PUBLIC UTILITIES COMMISSION

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Date:	March 28, 2014
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 2013 Efficiency Savings and Performance Incentive Ex Ante Review Performance Scores

Pursuant to Decision (D).13-09-023, Commission staff and consultants have completed the 2013 Efficiency Savings and Performance Incentive (ESPI) mechanism ex ante review performance scoring. The scores were developed as prescribed in Attachments 5 and 7 of D.13-09-023. The scores contained in this memo are considered final and PG&E should use the total final score of 62.5 out of 100, as presented below, to calculate the 2013 ESPI ex ante review component award. The final score is explained in more detail in Attachment A to this memo.

Attachments B and C of this memo provide the rationale Commission staff and consultants used for the final scoring. The rationale discussions also address PG&E's comments on the Preliminary Assessment released in December 2013. Overall, Commission staff finds PG&E's ex ante activities to be marginally adequate. Staff is concerned, however, about the slight decline in PG&E's performance compared to the 2010-12 ex ante review performance scores. Since the ESPI was adopted and the Preliminary Assessment was distributed, Commission staff has seen PG&E make a more concerted effort to collaborate with Commission staff, particularly on workpapers, and a greater intention to comply the Commission's ex ante review policies. There is, however, more work to be done until Commission staff is comfortable that PG&E's ex ante review activities are sufficient and consistent with Commission policies.

With regard to workpaper activities, Commission staff note that PG&E makes a good effort to identify workpapers under development and collaborate with Commission staff where input is desired, as evidenced through the smart thermostat, home energy report, and demand control ventilation workpapers. Commission staff also finds, however, that there are workpapers (e.g., screw-in LEDs and HVAC Quality Maintenance) where the 2013-14 workpapers submitted did not incorporate guidance issued in the 2010-12 dispositions for those workpapers. Additionally, Commission staff is concerned about the possible inappropriate use of the hard-to-reach and emerging technology net-to-gross values. Staff recognizes that PG&E is reaching out to staff to clarify the application of these net-to-gross values and encourages PG&E to continue to work with staff on this issue.

PG&E's cooperation in the development of the ex ante database was a large point of concern for Commission staff throughout 2013. Staff has noticed an earnest improvement in cooperation since the last quarter of 2013, as shown through PG&E's submittal of their workpaper template developed to comply with the ex ante database. Commission staff expects PG&E to continue to work with staff to refine the template and complete the directed data submittal process and format for the ex ante database.

With regard to custom project activities, Commission staff finds PG&E's activities need improvement in posting to the Custom Measure and Project Archive (CMPA) and Calculation Tool Archive (CTA) sites in a timely manner. In PG&E's response to the Preliminary Assessment, PG&E identified some actions it has taken to remedy issues with CMPA and CTA but also notes procedural difficulties in getting projects and tools posted in a timely manner. PG&E must continue to work with its customers and Commission staff to reduce the time between a project application or custom tool proposal and the posting of the application or tool to the CMPA or CTA. Additionally, PG&E must improve the documentation quality for early retirement, project and measure baseline, and program influence, particularly with third party implementers. The guidance documents recently developed by Commission and IOU staff should help in this effort and Commission staff expects PG&E to have its third party implementers review and meet the expectations noted in the documents.

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. On this scale, 1 is a low score and 5 is a high score. A maximum score will yield 100 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 2013 are as follows:

Metric	Total Possible	Workpaper	Custom	Total Score
1 a	5	2	1.5	3.5
1b	5	1.5	1.5	3
2	10	3.5	3	6.5
3	10	3	3	6
4	10	3.5	3	6.5
5	10	2.5	2	4.5
6a	5	1	1	2
6b	5	1.5	1	2.5

Metric	Total Possible	Workpaper	Custom	Total Score
7	10	3	4	7
8	10	3.5	4	7.5
9	10	3.5	4	7.5
10	10	3	3	6
Total	100	31.5	31	62.5

It should be noted that in the preparation of the final 2013 ESPI ex ante review scores, Commission staff did not have all desired data available. For instance, Commission staff did not have enough time to conduct a comprehensive claims review for these scores and was not able to review all of the dispositions issued for custom projects in 2013. Were these data sources available, PG&E's scores may be significantly different. For 2013, Commission staff based the scoring on the data available and did not speculate on how a claims or disposition review would impact the final scores. With the development of the ex ante database and a workpaper and custom disposition tracking tool, Commission staff expects that comprehensive claims and disposition reviews will be used to inform the utilities' ESPI ex ante review scores in the future.

