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Date: March 30, 2020

To: Pacific Gas and Electric (PG&E)

From: Peter Lai and Peter Biermayer, California Public Utilities Commission (CPUC)
Cc: R.12-01-005 and R.13-11-005 Service Lists

Subject: 2019 EFFICIENCY SAVINGS AND PERFORMANCE INCENTIVE (ESPI) PERFORMANCE SCORES

Table of Contents

I. Summary of 2019 ESPI Scores - Custom Projects and Workpapers

Pursuant to Decision (D).13-09-023, D.15-10-028 and D.16-08-019, California Public Utilities Commission (CPUC) 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. CPUC Staff and consultants completed the 2019 ESPI performance review scoring as prescribed in Table 3 of D.16-08-019. Decision D.16-08-019 established consolidated metrics to evaluate and further direct the utilities. 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 Pacific Gas and Electric Company (PG&E) shall use the total final performance points from the table below together with the weighting[1] for each category to calculate the 2019 ESPI performance review component award.

A breakdown of PG&E's 2019 ESPI performance score of 80.66/100 for workpapers[2] and custom projects is shown below in Table 1. PG&E's 2019 total points is an increase over its 2018 total points of 75.77. Scores for 2018 are provided in Table 2 on the following page.

Table 1: PG&E 2019 ESPI Scoring for Workpapers and Custom Projects

PG&E 2019 ESPI Performance Scores and Points		Workpapers				Custom			
Metric	Metric Area of Scoring	Metric Score	Metric Weight Factor	Points	Max Points	Metric Score	Metric Weight Factor	Points	Max Points
1	Timing and Timeliness of Submittals	2.50	10%	2.50	5	4.89	10%	4.89	5
2	Content, Completeness, and Quality of Submittals	3.90	30%	11.70	15	3.53	30%	10.59	15
3	Proactive Initiative of Collaboration	5.00	10%	5.00	5	4.40	10%	4.40	5
4	Due Diligence and QA/QC Effectiveness	3.37	25%	8.43	12.5	4.00	25%	12.50	12.5
5	Responsiveness to Needs for Process/Program Improvements	4.51	25%	11.27	12.5	3.75	25%	9.38	12.5
Total				38.90	50			41.76	50

[1] D.16-08-019 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 2018 savings claims and published for each utility the weights for the custom and deemed categories.
[2] A workpaper documents the data, methodologies, and rational used to develop values for deemed measures. A workpaper is prepared and submitted by program administrators and approved by the CPUC.

Table 2: PG&E 2018 ESPI Scoring for Workpapers and Custom Projects

PG&E 2018 ESPI Performance Scores and Points		Workpapers				Custom			
Metric	Metric Area of Scoring	Metric Score	Metric Weight Factor	Points	Max Points	Metric Score	Metric Weight Factor	Points	Max Points
1	Timing and Timeliness of Submittals	2.04	10%	2.04	5	2.50	10%	2.50	5
2	Content, Completeness, and Quality of Submittals	1.50	30%	4.50	15	4.00	30%	12.00	15
3	Proactive Initiative of Collaboration	5.00	10%	5.00	5	4.73	10%	4.73	5
4	Due Diligence and QA/QC Effectiveness	3.00	25%	7.50	12.5	5.00	25%	12.50	12.5
5	Responsiveness to Needs for Process/Program Improvements	5.00	25%	12.50	12.5	5.00	25%	12.50	12.5
Total				31.54	50			44.23	50

The metric scoring area descriptions are expanded in Attachment A. The final category scores are explained in more detail below as well as in Attachment B through Attachment 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"[3]) development of the performance component of the ESPI will be published by CPUC Staff in June 2020 after reviewing the utilities' final 2019 savings claims to be filed on May 1, 2020.

II. CPUC Staff Findings 2019 Activities

A. Custom Projects Review Overview

1. Summary of 2019 Achievements

In 2019, CPUC Staff selected no new custom projects for review in the first half of the year due to delays in the procurement of a review contractor. Project review activities were resumed in July of 2019. From the period beginning July 2019 to the end of December 2019, PG&E submitted 1,034 custom projects to CPUC Staff for review selection. CPUC Staff selected 91 of these projects for review and issued 57 custom project dispositions out of the 91 projects selected for review. The remaining 34 PG&E projects selected for review in 2019 were reviewed and had dispositions issued in early 2020 due to the timing of their selection.[4] No review waivers were issued in 2019.[5] A review of the project dispositions and the Review Process Score Enhancements points resulted in PG&E's custom project score decreasing by 2.47 points over 2018 scores (44.23 in 2018 vs. 41.76 in 2019 as shown in Tables 1 and 2 above).[6] PG&E continues to demonstrate efforts to improve its performance.

[3] Deemed are a set of predetermined savings values for efficiency measures that are developed from commonly accepted data sources and analytical methods.
[4] Projects selected by CPUC Staff at the end of 2019 were reviewed and disposed in early 2020 and therefore are not included in the 2019 performance scoring.
[5] Review waivers are issued where CPUC Staff have not conducted an in-depth review of all of the submitted project documentation. CPUC Staff neither approves nor disapproves any aspects of this project. The project application is directed to proceed without further CPUC Staff review.
[6] PG&E's 2018 custom projects score was based on CPUC Staff issuing two project review dispositions.

CPUC Staff's observations include:

- **Improvements in Gross Impact Estimation**. In 2018, only two dispositions were issued which does not provide a reliable comparison to 2019. In 2017 there were 93 issues related to gross savings impacts in the dispositions issued and thus it was used as a comparison to 2019 during which there were 24 issues regarding gross savings impacts. The fraction of issues regarding the calculation of gross impacts went down from 51 percent in 2017 to 28 percent in 2019. PG&E has shown significant progress in improving quality control of issues relating to gross impacts.
- **Improvements in Documentation**. Comparing 2019 to 2017 project submissions, the fraction of issues regarding documentation went down from 18 percent to 8 percent. PG&E continues to show progress in improving the quality of their documentation packages.
- **Improvements in Program Influence Documentation**. The fraction of issues regarding program influence went down from six percent in 2017 to one percent in 2019. PG&E continues to make progress in improving their program influence documentation.

2. Summary of Areas Requiring Improvement

Areas that were most problematic, frequent, and/or are in need of improvement include:

- PG&E must include effective useful life (EUL) data for all projects and test the simple payback against the project EUL. One of the Statewide Custom Project Guidance Document eligibility rules states that the project simple payback must be less than the project EUL. In order to evaluate conformance with this rule, EUL data must be provided.
- Data exchange between Third Party implementers and PG&E has been problematic. The savings claims in the bimonthly uploads generally do not match the approved savings in the project documentation. PG&E must continue to work on a data exchange protocol that improves the reporting and tracking of savings from Third Party programs.

B. Workpapers Review Overview

1. Summary of 2019 Achievements

PGE's workpapers scores have increased compared to last year by 7.36 points (from 31.54 in 2018 to 38.90 in 2019 as shown in Tables 1 and 2 above). PGE continues to demonstrate efforts to improve its performance. CPUC Staff observed improvements in PG&E's development and management of workpaper submissions in the following areas:

- **Successful transition to statewide workpapers**. PG&E, in collaboration with the other program administrators (PA), has managed the revision and/or development of a high volume of workpapers during the review period. CPUC Staff acknowledges PG&E's role in making this submission cycle successful and timely.
- **PG&E provided leadership** managing the submissions for or making significant contributions to more complex measures including linear lighting and the two behavioral workpaper for Home Energy Report and Universal Audit Tool.

- **PG&E provided leadership** in the resolution of the Measure Application Type (MAT) implementation and compiled all active workpaper parameters across all PAs into a single data set.

2. Summary of Areas of Improvement

CPUC Staff highlights the following recommendations for improvement which are centered on improved planning:

- PG&E reported that it reorganized its internal ex ante teams and introduced internal tools that are expected to improve the quality of the workpapers, however, in the near term, PG&E workpapers have had errors and inconsistencies between the workpaper narrative and the workpaper data sheets.
- PG&E, in collaboration with the other PAs, should plan workpaper updates holistically, with research activities coordinated across workpapers of the same end-use.
- PG&E, in collaboration with the other PAs, should identify disruptive issues earlier and propose methods for their orderly resolution.
- PG&E should keep CPUC Staff informed of all workpaper development through workpaper plans which include detailed schedules that are updated in a timely manner as the workpaper development process evolves.

