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**PUBLIC UTILITIES COMMISSION**

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298



Date: April 4, 2016 revised June 7, 2016  
To: Pacific Gas and Electric  
From: CPUC Ex Ante Review Staff  
Cc: R.12-01-005 and R.13-11-005 Service Lists  
Subject: Final 2015 Efficiency Savings and Performance Incentive Ex Ante Review Performance Scores

Pursuant to Decision (D).13-09-023 and D.15-10-028, Commission staff and consultants completed the 2015 Efficiency Savings and Performance Incentive (ESPI) mechanism ex ante review performance scoring as prescribed in Attachment 7 of D.13-09-023. The scores contained in this memo are final, and Pacific Gas and Electric Company (PG&E) shall use the total final score of 40.84 out of 100 to calculate the 2015 ESPI ex ante review component award. The final score is explained in more detail in Attachments A and D to this memo.

The 2015 ex ante review performance score was developed using a detailed scoring by metric for each reviewed workpaper and each reviewed custom project, as well as a scoring of the utility's internal due diligence processes and Quality Assurance/Quality Control (QA/QC) procedures and methods.

This is the first time that the final scores were “built-up” from a detailed assessment of each reviewed work product. Commission staff believes the quantitative scoring utilized for the 2015 review period results in a more accurate assessment of utility performance both comparatively between utilities, and against Commission expectations, but also results in generally lower scores than in previous years. It is Commission staff's expectation that this detailed scoring approach, along with the detailed qualitative workpaper and custom project level feedback, is more consistent with the direction provided in the ESPI D.13-09-023 Attachment A, which defines each metric and provides “benchmarks” for scoring using counts, percentages and fractions of workpapers and custom projects that conform or deviate from Commission and Commission staff guidance<sup>1</sup>. We believe this scoring approach will provide more specific guidance to the utilities on how to improve their ex ante due diligence. However, we acknowledge that this quantitative scoring approach does not correlate with the scoring approaches used in the previous two years of the ESPI, so it would be inappropriate to compare these results with past years' results for the purposes of drawing any conclusions regarding improvements or deterioration in PG&E's compliance with the CPUC's Ex Ante Review requirements.

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<sup>1</sup> The benchmarks listed for each metric are not presented as a required scoring approach or limiting set of factors in scoring, however, they do provide guidance that the scoring should have a quantitative framework that is transparent and objective such that a pathway to higher scores is clear.

For each metric, each reviewed utility work product was first determined to have components either applicable or not applicable to a metric<sup>2</sup>. If not applicable to a metric that item was not used in the final score development for the metric. 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 ratings was then assigned a score percentage level of 0%, 50% and 100%, respectively. The assigned percentage scores were averaged across all the reviewed items. This resulted in a custom review overall percentage metric score and a workpaper process percentage score. Additionally, the workpaper metric benchmarks from D.13-09-023 Attachment 7 were used to calculate a workpaper percentage score and thus workpaper points for each metric. Lastly, utility-specific custom review process “adders” were developed for each applicable metric based on observed QA/QC processes and procedures developed and under implementation in 2015 that are expected to positively impact future selected project reviews. Commission staff believes it is important to provide ESPI points for positive due diligence developments as recognition of the effort and continue encouragement even before a change in project-level results is observed.

To produce final scores, the individual metric scores for the two workpaper contributing areas (benchmarks and processes) were weighted together (65% benchmarks and 35% process) and the three custom review contributing areas (project reviews, QA/QC, and process adders) were summed. The larger weight was given to the workpaper benchmarks due to the large number of workpaper submissions received from PG&E. The separate process scoring provides an avenue for assessing overall QA/QC processes and procedures put into place by PG&E.<sup>3</sup> Attachment D contains tables of the metric components and total scores for each utility. Attachments B and C of this memo provide more specifics on the rationale and project-level issues Commission staff and consultants used in scoring for each metric for PG&E.

PG&E’s workpaper activities at the beginning of 2015 demonstrated an intention to collaborate with Commission staff, particularly on high profile workpapers. By the mid-year feedback, staff had reviewed six recent workpapers and provided an individual assessment of each, including detailed edits of the submitted ex ante data to demonstrate the corrections needed for format,

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<sup>2</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 ”)

<sup>3</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.”

consistency, and accuracy. The mid-year assessment also noted that, while PG&E was making some strides towards compliance with the 2013-2014 Lighting Retrofit disposition, elements of the 2015 Lighting Retrofit Guidance memo issued in January 2015 had not yet been incorporated.

As to PG&E's custom projects in 2015, Commission staff ex ante review activities spanned both single projects and large groups of selected custom project applications. The 2015 review activities were tracked across 49 CPUC Project IDs encompassing several hundred custom projects. For example, CPUC Project ID "PGE-15-T-0009\_Various+Multiple\_LEDLighting" represented 337 custom lighting project applications that Commission staff sampled to ascertain whether PG&E is ensuring that the Modified Lighting Calculator tool is being properly used by Third Parties and Local Government Partnerships. Similarly, CPUC Project ID "PGE-15-T-C-0008" represents 77 applications selected from PG&E's pilot retro-commissioning program that appeared in PG&E's August 28, 2015 CMPA List. Commission staff selected these retrocommissioning projects for review because it is unusual for there to be over 500 ongoing applications within just a few months after startup of a pilot program.

Commission staff remains concerned with how PG&E program staff and its Third Party implementers continue to amplify customer expectations for large energy efficiency incentive amounts before a complete review is completed for major assumptions, eligibility, or program attribution. Allowing customer expectations to be set high for project types with a history of issues, or those with complex market, baseline, or measurement issues sets up potential customer satisfaction issues when significant deficiencies are identified for their project. Blaming the Ex Ante Review process for customers being dissatisfied with review outcomes seems to be the default response rather than program and process changes that set customer expectations appropriately from the start. PG&E and Third Party implementers need to address more of the issues up front and early in the "project lead" stage rather than allowing expectations to rise and leaving it to Commission staff review to identify problems. The number of projects selected for review that have significant issues raises great concerns about the vast majority of project that are not selected for review. The legitimacy of these concerns is supported by the continued low gross and net realization rates found by the ex post evaluations of custom activities for 2014. This is a troubling example of an apparent lack of reasonable judgement in PG&E program staff's stewardship of ratepayer funds that requires serious PG&E management attention

For the 2015 ex ante activities, Commission staff finds the following:

### **Workpapers:**

In the mid-year review, Commission staff noted improvements in the areas of providing ex ante data with workpapers, engaging Commission staff ex ante review team when developing workpapers for new technologies, and incorporating previous direction for some workpaper technology areas. Furthermore, PG&E staff prioritized responding to preliminary reviews in a timely manner. Commission staff noted that improvement was needed in the areas of ensuring that workpaper narratives supported, and were consistent with, the submitted ex ante data, and incorporating previous direction and input in the revision of existing workpapers.

Commission staff offers a mixed review of workpaper activities for 2015. On the positive side, PG&E increased efforts to respond to certain Commission directives. PG&E reached out to Commission staff early to collaborate on new projects, one example being the Ambient LED fixtures workpaper. PG&E also improved their use of ex ante data contained within issued dispositions, an example being the 2013-2014 lighting disposition and its data. PG&E also made modest improvement toward submitting workpaper ex ante values in the prescribed format, which will ultimately serve to streamline review and approval of ex ante values in the future. However, PG&E sometimes engages with Commission staff inappropriately to ask questions multiple times without performing engineering or development work in the meantime. An example of this issue can be found in the lack of progress on the HVAC Variable Refrigerant Flow system workpaper where Commission staff reviews repeatedly identified areas needing improvement but PG&E did not undertake any seriously responsive work to collect the information needed to support an acceptable workpaper submission. Additionally, when Commission staff spent resources to review many workpapers for completeness (i.e., the “preliminary review”), there are continued discoveries of areas where improvement in due diligence and application of previous direction were needed. While PG&E excels at accurately revising workpapers for existing and established programs (e.g., the residential hot water showerheads and process fan variable speed drive workpapers), Commission staff continues to have many technical concerns with PG&E submissions in support of new programs (e.g., the Retail Products Platform). As well, PG&E’s continued shortcomings with submitting valid ex ante data is at odds with the Commission’s goal of improving the overall quality and reliability of the ex ante data.