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 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 area.

If you have any questions or comments about the feedback or final scores, please contact Katie Wu (<u>katie.wu@cpuc.ca.gov</u>). Note that pursuant to D.13-09-023, Commission staff will schedule time with the utilities to discuss the final scores.

		Workpapers			Custom				Total	
<u>1</u> a	Metric 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-	Max Points 2.5	Score 4	Percent Score	Total Points	Max Points 2.5	Score 3	Percent Score	Total Points 1.5	3.5
	submittal/ implementation phase: Timing of disclosure in relation to reporting									
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	2.5	3	60%	1.5	2.5	3	60%	1.5	3
2	Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process	5	3.5	70%	3.5	5	3	60%	3	6.5
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)	5	3	60%	3	5	3	60%	3	6
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	5	3.5	70%	3.5	5	3	60%	3	6.5

	Total	50			31.5	50			31	62.5
10	Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products	5	3	60%	3	5	3	60%	3	6
9	Professional care and expertise in the use and application of adopted DEER values and DEER methods	5	3.5	70%	3.5	5	4	80%	4	7.5
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	3.5	70%	3.5	5	4	80%	4	7.5
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	3	60%	3	5	4	80%	4	7
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	3	60%	1.5	2.5	2	40%	1	2.5
ба	Depth of IOU quality control and technical review of ex ante submittals: Third party oversight	2.5	2	40%	1	2.5	2	40%	1	2
5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives)	5	2.5	50%	2.5	5	2	40%	2	4.5

Final 2013 Efficiency Savings and Performance Incentive

Ex Ante Performance Scores – PG&E

March 31, 2014

Metric 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

1a.(1) Fraction of deemed measures for which workpapers have been submitted to Commission prior to measure being offered in the portfolio

Staff is not aware at this time of any deemed measures being offered in a PG&E program without a workpaper being provided to the Commission.

1a.(2) Fraction of workpapers disclosed prior to or during work commencement and submitted upon completion rather than withheld and submitted in large quantity

PG&E regularly reports workpaper development activities. PG&E along with all IOUs submit large groups of workpapers as part of their program cycle applications. Once the application is approved and new workpapers become part of the Phase 2 review cycle, it is PG&E's general practice to keep the Commission informed of workpaper development activities and submit individual workpapers for review as they are completed.

There are several IOU-sponsored evaluation activities going on that are oriented toward workpaper development. LED market characterization and multi-family swimming pools are two specific areas. The ex ante review team was not informed of these activities and not given a chance for input until very late. Commission staff recognizes that PG&E was not the lead for these studies; however, given that the studies are for statewide estimates, all IOUs should make an effort to ensure Commission ex ante staff are aware of evaluation activities that pertain to workpaper updates.

1a.(3) Fraction of workpaper development projects for new technologies submitted for collaboration versus total number of workpapers for new technologies submitted

It is generally PG&E's practice to submit new technologies for collaboration. Recent submissions include smart thermostats, home energy reports, packaged HVAC demand controlled ventilation and improvements to refrigerated display case enhancements. PG&E is proactive in seeking out staff and ex ante review team input as workpaper development progresses.

At this time, the ex ante review team believes the list of new technologies under development is small compared to the overall number of technologies covered by the workpapers. Workpapers submitted with applications as well as those submitted in Phase 2 cover similar technologies that been incentivized over the past four or five years. Commission staff would like to see a greater

connection between IOU-sponsored M&V activities and workpaper updates. The ex ante review team would like the opportunity to provide input on the M&V studies as the results of those studies will ultimately be applied to updated ex ante estimates.