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, CPUC Staff reviews a selected sample of custom project energy efficiency program applications. The review findings and directions to the program administrators (PA) are presented in documents referred to as "dispositions". CPUC Staff acknowledges that prior to July of 2019 project applications were not always selected at random, rather selected based upon the type of projects that had past issues or projects where the CPUC expected to find deficiencies for various reasons. Projects were also selected to determine whether a utility has corrected issues from similar projects that CPUC Staff reviews identified in the past, e.g., Savings by Design projects using the EnergyPro software.

In 2019, CPUC Staff selected no new custom projects for review in the first half of the year due to delays in the procurement of a review contractor. Project review activities were resumed in July of 2019. From the period beginning July 2019 to the end of December 2019, CPUC Staff selected 91 new PG&E projects for review and of those 57 received dispositions and none received a review waiver. The remaining 34 projects' dispositions were issued in early 2020 due to the timing at which they were selected. The comments below are organized by the five metric areas of scoring prescribed in D.16-08-019 with metric scores shown prior to any

enhancement points. A summary table of all issued dispositions, along with the dispositions individual score and feedback from the reviewer, is included in Attachment B. Attachment D contains an embedded custom scores workbook that includes a tab with details on the individual project level disposition scores and feedback from the project reviewer.

Table 3 below presents the custom disposition points given to PG&E for each metric both with and without the addition of any Enhancement Points.

Table 3: PG&E Custom Disposition Points Awarded by Metric

Metric	Metric Area of Scoring	Weight Factor	Custom Disposition Points		Max Points
			With Enhance Pts	w/o Enhance Pts	
1	Timeliness of Submittals	10%	4.89	4.89	5
2	Content, Completeness, and Quality of Submittals	30%	10.59	10.59	15
3	Proactive Initiative of Collaboration	10%	4.40	4.40	5
4	PA's Due Diligence and QA/QC	25%	12.50	10.00	12.5
5	PA's Responsiveness	25%	9.38	8.13	12.5
Total			**41.76**	**38.01**	**50**

1. Timeliness of Submittals

In 2019, PG&E received a custom disposition score of 4.89 out of 5.0 for Metric 1 (Timeliness of Submittals) prior to the addition of any enhancement points. This disposition score was based on the 57 PG&E custom project reviews completed in 2019. Out of these 57 projects reviewed, 3 projects were submitted a day later than required, 1 project was submitted 4 days late, and 19 projects were submitted several days earlier than required per the timeline mandated in Senate Bill 1131 and Section 381.2 of the Public Utilities Code.[7]

2. Content, Completeness, and Quality of Submissions

In 2019, PG&E received a custom disposition score of 10.59 out of 15.0 for Metric 2 (Content, Completeness, and Quality of Submissions) prior to the addition of any enhancement points. This disposition score was based on the completeness of the 57 PG&E custom project reviews. Of these 57 dispositions, 24 projects (42 percent) contained no errors that were critical to the completeness of the submittal, and an additional 15 projects (26 percent) had minor deficiencies. Eighteen projects out of the 57 projects reviewed (32 percent) had significant errors which resulted in a loss of points under this metric. As such CPUC Staff believe PG&E must work to address parameters that significantly impact the quality and completeness of submitted project documentation on future submissions.

Table 4 below summarizes the 85 action items identified across the 57 dispositions issued between July 1, 2019 and December 31, 2019. These action items illustrate errors that were critical to the project's efficiency savings estimate calculations.

[7] "The electrical corporation or gas corporation shall make the project application supporting documentation available to the CPUC for review within 15 business days of the CPUC review selection date".

Table 4: Summary of Categorized Action Items for Custom Projects

Issue Area	Action Categories	Summary of CPUC Staff Required Action by the PA:	Summary of CPUC Staff Notes or Instructions:	Total	Percent of Total
Issues Related to Gross Savings Impacts	Analysis assumptions	7	2	9	38%
	Calculation method	6	0	6	25%
	M&V plan	6	0	6	25%
	Revise to match CPUC savings estimate	2	1	3	13%
	Subtotals	**21**	**3**	**24**	**28%**
Process, Policy, Program Rules	Baseline	1	1	2	6%
	Eligibility	1	0	1	3%
	ER preponderance of evidence	3	2	5	14%
	EUL/RUL	18	2	20	57%
	Incentive calculation	1	0	1	3%
	Measure cost	3	0	3	9%
	Self generation	3	0	3	9%
	Subtotals	**30**	**5**	**35**	**41%**
Documentation Issues	Missing documents	4	2	6	86%
	Project scope unclear	1	0	1	14%
	Subtotals	**5**	**2**	**7**	**8%**
Issues Related to Net Impacts	Program influence	1	0	1	100%
	Subtotals	**1**	**0**	**1**	**1%**
Other Issues	Documentation and bi-monthly upload discrepency	11	2	13	72%
	Other 2 - Review waived	0	1	1	6%
	Other 3 - SPB > EUL	1	3	4	22%
	Subtotals	**12**	**6**	**18**	**21%**
	Grand Total	**69**	**16**	**85**	**100%**

Specific examples of project and measure level deficiencies are provided below.

- **EUL Exceeds Simple Payback** was a recurring deficiency discovered and occurred in 3 out of the 57 projects reviewed which resulted in a significant reduction in points for this metric. Sampled projects containing this deficiency were CPUC Project IDs 279, 297, and 298.
- **Fuel Substitution Test Failed** for one sampled project (CPUC Project ID 228), and due to the importance of this test, the project received the minimum points under this metric.
- **Non-IOU Energy Source not Accounted for** occurred on three projects (CPUC Project IDs 265, 286, and 300) and resulted in the loss of significant ESPI points for this metric due to the importance of accounting for all energy sources included in a project.
- **Project not authorized prior to implementation** occurred in one project (CPUC Project ID 200) and resulted in a significant loss of ESPI points due to the importance of authorizing projects prior to implementation.
- **Incorrect EUL** was found in 5 out of the 57 projects reviewed which resulted in a significant reduction in points for this metric. Sampled projects containing this deficiency were CPUC Project IDs 205, 241, 278, 285, and 286.
- **Measure Not Articulated Clearly and Lack of Clarity in Descriptions** occurred in 4 of the 57 projects reviewed and resulted in a meaningful deduction of points related to this

metric. Sampled projects that contained this deficiency were CPUC Project IDs 221, 226, 262, 264, and 265.

- **Age Not Documented** occurred for 8 of the 57 projects reviewed and resulted in a meaningful deduction of points related to this metric. Sampled projects that contained this deficiency were CPUC Project IDs 219, 221, 223, 224, 225, 244, 245, 262, and 312.

3. Proactive Initiative of Collaboration

In 2019, In PG&E received a custom disposition score of 4.4 out of 5.0 for Metric 3 (Proactive Initiative of Collaboration) prior to the addition of any enhancement points. At the portfolio level, CPUC Staff determined that PG&E did make a significant effort to bring measures, projects, and studies forward for discussion prior to CPUC Staff review. Topics related to project tool updates, high-impact projects, and measures with EUL exceeding simple payback were brought up during bi-weekly calls. In addition, PG&E made six Early Opinion requests as well as an Early Opinion meeting with regards to an upcoming project. CPUC Staff expects PAs to bring topics forward that may impact project reviews for early opinions, particularly if they are high impact projects (such as for CPUC Project IDs 40 and 286) and found that PG&E did so. As such CPUC Staff determined that PG&E exceeded the minimum expectations with regards to proactive collaboration under this metric.

4. PA's Due Diligence, Quality Assurance, and Quality Control (QA/QC)

In 2019, In PG&E received a custom disposition score of 10.0 out of 12.5 for Metric 4 (PA's Due Diligence, Quality Assurance, and Quality Control) prior to the addition of any enhancement points. Project and measure level disposition performance results reviewed under Metric 2 were used as a proxy for the level of QA/QC performed by the PA. As such, the number of dispositions proceeding without exception was weighed against those that required resubmissions or resulted in rejections. Of the 57 projects reviewed, 15 projects (26 percent) proceeded without exception, while 37 projects (65 percent) were allowed to proceed with exceptions as noted in the review. The remaining four projects[8] (7 percent) were rejected, resulting in a rejection rate that was second lowest of the four IOUs.

