats (SCT), the Universal Audit Tool, pool covers and hot water measures.
- SoCalGas, along with the other three PAs, have collaborated to develop statewide-consolidated standardized documentation and processes for several deemed measures / workpapers, including the first statewide workpapers for food services.
- SoCalGas collaborated with stakeholders to present two workpaper training sessions for third party contractors.

#### **2. Summary of Areas of Improvement**

Commission Staff also highlight the following additional recommendations for improvement:

- SoCalGas has not taken a leadership role or demonstrated strong commitment to effective and timely communications to implementer community of changes in deemed savings.
- SoCalGas should strive for the timely submission of required workpaper updates.
- SoCalGas should increase its efforts to respond to Federal code updates in updating its measures, such as residential and small commercial water heaters.
- SoCalGas should improve response time in implementing research studies so that workpapers can be updated with less disruption to the market.

## **III. Discussion**

The following sections of this memorandum provide a detailed description of the findings, including, areas of achievement, areas requiring improvement and scoring for both custom projects and workpapers.

### **A. Custom Projects Performance Review**

Each year, Commission Staff review a selected sample of custom project energy efficiency program applications. The review findings and directions to the program administrators are presented in documents referred to as "dispositions". Commission Staff acknowledges that the project applications are not selected at random, rather selected based upon the type of projects that had past issues or projects where the Commission expected to find deficiencies for various reasons. Projects were also selected to determine whether a utility has corrected issues from similar projects that Commission Staff reviews identified in the past.

**In 2018, Commission Staff issued two SoCalGas review dispositions and six review waivers. Commission Staff selected no new SoCalGas projects for review. Most of the custom project review activities were focused on meetings between SoCalGas and Commission Staff where various ongoing projects and policy issues were discussed.**

The Commission has selected a new contractor to assist staff with the custom projects review and expects more significant review activities to start in the second quarter of 2019.

## **1. Issues Related to Gross Savings Impacts**

As highlighted in the 2018 mid-year ESPI memoranda, issued on July 30, 2018, calculation methodologies and measurement and verification (M&V) plans continue to be an area of weakness that have a significant impact on the reliability of the pre-approval, forecasted savings estimates.

- In 2017 Commission Staff selected two PG&E and two SDG&E Savings by Design projects (CPUC Project ID numbers 0061 and 0127) which used the EnergyPro™ software tool for their savings impact analysis. The pre-project approval review determined that the EnergyPro™ tool is flawed. It became evident that SoCalGas and the statewide IOU team for this program had not vetted this tool before using it in this program. When accepting analysis tools for use in estimating savings for custom projects, PAs must take more care to review the results provided by the tool and not rely on vendor's or other agency's reviews to ensure the accuracy of the tool under the range of uses expected in the PA programs. Commission Staff also note that many of the errors identified in the dispositions are user input errors in the EnergyPro™ software. User input errors are a sign that the software users may not have the expertise to perform the modelling and that the technical reviewers may not have the expertise to review the simulation models created by the implementation teams. These issues must be addressed by the Statewide team.
- For CPUC Project ID number 0029, which is a retrofit project occurring at multiple facilities, the analysis was based purely on assumptions that were not verified by SoCalGas. Commission Staff conducted a short online search and found the hour of use estimate used for the measures were likely significantly overstated.
- For CPUC Project ID number 0017, which is a statewide process heating project at multiple sites of one customer, Commission Staff's analysis found the savings impacts associated with this project varied by customer site for the same measure. Within a custom project, single measures that are being used for the same purpose must be considered and analyzed together, not broken into different applications at different sites. Additionally, efficiency savings for the measure must be based on the entire project. The measures efficiency savings impacts at the different locations must be consistent.

As described above, the inability to provide accurate savings estimates remain weaknesses of the custom gross savings impacts process. SoCalGas must undertake a long-term and ongoing effort to increase the technical skills of its project developers and Quality Assurance/Quality Control (QA/QC) reviewers to ensure that the pre-approval, forecasted savings estimates are accurate and reliable.

## **2. Documentation Issues**

CPUC Project ID number 0029 was selected for review on December 30, 2015 from SoCalGas' December 21, 2015 bi-weekly "Ready for Review Projects" list. SoCalGas did not submit project documentation for Commission Staff review until March 27, 2018, after the project measures had been

installed. This is not in compliance with Custom Measure and Project Review Process as described in Commission Decision 11-07-030, Attachment B, page B6.

### **3. Issues Related to Net Impacts**

Commission Staff continue to be concerned about issues related to net savings impacts. For CPUC Project ID number 0029, there was no evidence of program influence. For all projects SoCalGas should provide documentation that demonstrates what the customer was planning to do prior to the energy efficiency program intervening in the project. The documentation needs to demonstrate how the program enabled the customer to adopt an alternative action improving the final efficiency of the project and providing incremental savings benefits to ratepayers over what the customer was otherwise planning to implement.