There are a number of areas where the IOUs are incorporating new delivery mechanisms for measures that have been included in IOU programs for several years. The Energy Upgrade California (EUC) program includes many common DEER and non-DEER residential measures. EUC workpaper development has been a reasonably successful collaborative effort between IOUs and Commission staff. Another example is the residential and commercial quality maintenance programs. Commission staff views the collaborative process on quality maintenance projects much less favorably, primarily due to IOUs lack of consideration of staff input provided during the 2010-2012 review of the same workpapers.¹

Metric 1a Preliminary Assessment: Good Performer

¹ Because of the change in delivery approach, staff directed IOUs to investigate the impact of new delivery approaches on measure efficacy, cost and installation rates. Additionally, staff was concerned that the change in delivery approach would change the typical characteristics of the participants, which may necessitate revisions to the savings estimates. Little if any of this research was done since the initial workpapers for HVAC QM were submitted.

Metric 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

After the initial applications, staff issued a data request for additional information needed to perform reviews of workpapers. All IOUs were generally compliant with that request. If the score for this item was based entirely on response to the initial data request, all IOUs would receive high scores. The biggest concern, however, is the re-submittal of workpaper ex ante values in the format needed for the centralized ex ante database. IOUs were provided with a data request from the reporting team that required them to resubmit all of their workpaper data in the specified format.

In their response to the preliminary ESPI review, PG&E states that all data had been provided in the draft ex ante format. PG&E has made an attempt to provide information in that format, but still has much room for improvement. There are specific areas of the content that lack the information necessary to identify the exact and full set of ex ante values associated with a particular claim.

In its response to the preliminary assessment, PG&E suggests that there must have been some miscommunication with the ex ante team and that PG&E believed they had fully complied with the data request. Again, Commission staff disagrees and cites D.11-07-030 as the initial direction to provide ex ante data in a specific format. As a result of the lack of progress towards an ex ante database throughout 2013, scores for this metric remain low; future compliance with the ex ante data specification will likely increase scores throughout the ESPI scoring areas.

On a positive note since the Preliminary Assessment was issued, PG&E has increased its efforts to provide ex ante data in the directed format. PG&E has submitted a sample set of data for staff review. While this data was not yet in the directed format, staff and consultants have had several interactions with PG&E and believe PG&E is on the right track to provided data in the required format.

Metric 1b Preliminary Assessment: Consistent Underperformer

Metric 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)

There has been no workpaper template issued pursuant to A.08-07-021. Staff did publish an executive summary template but this has received little use since it was published. In its comments on the Preliminary Assessment, PG&E notes that it completed the executive summary template with its early Phase 2 workpaper submissions and did not receive feedback from the ex ante team. Commission staff recognizes that PG&E used the executive summary template.

Generally, workpapers submitted as part of the application for 2013-2014 incorporated direction from previous workpaper reviews in terms of calculation assumptions and methods. To the extent that the prescribed ex ante data format provided to IOUs in September 2011 counts as a "workpaper template" IOUs are generally non-compliant with that direction. In consideration of late 2013 activities aimed at attempting, in good faith, to implement the directed ex ante submission format, staff has raised the score in this area over the preliminary value. Staff would like to see that the efforts made in late 2013 continue throughout 2014.

Metric 2 Preliminary Assessment: Needs improvement

Metric 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)

3 (1) Percentage of workpapers that include appropriate program implementation background as well as analysis of how implementation approach influences development of ex ante values

Generally, there is still very limited information in any workpapers covering implementation background. In its response to the preliminary assessment, PG&E states that "implementation background should be dealt with by the respective program staff at the IOUs and Commission." Staff disagrees and believes that implementation details are often inextricably linked to the engineering assumptions that underlie the development of ex ante values.

As an example of implementation information that influences development of ex ante values, consider workpapers covering upstream incentives for variable refrigerant flow (VRF) HVAC systems. The workpapers assume an ideal installation that maximizes the efficiency of the installation, however, there is no implementation mechanism described in the workpaper that would ensure these optimized configurations in the actual installations. PG&E tends to develop separate workpapers for direct installation and third party implementations, and this makes it easier for staff to identify similar measures delivered via different mechanisms or programs.