CPUC Staff looked at what procedure documents were in place and found that PG&E had a significant number of post installation and post M&V QC checks in place. PG&E demonstrated compliance with this metric by providing evidence in the uploads that PA staff had reviewed the document and performed QC. CPUC Staff also commends PG&E for their communications with Project Sponsors through their Custom Implementation Team (CIT) Wiki, which provides program rules, guidelines for project submittals, training videos and communications relating to project status and remaining issues. Overall CPUC Staff believes PG&E made efforts to exceed CPUC Staff's expectations for this metric.

5. PA's Responsiveness

In 2019, PG&E received a custom disposition score of 8.13 out of 12.5 for Metric 5 (PA's Responsiveness) prior to the addition of any enhancement points. When reviewed at the portfolio level, CPUC Staff assessed the time series of rejections and exceptions, the alignment of program

[8] One additional project reviewed was issued a Prospective Review Disposition.

policy and procedures with the number of actual rejections and exceptions based on eligibility and attribution, and adaptation to rule changes over time. CPUC Staff found that projects reviewed between July 2019 and December 2019 exhibited a slight downward trend in terms of project performance over time (i.e. project submissions had more issues when submitted later in 2019 compared to earlier in the year). CPUC Staff noted that 35 issues out of the 85 comments made on projects (41 percent) were related to Process, Policy, and Program Rules; most of these were focused on the EUL reporting issue noted above. In terms of program influence, only one issue out of 85 comments made on projects (1 percent) was related to program influence. CPUC Staff also notes that PG&E was quick to address a new program eligibility issue with a third-party implementer, demonstrating their willingness to adapt to changes in program rules.

B. Workpapers Performance Review

PG&E had 68 workpapers which were submitted or disposed in 2019, 55 of which were led by PG&E and the balance of which were adoptions[9] of previously approved workpapers or straightforward revisions of existing workpapers. This high volume is due to workpaper revisions in response to the 2018 DEER Update Resolution E-4952 update and the consolidation of PA-specific workpapers into single statewide workpapers.

The comments below are organized by the five scoring metric areas created in D.16-08-019.[10] The narrative includes observations common to multiple workpapers and feedback related to the workpaper development process. Specific workpaper feedback is provided in tables in Attachment C. The Workpaper Detailed Review Table provides feedback on specific workpapers. The Workpaper Submissions Table lists all workpapers submitted by PG&E or PG&E workpapers that were disposed during the review period. Workpapers were selected for feedback from those that were submitted by PG&E and were either disposed or reached approval status during the review period. CPUC Staff acknowledges that workpaper development may have been supported by multiple PAs; however, at this time, there is no mechanism for apportioning feedback among PAs. Therefore, feedback is only provided for the submitting PA, with the assumption that they are the lead PA. The scoring rubric for workpapers is defined as follows:

> '+' indicates a positive scoring impact which receives 100% of total points for the metric
> '-' indicates a negative scoring impact which receives 0% of total points for the metric
> 'Yes' indicates meeting minimum expectation which receives 50% of total points for the metric
> 'No' indicates the review feedback is not applicable to a metric and does not impact the average

The assigned percentage scores were averaged across all the reviewed items.

[9] An adoption is a short form submission referencing another PA's previously approved workpaper without any revisions in content or values, except for necessary PA related measure identification codes.
[10] See D.16-08-019 at 87.

Table 5 below presents the workpaper disposition points given to PG&E for each metric both with and without the addition of any Enhancement Points.

Table 5: PG&E Workpaper Disposition Points Awarded by Metric

Metric	Metric Area of Scoring	Weight Factor	Workpaper Disposition Points		Max Points
			With Enhance Pts	w/o Enhance Pts	
1	Timeliness of Submittals	10%	2.50	2.50	5
2	Content, Completeness, and Quality of Submittals	30%	11.70	7.95	15
3	Proactive Initiative of Collaboration	10%	5.00	2.50	5
4	PA's Due Diligence and QA/QC	25%	8.43	5.30	12.5
5	PA's Responsiveness	25%	11.27	8.14	12.5
Total			**38.90**	**26.40**	**50**

1. Timeliness of Submittals

In 2019, PG&E received a workpaper disposition score of 2.50 out of 5.0 for Metric 1 (Timeliness of Submittals) prior to the addition of any enhancement points. PG&E has met deadlines for submission of statewide workpapers in the review period and all workpapers received a Yes, indicating that minimum expectations were met for timeliness.

PG&E submitted 10 workpaper plans in 2019, not all of which included detailed schedules. CPUC Staff and consultants expect that workpaper plans will include at least a target workpaper submission date early in the development cycle. As the development cycle advances, the schedule should become more detailed with itemized tasks, interim deliverables, and CPUC Staff review milestones with projected due dates. We expect PG&E to provide timely updates of schedule changes.

CPUC Staff requests that the PA joint Work Paper Plan required by D.15-10-028, and typically submitted in October, include all planned workpaper submissions anticipated through the end of the year, including Phase 2,[11] resubmitted Phase 2, and PA adoption workpapers, as well as 2020 Phase 1 workpapers. The PAs complied and submitted a Work Paper Plan in October. Three workpapers were submitted by PG&E that were not in the October workplan (Universal Audit Tool, Variable Speed Drive for Ventilation Fan, and Home Energy Report), however, there was some advance notice of their pending submission.

2. Content, Completeness, and Quality of Submissions

In 2019, PG&E received a workpaper disposition score of 7.95 out of 15.0 for Metric 2 (Content, Completeness, and Quality of Submissions) prior to the addition of any enhancement points. PG&E's content, completeness, and quality of workpapers has generally met standards. From the CPUC Staff perspective, the consolidation process went well, considering the volume of workpapers, the coordination that has been required, and the difficulties acquiring all the reference building prototypes.

[11] Phase 2 workpapers are for new measures or revisions to workpapers that are not submitted in response to the DEER Resolution.

PG&E submitted many workpapers, of which 10 required complex development, such as the behavioral (Universal Audit Tool and Home Energy Report), well water pump upgrades, and compressed air upgrade workpapers. The behavioral measure expertise was especially helpful, since behavioral measures are relatively a new type of deemed measure. However, some PG&E workpapers included content errors which required revisions; for example, there were modeling errors in the space heating boiler workpaper which did not reference the correct Title 24 efficiency. PG&E averaged 53 percent of the direct work product points for this metric, slightly exceeding minimum expectations for workpaper content.

PAs have an important responsibility to identify new technologies and delivery methods, and to develop workpapers where a deemed option makes sense. PG&E has been actively engaged in developing new measures including variable speed drives for boiler plant baghouse fans, variable speed drives for agricultural pumps, and the Universal Audit Tool, a behavioral measure. CPUC Staff encourages planning workpaper updates more comprehensively and by end-use, borrowing elements from the workpaper consolidation planning. Planning by end-use (such as lighting or refrigeration) provides an opportunity to leverage research activities across multiple measures and workpapers. CPUC Staff notes that the catalog of potential areas of improvement by end-use is also very useful and should be continuously updated as issues arise.

Rather than single workpaper or workpaper parameter updates, CPUC Staff encourages comprehensive updates by workpaper groupings, such as the update of five food services workpapers. The plan for updating these five workpapers includes standard practice research, equipment testing, customer surveys, hours of operation measurements, and updated compilation of product characteristics. Updating the uncertain and impactful parameters means these workpapers should not require updating again for a significant period. CPUC Staff encourages a proposal from the PAs for updating workpapers grouped by end-use spaced over a multi-year time horizon.

Workpapers are focused on defining well-supported savings and cost estimates, but measures are delivered in a program and regulatory context that is not described in the workpaper. CPUC Staff finds it useful to hear PG&E's views on program and market impacts of workpapers. As an example, the SoCalGas smart communicating thermostat program manager described to CPUC Staff and consultants the measure's role in multiple co-offerings with other SoCalGas programs. This presentation was excellent, and CPUC Staff encourages communication of how workpaper revisions impact the market. CPUC Staff expect regular updates of market conditions related to workpapers in the regularly scheduled meetings.