### **Custom Projects:**

In the mid-year feedback, Commission staff identified several high-level issues of concern for PG&E. Following the mid-year feedback, PG&E brought on board new staff to work on the Ex Ante Review process and indicated that they had implemented an internal process improvement effort. For example, PG&E established a new industry standard practice (ISP) study process and activity as well as brought on board a new staff person to lead that effort. The staff involved in the ISP effort appear sincere and are executing a good faith effort to conduct well-thought out standard practice studies in close collaboration with Commission staff and staff consultants. This activity has been proactive and helped identify and address issues beyond ISP in several projects. Additionally, PG&E presented its initiative on early retirement opportunities for rewind motors for discussion with Commission staff. PG&E’s ex ante review engineering staff continues to show a willingness to work collaboratively and cooperatively with Commission staff in the project reviews. Lastly, PG&E brought in a new staff for its policy oversight activity in the ex ante review effort. The policy staff undertook the development of a unified “Rule Book” to provide a standard set of rules and policies for all programs. Early versions were supplied to Commission staff for review and comment in 2015 prior to its rollout in early 2016. Commission staff applauds this effort as a positive step, and expects to see a positive impact on the projects selected for review in 2016.

These aforementioned areas were the primary reasons Commission staff was able to augment many ESPI metric scores with added points above those assigned from the detailed results of custom projects reviewed during 2015. This augmentation was done to acknowledge PG&E

staffs' efforts that have not yet been observed in projects under review during 2015 due to the lag time in projects moving through the pipeline. For 2016, the PG&E implemented process improvements will need to result in improvements in selected projects in order to justify improvements in metric scores.

Despite these areas of positive action by PG&E, Commission staffs have yet to observe noticeable project-level improvements in the range of projects selected for review during 2015. Some of these actions will take time before results are seen in the long project pipeline, but some issues remain troubling to Commission staff and may hinder the influence these positive actions on the overall gross and net performance of custom activity. For example, PG&E's program staff and Third Party implementers continue to inflate customer expectations for incentives and delay project data submittals to Commission staff until projects are in the advanced stages of development. Additionally, PG&E and their Third Party implementers continue to argue about Commission policies and rules with the Commission ex ante review team and delay implementing program rules and other activity changes warranted by past dispositions and ex post results. Arguing in itself is not an issue; putting forward an interpretation of data or a technical position/opinion in a spirited manner is certainly acceptable. However, what Commission staff finds unacceptable includes arguing continuously for an unsupported change in policy previously considered and rejected by Commission staff, or arguing continuously for change in previously-issued technical findings. Commission staff is also disappointed in the need to bring up the same issue multiple times for a single program area, a single program staff, or a single implementer. Certainly it takes time for an identified issue to be cured across multiple activities, but one disposition on an issue should be entirely adequate for one activity, implementer, or program staff to respond and cure the problem.

More specifically, Commission staff is disappointed in PG&E staff's handling of CPUC Project ID X525, a project with a proposed \$1.6 million incentive for new spray painting facilities in a manufacturing facility. PG&E was not forthcoming with any information or background on the project for more than six months. Initial submissions, while being quite verbose, were missing critical information on the project evolution and appropriate market- and customer-specific analyses for setting baselines. It is Commission staff's position that neither the implementer nor PG&E could demonstrate any program influence on this project and that the baseline initially submitted was a worst case scenario rather than a reasonable analysis of the facts of the project and customer. As with a number of projects selected for review, the focus seemed to be on justifying the best possible outcome in terms of savings and incentive levels, rather than seeking an appropriate baseline definition and realistic and accurate appraisal of program influence on the customer's decision outcome. These kinds of projects hurt PG&E's efforts to realize both gross and net portfolio improvement and further deteriorate the low net realization rate of custom activities. This is a troubling issue of an apparent lack of reasonable judgement in PG&E program staff's stewardship of ratepayer funds that requires PG&E management attention.

For CPUC Project ID PGE-15-C-I-0005, a process optimization project with a proposed close to \$400,000 incentive at an industrial facility, Commission staff identified significant measure baseline issues. Commission staff selected this project for review from PG&E's January 5, 2015 list of projects ready for review selection, but PG&E did not upload any project information to the Custom Measures and Projects Archive (CMPA) for Commission staff's review until July 21,

2015. PG&E staff's six month delay to involve Commission staff in the review, essentially until after the savings calculations were completed, led to customer dissatisfaction issues that were avoidable. The customer became justifiably agitated when Commission staff identified significant deficiencies in the project baseline assumptions, after the customer had worked with PG&E for more than six months. In retrospect, PG&E staff should have approached Commission staff with this project for early opinion discussions before it was selected.

Regarding a pilot retrocommissioning program, Commission staff brought to PG&E's attention that the program was providing incentives for measures that were either below or just meeting mandatory code requirements, contrary to established Commission policies. Commission staff reminded PG&E that Decision 14-10-046, Ordering Paragraph 9, explicitly stated that all K-12 and community college energy efficiency projects the "...only eligible measures are those that are above code."

Commission staff finds only a few documented instances where PG&E staff looked at what a customer was proposing/planning before program intervention and then identified opportunities for more efficient and costly alternatives that the customer was not considering. Commission staff's review of a wastewater treatment plant project, CPUC Project ID PGE-15-C-I-0004, and a compressed air retro-commissioning project, CPUC Project ID X533, are examples of PG&E field staff and Third Party implementers seeking approval for projects that customers were already pursuing. Commission staff considers simply finding planned activities and bringing those activities into the program without exerting program influence to take the plan to a higher efficiency level or to include deeper content to be a primary reason for the low net realization rate of the custom program portfolio, and requires PG&E's management attention to address.

In its review of CPUC Project ID X510, Commission staff learned that prior to the proposed retro-commissioning project, the building and its mechanical systems had undergone a \$70 million comprehensive renovation rebuild to meet seismic requirements in late 2010. The renovation included the installation of new HVAC equipment and a new Energy Management System. Savings related to that renovation project were included in claim ID PGE5846182 for 2011Q3 under a Partnership program. Many measures pursued under CPUC Project ID X510 were ineligible since they were mandated code requirements under the renovation project. Commission staff questions the use of retro-commissioning incentives to cure inadequacies of the design or construction project that should have been properly covered by the original construction contract and cured as part of that taxpayer funded activity. Additionally, the portions of the project that were approved (i.e., adding controls for after-hours activation of the HVAC systems) may not solve the problem of extended operating hours nor offer the anticipated persistence.

PG&E has made efforts to update a number of pre-existing "Baseline Studies" that provide suggested baseline considerations and analysis approaches; however, Commission staff is concerned that the studies do not always appropriately apply current policy and have a potential to be used universally when site-specific analysis is often required. An example is the recent update to the Municipal Waste Water Treatment Study, where Commission staff expressed concern that this type of document will be used as the justification to qualify measures as eligible despite the measure being the typical, current new installation practice (as opposed to

representing the technology with the highest saturation of currently installations) and lacking any evidence of program influence on the customer choice. Commission Staff often repeats the reminder to PG&E program staff that a primary purpose of the energy efficiency activity should be to determine what a customer is proposing to implement and then seek to influence the customer to implement a more efficient alternative by providing advice, design expertise, and financial incentives designed to overcome the high cost of that alternative. Simply paying incentives to customers for what they are planning to implement independent of the program activity simply because it is demonstrated to be more energy efficient than a “baseline” measure in a “Baseline” document, is not appropriate program decision criteria in isolation.