Net Impacts should be based on real and convincing evidence of program influence included in the documentation submitted for every project. The evidence of program influence should outweigh evidence that suggests the customer would have chosen the efficient alternative absent the program information or financial support. It is important that SoCalGas make significant progress in reducing free-ridership to meet the portfolio net savings goals.

#### **B. Workpapers Performance Review**

SoCalGas submitted 19 workpapers for deemed measures in 2018. The comments below are organized by the 5 metric areas of scoring. A table of all submitted and reviewed workpapers, along with feedback of each reviewed workpaper, is included in [Attachment C](#).

##### **1. Timeliness**

Timeliness was a concern for SoCalGas' submittals of workpapers and workpaper revisions in 2018.

For example, federal regulations require residential and small commercial water heaters to be rated under a revised testing and reporting standard as of December 2017. Commission Staff was expecting revised workpapers to be submitted as part of Phase 1<sup>4</sup> 2018 that reflected these code changes. Instead, Commission Staff had to issue a uniform disposition covering all IOUs' water heating workpapers, regardless of whether revisions were submitted as part of Phase 1.

The hot water workpaper updates in response to DEER2019 and the disposition were submitted at the end of 2018 even though the hot water calculator was available in August. This unnecessarily added workload during the busy end-of-year and Phase 1 workpaper submission period.

SoCalGas also proactively kept Commission Staff updated on the progress of the SCT, however research timelines were not managed well. The delayed research required the CPUC to issue an extension to avoid market disruptions. This was factored into both individual workpaper scoring and the process adder score.

##### **2. Content, Completeness, and Quality of Submissions**

The content and quality of workpaper submissions continues to be a concern, although there have been

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<sup>4</sup> Phase 1 is updated workpapers affected by DEER resolution or for new workpapers to be included in the 2019 and 2020 program year. Phase 2 is new workpapers or workpaper revisions due to non-DEER/resolution changes.

improvements since 2017.

As discussed under Metric 1 (Timeliness) above, Commission Staff issued a Phase 1 disposition that updated savings values for residential and small commercial water heaters. SoCalGas was the lead for these measures and when the workpaper was finally submitted, it was not clear which calculator version was to be applied to which program year, much less whether the calculations were correct and correctly applied. The Phase 1 2019 values were not correct.

SoCalGas was the lead or co-lead for two workpapers, the Residential Universal Audit Tool (UAT) a new measure type without a clear precedence, and the SCT. Although final dispositions for these workpapers were not issued in 2018, we appreciated SoCalGas' leadership and in-depth discussions with the Commission's Workpaper Consultant Subject Matter Expert (SME). The workpaper development research addressed issues previously raised by the Consultant.

SoCalGas completed an industry standard practice study for commercial pool covers and presented results in a collaborative session with the SME prior to the workpaper submission, which was appreciated. However, the workpaper did not address important questions raised in the pre-review.

### **3. Proactive Initiative of Collaboration**

SoCalGas staff continued to seek out collaboration with Commission Staff regarding updates to current measures, as well as potential new program offerings. SoCalGas also notified and requested early feedback from Commission Staff on workpapers as noted above.

SoCalGas collaborated with the other IOUs and the CPUC to present two successful workpaper training sessions in November 2018 geared to third party contractor bidders. SoCalGas assisted in the general planning and attendance activities for the training sessions. SoCalGas staff has also been helpful to Commission Staff as it transitions to a new workpaper consultant. These efforts have been recognized in the process adder scoring.

### **4. IOU's Due Diligence, Quality Assurance, and Quality Control**

Commission Staff would like to see SoCalGas improve its management of workpapers. As the lead for the residential and small business hot water workpapers, SoCalGas was responsible for the management of those workpapers. The updates for 2018 and the submissions for 2019 and 2020 program years were submitted at the very end of 2018 through a single workpaper that addressed all three years in a confusing manner. It took Commission Staff considerable effort to sort out the workpapers. As the lead for this measure, SoCalGas should have managed more timely and clear submissions, at least for 2018.

SoCalGas has not addressed multiple workpapers that have been called out in previous dispositions, including:

- Establishing preponderance of evidence of program influence for accelerated replacement of shower heads; and
- Investigating industry standard practice for commercial service water heating circulation systems.

SoCalGas, as the co-lead for the SCT measure, was at least partially responsible for the planning and execution of the research required to develop the revised workpaper. The original study projected that the research would be completed by October. However, the timelines were not managed and at

the last minute, the CPUC had to issue an extension to avoid market disruptions. Orderly markets require smooth and well announced transitions which requires driving research to a successful, timely conclusion.

## 5. IOU's Responsiveness

SoCalGas has improved in this area since 2017. Commission Staff appreciates SoCalGas' efforts to lead workpaper revision and development for the SCTs, hot water, UAT, and pool cover measures. This leadership is vital for the ongoing improvement of workpapers.