3. Proactive Initiative of Collaboration

In 2019, PG&E received a workpaper disposition score of 2.50 out of 5.0 for Metric 3 (Proactive Initiative of Collaboration) prior to the addition of any enhancement points. Workpapers met the minimum expectations of collaboration which was required to ensure each workpaper met all PAs' needs, therefore all workpapers received a "Yes". CPUC Staff recognizes that the consolidation of workpapers into single, statewide workpapers has required considerable coordination and collaboration between the PAs, and PG&E is to be commended and has been further recognized in the Process Adder Score.

PG&E has provided CPUC Staff with updates and preliminary work products on upcoming workpapers via the workpaper plan process. PG&E collaborated with the other PAs and CPUC Staff to present a Third Party Workpaper Q&A webinar on April 11.

4. PA's Due Diligence, Quality Assurance, and Quality Control (QA/QC)

In 2019, PG&E received a workpaper disposition score of 5.30 out of 12.5 for Metric 4 (PA's Due Diligence, Quality Assurance, and Quality Control) prior to the addition of any enhancement points. PG&E reports that it has reorganized its deemed workpaper team and introduced data quality assurance tools, however, in the near term, PG&E workpapers lack sufficient quality control. PG&E had multiple workpapers, as noted in Attachment C, with errors or inconsistencies between the workpaper narrative and the associated workpaper data tables as was seen, for example, in the central storage hot water heater workpaper. PG&E averaged 42 percent of the direct work product points for this metric, below minimum expectations for workpaper quality control.

PG&E reports that they have recently developed tools to assist in the quality of workpapers. CPUC Staff would appreciate a briefing on the functions and use of the tools to better understand how these tools or similar tools might be used to improve workpaper quality.

CPUC Staff expects that the PG&E will manage workpaper development well, including the submission of a workpaper plan and schedule early in the development process, as noted in Section 1, and that the schedules are managed to meet deadlines. CPUC Staff also expects that when PG&E leads a workpaper, they will coordinate with other PAs to ensure each statewide submission is complete from the perspective of all PAs.

5. PA's Responsiveness

In 2019, PG&E received a workpaper disposition score of 8.14 out of 12.5 for Metric 5 (PA's Responsiveness) prior to the addition of any enhancement points. Of the 68 workpapers submitted, PG&E was the lead for the 55 workpapers listed in Attachment C of this document. Leading workpaper development taxes PA resources, and CPUC Staff acknowledges and commends PG&E for taking on this work, particularly for the 10 that were more complex. PG&E averaged 65 percent of the direct work product points for this metric, exceeding the minimum expectations for individual workpaper leadership.

PG&E partnered with CPUC Staff and other PAs to resolve common issues and implement process improvements. Examples of these include:

- Development of a solution for implementing the new Measure Application Types (MAT). PG&E provided leadership in the development and implementation of the solution by organizing coordination meetings and by synthesizing PA input.
- Implementation of a workpaper cover page. All workpaper submissions from PG&E have included a complete cover page since its rollout.
- Common workpaper parameter dataset. Working with the other PAs, PG&E gathered all active workpaper data specifications sheets and compiled them into a single dataset earlier in 2019.

While there have been some procedural improvements, PG&E has, along with the other PAs as a whole, been deficient in anticipating and acting to resolve looming issues, such as the MAT implementation and defining the workpaper references for the September Annual Budget Advice Letters. Although these issues were ultimately resolved, the schedule was more compressed than necessary. As a group, the PAs need to better manage potential problems, first by articulating issues early and then by developing action plans to resolve them in an orderly fashion. CPUC Staff requests that the monthly joint meeting includes a standing agenda item to inventory upcoming issues and to begin formulating action plans to address them. The CPUC expects PG&E to volunteer to take leads on high-priority issues.

The consolidated measure workpapers, new third-party contracting process, and implications of Resolution E-4939[12] all set the stage for rethinking workpaper processes. It is incumbent upon the PG&E to provide their vision of what these processes might be, although other stakeholders will also have important input on the final processes.

IV. The Scoring Methodology

The 2019 performance score was developed using five 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 CPUC Staff developed scores and points for 2019. 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 CPUC Staff in June 2020 based upon the PAs final 2019 savings claims to be filed on May 1, 2020.

In accordance with D.13-09-023, the PAs' 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 to 5 rating scale is distinguished as follows:

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

As with the 2018 performance scores, the final scores were "built-up" from a metric-by-metric assessment of each reviewed work product. It is CPUC Staff's expectation that this detailed scoring approach, along with the detailed qualitative workpaper and custom project level feedback, is

[12] Resolution E-3949 sets forth principles for regular updates of measure baselines.

consistent with the direction provided in D.13-09-023. 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.[13] 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 nor 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. The scoring rubric for workpapers is defined as follows:

> '+' indicates a positive scoring impact which receives 100% of total points for the metric
> '-' indicates a negative scoring impact which receives 0% of total points for the metric
> 'Yes' indicates meeting minimum expectation which receives 50% of total points for the metric
> 'No' indicates the review feedback is not applicable to a metric and does not impact the average

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. Note the following approach to scoring individual workpapers by metric:

- Metric 1 Timeliness: The workpaper submission schedule was designed to distribute the workpapers throughout the months leading up to August. This was accomplished, so all workpapers were assigned a "Yes".
- Metric 2 Content: Straightforward workpaper received a "Yes", complex revisions received a "+", unless there were errors in the content, which warranted a "-".
- Metric 3 Collaboration: Statewide consolidation required expected collaboration between all parties, therefore all workpapers received a "Yes" in this metric.
- Metric 4 Quality Assurance: Workpapers that were complete, consistent, and without meaningful errors received a "Yes". Those workpapers with inconsistencies between the data tables and narrative or where values were left undefined received a "-" score. There were a few "+" scores assigned for workpapers with additional work products included that aided in the review of the workpaper.

[13] 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 2 ("Content, Completeness, and Quality of Submittals"). Another example would be a minor workpaper which may not require proactive collaboration with CPUC Staff and therefore not receive a score for Metric 3 ("Proactive Initiation of Collaboration").

- Metric 5 Process: Since workpaper development is an important task, the workpaper lead received a "Yes" for straightforward and "+" for complex workpaper submissions.

For custom projects, each applicable metric was directly scored according to the unique metric scoring methodology outlined below. A project by project summary of the custom project scoring is included in Attachment B.

A. Custom Metric 1 Scoring Methodology

This metric is related to the timeliness of submittals and a maximum of 5 points is allocated to this metric based on the PA's responsiveness to requests and follow-up documentation required to complete the review. Scoring for this metric occurs at the individual project review stage.

An allocation of 15 business days is given for the PA to submit materials following the date selected for review. PAs begin with a score of 5 and after 15 business days have passed, 1.0 point is deducted for each day the submittal is late.

B. Custom Metric 2 Scoring Methodology

This metric is related to content and completeness of submittals and a maximum of 15 points is allocated to this metric. Scoring occurs on each custom project during the individual project review stage. On a percentage basis Metric 2 is the single greatest determinant of the overall ESPI score. Scoring for Metric 2 is achieved through numerous areas throughout the custom project review workbook. PA's begin with a full score of 5 for each custom project in the review workbook with each noted deficiency reducing the points accordingly. Deficiencies are not weighted equally, with significant issues such as failure of the fuel substitution test or inadequate documentation of program influence receiving a heavier weighting compared to tests such as incorrect site location information. The scores from all custom projects are then averaged together to arrive at an average disposition score for Metric 2.

C. Custom Metric 3, 4, and 5 Scoring Methodology

Whereas Metrics 1 and 2 are assessed at the project level, Metrics 3, 4, and 5 are assessed at the portfolio level for each PA. As such, no individual custom project receives a unique score for these metrics. Additionally, unlike Metrics 1 and 2 which rely on deductions under each metric, scores for Metrics 3, 4, and 5 are awarded based on the PA's performance as it relates to the components of each metric.

For Metric 3, points are awarded when the PA proactively brought high impact or unique projects forward to CPUC Staff prior to developing a study or project, or if the CPUC Staff determined that an early opinion was not needed for a project. The final score for Metric 3 is therefore representative of the average performance of custom projects across the portfolio of projects.

Scoring for Metric 4 relies upon disposition results and findings identified under Metric 2 as well as the overall depth and correctness of the technical review team. The PA's performance on dispositions assist in serving as a proxy for quality control under Metric 4. In addition, several

project specific elements such as whether changing market practices and updates to DEER were considered, or if a project demonstrated evidence of review activities are used to assess the scoring for this metric. Similar to Metric 3, a final score is representative of the average performance of custom projects across the portfolio of projects.