PG&E staff needs to become proactive in bringing new calculation methods and tools into the ex ante review process in a manner that allows review well ahead of program use. As the utility lead in this activity, PG&E staff did not upload to the Custom Tools Archive or make available for ex ante review three new software tools used to estimate energy savings for the Home Upgrade California program. These new software tools were to be implemented in Q1 of 2016. Although these tools were discussed in meetings and claims of extensive review were made by PG&E staff and contractors, none of the review details such as comparison data sets, program inputs and outputs were made available even though requests for these details were made several times in meetings. Given the poor performance of past tools selected for program use, despite years of claims by utility staff that those selected were the most appropriate tools for use, Commission staff expected more open collaborative evaluation of the tools rather than a behind the scenes activity simply announcing the result with no supporting documentation of the details.

Commission staff is concerned, and has expressed this concern several times to PG&E staff in meetings, with the appearance of a conflict of interest for several of PG&E’s technical review contractors that are also custom program implementers. It seems inappropriate to utilize a contractor to evaluate work of other contractors and thus enforce custom review policy and procedures when that contractor is itself operating as an implementation contractor. It does not matter if the implementation being performed is not the same set of project types being reviewed, there is an inherent conflict related to being on the enforcement versus user side of rules and policies. PG&E has not informed Commission staff what actions have been taken to address and mitigate this apparent conflict of interest.

After more than four years of the Ex Ante Review process interactions with PG&E, Commission staff expected more progress on ex ante review process and results, especially from the utility’s program staff and management. Commission staff observes that the PG&E energy efficiency program implementation culture does not seem to promote within program staff and contractor implementers the need to pursue net benefits to all ratepayers versus pursuing any savings from customer projects by offering incentive for those projects independent of real program influence.

In accordance with D.13-09-023, the IOUs’ ex ante activities are assessed against a set of 10 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 Commission 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.

**PG&E’s final ESPI ex ante review scores for 2015 are as follows:**

<b>Metric</b>	<b>Total Possible</b>	<b>Workpaper</b>	<b>Custom</b>	<b>Total Score</b>
<b>1a</b>	5	1.06	0.50	1.56
<b>1b</b>	5	1.46	0.75	2.21
<b>2</b>	10	2.12	2.42	4.54
<b>3</b>	10	1.70	1.97	3.67
<b>4</b>	10	2.99	4.25	7.24
<b>5</b>	10	1.00	1.00	2.00
<b>6a</b>	5	0.50	0.56	1.06
<b>6b</b>	5	0.64	0.60	1.24
<b>7</b>	10	2.94	1.00	3.94
<b>8</b>	10	1.33	2.45	3.78
<b>9</b>	10	2.92	1.75	4.67
<b>10</b>	10	2.13	2.80	4.93
<b>Total</b>	100	20.79	20.05	40.84

It should be noted that in the preparation of the final 2015 ESPI ex ante review scores, Commission staff did not have all desired data available. For instance, Commission staff did not conduct a comprehensive claims review for these scores. For custom projects, Commission staff reviewed the 2015 activities and issued dispositions issues. Commission staff based the scoring on the data available and did not speculate how any particular disposition review would impact the final scores.

The intention of the ESPI ex ante review component is to motivate utilities to employ a superior level of due diligence to their activities and thus reduce the need for the extensive level of oversight currently undertaken by Commission staff and consultants. The due diligence expectations include complying with the Commission’s ex ante review policies and procedures in a manner that results in the development and reporting of reliable, defensible, and accurate ex ante estimates. Commission staff finds that all of the utilities still tend to rely on Commission staff input and analysis before finalizing ex ante estimates.



While collaboration and information-sharing is always encouraged, Commission staff envisions that, through the feedback provided in this ESPI component and ongoing collaboration, the utilities' internal ex ante review policies and activities will become sufficient such that Commission staff can devote more time and resources towards collaboration and less time to correcting or re-analyzing ex ante values on behalf of the utilities. Commission staff recognizes and commends the progress that has been made to date and encourages the utilities to continue to strive for excellence in this issue area.

If you have any questions or comments about the feedback or final scores, please contact 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 time with each individual utility to discuss its final scores.

Metric	Workpapers			Custom			Total		
	Max Points	Score	Percent Score	Total Points	Max Points	Score	Percent Score	Total Points	
1a	2.5	2.12	42%	1.06	2.5	1	20%	0.5	<b>1.56</b>
1b	2.5	2.92	58%	1.46	2.5	1.5	30%	0.75	<b>2.21</b>
2	5	2.12	42%	2.12	5	2.42	48%	2.42	<b>4.54</b>
3	5	1.7	34%	1.7	5	1.97	39%	1.97	<b>3.67</b>
4	5	2.99	59%	2.99	5	4.25	85%	4.25	<b>7.24</b>

5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives)	5	1.0	20%	1.0	5	1.0	20%	1.0	<b>2.00</b>
6a	Depth of IOU quality control and technical review of ex ante submittals: Third party oversight	2.5	1.0	20%	0.5	2.5	1.12	22%	0.56	<b>1.06</b>
6b	Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V	2.5	1.28	25%	0.64	2.5	1.2	24%	0.6	<b>1.24</b>
7	Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience	5	2.94	58%	2.94	5	1.0	20%	1.0	<b>3.94</b>
8	Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated	5	1.33	26%	1.33	5	2.45	49%	2.45	<b>3.78</b>
9	Professional care and expertise in the use and application of adopted DEER values and DEER methods	5	2.92	58%	2.92	5	1.75	35%	1.75	<b>4.67</b>
10	Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products	5	2.13	42%	2.13	5	2.8	56%	2.8	<b>4.93</b>
<b>Total</b>		<b>50</b>			<b>20.79</b>	<b>50</b>			<b>20.05</b>	<b>40.84</b>

## Final 2015 Efficiency Savings and Performance Incentive Workpapers Ex Ante Performance Scores

Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
1a	Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the pre-submittal/ implementation phase: Timing of disclosure in relation to reporting	<ol style="list-style-type: none"> <li>1. Fraction of deemed measures for which workpapers have been submitted to Commission prior to measure being offered in the portfolio;</li> <li>2. Fraction of workpapers disclosed prior to or during work commencement and submitted upon completion rather than withheld and submitted in large quantity;</li> <li>3. Fraction of workpaper development projects for new technologies submitted for collaboration versus total number of workpapers for new technologies submitted</li> </ol>	2.12	<p>There does not appear to be a comprehensive workpaper update process that involves a proactive review of underlying assumptions and methods with respect to direction and policy established through previous decisions. For example, PG&amp;E has still not completed standard practice research for food service equipment that was directed in D.11-07-030. Recently reviewed LED and CFL fixture workpapers have little, if any, research or analysis of how Title 24 requirements may result in a more stringent baseline than the previously allowed wattage reduction ratio.</p> <p>A recent comprehensive review of custom projects using the Modified Lighting Calculator showed that many common deemed measures such as LED and CFL fixtures and lamps are being offered through custom projects, but they are more appropriately offered through deemed programs, supported by workpapers, that would enable Commission staff review of baseline assumptions.</p> <p>PG&amp;E submitted 68 workpapers in 2015 with larger batches submitted three times: 8 on 2/2/2015; 33 on 12/23/2015; 7 on 12/31/2015. Commission staff considers 8 of these workpapers to be for new technologies with 2 (RPP and LED retrofits/fixtures) submitted for collaboration in advance of workpaper submittal.</p>
1b	Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the post-submittal/ implementation phase: Timing of responses to requests for additional information	Percentage of workpaper reviews which experience significant delay <sup>[3]</sup> due to slow response to requests for readily available (or commonly requested) <sup>[4]</sup> additional information (higher percentage = lower score)	2.92	<p>Commission staff reviewed 15 workpapers and 1 was complete the first time it was reviewed. Of the 14 incomplete workpapers, all except 1 were resubmitted (Industrial Blower Replacing Air Compressor - PGECOPRO111). Additionally 2 workpapers weren't re-submitted for 6 months (Sprinkler to Drip Irrigation - PGECOAGR111 and Unitary ACHP under 65kBtuh).</p> <p>The mid-year review noted that most PG&amp;E workpapers were returned at the preliminary review stage. Commission staff continued to return most workpapers at the preliminary review stage since the mid-year review.</p>
2	Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process	Percentage of workpapers that address all aspects of the Uniform Workpaper Template (as described in A.08-07-021, or any superseding Commission directive)	2.12	In 2015, additional Commission staff emphasis and resources were spent on Preliminary review of PG&E workpapers, particularly in providing specific review comments regarding each workpaper's ex ante database submission. Commission staff reviewed and scored 21 PG&E workpaper submissions for this metric. Eleven of these submissions address all (or almost all) of the Uniform Workpaper Template and ex ante database format (typographic issues only) leaving almost 50% which have multiple errors such as the following:

Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
				<ul style="list-style-type: none"> <li>• Unitary ACHP under 65kBtuh (PGECOHC126) - Implementation / Measure Catalog table submission does not reflect the workpaper’s statements that upstream delivery channels will be used (the weight Com impacts are not correctly noted) nor does the submission include New Construction (NC) application types although the workpaper states that new construction measures will be incentivized.</li> <li>• Residential HVAC Quality Maintenance (PGECOHC139r3) – The submission included multiple formatting issues which prevented the data from being uploaded to the ex ante database. Additionally, cost records were submitted which did not match the workpaper’s stated approach or follow the Commission staff 2014 cost guidance document.</li> </ul> <p>Examples where PG&amp;E did meet the workpaper template and ex ante data format are the following:</p> <ul style="list-style-type: none"> <li>• Sprinkler to Drip Irrigation (PGECOAGR111r4)</li> <li>• Vertical Hollow Shaft Pump Motors (PGECOPUM103r0)</li> </ul>
3	Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes)	<ol style="list-style-type: none"> <li>1. Percentage of workpapers that include appropriate program implementation background as well as analysis of how implementation approach influences development of ex ante values;</li> <li>2. Percentage of workpapers which, on initial submission, were found to include all applicable supporting materials or an adequate description of assumptions or calculation methods</li> </ol>	1.70	<p>With increased emphasis on preliminary reviews, Commission staff have identified a number of areas where the workpaper narratives do not align with the submitted ex ante data. For example, workpapers often describe or list in tables the full range of applicable implementations, but do not accompany the workpaper with complete ex ante data for all implementations and associated values described in the workpaper. Commission staff cannot approve a narrative without the actual values associated with the text in a workpaper.</p> <p>Shortcomings with supporting documentation were observed include:</p> <ul style="list-style-type: none"> <li>• Implementation descriptions for mobile home residential duct sealing</li> <li>• Base cost development for irrigation measures</li> <li>• Support for savings estimates for downstream Tier 2 advance power strips when savings had only been previously approved in an SDG&amp;E workpaper for direct install deliveries</li> <li>• Savings values for industrial compressor-to-blower retrofit ROB baseline</li> <li>• Legacy VRF workpaper submitted with only minor revisions and did not address Commission staff concerns provided over the past two years</li> </ul>
4	Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to	Percentage of high profile program, or high impact measure, workpapers submitted for collaboration or flagged for review	2.99	<p>PG&amp;E actively sought Commission staff input workpapers covering ambient LED lighting and retail plug load products. Areas where PG&amp;E fell short are:</p> <ul style="list-style-type: none"> <li>• HVAC variable refrigerant flow, where a legacy workpaper was submitted with only</li> </ul>

Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
	Commission staff in the formative stage for collaboration or input			<p>minor revisions as opposed to developing a workpaper that responded to Commission staff concerns issued over the past two years</p> <ul style="list-style-type: none"> <li>• Tube LED lamp replacements where it appears all PAs have elected to promote these products through custom programs instead of more appropriately developing a deemed workpaper that addressed Commission staff concerns issued in late 2014</li> </ul>
5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives)	Frequency of inappropriate or inferior quality at the time of initial Commission staff review (higher frequency = lower score)	1.0	<p>Commission staff reviewed and scored 14 PG&amp;E workpapers for this metric. Only two of the submissions were of appropriate quality and included all information needed to understand and review the workpaper the first time it was submitted. Although subsequent submissions made improvements, this metric is limited to the first submission made in 2015.</p> <p>Workpapers which represent the type of issues found in PG&amp;E workpapers are the following:</p> <ul style="list-style-type: none"> <li>• Retail Products Platform (PGECOAPP128): inadequate analysis of standard practice baseline and proposing incentives on measures with zero incremental cost</li> <li>• Variable Frequency Drives on Agricultural Pumps (PGECOAGR119): energy savings calculations were missing from the submittal although the calculation file was listed as an “attachment” within the workpaper.</li> </ul> <p>The two initial submissions that Commission staff counted as “appropriate quality” for this metric are Low Flow Showerheads and Aerators (PGECODHW125) and Process Fan VSD (PGECOPRO110). These workpapers addressed areas needing improvement in the mid-year review, which noted that improvements were needed in consistency between workpaper narratives and submitted data. However, most submitted workpapers still need improvements in documentation, as is apparent by the large fraction of review workpapers that are either returned during preliminary review or need significant revisions after a detailed review.</p>
6a	Depth of IOU quality control and technical review of ex ante submittals: Third party oversight	Quality of workpapers prepared by consultants, third parties, and local government partners submitted by IOUs	1.0	<p>On initial review, Commission staff noted several concerns with workpapers prepared either entirely or in part by consultants or parties other than PG&amp;E staff, with some examples summarized below:</p> <ul style="list-style-type: none"> <li>• LED fixtures (PGECOLTG179) included a thorough development of the code baseline. Initial measure definitions did not support easy identification of actual measure in the claims. These issues were resolved during the disposition review process. Generally, even with the initial review comments, Commission staff views this workpaper</li> </ul>

Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
				<p>development as a positive item.</p> <ul style="list-style-type: none"> <li>• Retail Products Platform (PGECOAPP128): The Retail Products Platform (RPP) is a single workpaper that includes 6 measure groups. Commission staff has several concerns about the development of this workpaper where: savings were based on minimal baseline data; it was not clear that incremental costs were due to improvements in energy efficiency; net-to-gross values were elevated due to an assumed market transformation that would occur in ten years; net-to-gross values were not developed in consideration of very low actual values observed in the initial pilot project.</li> <li>• Residential Tier 2 Advance Power Strips (PGECOALL111) is a version of a workpaper developed by a consultant to SDG&amp;E. The PG&amp;E workpaper appeared to be submitted prior to resolution of the disposition on the SDG&amp;E workpaper and so was not reviewed or approved by Commission staff.</li> <li>• Variable Refrigerant Flow (PGECOAVC142): Commission staff has provided, on several occasions, a comprehensive description of concerns related to savings calculation methods and baselines for standard practice and fuel switching. At the end of 2015, PG&amp;E resubmitted a version of the consultant’s previous workpaper with only minor revisions and not addressing in any meaningful way the Commission staff concerns.</li> </ul> <p>Commission staff note similar concerns with no noticeable improvement compared to the mid-year review.</p>
6b	Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V	<ol style="list-style-type: none"> <li>1. Percentage of workpapers which required changes to parameters of more than 10% or required substantial changes to more than two parameters among UES, EUL/RUL, NTG, impact shape, or costs;</li> <li>2. Percentage change from IOU-proposed values to ED-approved values (higher percentage = lower score)</li> </ol>	1.28	<p>Commission staff issued preliminary reviews and dispositions on workpapers that included either revised values or direction for further analysis that will likely result in revised values. Of the 14 workpapers where revisions to ex ante values are required, Commission staff estimate that 10 require changes to at least two values or any one value requires a downward revision by more than 10%.</p> <p>At the time of the mid-year review, Commission staff had not performed any values review of submitted workpapers so it was difficult to provide specific feedback at that time. As discussed in item 1a above, Commission staff expects PAs to broadly examine all decisions, workpaper feedback and staff direction in terms of how it may apply to all workpapers, not just those selected for review in the past.</p>
7	Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and	Percentage of workpapers with analysis of existing data and projects that are applicable to technologies covered by workpaper	2.94	Using review comments from 2015 Preliminary and Detailed workpaper reviews, Commission staff rated workpaper submissions for whether or not they correctly used recent and relevant data sources. All reviewed submissions (23) were counted for this metric which means that PG&E gets a higher score in cases where they incorporated Commission staff comments and

Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
	parameter development that reflects professional care, expertise, and experience			<p>revised submissions to include relevant data sources.</p> <p>5 of PG&amp;E’s submissions used irrelevant or outdated data sources. For example, three workpapers were reviewed which directly use energy or cost data from outdated versions of DEER. Improvement is expected from PG&amp;E in this area in 2016.</p> <p>On the other hand, the Vertical Hollow Shaft Pump Motors workpaper used an internal PG&amp;E tool called the Pumping System Energy Savings Calculator (PSESC) which is based on recent, relevant data.</p> <p>Similar to the mid-year review, Commission staff emphasizes that PAs do not appear to be utilizing program participants as a source for investigating, understanding and proposing reasonable baselines for many measures.</p>
8	Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated	Frequency of revisions to workpapers in response to (and/or appropriate and well-defended rejection of) CPUC reviewer's recommendations	1.33	<p>10 PG&amp;E 2015 workpaper submissions were scored for this metric including all workpapers where PG&amp;E provided a response to Commission staff preliminary or detailed reviews. The mid-year review noted that Commission staff would be reviewing workpapers for content that shows consideration for preliminary review comments and previously issued direction.</p> <p>First, on the positive side, PG&amp;E responded quickly and thoughtfully to the following 4 workpapers: Duct Test &amp; Seal: Residential (PGE3PHVC159), Variable Frequency Drives on Agricultural Pumps (PGECOAGR119), LED Ambient Commercial Fixtures and Retrofit Kits (PGECOLTG179), and Vertical Hollow Shaft Pump Motors (PGECOPUM103). In particular, we would like to highlight the LED Ambient lighting workpaper as an example of a process which raised and resolved several issues in a constructive and collaborative manner.</p> <p>On the other hand, 6 of PG&amp;E's responses either had further errors, did not address all of CPUC comments, or did not provide reasoning or response to EAR team comments. For example, PG&amp;E was scored down in this metric due to the following:</p> <ul style="list-style-type: none"> <li>• Retail Products Platform (PGECOAPP128): PG&amp;E’s response to the disposition regarding establishing baseline and performing "sensitivity analysis" did not address Commission staff concerns and would likely not result in high confidence estimates of the baseline energy use nor address non-energy market barriers for zero IMC measures.</li> <li>• Residential HVAC Quality Maintenance (PGECOHVC139): responses did not follow CPUC policy regarding assignment of program costs to measures rather than non-incentive costs. Commission staff expects PG&amp;E to understand how CPUC policy requires program costs to be assigned.</li> </ul>



Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
				<ul style="list-style-type: none"> <li>Unitary ACHP under 65kBtuh (PGECOHC126): The second submission of this work paper did not address the preliminary review comments. Some recommendations appear to be ignored and no information is given regarding PG&amp;E's reasons for how changes were addressed.</li> <li>Industrial Blower Replacing Air Compressor: a Preliminary workpaper review was returned as incomplete in May. No resubmittal or feedback was received for the remainder of 2015.</li> </ul>
9	Professional care and expertise in the use and application of adopted DEER values and DEER methods	Percentage of workpapers, including those covering new or modified existing measures, that appropriately incorporate DEER assumptions and methods	2.92	<p>The mid-year review noted that Commission staff expected improvement in PG&amp;E's understanding of, use of and reference to DEER values.</p> <p>Commission staff used all workpaper reviews for this metric and scored the metric based on the accuracy of PG&amp;E's ex ante data submission. 25 submissions were scored for this metric and 19 of them appropriately incorporate DEER assumptions and methods including correct (or nearly correct) selection of ex ante database values from the DEER support tables. In particular, PG&amp;E worked hard during the 4<sup>th</sup> quarter of 2015 to make adjustments to their submission format in order to reduce the number of typographical errors. PG&amp;E's December submissions did a good job of matching the ex ante data specification with regard to including updated, relevant values for the DEER support tables.</p> <p>Examples from the 6 submissions that were scored down for this metric include the following: misinterpreting and/or misusing DEER cost qualifier, selecting an incorrect EUL instead of proposing a new value via the work paper, proposing an installation rate (IR) value based on a data that is actually applicable to the EUL indicating a misunderstanding of IR and EUL, mismatches in the selection of Tech Group and/or Tech Type indicating a lack of rigor or a lack of understanding in how these parameters must be matched, selecting the wrong UseSubCategory, and not following DEER methods for simulating energy savings.</p>
10	Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products	Percentage of workpapers including analysis of previous activities, reviews and direction	2.13	<p>PG&amp;E makes an effort to meet Commission direction; however, improvement is required. Commission staff remains concerned that past direction on workpaper development is not being addressed and, of equal importance, is not being broadly considered in overall workpaper development efforts.</p> <p>The mid-year review noted that on-going reviews would focus on PG&amp;E's workpaper developments that consider previous input and reviews. About one-third of the 2015 work papers Commission staff reviewed had major issues in areas that we have repeatedly asked for improvement on. Example of previous activities, reviews and direction that PG&amp;E has not</p>

Metric	Description	Workpaper Benchmark	Final	Commission staff Assessment
				consistently incorporated into their workpaper submissions include following previous direction from the quality maintenance disposition; submitting workpapers from other PAs that either do not match PG&E’s proposed program implementation (and do not include relevant savings calculations) or that are interim versions of the workpaper (and should not have been submitted); and on-going underperformance in the descriptive clarity of ex ante data submissions.