All four IOUs, with SCE as the lead, have been submitting a consolidated workpaper plan that includes, for a subset of currently active workpapers, the workpaper lead PA and anticipated submission dates of revisions. The IOUs have supplemented the workpaper plan with additional information since the mid-year ESPI Performance Review Feedback memos, with flags indicating a variety of conditions leading to the revision. While there is room for additional improvements in the next submission plan, the workpaper plan was useful to Commission Staff. Commission Staff does note, however, that SoCalGas did not include all the workpapers they planned to submit in the September to December timeframe (unlike the other IOUs), nor did they provide forecasts of portfolio savings by workpaper as requested.

## IV. The Scoring Methodology

The 2018 performance score was developed using 5 detailed scoring metrics for each directly reviewed work product (i.e., workpaper and custom project), as well as a scoring of the utility's internal due diligence processes, QA/QC procedures and methods, as well as program implementation enhancements to support improved forecasted values.

[Attachment A](#) summarizes the Metrics adopted in D.16-08-019 as well as the Commission Staff developed scores and points for 2018. D.16-08-019 also directed that the custom and workpaper scores be weighted together into a final score based on the PA total claims for custom and deemed activities, respectively. The weights for custom and deemed scores will be developed and published by Commission Staff in June 2019 based upon the IOUs final 2018 savings claims to be filed on May 1, 2019.

In accordance with D.16-08-019, the IOUs' activities are assessed against a set of five metrics on a rating scale of 1 to 5. Once activities are assessed, the ratings for each are converted onto this scale, where 1 is the lowest score assigned and 5 is the highest score assigned. A maximum score on all metrics for both workpapers and custom projects will yield 100 points whereas a minimum score on all metrics would yield 20 points. The 1-5 rating scale is distinguished as follows:

1. Consistent underperformer in meeting the basic expectations;
2. Makes a minimal effort to meet Commission expectations but needs dramatic improvement;
3. Makes effort to meet Commission expectations, however improvement is required;
4. Sometimes exceeds Commission expectations while some improvement is expected; and
5. Consistently exceeds Commission expectations.

As with the 2017 performance scores, the final scores were "built-up" from a metric-by-metric assessment of each reviewed work product. It is Commission Staff's expectation that this detailed



scoring approach, along with the detailed qualitative workpaper and custom project level feedback, is consistent with the direction provided in D.16-08-019. We believe this scoring approach provides specific guidance to the utilities on how to improve their due diligence review and scores moving forward.

A “Direct Work Product Review” portion of each metric score was developed based upon the individual scoring of dispositions issued for custom project or workpapers. Each reviewed utility work product was first determined to have components either applicable or not applicable to a metric<sup>5</sup>. If a metric was determined to be not applicable to a given disposition, the metric was identified as not applicable (“N/A”) and the metric was assigned a score equal to the average 1 to 5 score from the remaining applicable metrics. Assigning this average score to any “N/A” metrics essentially normalized the final score so that a disposition neither benefitted or was penalized as a result of a non-applicable metric.

For workpapers, if an item was determined to have activity applicable to a metric, the item was then assigned a qualitative rating as to the level of due diligence applied to the item as either deficient (or “-“), apparent but minimal (or “yes”), or superior (or “+”). Each of the qualitative ratings were then mapped to a quantitative score percentage level of 0%, 50% and 100%, respectively. The assigned percentage scores were averaged across all the reviewed items. Individual workpaper level disposition scoring, as well as related workpaper activities, are provided in [Attachment C](#).

For custom projects, each applicable metric was directly scored using the 1 to 5 rating scale described above. A project by project summary of the custom project scoring is included in [Attachment B](#).

The above process resulted in custom project and workpaper work product review scores. Next, utility-specific “Review Process Score Enhancements” were developed for each applicable metric based on observed policy and technical reviews or program implementation processes/procedures developed and implemented in 2018 in order to positively impact future project reviews. Commission Staff believes it is important to provide ESPI “Enhancement” points for positive due diligence developments to recognize the effort and to provide additional encouragement even before a change in project-level results is observed.

In the custom scoring process Commission Staff added “Enhancement” points in the area of Policy/Technical QA/QC for Metrics 4 and 5 to reflect SoCalGas staff’s positive efforts in these metric areas as discussed earlier. Those initiatives included:

- SoCalGas conducted a process improvement of the calculated process that resulted in the implementing an early project review and a review of project documentation before submitting the project review package to Commission Staff.
- SoCalGas delivered training for internal and external stakeholder based on process improvement findings and provide updates on regulatory and program changes that could impact project quality.
- SoCalGas sought input from the Energy Efficiency Peer Review Group to prepare for the 2018 release of abstracts, focusing on ensuring conflicts do not exist with potential bidders between

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<sup>5</sup> For example, workpapers and custom projects which do not involve measures which in some way are expected to utilize DEER values, assumptions or methods, in the development of new kWh, kW and therm savings values would not receive scoring for metric 9 (“Professional care and expertise in the use and application of adopted DEER values and DEER methods”). Another example would be a minor workpaper or small custom project may not receive a score for metric 4 (“Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to Commission staff in the formative stage for collaboration or input”)

those who will implement custom programs and those who will review custom projects.