With Metric 5, a review of process enhancement tools and techniques, tracking improved disposition performance over time, and highlights provided throughout the year by the PA assist in determining an average score related to process and programmatic improvements. Similar to Metrics 3 and 4, a final score is representative of the average performance of custom projects across the portfolio of projects.

D. Score Enhancement Methodology

The above process resulted in custom project and workpaper work product review scores. Next, PA-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 2019 in order to positively impact future project reviews. CPUC 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 CPUC Staff added "Enhancement" points in the area of Policy/Technical QA/QC for Metrics 4 and 5 to reflect PG&E staff's positive efforts in these metric areas as discussed earlier. Those initiatives included:

- Acted quickly to alleviate the issue with projects where the EUL exceeded the simple payback for the measure. CPUC Staff recognize the attentiveness PG&E gave to remedy this issue for projects going forward.
- Created an AR scorecard to identify the strength of evidence and what types of interactions lean towards Accelerated Replacement vs. Natural Replacement. This has been an issue in the past and CPUC Staff agree this scorecard is a good process step to improving QC on projects being submitted.
- Developed streamlined methods, templates, and guidance documents to improve the quality of custom project documentation and the overall review process. CPUC Staff noted the quality of submissions received and agrees that the consistency with project documentation streamlines the review process and leads to fewer errors overall.
- Enhanced the Wiki pages by expanding access to key external users, simplified the explanation of the CIT review process, increased library contents, presented webinars and tailored curriculum to different stakeholder groups. CPUC Staff recognize the usefulness of this resource and PG&E's commitment to improving and expanding content on the corporate Wiki pages over time.

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

Workpaper scores also include "Review Process Score Enhancements." Process issues represent critical deemed measure development topics where CPUC 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, are noted in the narrative, but are summarized here by metric as:

- Metric 1: Timeliness: There were no adder points for this metric.
- Metric 2: Content: PG&E was acknowledged for its contributions to the development of the behavioral workpapers which required specialized technical expertise.
- Metric 3: Collaboration: PG&E was acknowledged for the collaboration shown in the last year in the completion of the workpaper consolidation.
- Metric 4: Management: PG&E was acknowledged for its role in managing emerging issues such as the collaborative decisions on selecting workpapers to be used in ABAL reporting and the successful Q&A webinar.
- Metric 5: Process improvements: PG&E was acknowledged coordinating the PAs effort in the implementation of the new measure application type.

To produce the final workpaper scores, the metric scores for the two workpaper contributing areas were added together, using a 50 percent weight for the process issues score. The 50 percent 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), CPUC 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 PG&E.[14]

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). Note that pursuant to D.13-09-023, CPUC Staff will schedule a meeting with PG&E staff to discuss this memorandum and its final scores by April 30, 2020.

[14] 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 1), 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 (without Enhancement Points)

Metric		Workpapers Max Points	Workpapers Max Percent of Total Points	Workpapers 2019 Score	Workpapers 2019 Points	Custom Max Points	Custom Max Percent of Total Points	Custom 2019 Score	Custom 2019 Points
1	**Timing and Timeliness of Submittals**	5	10%	2.50	2.50	5	10%	4.89	4.89
	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.								
2	**Content, Completeness, and Quality of Submittals**	15	30%	2.65	7.95	15	30%	3.53	10.59
	Completeness, appropriateness, comprehensiveness, accuracy, and clarity of submittals. Submittal adherence to CPUC policies, Decisions, and prior CPUC 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.								
3	**Proactive Initiative of Collaboration**	5	10%	2.50	2.50	5	10%	4.40	4.40
	PA efforts to bring either measures, projects, studies, questions, and/or savings calculation methods and 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 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.								

4	**Program Administrator's Due Diligence and Quality Assurance/Quality Control Effectiveness**	**12.5**	**25%**	**2.12**	**5.30**	**12.5**	**25%**	**4.00**	**10.00**
	CPUC 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 be visible in submissions so that CPUC Staff can evaluate the effectiveness of the PA internal QA/QC processes.								
5	**Program Administrator's Responsiveness to Needs for Process and Program Improvements**	**12.5**	**25%**	**3.26**	**8.14**	**12.5**	**25%**	**3.25**	**8.13**
	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. CPUC 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 CPUC 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).								
Total		**50**	**100%**		**26.40**	**50**	**100%**		**38.01**

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	Percent of Total Points
Metric 1	**Timeliness and Timing of Submittals** Timely submittal of all documentation and follow-up utility responses to review disposition action items.	**5.0**	**10%**
Metric 2	**Content, Completeness, and Quality of Submittals** 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.	**15.0**	**30%**
Metric 3	**Proactive Initiation of Collaboration** 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.	**5.0**	**10%**
Metric 4	**Utility Due Diligence and QA/QC Effectiveness** 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.	**12.5**	**25%**
Metric 5	**Utility Responsiveness to Needs for Process & Program Improvements (Course Corrections)** 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.	**12.5**	**25%**

Metric	2016 CPUC Adopted ex ante Metrics	Maximum Points	Percent of Total Points	Total Scored Points	# Scored Dispositions	Scoring Notes (Portfolio Level[15])
Metric 1	**Timeliness and Timing of Submittals** Timely submittal of all documentation and follow-up utility responses to review disposition action items.	**5**	**10%**	**4.89**	**57**	PG&E complied with SB1131 guidelines for submitting documentation before the 15 business days required. Three projects were found to be one day late, and one project was four days late. The remaining 53 projects (93 percent) were submitted early, with 10 projects being submitted by 5 or more days early.
Metric 2	**Content, Completeness, and Quality of Submittals** 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.	**15**	**30%**	**10.59**	**57**	In 2019, 24 projects out of the 57 selected for review (42 percent) had no significant issues detected during custom project review. Additionally, 15 projects had minor deficiencies detected, such as missing evidence of permit, incorrect measure RUL, age not documented, or missing proof of old equipment not being removed. CPUC Staff found that 18 projects had significant deficiencies such as missing savings calculations, measure level EULs, not accounting for non-IOU fuel sources, lack of clarity in measure descriptions, and EUL exceeding simple payback. CPUC Staff determine that while 42 percent of the projects had no significant deficiencies, 32 percent had significant deficiencies and thus PG&E only met the minimum expectation for completeness and quality of submittals.
Metric 3	**Proactive Initiation of Collaboration** 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.	**5**	**10%**	**4.40**	**57**	CPUC Staff found that PG&E made significant efforts to bring measures, projects, or studies forward for discussion prior to review. In addition, they presented tool updates prior to implementation, discussed several topics on bi-weekly calls, and brought forth several high impact measures for discussion with CPUC Staff prior to commitments made to customers.
Metric 4	**Utility Due Diligence and QA/QC Effectiveness** CPUC Staff expects the utility to have effective Quality Control (QC) and Quality Assurance (QA) processes for its programs and measures. The depth and	**12.5**	**25%**	**10.00**	**57**	CPUC Staff weighted the number of dispositions proceeding without exception against those that required resubmissions or resulted in rejections. Of the 57 projects reviewed, 15 projects (26 percent) proceeded without exception, while 37 projects (65 percent) were allowed to proceed

[15] The Metric 1 and 2 scores for each of the individual custom projects are included in the final custom workbook which is embedded in Attachment D.

	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.					with exceptions as noted in the review. CPUC Staff found only 4 projects (7 percent) were rejected. These findings resulted in higher than expected performance with regards to effective QC of projects prior to submitting for review.
Metric 5	**Utility Responsiveness to Needs for Process & Program Improvements (Course Corrections)** 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.	**12.5**	**25%**	**8.13**	**57**	PG&E Projects reviewed from July 2019 through December 2019 exhibited a slight downward trend in terms of project performance over time. (i.e. project submissions performed more poorly over the course of the 2019 review period). Rules-based issues comprised 44 percent of all issues, with a majority surrounding EUL issues. PG&E demonstrated improvement through changes to program documents to incorporate requirements for simple payback to exceed EUL on several projects and had only one issue out of 69 total related to program influence. Both these efforts demonstrate compliance with CPUC policies as well as a willingness to improve internal processes, but that PG&E must take action to improve program performance overall.