## 2015 Efficiency Savings and Performance Incentive Custom Projects Ex Ante Performance Scores

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
1a	Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the pre-submittal/implementation phase: Timing of disclosure in relation to reporting	(1) Percentage of projects in quarterly or annual claims that were reported in the CMPA twice-monthly list submissions; (2) Percentage of projects for which there is a two weeks or less difference between the application date and the date reported in the CMPA; (3) Percentage of tools used for calculations disclosed prior to use	1.0	<p>Commission staff did not undertake a comprehensive claims review; however, PG&amp;E appears to be disclosing its custom projects in the CMPA submission.</p> <p>PG&amp;E, however, did not submit all 77 selected pilot retrocommission projects applications documentations that Commission staff selected under CPUC Project ID PGE-15-T-C-0008, in particular those projects that were listed as proceeding into the implementation phase. PG&amp;E has not responded to our 12/22/15 disposition on this issued.</p> <p>Over a quarter of the Project Applications that were selected to examine 3rd party use of the PG&amp;E Modified Lighting Calculator (MLC) Tool under CPUC Project ID PGE-15-T-C-0009 appeared to be completed installations. Commission staff found code baseline issues and generally not following previous Commission staff directives on the MLC Tool issued in late 2012. For CPUC Project ID PGE-15-T-I-0007, Commission staff suspended its review because PG&amp;E did not submit their own internal technical review of the project. For CPUC Project ID X185, Commission staff found that the VFDs are considered ISP for new construction for this oil pipeline and did not approve the project. PG&amp;E proceed with the project and paid incentives without Commission staff project approval. Similarly, PG&amp;E paid the incentives on CPUC Project ID X274 before Commission staff could approve the final savings. On CPUC Project ID X493, a small new pump installation, PG&amp;E delayed providing a reply to Commission staff questions for over a year and did not provide requested documentation. PG&amp;E did not submit the calculation tool for Commission staff review. Ex post evaluation of similar projects claimed in 2014 found the tool deficient in determining the DEER peak demand reduction and did not account for farmer's standard practices.</p>

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
1b	Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11 07-030, D.12 05-015, etc.) in the post-submittal/implementation phase: Timing of responses to requests for additional information	Percentage of projects which experience significant delay due to slow response to requests for readily available (or commonly requested) additional information (higher percentage = lower score)	1.5	PG&E's response to ex ante review directives in general are slow. For the pilot RCx projects selections, PG&E took one month to upload only a small number of the selected project files that turned out to be only summaries and completely inadequate. PG&E has not replied and given no indication that they followed the directives given in the December 22 disposition on a portion of the program regarding an advanced retrocommissioning and tune-up program. Likewise, PG&E has provided no formal replies to the review findings on the 3rd party use of the MLC Tool and PG&E's lack of oversight. CPUC Project ID X260A, Commission staff found the first set of final claim documentation lacking and issued a disposition not approving the final savings. PG&E's follow-up reply was more complete but did not address all the issues that were identified in the disposition and failed to subject the calculation tool to some very basic checks (e.g., the tool would indicate savings when the number of retrofitted rooftop AC units with dual cool evaporative add-ons were set to zero).

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
2	Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process	(1) Percentage of custom project submissions that show standardization of custom calculation methods and tools; (2) Development and/or update of comprehensive internal (to IOUs, third parties, and local government partners, as appropriate) process manuals/checklists and QC	2.42	<p>Although PG&amp;E almost 50% of the points for this metric, for example CPUC Project ID X260A, Commission staff found that PG&amp;E provided a complete M&amp;V write-up as requested in the disposition, PG&amp;E needs improvements as described in the examples below:</p> <ul style="list-style-type: none"> <li>• For CPUC Project ID X361, Commission staff examination found that the final savings claim submittal was missing the trued-up eQuest models. Commission staff examination found that the models do not accurately reflect the M&amp;V data.</li> <li>• For CPUC Project ID X447, Commission staff found that PG&amp;E had only provided the 3rd party installation report as documentation for the final savings claim and it took an additional 24 days for PG&amp;E to submit the missing documents. That upload was still missing PG&amp;E's own internal technical review which the reviewer provided on 12/29 one minute after Commission staff requested it through a CMPA message. This points to PG&amp;E's continued lack of due diligence to ensure documentation submittals are complete.</li> <li>• For CPUC Project ID X500, PG&amp;E appeared unable to understand the project eligibility and baseline deficiencies and correct them after Commission staff issued the first disposition on the project.</li> </ul>

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
3	Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes)	Number of repeated formal requests for additional documentation for project information and/or reporting claims that support ex ante review activities (fewer requests = higher score).	1.97	PG&E needs to strive for providing complete review packages to Commission staff for review, just as the IOU's internal reviewers receive a full package for project review. For the Project Applications selected from the pilot retrocommissioning program, it became apparent through the handful of documents that PG&E provided that there was no oversight of its program implementers and the program manager was accepting inadequately documented project applications and claiming ineligible savings. For the lighting projects that were reported as completed as part of Commission staff review of the 3rd party usage of the MLC Tool, rarely did any field verification documentation, valid invoices, PA payments, or customer copayment information provided. This also is indicative of poor PG&E oversight of its 3rd party implementers. For CPUC Project ID X361, PG&E did not provide the final eQuest models with their initial final submittal necessitating a further Commission staff data request that PG&E fulfilled in 12 days. Likewise, final documentation for CPUC Project ID X447 was missing PG&E's internal technical review with the initial final documentation submittal. In contrast, Commission staff found the final documentation for CPUC Project ID X194 fairly complete and comprehensive. Although the documentation submittal for CPUC Project ID X510, PG&E neglected to review and disclose prior work done at the facility that received ratepayer incentives making this application a potential violation of the "No Double Dipping" requirement found in PG&E's Terms and Conditions. Commission staff understands that PG&E recently completed a review of its custom project pipeline and that PG&E is currently looking into process improvements to remedy noted deficiencies. Commission staff looks forward to working with PG&E on this issue.

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
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	Percentage of large high impact projects or measures referred to CPUC early or flagged for review	4.25	PG&E did bring in a couple of project for early opinion review. From the large projects (e.g. the automotive paint shop project) that Commission staff reviewed, PG&E should have brought in more projects for early opinion review and submitted tools for Commission staff review. The higher score in this metric reflects PG&E's efforts to implement an industry standard practice effort and its collaboration with Commission staff in this activity.
5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives)	Frequency of inappropriate or inferior quality documentation on project eligibility, baseline determination, program influence, use of custom elements in projects, assumptions and data supporting savings, and project costs (higher frequency = lower score)	1.0	PG&E needs significant improvement in this area. For example, in the new pump CPUC Project ID X493, PG&E's response to our questions and request for documentation was a year delayed and still did not provide any additional project documentation. In the Dual-Cool evaporative cooler add-ons for rooftop air conditioner condensers, CPUC Project ID X260A, the documentation explaining the calculation methodology, inputs, outputs, and assumptions was inadequate. In CPUC Project ID X525, an automotive paint facility project, Commission staff found that the incentive agreement was signed 8 months prior to PG&E submitting documentation for Commission staff review. PG&E and their 3rd party implementer did not fully respond and incorporate prior guidance and review findings for CPUC Project ID X533, a compressed air retro-commissioning project.

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
6a	Depth of IOU quality control and technical review of ex ante submittals: Third party oversight	Quality of custom project estimates prepared by customers, third parties, and local government partners submitted by IOUs	1.12	PG&E needs to pay closer attention to Third Party projects. In an advanced retrocommissioning and tune-up program, the primary listed measures were ineligible behavior-base measures, such as altering thermostat schedules and setpoints. In addition, one completed project provided for review did not meet the minimum Title 24 Section 120.2 requirements. In the review of projects using the Modified Lighting Calculator, we found a lack of PG&E oversight of the project submissions with issues found in EUL for lamp-replacements; code/standard practice baselines and field documentation for completed projects. In CPUC Project ID X525, the automotive paint facility project, the 3P implementer executed an incentive agreement before the PA completed its technical review, and one day after the PA placed the project on the bi-monthly projects selection list.
6b	Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V	(1) Percentage of Projects requiring three reviews or re-requests for supporting information commonly requested; (2) Percentage of projects for which IOU-proposed savings and ED-approved savings differ by 20% or more (higher percentage = lower score)	1.2	We are not seeing PG&E's due diligence review impacting its projects. In the advanced retro-commissioning and tune-up program's projects, ineligible measures were routinely listed. In CPUC Project ID X260A, there was a lack of any in depth review of the calculation tool used to estimate savings for the dual-cool roof top units (RTU) add-ons and a lack of any detailed analysis of the M&V data that clearly pointed to uneven cooling load distributions among the retrofitted RTUs. Under CPUC Project ID PGE-15-T-C-0009, we found a lack of PG&E oversight of 3rd party implementer use of the Modified Lighting Calculator Tool in the sampled project applications. For CPUC Project ID X500, Commission staff found the measure baselines were flawed, the calculation methodology unacceptable, and PG&E appeared unable to understand the deficiencies and to correct them after the first disposition. As a result, Commission staff had to reject this project.



Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
7	Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience	Percentage of custom projects that use data sources and methods per standard research and evaluation practices	1.0	For the advanced retro-commissioning and tune-up program, Commission staff found that PG&E failed to take into consideration Commission Decision 14-10-046, Ordering Paragraph 9, that restricted EE funding and incentives for only above code measures for school projects. For CPUC Project ID X260A, Commission staff found that the submitted analysis failed to take into account that prior studies at other large retail facilities encountered uneven cooling loads distributions among the RTUs that was evident in the submitted M&V data. For CPUC Project ID X364, Commission staff found that the final savings analysis did not use field measured data and there was no attempt to verify some important savings parameters through field measurements. For CPUC Project ID X493, the PA assumption of pumping operations during the DEER peak demand period were unfounded and found to be just an assumption in their calculation tool.
8	Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated	(1) Frequency of improved engineering/M&V methods and processes resulting from (and/or appropriate and well-defended rejection of) CPUC reviewer's recommendations; (2) Percent of projects in custom reviews that reflect guidance provided in prior reviews	2.45	PG&E has not followed-up on the dispositions on either the advanced retro-commissioning and tune-up program or the 3rd Party use of the MLC Tool. The PG&E reply to the CPUC disposition on CPUC Project ID X260A although fairly complete, did not address issues related to RTU cooling load distributions, how the total cooling loads were determined, and the actual count of RTUs at each site.

Metric	Description	Custom Benchmark	Final 2015 Score	Commission staff Assessment
9	Professional care and expertise in the use and application of adopted DEER values and DEER methods	Percentage of custom projects including, and not limited to, new or modified existing technologies or project types that appropriately incorporate DEER assumptions and methods	1.75	Commission staff found that the calculation methods for CPUC Project IDs X194 and X493 did not conform to the DEER peak demand definition. CPUC Project ID X374 did not adhere solely to the DEER lighting hours of use.
10	Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products	Percentage of projects identified in claims review that were implemented per CPUC directions in previous reviews	2.8	Commission staff observed that PG&E has made some progress in this Metric area. However, Commission staff finds that projects with large potential savings are less likely to incorporate and follow prior staff review findings and recommendations.

Summary of all IOU custom measure and project ex ante review activities scoring for both the 2015 annual review as well as previously issued 2015 mid-year review:

2015 Annual Ratings	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10
SCE "-"	15	2	3	11	2	6	10	9	11	8	2	8
SCE "+"	1	2	2	2	4	0	0	1	0	2	2	3
SCE "Yes"	2	2	7	3	1	5	2	1	1	2	2	6
PG&E "-"	15	13	13	18	6	18	20	14	16	13	2	19
PG&E "+"	0	5	3	6	2	4	5	3	2	5	0	6
PG&E "Yes"	1	2	7	5	0	1	2	4	1	1	2	2
SDG&E "-"	4	4	5	4	0	5	4	4	6	4	0	4
SDG&E "+"	3	2	4	2	3	2	1	2	1	2	0	3
SDG&E "Yes"	0	0	0	1	0	0	0	0	1	0	0	1
SCG "-"	2	2	4	5	1	5	3	3	3	5	0	4
SCG "+"	0	0	0	1	1	0	0	0	0	1	0	0
SCG "Yes"	0	1	1	1	0	0	0	1	0	0	0	3

2015 Mid Year Ratings	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10
SCE "mid -"	3	3	4	8	0	5	5	5	8	8	2	10
SCE "mid +"	1	3	3	0	0	0	0	1	0	3	0	1
SCE "mid m"	0	0	0	1	0	0	0	0	0	0	0	0
SCE "mid n/a"	18	16	15	13	22	17	17	16	14	11	20	11
PG&E "mid -"	6	4	11	10	3	15	10	14	14	12	2	14
PG&E "mid +"	0	2	3	2	0	1	0	1	0	2	0	3
PG&E "mid m"	1	0	0	1	0	1	0	2	1	0	0	1
PG&E "mid n/a"	17	18	10	11	21	7	14	7	9	10	22	6
SDG&E "mid -"	0	1	1	3	0	3	2	4	4	0	0	1
SDG&E "mid +"	2	0	2	1	1	1	0	0	0	1	0	0
SDG&E "mid m"	2	1	0	1	0	1	1	2	0	0	1	0
SDG&E "mid n/a"	6	8	7	5	9	5	7	4	6	9	9	9
SCG "mid -"	0	0	1	4	0	4	1	1	0	2	0	1
SCG "mid +"	0	2	0	0	0	0	0	0	1	1	0	0
SCG "mid m"	0	3	3	1	0	0	3	1	2	2	0	4
SCG "mid n/a"	5	0	1	0	5	1	1	3	2	0	5	0

Details of PG&E custom measure and project activities scoring:

2015 Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
PG&E "-"	94%	65%	57%	62%	75%	78%	74%	67%	84%	68%	50%	70%	
PG&E "+"	0%	25%	13%	21%	25%	17%	19%	14%	11%	26%	0%	22%	
PG&E "Yes"	6%	10%	30%	17%	0%	4%	7%	19%	5%	5%	50%	7%	
<b>Overall Score</b>	<b>3%</b>	<b>30%</b>	<b>28%</b>	<b>29%</b>	<b>25%</b>	<b>20%</b>	<b>22%</b>	<b>24%</b>	<b>13%</b>	<b>29%</b>	<b>25%</b>	<b>26%</b>	<b>TOTALS</b>
<b>Metric Points</b>	<b>0.50</b>	<b>0.75</b>	<b>1.42</b>	<b>1.47</b>	<b>1.25</b>	<b>1.00</b>	<b>0.56</b>	<b>0.60</b>	<b>1.00</b>	<b>1.45</b>	<b>1.25</b>	<b>1.30</b>	<b>12.55</b>
<b>QA Adders</b>											<b>0.50</b>		<b>0.50</b>
<b>Process Adders</b>			<b>1.00</b>	<b>0.50</b>	<b>3.00</b>					<b>1.00</b>		<b>1.50</b>	<b>7.00</b>
<b>Final Points</b>	<b>0.50</b>	<b>0.75</b>	<b>2.42</b>	<b>1.97</b>	<b>4.25</b>	<b>1.00</b>	<b>0.56</b>	<b>0.60</b>	<b>1.00</b>	<b>2.45</b>	<b>1.75</b>	<b>2.80</b>	<b>20.05</b>

Explanations of scoring tables row entries:

1. The row labeled with *IOU* “-“ lists the percent of custom project reviews undertaken in 2015 where the Commission staff evaluation of the project 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 custom project reviews undertaken in 2015 where the Commission staff evaluation of the project 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 “Overall Score” row 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.
4. The “Metric Points” row provides the point value derived from the three scoring rows and the resulting overall score row with the final score constrained between a maximum score of 5 and a minimum score of 1. Even if the overall goes negative, due to the “-“ rows overwhelming the total, a minimum score of 1 is assigned.
5. The row labeled with *IOU* “Yes“ lists the percent of custom project reviews undertaken in 2015 where the Commission staff evaluation of the project materials or information indicated that the IOU performance in this metric for the submission exceeded met minimum expectations or requirements relative to the metric.
6. The row labeled with *QA Adders* 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 in 2015 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 2015 but not yet seen in the custom review activity.
7. The row labeled with *Process Adders* lists Commission staff points added to the metric based on an evaluation of the overall IOU performance in putting into place new internal review processes and procedures in 2015 related to this metric area that are expected to improve performance going forward on projects started during 2015 but not yet seen in the custom review activity.
8. The final points row indicated the total score for each metric as a sum of the overall score plus the two types of adder points.