- SoCalGas holds monthly manager/director meetings to continue to enhance and streamline the custom process and projects reviews.
- SoCalGas coordinated with other program administrators on joint projects and to discuss Commission decisions, program strategies and baseline issues.

Although these efforts may not yet be reflected in project specific disposition scores, Commission Staff believes recognition of the efforts of SoCalGas' technical and policy review staff is warranted. These activities offer promise to improve the overall SoCalGas performance in the future.

Workpaper scores also include "Review Process Score Enhancements." Process issues represent critical deemed measure development topics where Commission Staff believes improvement is needed or improvement has occurred, but those activities are not necessarily reflected in the areas of direct review. These activities, as discussed above, include items such as:

- SoCalGas collaborated with the other PAs and the Commission to present two successful workpaper training sessions in November 2018 geared to third party contractor bidders.

To produce the final workpaper scores, the metric scores for the two workpaper contributing areas were added together, using a 50% weight for the process issues score. The 50% weight given to the process review has the effect of being a "score enhancement" or increase to the direct review score. Furthermore, within each contributing area (direct and process review areas), Commission Staff also assigned weights for individual items as a way to reflect greater importance of different individual review items. The separate process scoring provides an avenue for assessing overall QA/QC processes and procedures put into place by SoCalGas.<sup>6</sup>

[Attachment D](#) contains custom and workpaper summary tables showing the components and total scores and points for each metric in each of the two component areas of scoring described above.

Questions or comments about the feedback or final scores should be directed to Peter Lai ([peter.lai@cpuc.ca.gov](mailto:peter.lai@cpuc.ca.gov)). Note that pursuant to D.13-09-023, Commission Staff will schedule a meeting with SoCalGas staff to discuss this memorandum and its final scores by April 30, 2019.

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<sup>6</sup> The guidance on scoring approach provided in D.13-09-023, at 74, provides that when only a small number of submissions are available for scoring and the submissions have varying impacts on the portfolio overall, that appropriate weighting should be allied to the submission and observed performance that should carry across multiple metrics. "Low scores for metrics that assess specific and important quantities (e.g., if the utility only uploads a small percentage of custom projects and receives a low score for Metric 1a), will have a proportional impact on the total score the utility could receive for later metrics that measure the quality of custom project submittals." "For example, doing an outstanding job on a large number of very low-impact, standardized projects will not make up for doing a poor job on a few projects that represent a major portion of portfolio dollars."

## Attachment A: Final ESPI Performance Scores

Metric	Workpapers				Custom			
	Max Points	Max Percent of Total Points	2018 Score	2018 Points	Max Points	Max Percent of Total Points	2018 Score	2018 Points
<b>1 Timing and Timeliness of Submittals</b> Timely submittals: all lists, inventories, plans, studies, workpapers and project/measure documentation; timing and advanced announcement of submittals (spreading out submission when available rather than holding and turning in large batches); timely follow-up PA responses to review disposition action items including intention to submit/re-submit with proposed schedule.	5	10%	1.52	1.52	5	10%	2.00	2.00
<b>2 Content, Completeness, and Quality of Submittals</b> Completeness, appropriateness, comprehensiveness, accuracy, and clarity of submittals. Submittal adherence to Commission policies, Decisions, and prior Commission Staff dispositions and/or guidance. Do the submittals include all materials required to support the submittal proposed values, methods and results. Is the project or measure clearly articulated? Are proposed or utilized methods clearly explained including step-by-step method or procedure descriptions. Will the proposed or utilized approach provide accurate results. Are all relevant related or past activities and submittals appropriately noted or disclosed, analyzed or discussed. Are the pros/cons of alternate possible approaches or conclusions discussed to support that the chosen one is most appropriate.	15	30%	1.07	3.21	15	30%	2.00	6.00
<b>3 Proactive Initiative of Collaboration</b>	5	10%	4.38	4.38	5	10%	3.45	3.45

PA efforts to bring either measures, projects, studies, questions, and/or savings calculation methods and tools to Commission Staff for discussion in the early formative stages, before CPUC staff review selection. In the case of tools, before widespread use in the programs.

Commission Staff expects collaboration among the PAs to develop common or coordinated submissions and for the PAs to undertake joint or coordinated planning activities and study work. The PAs are expected to engage with CPUC staff in early discussions on unique or high profile, high impact measures or projects before program or customer commitments are made. The PAs are expected to engage with CPUC staff on planning and execution of studies that support proposed offerings, tools, or determination of proposed baselines or other programmatic assumption that can impact ex ante values to be utilized.