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 Reviews					ESPI Metrics				
WP ID	Rev	Title	Comments	Weight	1	2	3	4	5
PGE3PHVC158	4	EvapCoil Cleaning	The workpaper appropriately addressed DEER resolution, MAT, and BRO guidance.	1	Yes	Yes	Yes	Yes	Yes
PGECOLTG151	9	LED Outdoor Lighting	See comment for PGECOLTG179	1	Yes	Yes	Yes	Yes	+
PGECOLTG178	4	LED HighLowBay	See comment for PGECOLTG179	1	Yes	Yes	Yes	Yes	+
SWCR012	1	Compressor Retrofit, Multiplex	The unit energy savings (UES) for this measure are based upon values retrieved from the 2008 version of the Database for Energy Efficient Resources (DEER). The savings for this measure were computed from energy use modeled in the DEER 2020 Grocery Prototype eQUEST models. The models were generated from MAS Control V3.00.19. The EX Ante team reviewed these models and found that inputs were entered correct.	1	Yes	+	Yes	+	+
SWCR015	1	Medium-Temperature Case Doors	This measure is included in the Database for Energy Efficient Resources (DEER). However, because of significant differences between the DEER measure and the measure defined herein, the UES for this measure were derived from detailed computer simulations based on the DOE-2.2R energy analysis program. The EX Ante team's review found some issues with the model inputs, which were addressed in the resubmitted models.	1	Yes	Yes	Yes	Yes	Yes
SWCR017	1	Ultra-Low Temperature Freezer	The estimated unit savings (UES) of an ultra-low-temperature (ULT) freezer in laboratory spaces is the sum of direct and indirect energy usage: • Controlled ENERGY STAR performance tests to measure direct savings (i.e., no interactive effects), and • Indirect energy savings	1	Yes	Yes	Yes	Yes	Yes

			were calculated as the net change in the building HVAC system energy usage due to the increase or reduction of heat release by a new ULT freezer.							
SWCR019	1	Low-Temperature Coffin to Reach-In Display Case Conversion	The EX Ante review team found the energy savings calculation to be reasonable. A few typos/formatting errors in the WP, which were corrected promptly.	1	Yes	Yes	Yes	Yes	Yes
SWCR020	1	Medium-Temperature Open Display Case Retrofit	The electric unit energy savings (UES) from this measure result primarily from a reduction in cooling load associated with a more efficient evaporator coil. The EX Ante team found the UES calculations to be reasonable.	1	Yes	Yes	Yes	Yes	Yes
SWCR021	1	Medium or Low-Temperature Display Case with Doors	eQuest models were used to estimate baseline and proposed energy consumptions. The EX Ante team found the model inputs were entered correctly.	1	Yes	Yes	Yes	Yes	Yes
SWHC004	1	Space Heating Boiler	Workpaper is not consistent with eligible building types. EAD tables show new construction and normal replacement measure offerings, but the workpaper text no mention of new buildings is listed. Measure case table does not include the 82% combustion efficiency value for the base case efficiency for hot water boilers with rated inputs ≥ 2500 Mbtuh, that is stipulated in Title 24. The table only includes the thermal efficiency estimate based on eQuest assumptions (80% thermal efficiency). We recommend including the base efficiency as stated in Title 24.	1	Yes	-	Yes	-	+
SWHC009	1	Supply Fan Controls, Commercial	The DEER 2020 base case prototypes were used to develop base and measure case energy use and demand estimates. The DEER prototypes were generated using MASControl3 software, and all modeling was conducted using the Title 24 CZ2010 weather files. Ex Ante team reviewed the models and found that inputs are entered correctly. The WP was uploaded in June, a head of the due date.	1	Yes	Yes	Yes	Yes	Yes
SWHC013	1	Unitary Air-Cooled Ac or Heat Pump, ≥ 65 Kbtuh, Commercial	No major issues found in the workpaper content; timeliness was sufficient.	1	Yes	Yes	Yes	Yes	Yes
SWHC018	1	Variable Speed Drive for HVAC Fan Controls	eQUEST 3.65-7175 energy modeling software was used to estimate savings, with DEER 2020 prototypes obtained from MASControl3 serving as the base case with the CZ2010 weather files. Comments made by the Ex Ante team regarding the model inputs were not addressed/answered until late December 2019.	1	Yes	Yes	Yes	Yes	Yes
SWHC023	1	Enhanced Ventilation for Packaged HVAC	Formatting and content errors in the originally submitted WP; errors in the originally submitted eQUEST model. The resubmitted WP and equest models addressed all the issue found during the first round of review. However, the resubmission was made very late. The Database for Energy Efficient Resources (DEER) 2020 basecase prototypes of the DEER Energy Impact IDs shown below were used to develop base and measure case energy use and demand estimates. DEER prototypes were generated using MASControl3 software. All modeling was performed using the CZ2010 weather files. T	1	Yes	Yes	Yes	-	+
SWHC043	1	Multiple Capacity Unitary Air-Cooled Commercial Air	Supporting workbooks referenced in the workpaper were not included with the workpaper submission. The raw data used to develop performance curves was not provided because	1	Yes	Yes	Yes	Yes	Yes

		Conditioners Between 65 And 240 Kbtu/H	they were developed by thermophysical computer models. However, the generated performance curves were also not provided.							
SWLG011	1	LED High or Low Bay	Normal replacement of LED fixture with more efficient LED fixture. Largely follows from approved PGE high/low bay paper. PGE paper had baseline that was mixed between fluorescent, TLED, and LED fixture. The paper migrates all fluorescent baseline to TLED (i.e. the mix between “lamp” and “fixture” in the baseline is unchanged but now “lamp” is 100% LED). Uses the 111 lm/W value for TLEDs in baseline approved in PGE paper. Small decrease in delta watts (because of fluorescent to TLED migration). Measure categories are identical to those in PGE paper (same lumen bins with same efficacy requirements).	1	Yes	Yes	Yes	Yes	Yes
SWLG012	1	LED Ambient Fixtures and Retrofit Kits, Commercial	Normal replacement of LED fixture with more efficient LED fixture or LED retrofit kit. Largely follows from approved PGE LED ambient paper. Uses same blended TLED/LED fixture baseline as approved in PGE paper (33% TLED, 67% LED fixture). Uses the 111 lm/W value for TLEDs in baseline approved in PGE paper. Measure categories are identical to those in PGE paper (same lumen bins with same efficacy requirements).	1	Yes	Yes	Yes	Yes	Yes
SWPR001	1	Ventilation Fan, Agriculture	The calculation of unit energy savings (UES) utilizes fan efficiency performance test results from the Bioenvironmental and Structural Systems Laboratory (BESS Lab) ventilation fan testing facility at the University of Illinois. Annual hours of operation were derived from data obtained directly from customers of the Southern California Edison (SCE) 2005 Agricultural Ventilation Fan Efficiency Program. The Ex Ante reviews found the assumptions and calculation methodology to be reasonable.	1	Yes	Yes	Yes	Yes	Yes
SWPR002	1	VFD for Glycol Pump Motor	PG&E submitted this workpaper based on PGE3PPR01018 R2 in a timely manner. Inconsistency in the range of heat pump reported (25 hp pump not included in the workpaper but listed in the EAD table and CalTF presentation). Due to a typo, the incorrect annual operating hours for measure case full speed was presented.	1	Yes	Yes	Yes	Yes	Yes
SWPR005	1	Dust Collection Fan VSD	The Ex Ante team found the savings calculation methodology to be reasonable. There were several formatting and grammatical errors in the WP, which have not been corrected yet (as of 01/31/2020).	1	Yes	Yes	Yes	Yes	Yes
SWPR006	1	VSD For Ventilation Fan	The Ex Ante team's review found the savings calculation methodology to be reasonable. 2015-2017 cost data was used to calculate measure cost. The Ex Ante team made a comment about updating the cost values, which hasn't been addressed yet (As of 01/31/2020).	1	Yes	Yes	Yes	Yes	Yes
SWRE003	1	Heater for Pool or Spa, Commercial	The WP used RSPEC, an outdated software tool that is no longer supported, to estimate gas savings. There is a model developed by SCG, which the PA initially agreed to use for savings calculation. Later, the PA decided not to use the model because they didn't feel comfortable with the savings calculation methodology. The Ex Ante team compared the savings reported in the WP with the savings calculation using the SCG's model and found the values to be within 20%.	1	Yes	-	Yes	Yes	+