Details of other IOU custom measure and project activities scoring:

2015 Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
SCE "-"	83%	33%	25%	69%	29%	55%	83%	82%	92%	67%	33%	47%	
SCE "+"	6%	33%	17%	13%	57%	0%	0%	9%	0%	17%	33%	18%	
SCE "Yes"	11%	33%	58%	19%	14%	45%	17%	9%	8%	17%	33%	35%	
Overall Score	11%	50%	46%	22%	64%	23%	8%	14%	4%	25%	50%	35%	<b>TOTALS</b>
Metric Points	<b>0.50</b>	<b>1.25</b>	<b>2.30</b>	<b>1.10</b>	<b>3.22</b>	<b>1.14</b>	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>1.25</b>	<b>2.50</b>	<b>1.77</b>	<b>17.03</b>
QA Adders											<b>0.50</b>		<b>0.50</b>
Process Adders	<b>0.50</b>			<b>0.50</b>	<b>0.50</b>					<b>1.50</b>		<b>2.00</b>	<b>5.00</b>
Final Points	<b>1.00</b>	<b>1.25</b>	<b>2.30</b>	<b>1.60</b>	<b>3.72</b>	<b>1.14</b>	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>2.75</b>	<b>3.00</b>	<b>3.77</b>	<b>22.53</b>

2015 Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
SDG&E "-"	57%	67%	56%	57%	0%	71%	80%	67%	75%	67%	0%	50%	
SDG&E "+"	43%	33%	44%	29%	100%	29%	20%	33%	13%	33%	0%	38%	
SDG&E "Yes"	0%	0%	0%	14%	0%	0%	0%	0%	13%	0%	0%	13%	
Overall Score	<b>43%</b>	<b>33%</b>	<b>44%</b>	<b>36%</b>	<b>100%</b>	<b>29%</b>	<b>20%</b>	<b>33%</b>	<b>19%</b>	<b>33%</b>	<b>0%</b>	<b>44%</b>	<b>TOTALS</b>
Metric Points	<b>1.08</b>	<b>0.84</b>	<b>2.23</b>	<b>1.79</b>	<b>5.00</b>	<b>1.43</b>	<b>0.50</b>	<b>0.84</b>	<b>1.00</b>	<b>1.67</b>	<b>1.00</b>	<b>2.19</b>	<b>19.57</b>
QA Adders									<b>1.00</b>		<b>1.50</b>		<b>2.50</b>
Process Adders	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>0.50</b>						<b>1.00</b>		<b>1.00</b>	<b>4.50</b>
Final Points	<b>1.58</b>	<b>1.34</b>	<b>3.23</b>	<b>2.29</b>	<b>5.00</b>	<b>1.43</b>	<b>0.50</b>	<b>0.84</b>	<b>2.00</b>	<b>2.67</b>	<b>2.50</b>	<b>3.19</b>	<b>26.57</b>

2015 Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
SCG "-"	100%	67%	80%	71%	50%	100%	100%	75%	100%	83%		57%	
SCG "+"	0%	0%	0%	14%	50%	0%	0%	0%	0%	17%		0%	
SCG "Yes"	0%	33%	20%	14%	0%	0%	0%	25%	0%	0%		43%	
Overall Score	<b>0%</b>	<b>17%</b>	<b>10%</b>	<b>21%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>	<b>13%</b>	<b>0%</b>	<b>17%</b>	<b>0%</b>	<b>21%</b>	<b>TOTALS</b>
Metric Points	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>1.08</b>	<b>2.50</b>	<b>1.00</b>	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.08</b>	<b>11.66</b>
QA Adders											<b>1.50</b>		<b>1.50</b>
Process Adders					<b>1.00</b>								<b>1.00</b>
Final Points	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>1.08</b>	<b>3.50</b>	<b>1.00</b>	<b>0.50</b>	<b>0.50</b>	<b>1.00</b>	<b>1.00</b>	<b>2.50</b>	<b>1.08</b>	<b>14.16</b>

Summary of all IOU workpaper reviews ex ante review activities scoring for 2015:

2015 SCE Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
Workpapers Score	42%	90%	29%	39%	50%	33%	67%	19%	53%	50%	66%	50%	
Workpapers Points	2.12	4.52	1.45	1.93	2.50	1.67	3.33	0.95	2.00	2.50	3.00	2.50	
Workpaper Process	1.31	1.44	1.60	1.15	1.07	1.51	1.16	1.10	1.05	1.22	1.33	1.04	
Process weight	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	<b>TOTAL</b>
Metric Points	<b>0.92</b>	<b>1.73</b>	<b>1.51</b>	<b>1.66</b>	<b>2.00</b>	<b>1.62</b>	<b>1.29</b>	<b>0.51</b>	<b>1.67</b>	<b>2.06</b>	<b>2.42</b>	<b>1.99</b>	<b>19.38</b>
2015 PG&E Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
Workpapers Score	43%	79%	52%	42%	75%	14%	11%	27%	78%	40%	68%	72%	
Workpapers Points	2.57	3.93	2.62	1.96	3.75	0.71	0.56	1.33	3.91	1.00	3.39	2.50	
Workpaper Process	1.23	1.00	1.19	1.18	1.58	1.30	1.20	1.17	1.12	1.94	2.01	1.44	
Process weight	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	<b>TOTAL</b>
Metric Points	<b>1.06</b>	<b>1.46</b>	<b>2.12</b>	<b>1.70</b>	<b>2.99</b>	<b>1.00</b>	<b>0.50</b>	<b>0.64</b>	<b>2.94</b>	<b>1.33</b>	<b>2.92</b>	<b>2.13</b>	<b>20.79</b>
2015 SDG&E Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
Workpapers Score	43%	5%	44%	42%	25%	68%	17%	36%	58%	4%	23%	37%	
Workpapers Points	2.13	0.23	2.22	2.12	1.25	3.41	0.83	1.82	2.88	0.22	1.17	1.85	
Workpaper Process	1.30	1.28	1.18	1.31	2.03	1.45	1.39	1.42	1.13	1.86	1.83	1.70	
Process weight	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	<b>TOTAL</b>
Metric Points	<b>0.92</b>	<b>0.50</b>	<b>1.86</b>	<b>1.84</b>	<b>1.53</b>	<b>2.73</b>	<b>0.52</b>	<b>0.84</b>	<b>2.28</b>	<b>1.00</b>	<b>1.40</b>	<b>1.80</b>	<b>17.22</b>
2015 SCG Annual Rating	Metric 1a	Metric 1b	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6a	Metric 6b	Metric 7	Metric 8	Metric 9	Metric 10	
Workpapers Score	100%	50%	50%	42%	75%	67%	10%	40%	86%	100%	50%	67%	
Workpapers Points	5.00	2.50	2.50	2.08	3.75	3.33	0.50	2.00	4.29	5.00	2.50	3.33	
Workpaper Process	2.49	2.75	2.05	2.51	3.39	2.04	2.72	2.87	1.89	2.80	2.83	2.55	
Process weight	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	<b>TOTAL</b>
Metric Points	<b>1.69</b>	<b>1.34</b>	<b>2.21</b>	<b>2.36</b>	<b>3.52</b>	<b>2.50</b>	<b>0.98</b>	<b>1.29</b>	<b>2.74</b>	<b>3.57</b>	<b>2.72</b>	<b>2.83</b>	<b>27.75</b>