<p><b>4 Program Administrator’s Due Diligence and Quality Assurance/Quality Control Effectiveness</b></p>	<p>12.5</p>	<p>25%</p>	<p>1.88</p>	<p>4.69</p>	<p>12.5</p>	<p>25%</p>	<p>3.00</p>	<p>7.50</p>
<p>Commission Staff expects the PA to have effective Quality Control (QC) and Quality Assurance (QA) processes for their programs and measures. The PAs are expected to have a pro-active approach to reviewing existing measure and project assumptions, methods and values and updating those to take into account changes in market offerings, standard practice, updates to DEER methods and assumptions, changes to codes, standards and regulations, and other factors that warrant such updates. The depth and correctness of the PA's technical review of their ex ante parameters and values, for both Core, Local Government and Third Party programs, are included under this metric. The depth and correctness of the PA's technical review of their own staff and subcontractor work related to supporting deemed and custom measure and project submissions are included in this metric. Evidence of review activities is expected to</p>								

be visible in submissions so that Commission Staff can evaluate the effectiveness of the PA internal QA/QC processes.

<b>5 Program Administrator’s Responsiveness to Needs for Process and Program Improvements</b>	12.5	25%	4.38	10.94	12.5	25%	5.00	12.50
This metric reflects the PAs ongoing efforts to improve their internal processes and procedures resulting in increased ex post evaluated gross and net savings impacts. Commission Staff looks not only to the PA's internal QC/QA processes, but also whether individual programs and their supporting activities incorporate and comply with CPUC policies and prior Commission Staff disposition guidance in their program rules, policies, procedures and reporting. This includes changes to program rules, offerings and internal operations and processes required to improve overall review and evaluation results. A particularly important area for focus is the improvement of net portfolio performance via the removal of measures and or participation with low program attribution (NTG).								
<b>Total</b>	50	100%		24.73	50	100%		31.45

## Attachment B: Custom Project Scores and Feedback

The table below lists the identification numbers associated with each disposition. All custom projects were scored using new metrics adopted in 2016. The metrics are shown in the Table below.

Table 3 2016 Adopted Performance Metrics

Metric	2016 CPUC Adopted Performance Metrics	Maximum Points	% of TOTAL POINTS
<b>Metric 1</b>	<b>Timeliness and Timing of Submittals</b> Timely submittal of all documentation and follow-up utility responses to review disposition action items.	<b>5.0</b>	<b>10%</b>
<b>Metric 2</b>	<b>Content, Completeness and Quality of Submittals</b> Completeness, appropriateness, comprehensiveness, accuracy, and clarity of submitted documentation. In addition, this metric is an assessment of the utility's adherence to CPUC policies, Decisions, and prior CPUC Staff disposition guidance.	<b>15.0</b>	<b>30%</b>
<b>Metric 3</b>	<b>Proactive Initiation of Collaboration</b> Utility's efforts to bring either measures, questions, and/or savings calculation tools to CPUC Staff for discussion in the early formative stages, before CPUC Staff review selection. In the case of tools, before widespread use in the programs. CPUC Staff expects collaboration among the utilities and for the program administrators to engage with CPUC Staff in early discussions on high profile, high impact measures well before customer commitments are made.	<b>5.0</b>	<b>10%</b>
<b>Metric 4</b>	<b>Utility Due Diligence and QA/QC Effectiveness</b> CPUC Staff expects the utility to have effective Quality Control (QC) and Quality Assurance (QA) processes for its programs and measures. The depth and correctness of the utility's technical review of its ex ante parameters and values, for both Core and Third Party programs, are included under this metric.	<b>12.5</b>	<b>25%</b>
<b>Metric 5</b>	<b>Utility Responsiveness to Needs for Process &amp; Program Improvements (Course Corrections)</b> This metric reflects the utility's efforts to improve, operationalize, and improve its internal processes which are responsible for the creation and assignment of ex ante parameters and values. CPUC Staff looks not only to the utility's internal QC/QA process, but also whether individual programs incorporate and comply with CPUC policies and prior CPUC Staff disposition guidance in its program rules, policies, and procedures.	<b>12.5</b>	<b>25%</b>

29			17	
Metric	SCORE	CPUC Staff Specific Comments on Each Metric	SCORE	CPUC Staff Specific Comments on Each Metric
<b>Metric 1</b>	<b>0.0</b>	These projects were selected for review on December 30, 2015 from SCG's December 21, 2015 bi-weekly CMPA list. SCG submitted projects documentation for review on March 27, 2018, after the projects' measures were installed.	<b>4.0</b>	The data requested by Commission Staff for the analysis was provided in a timely manner.
<b>Metric 2</b>	<b>0.0</b>	There was no documentation included to include program influence.	<b>12.0</b>	The project documentation was clear and comprehensive. The data requested by Commission Staff for the analysis was well organized which helped facilitate Commission Staff's analysis.
<b>Metric 3</b>	<b>N/A</b>	N/A	<b>N/A</b>	N/A
<b>Metric 4</b>	<b>0.0</b>	The baseline used was overstated. SCG did not verify the savings.	<b>10.0</b>	The IOU's analysis of the data indicated significant concerns about the integrity of the implementer's data and M&V approach.
<b>Metric 5</b>	<b>N/A</b>	N/A	<b>9.0</b>	The IOUs made a diligent effort to review and analyze the results of the implementer's data.