SWSV001	1	Duct Seal, Residential	Leakage rate discrepancies between workpaper, Measure Data Spec worksheet, and EAD tables. WP outlines base case and measure case leak rates that vary by building type (single family, multifamily, double-wide mobile home). The following measure offering (for any CZ) are using incorrect leakage rates based on the WP: Medium to low (MF), medium to low (SF), high to low (mobile home). Quality of initial submission was unacceptable.	1	Yes	Yes	Yes	-	+
SWSV005	1	Economizer Repair	The electric unit energy savings (UES) and demand reduction for non-refrigeration models were derived from unit energy consumption (UEC) estimated with the eQUEST version 3.65 energy modeling software and DOE-2.2R version 52h energy modeling simulation engine for refrigeration models. Modifications were made in the existing DEER prototypes; minimum and maximum OA% changed from 0 to 20 and 100 to 70%, respectively. This modification is based on the previous year's HVAC impact evaluation final report. Ex Ante team verified that the assumptions were entered correctly in eQuest models and the WP reports correct savings values. Title is ambiguous without discerning between commercial and residential economizer.	1	Yes	Yes	Yes	-	Yes
SWSV010	1	Economizer Controls, Commercial	Prototypes form the Database of Energy Efficient Resources (DEER) were utilized for the building energy use simulations. The DEER prototypes were generated using MASControl v3.00.00. The Ex Ante team reviewed the submitted models and found that inputs were entered correctly and that the correct savings values are reported.	1	Yes	Yes	Yes	+	Yes
SWWB002	1	Universal Audit Tool	The supporting research from the technical consultant was poor and it took multiple iterations before the workpaper was acceptable.	1	Yes	+	Yes	-	+
SWWH005	1	Boiler, Commercial	DEER 2015 is referenced in WP for base case efficiencies. Unsure if DEER 2020 has any additional updates beyond DEER 2015 for hot water boiler/instantaneous water heater baseline efficiencies. In the workpaper, the efficiencies used for savings calculations listed for Tier 1 are not consistence with the Measure Data Spec worksheet.	1	Yes	Yes	Yes	-	Yes
SWWH008	1	Process Boiler	The calculation methodology used is clearly stated. The Stage 1 issues that were brought up by CalTF were addressed in this workpaper.	1	Yes	Yes	Yes	Yes	Yes
SWWH011	1	Central Storage Water Heater, Multifamily	All Stage 1 issues addressed in WP, but some issues remain in EAD and Measure Data Spec worksheet. Incorrect workpaper ID listed, DEER difference summary table is not complete, delivery types inconsistent between workpaper and Measure Data Spec worksheet.	1	Yes	Yes	Yes	-	Yes
SWWH022	1	Smart Pump, Residential	Only minor issues found in workpaper text: workpaper application type did not match Measure Data Spec worksheet.	1	Yes	Yes	Yes	Yes	Yes
SWWP002	1	VFD On Well Pump	UES calculation using VFD energy savings formulae. Data to calculate the UES was drawn from Pacific Gas and Electric (PG&E) projects for which VFDs were installed on agricultural pumps to determine the range in energy savings, demand reduction, implementation cost, and incentives. Ex Ante team found several issues in original WP; however, the issues were	1	Yes	+	Yes	Yes	+

			corrected in the revised wp. Ex Ante team found the inputs and assumptions reasonable. Research included an ISP study. The WP was uploaded a head of the due date.							
SWWP004	1	Water Pump Upgrade	This unit energy savings (UES) analysis was adopted from the pump savings analysis approved by the Regional Technical Forum (RTF) for the Northwest Energy Efficiency Alliance (NEEA) Efficient Commercial and Industrial Pumps (ECIP) Project. This analysis, approved in December 2016, was part of the first phase of the ECIP project and included extensive pump modeling, DOE database information, and customer/vendor field data. The WP was uploaded well before the due date.	1	Yes	+	Yes	Yes	+
SWWP005	1	Enhanced VFD On Irrigation Pump	The Ex Ante team found the savings calculation methodology to be reasonable.	1	Yes	Yes	Yes	Yes	Yes

Workpaper Submissions				
PGE3PHVC151	5	Economizer Repair	Review complete - interim approval	
PGE3PHVC152	6	Economizer Controls	Review complete - interim approval	
PGE3PHVC156	4	Condenser Coil Cleaning	Review complete - interim approval	
PGE3PHVC157	4	Unocc Supply Fan Control	Review complete - interim approval	
PGE3PHVC158	4	EvapCoilCleaning	Scored in detailed review section - interim approval	
PGE3PHVC160	4	Refrigerant Charge Adjustment	Review complete - interim approval	
PGE3PREF116	3	Add Doors to Open Medium Temperature Cases	Review complete - interim approval	
PGECOAGR111	7	Sprinkler to Drip Irrigation	Review complete - interim approval	
PGECOAGR119	3	Variable Frequency Drive on Agricultural Well Pumps (<=300hp) NEW Express only	Review complete - interim approval	
PGECOAGR120	2	Agricultural Pump System Overhaul for Pumps Up To 25 HP	Review complete - interim approval	
PGECOAGR121	0	Enhanced Specifications VFD on Ag Pumps	Review complete - interim approval	
PGECOAGR121	1	Enhanced Specifications VFD on Ag Pumps	Review complete - interim approval	
PGECODHW125	7	Showerheads and Aerators	Review complete - interim approval	
PGECOFST129	1	Commercial Conveyor Broiler	Review complete - interim approval	
PGECOHVC143	3	Enhanced Ventilation for Packaged HVAC Units with Gas Heating and Packaged Heat Pumps	Review complete - interim approval	
PGECOHVC167	2	Residential Smart Communicating Thermostat	Review complete - interim approval	
PGECOHVC168	2	Demand Controlled Ventilation Packaged HVAC	Review complete - interim approval	
PGECOLTG151	9	LED Outdoor Lighting	Scored in detailed review section - interim approval	
PGECOLTG163	8	LED Candelabra	Review complete - interim approval	
PGECOLTG164	8	LED Globe Lamps	Review complete - interim approval	
PGECOLTG177	7	LED BR-R Lamps	Review complete - interim approval	
PGECOLTG178	4	LED HighLowBay	Scored in detailed review section - interim approval	
PGECOLTG179	6	LED Ambient Com Fixt	Review complete - interim approval	
PGECOPRO114	0	Commercial Steam Traps	Review complete - interim approval	
PGECOPRO115	1	Dust Collection (Baghouse) Fan VSD	Review complete - interim approval	
PGECOPUM102	8	Res VSD Pool Pump	Review complete - interim approval	
PGECOREF108	8	Anti-Sweat Heat (ASH) Controls	Review complete - interim approval	
SWAP001	1	Refrigerator, Residential	Review complete - interim approval	

SWAP003	1	Clothes Dryer, Residential	Review complete - interim approval	
SWAP004	1	Clothes Washer, Residential	Review complete - interim approval	
SWAP007	1	Room Air Conditioner, Residential	Review complete - interim approval	
SWAP008	1	Room Air Cleaner	Review complete - interim approval	
SWCR012	1	Compressor Retrofit, Multiplex	Scored in detailed review section - interim approval	
SWCR015	1	Medium-Temperature Case Doors	Scored in detailed review section - interim approval	
SWCR017	1	Ultra-Low Temperature Freezer	Scored in detailed review section - interim approval	
SWCR018	1	Reach-In Refrigerator or Freezer, Commercial	Review complete - interim approval	
SWCR019	1	Low-Temperature Coffin to Reach-In Display Case Conversion	Scored in detailed review section - interim approval	
SWCR020	1	Medium-Temperature Open Display Case Retrofit	Scored in detailed review section - interim approval	
SWCR021	1	Medium or Low-Temperature Display Case sith Doors	Scored in detailed review section - interim approval	
SWFS006	1	Commercial Ice Machine	Review complete - interim approval	
SWHC004	1	Space Heating Boiler	Scored in detailed review section - interim approval	
SWHC006	1	Demand Controlled Ventilation for Single Zone HVAC	Review complete - interim approval	
SWHC009	1	Supply Fan Controls, Commercial	Scored in detailed review section - interim approval	
SWHC013	1	Unitary Air-Cooled Ac or Heat Pump, ≥ 65 Kbtuh, Commercial	Scored in detailed review section - interim approval	
SWHC018	1	Variable Speed Drive for HVAC Fan Controls	Scored in detailed review section - interim approval	
SWHC023	1	Enhanced Ventilation for Packaged HVAC	Scored in detailed review section - interim approval	
SWHC043	1	Multiple Capacity Unitary Air-Cooled Commercial Air Conditioners Between 65 and 240 Kbtu/H	Scored in detailed review section - interim approval	
SWLG011	1	LED High or Low Bay	Scored in detailed review section - interim approval	
SWLG012	1	LED Ambient Fixtures and Retrofit Kits, Commercial	Scored in detailed review section - interim approval	
SWPR001	1	Ventilation Fan, Agriculture	Scored in detailed review section - interim approval	
SWPR002	1	VFD For Glycol Pump Motor	Scored in detailed review section - interim approval	
SWPR005	1	Dust Collection Fan VSD	Scored in detailed review section - interim approval	
SWPR006	1	VSD For Ventilation Fan	Scored in detailed review section - interim approval	
SWRE003	1	Heater for Pool or Spa, Commercial	Scored in detailed review section - interim approval	
SWSV001	1	Duct Seal, Residential	Scored in detailed review section - interim approval	
SWSV005	1	Economizer Repair	Scored in detailed review section - interim approval	
SWSV010	1	Economizer Controls, Commercial	Scored in detailed review section - interim approval	
SWWB002	1	Universal Audit Tool	Scored in detailed review section - interim approval	
SWWB004	1	Home Energy Reports	Review complete - interim approval	
SWWH005	1	Boiler, Commercial	Scored in detailed review section - interim approval	

SWWH008	1	Boiler, Process	Scored in detailed review section - interim approval	
SWWH011	1	Central Storage Water Heater, Multifamily	Scored in detailed review section - interim approval	
SWWH022	1	Smart Pump, Residential	Scored in detailed review section - interim approval	
SWWP002	1	VFD On Well Pump	Scored in detailed review section - interim approval	
SWWP004	1	Water Pump Upgrade	Scored in detailed review section - interim approval	
SWWP005	1	Enhanced VFD On Irrigation Pump	Scored in detailed review section - interim approval	
PGECOALL112	0	Water Energy Nexus	Under CPUC review	
SWHC014	1	Unitary Air-Cooled Ac or Heat Pump, < 65 Kbtuh, Commercial	Under CPUC review	

Process Adder	ESPI Metrics					
	Weight	1	2	3	4	5
PG&E provided expert technical support for behavioral measures through procedural workpapers, which was helpful in resolving implementation and reporting issues as well as methodology.	1	No	Yes	No	No	Yes
PG&E coordinated the PA's in determining an approach to managing the revised measure application type nomenclature that arose from E-4952.	1	No	No	No	No	Yes
PG&E in collaboration with the other PAs, has managed the revision and/or development of a high volume of workpapers during the review period. The Commission acknowledges PG&E's role in making this submission cycle successful and timely.	1	No	No	+	No	No
PG&E partnered with CPUC Staff and other PAs to resolve common issues and implement process improvements. Examples of these include: Development of a solution for implementing the new measure application types (MAT), implementation of workpaper cover page, coordinating the WPs to be used for ABAL 2020. As noted in another score, the identification and resolution of these issues should have happened earlier.	1	No	No	No	Yes	No
PG&E collaborated with the other PAs and CPUC Staff to present a Third Party Workpaper Q&A webinar on April 11.	1	No	No	No	Yes	No

Attachment D: 2019 Performance Annual Ratings

Custom Scoring

2019 Annual Custom Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Work Product Review Score	Disposition Score (1-5)	4.89	3.53	4.40	4.00	3.25	
Review Process Score Enhancements	Technical & Policy QC Increase	0.00	0.00	0.00	2.00	0.50	
	Implementation Increase	0.00	0.00	0.00	0.00	0.00	
Total Score	Adjusted Final Metric Score (1-5)	4.89	3.53	4.40	5.00	3.75	Total Points
	Adjusted Metric Points	4.89	10.59	4.40	12.50	9.38	41.76

2018 Annual Custom Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Work Product Review Score	Disposition Score (1-5)	2.50	4.00	3.73	5.00	5.00	
Review Process Score Enhancements	Technical & Policy QC Increase	0.00	0.00	1.00	1.00	2.50	
	Implementation Increase	0.00	0.00	0.00	0.00	1.00	
Total Score	Adjusted Final Metric Score (1-5)	2.50	4.00	4.73	5.00	5.00	Total Points
	Adjusted Metric Points	2.50	12.00	4.73	12.50	12.50	44.23

Microsoft Excel Worksheet This embedded workbook contains all of the PG&E Custom Scoring tables

Workpaper Scoring

2019 Annual Workpaper Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	PG&E "-"	0%	6%	0%	21%	0%	
	PG&E "+"	0%	12%	0%	6%	30%	
	PG&E "Yes"	100%	82%	100%	73%	70%	
	Dispositions Score %	**50%**	**53%**	**50%**	**42%**	**65%**	
	Dispositions Score	**2.50**	**2.65**	**2.50**	**2.12**	**3.26**	
Review Process Score Enhancements	PG&E "-"		0%	0%	0%	0%	
	PG&E "+"		0%	100%	0%	0%	
	PG&E "Yes"		100%	0%	100%	100%	
	Process Score %	**0%**	**50%**	**100%**	**50%**	**50%**	
	Process Increase Score	**0.00**	**2.50**	**5.00**	**2.50**	**2.50**	
	Process Increase Weight	**0.50**	**0.50**	**0.50**	**0.50**	**0.50**	
	Process Increase Wtd Score	**0.00**	**1.25**	**2.50**	**1.25**	**1.25**	
Total Score	**Final Metric Score (1-5)**	**2.50**	**3.90**	**5.00**	**3.37**	**4.51**	**Total Points**
	Metric Points with Weighting	**2.50**	**11.70**	**5.00**	**8.43**	**11.27**	**38.90**

2018 Annual Workpaper Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	PG&E "-"	72.4%	40%	0%	20%	0%	
	PG&E "+"	20.7%	0%	71.4%	20%	83.3%	
	PG&E "Yes"	6.9%	60%	28.6%	40%	16.7%	
	Dispositions Score %	**24%**	**30%**	**86%**	**60%**	**92%**	
	Dispositions Score	**1.21**	**1.50**	**4.29**	**3.00**	**4.58**	
Review Process Score Enhancements	PG&E "-"	33%	0%	0%	100%	0%	
	PG&E "+"	0%	0%	50%	0%	100%	
	PG&E "Yes"	67%	0%	50%	0%	0%	
	Process Score %	**33%**	**0%**	**75%**	**0%**	**100%**	
	Process Increase Score	**1.67**	**0.00**	**3.75**	**0.00**	**5.00**	
	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**	**2.50**	
Total Score	**Final Metric Score (1-5)**	**2.04**	**1.50**	**5.00**	**3.00**	**5.00**	**Total Points**
	Metric Points with Weighting	**2.04**	**4.50**	**5.00**	**7.50**	**12.50**	**31.54**

Explanations of scoring tables row entries

- The row labeled with PA "-" lists the percent of workpaper reviews undertaken where the CPUC Staff evaluation of the materials or information indicated that the PA performance in this metric for the submission did not meet minimum expectations or requirements relative to the metric.
- The row labeled with PA "+" lists the percent of workpaper reviews undertaken where the CPUC Staff evaluation of the materials or information indicated that the PA performance in this metric for the submission exceeded minimum expectations or requirements relative to the metric.
- The rows labeled with PA "Yes" lists the percent of workpaper reviews undertaken where the CPUC Staff evaluation of the materials or information indicated that the PA performance in this metric for the submission exceeded met minimum expectations or requirements relative to the metric.
- 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.
- The "Disposition Score" (and "Process Increase Score" for workpapers) row converts the percent score into a numeric value of up to five by directly applying the percent to a value of 5.
- The custom row labeled with "Technical & Policy QC Increase" lists CPUC Staff points added to the metric based on an evaluation of the overall PA 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.

- The custom row labeled with "Implementation Increase" lists CPUC Staff points added to the metric based on an evaluation of the overall PA 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.
- The workpaper rows labeled with "Review Process Score Enhancements" lists CPUC Staff scoring for each metric based on an evaluation of the overall PA 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.
- 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.
- 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.