## Attachment C: Workpaper Scores and Feedback

The table below lists the ID numbers associated with each workpaper submission or disposition and the workpaper review process “score enhancements” scoring area. The listed weight is used in the combining all the individual rows together into a single score for all the rows in the two scoring components (“direct review” and “process issues”); then each category total score gets equal weighting in the final total score for the metric. The PA may refer to the individual dispositions for more detailed descriptions of the specific actions staff required for each workpaper. The qualitative ESPI scoring feedbacks are designated as follows:

- ‘+’ indicates a positive (from midpoint) scoring impact on a metric,
- ‘-’ indicates a negative (from midpoint) scoring impact on a metric,
- ‘Yes’ indicates meeting expectation; neutral (midpoint) scoring impact on a metric,
- ‘No’ indicates the review feedback is not applicable to a metric.

Workpaper Detailed Reviews				ESPI Metrics					
WP ID	Rev	Title	Comments	Weight	1	2	3	4	5
SCGNRWH120206A	9	Storage Tank Water Heaters for Commercial and Industrial Applications	Opportunities: Starting 2018, residential and small commercial water heaters are required by Federal standards to be tested and rated with a Uniform Energy Factor (UEF). However, it appears that all IOU programs are still defining measures using the outdated Energy Factor (EF). As part of the Phase 1 disposition, CPUC staff developed measure definitions using UEF, but no workpapers were submitted following this direction until the end of the year.	1.00	-	no	no	no	no
SCGNRWH120206A	10	Storage Tank Water Heaters for Commercial and Industrial Applications	SCG was the lead for these measures and when the workpaper was finally submitted, it was not clear which calculator version was to be applied to which program year, much less whether the calculations were correct and correctly applied. The 2018 update was submitted at the end of 2018 while the calculator was available in September.	1.00	-	-	no	no	+
SCGNRWH120206B	7	Tankless Water Heaters For Commercial Applications	See comment for WPCGNRWH120206A, Rev 10	1.00	-	-	no	no	+



SCGREWH120919A	4	Tankless Water Heaters for Single Family and Multifamily Applications	Positive: SCE submitted workpaper a new short form workpaper, SCE17LG134, adopting PG&E's approved workpaper in place of this workpaper. Opportunities: CPUC staff was expecting and update to this workpaper to reflect previous direction to update ISP. In February 2017, CPUC staff issued a custom project disposition that directed SCE to collaborate with other PAs and complete and ISP study for interior and exterior lighting by October 1, 2017 (in time to incorporate results into 2018 deemed and custom savings values). At this time, SCE is still in the planning stages and expects to complete the work by the fall of 2018 (about a year later than directed). Some of the delay appears to be due to an increase in scope to investigate current existing conditions (which would serve as a first baseline only in AR claims).	1.00	-	-	no	no	+
SCGNRWH150309A	1	Commercial Pool Cover	SCG completed the ISP research and presented results prior to the workpaper submission, which was appreciated. However, the workpaper did not address important questions raised in the pre-review.	1.00	yes	-	yes	yes	+
SCGREHC180409	0	Res Online Universal Audit Kits (UAT)	SCG was the lead for this behavioral workpaper, which is new measure type without many precedents. Although the final disposition has not been issued, we appreciate SCG's leadership and its responses to questions about the workpaper, including in-depth reviews with the ex ante subject matter expert. The workpaper addressed issues previously raised earlier by the Ex Ante Team.	1.00	yes	+	yes	+	+
SCE17HC054	0	Residential Smart Communicating Thermostat	SCE was the primary author of this work paper, with co-authorship by SCG. The SCT research timelines were not managed well, delaying workpaper submission by six months. The delayed research required the CPUC to issue an extension to avoid market disruptions. An assessment of the quality of the final research will be assessed in later ESPI scores since the research is incomplete at this time. We appreciate SCG's leadership and its responses to questions about the workpaper, including in-depth reviews with the ex ante subject matter expert.	1.00	-	no	yes	-	yes
SCGNRCC171226A	1	Commercial Conveyor Broiler	Minor edits to ExAnte Tables.	1.00	yes	yes	no	no	yes
SCGREWH180207A	0	Small Storage Residential WH	SCG was the lead for these measures and when the workpaper was finally submitted, it was not clear which calculator version was to be applied to which program year, much less whether the calculations were correct and correctly applied. The 2018 update was submitted at the end of 2018 while the calculator was available in September.	1.00	-	-	no	-	+
SCGNRWH120206B	6	Tankless Water Heaters For Commercial Applications	See comment for WPSCGNRWH120206A, Revision 9	1.00	-	no	no	no	no
SCGREWH120919A	3	Tankless Water Heaters for Singles Family and Multifamily Applications	While SCE provided a workpaper plan and kept the Commission aware of progress, the smart thermostat research timelines were not managed well, delaying workpaper submission by six months. The delayed	1.00	-	no	no	no	no

research required the CPUC to issue an extension to avoid market disruptions. An assessment of the quality of the final research will be assessed in later ESPI scores since the research is incomplete at this time.

## Workpaper Submissions

WP ID	Rev	Title	Comments
WPSCGREWH120919A	3	Tankless Water Heaters for Single Family and Multifamily Applications	Detailed review – resubmit - scored in detailed review section
WPSCGNRWH120206B	6	Tankless Water Heaters For Commercial Applications	Detailed review – resubmit - scored in detailed review section
WPSCGNRWH120206A	9	Storage Tank Water Heaters for Commercial and Industrial Applications	Detailed review – resubmit - scored in detailed review section
WPSCGREAP170726A	0	Res High Efficiency Dishwasher	Review waived - interim approval
WPSCGNRWH170412A	1	Low Flow Showerheads for Non-Residential	Review waived - interim approval
WPSCGWP110812A	4	Pipe insulation (Non-Space Conditioning)	Review waived - interim approval
WPSCGNRWH161128B	1	Central Water Heating Variable Speed Pump for Commercial	Review waived - interim approval
WPSCGNRWH170313A	0	Recirculation Pump Time Clock	Review waived - interim approval
WPSCGNRCC171226A	0	Conveyor Broiler	Review waived - interim approval
WPSCGCCWH180504A	0	FlowControlValves	Review waived - interim approval
WPSCGREHC161128A	1	Efficient Fan Controller for Residential Furnaces	Review waived - interim approval
WPSCGNRWH120206A	10	Storage Tank Water Heaters for Commercial and Industrial Applications	See notes in Workpaper Review Section
WPSCGNRWH120206B	7	Tankless Water Heaters For Commercial Applications	See notes in Workpaper Review Section
WPSCGREWH120919A	4	Tankless Water Heaters for Single Family and Multifamily Applications	See notes in Workpaper Review Section
WPSCGNRWH150309A	1	Commercial Pool Cover	See notes in Workpaper Review Section
WPSCGREHC180409	0	Res Online Universal Audit Kits (UAT)	See notes in Workpaper Review Section
SCE17HC054	0	Residential Smart Communicating Thermostat	See notes in Workpaper Review Section
WPSCGNRCC171226A	1	Commercial Conveyor Broiler	See notes in Workpaper Review Section
WPSCGREWH180207A	0	Small Storage Residential WH	See notes in Workpaper Review Section

Process Adder	ESPI Metrics					
	Weight	1	2	3	4	5
PAs are required to submit all workpapers subject to the most recent DEER update before January 1 of the subsequent year. SCG submitted workpaper and workpaper revisions in response to DEER2019 updates, meeting the January 1 2019 due date.	1	yes	no	no	no	no
PAs are expected to conduct well designed research as the basis for workpaper revisions. The PA's scope includes all the activities required for successful research including planning, oversight of the research and incorporation of the findings into the workplan. The SCT research timelines were not managed well, delaying workpaper submission by six months. The delayed research required the CPUC to issue an extension to avoid market disruptions.	1	-	no	no	-	no
PAs are required to submit workpaper submission plans each year within thirty days of the filing of the Resolution. SCG submitted the appropriate data to SCE for compilation. The plan included active and inactive workpapers organized by measure type and flagged by key characteristics.	1	yes	no	no	no	no
SCG was directed to provide revised workpapers establishing preponderance of evidence for showerheads and to conduct an ISP study for commercial service water heating circulation system. Neither effort has progressed to the workpaper stage.	1	no	no	no	-	no
SCG collaborated with the other PAs and the CPUC to present two successful workpaper training sessions in November 2018 geared to third party contractor bidders.	1	no	no	yes	no	no
The CPUC transitioned to a new consultant team late in 2018. SCG as well as the other PAs have been helpful and patient with the new workpaper and DEER consultants during this transition period.	1	no	no	+	no	no

## Attachment D: 2018 Performance Annual Ratings

### Custom Scoring

2018 Annual Custom Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	N/A Adjusted Disposition Score (1-5)	2.00	2.00	2.44	2.00	3.60	
Review Process Score Enhancements	Technical & Policy QC Increase	0.00	0.00	1.00	0.50	0.50	
	Implementation Increase	0.00	0.00	0.00	0.50	1.00	
Total Score	N/A Adjusted Final Metric Score (1-5)	2.00	2.00	3.45	3.00	5.00	Total Points
	N/A Adjusted Metric Points	2.00	6.00	3.45	7.50	12.50	31.45

2017 Annual Custom Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	Dispositions Score	2.81	2.69	0.00	1.79	1.75	
Review Process Score Enhancements	Technical & Policy QC Increase	0.50	0.50	0.00	0.50	0.50	
	Implementation Increase	0.00	0.00	1.00	0.50	0.00	
Total Score	Final Metric Score (1-5)	3.32	3.19	1.00	2.79	2.25	Total Points
	Metric points	3.32	9.57	1.00	6.98	5.63	26.49

## Workpaper Scoring

2018 Annual Workpaper Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	SCG "-"	73%	71%	0%	50%	0%	
	SCG "+"	0%	14%	0%	25%	75%	
	SCG "Yes"	27%	14%	100%	25%	25%	
	Dispositions Score %	14%	21%	50%	38%	88%	
	Dispositions Score	0.68	1.07	2.50	1.88	4.38	
Review Process Score Enhancements	SCG "-"	33%	0%	0%	100%	0%	
	SCG "+"	0%	0%	50%	0%	0%	
	SCG "Yes"	67%	0%	50%	0%	0%	
	Process Score %	33%	0%	75%	0%	0%	
	Process Increase Score	1.67	0.00	3.75	0.00	0.00	
	Process Increase Weight	0.50	0.50	0.50	0.50	0.50	
	Process Increase Wtd Score	0.83	0.00	1.88	0.00	0.00	
Total Score	Final Metric Score (1-5)	1.52	1.07	4.38	1.88	4.38	Total Points
	Metric Points	1.52	3.21	4.38	4.69	10.94	24.73

2017 Annual Workpaper Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	SCG "-"	25%	100%	75%	50%	100%	
	SCG "+"	75%	0%	25%	0%	0%	
	SCG "Yes"	0%	0%	0%	50%	0%	
	Dispositions Score %	75%	0%	25%	25%	0%	
	Dispositions Score	3.75	0.00	1.25	1.25	0.00	
Review Process Score Enhancements	SCG "-"	17%	33%	0%	50%	0%	
	SCG "+"	67%	0%	80%	17%	0%	
	SCG "Yes"	17%	67%	20%	33%	100%	
	Process Score %	75%	33%	90%	33%	50%	
	Process Increase Score	3.75	1.67	4.50	1.67	2.50	
	Process Increase Weight	0.50	0.50	0.50	0.50	0.50	
	Process Increase Wtd Score	0.50	0.50	0.50	0.50	0.50	
Total Score	Final Metric Score (1-5)	5.00	1.00	3.50	2.09	1.25	Total Points
	Metric points	5.00	3.00	3.50	5.23	3.13	19.85

## Explanations of scoring tables row entries

1. The row labeled with *IOU* “-“ lists the percent of workpaper reviews undertaken where the Commission Staff evaluation of the materials or information indicated that the IOU performance in this metric for the submission did not meet minimum expectations or requirements relative to the metric.
2. The row labeled with *IOU* “+“ lists the percent of workpaper reviews undertaken where the Commission Staff evaluation of the materials or information indicated that the IOU performance in this metric for the submission exceeded minimum expectations or requirements relative to the metric.
3. The rows labeled with *IOU* “Yes“ lists the percent of workpaper reviews undertaken where the Commission Staff evaluation of the materials or information indicated that the IOU performance in this metric for the submission exceeded met minimum expectations or requirements relative to the metric.
4. The “Dispositions Score %” row (and “Process Increase Score” for workpapers) indicates how the combination of the three rows of scores (+, -, and yes) sum into a total points multiplier for each metric. Each row contributes to the total based on the row count over the total count for all three rows.
5. The “Disposition Score” (and “Process Increase Score” for workpapers) row converts the % score into a numeric value of up to five by directly applying the % to a value of 5.
6. The custom row labeled with “*Technical & Policy QC Increase*” lists Commission Staff points added to the metric based on an evaluation of the overall IOU performance in putting into place quality assurance and/or quality control methods, documents and/or training for staff and contractors related to this metric area that are expected to improve the ability of review personnel to identify and cure issues going forward on projects started during 2016 but not yet seen in the custom review activity.
7. The custom row labeled with “*Implementation Increase*” lists Commission Staff points added to the metric based on an evaluation of the overall IOU performance in putting into place new or changed program rules, eligibility criteria, incentive structures, application and implementation contract processes and procedures in 2016 related to this metric area that are expected to improve performance going forward on projects started but not yet seen in the custom review activity.
8. The workpaper rows labeled with “*Review Process Score Enhancements*” lists Commission Staff scoring for each metric based on an evaluation of the overall IOU performance in putting into place quality assurance and/or quality control methods, documents and/or training for staff and contractors that are expected to improve the ability of review personnel to identify and cure issues going forward on workpapers. This score is weighted as an increase to the disposition score based on the fractional weight listed in the “Process Increase Weight” row.
9. The “Final Metric Score” row indicates the total score for each metric as a sum of the Direct Work product Review Score plus the Review

Process Score Enhancements (either as a simple sum for custom or a weighted value sum for workpapers) to provide a final metric score with the final score constrained between a maximum score of 5 and a minimum score of 1.

10. The “Metric Points” row provides the point value derived from the Final Metric Score row. If the maximum point value associated with a metric is greater than 5 then the score is multiplied by the max point value divided by 5 to obtain the metric point value related to the final score.