3 (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

The Phase 1 review resulted in a data request requiring a significant amount of additional information for most workpapers. This information was mainly related to nomenclature within individual workpapers related to the applicability of cost and impact values. Most of these issues were clarified by the IOUs in their responses to the data request.

A limited number of workpapers have been reviewed in detail for adequate supporting materials. In general, reviewed workpapers have been lacking in supporting materials in some areas. Lighting workpapers such as fixture replacements, often lack adequate support for pre-existing and measure case assumptions. Many fixture replacement fixtures present the pre-existing and measure cases in the form of wattage ranges with poor or missing information for developing average wattages of actual installations. Often, the lowest wattage of the pre-existing range is lower than the highest wattage of the measure range, which presents the possibility of the measure installation actually increasing energy use. In its comments on the Preliminary Assessment, PG&E identifies that its lighting expert, Alina Zohrabian, worked with Commission staff to resolve issues with the pre-existing and measure cases. Staff recognizes this effort though points out that the intent of this metric is to assess the initial submittal of workpapers.

Metric 3 Preliminary Assessment: Needs Improvement

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

Percentage of high profile program, or high impact measure, workpapers submitted for collaboration or flagged for review

Generally, PG&E has been proactive in submitting new measures for review and collaboration. PG&E submits a monthly workpaper development summary report. However, staff has some concerns about the schedule of workpaper development and how it often occurs at the same time as the development of a program. Staff would prefer to see more collaboration and development workpapers and associated ex ante values prior to inclusion of measures into programs. Below are some example instances where earlier involvement of staff review, prior to submission of the workpaper, would have resulted in a much more streamlined process to finalize the workpaper and ex ante values.

- Energy Upgrade California: IOUs appear reasonably responsive to staff input on these workpapers with the exception of the Advanced Path. The Advanced Path uses the EnergyPro software. This by itself is not a problem, however, the assumptions that are used in the EnergyPro software are not consistent with DEER assumptions, which result in savings estimates that are 4-5 times higher than would result if using DEER assumptions. Ex ante consultants provided several documents to IOUs and other implementers documenting the needed revisions to the program inputs and even engaged the EnergyPro authors to develop a version that included the correct DEER assumptions. Staff recommended that the enhanced version of EnergyPro be used for the EUC program, but IOUs elected to use the standard version. Ex ante consultants therefore recommended significant adjustment factors to the savings calculated by EnergyPro. Staff would have preferred the use of the enhanced version of Energy Pro, but the incorporation of savings adjustment factors is an acceptable alternative.
- Integral screw-in LED lamps and pin based MR-16 lamps: IOUs have embarked on an LED market characterization project, however, ex ante consultants and staff have not had the opportunity to contribute to the development of that study. Staff believes the rapid development of program offerings for screw-in and MR16 LED lamps requires early collaboration. As discussed below in Metric 5, workpaper savings estimates are based on the assumptions that are not supported by the body of research related to CFLs. This concern was noted in the original dispositions for LEDs issued during the 2010-2012 cycle, but no additional research was performed in advance of the 2013 workpaper submissions. This type of missing research is necessary to support the assumptions needed to estimate baseline and measure energy consumption and should be the focus of a collaboration related to LED measures.

Metric 4 Preliminary Assessment: Needs Improvement

Metric 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)

The main source of assessment at this time is the workpaper submissions PG&E included with their applications for the 2013-2014 cycle. There are approximately 174 workpapers submitted by PG&E to date. The ex ante review team has reviewed 56 workpapers. Staff has directed revisions on every workpaper it has reviewed. Additionally, staff is concerned that some of the issued identified in the reviewed workpapers are indicative of a larger problem across other workpapers. Below is a discussion of some of the major areas where staff believes workpapers showed inappropriate or inferior quality.

- The wide application of the high NTG values for emerging technologies and hard-toreach markets is troubling because workpapers often do not contain adequate supporting documentation for the applicability of these values. D.12-05-015 directed the establishment of an emerging technology NTG of 0.85; however, this decision explicitly stated that this value could only be used where actual Emerging Technology program activities are occurring² and that staff should assign that value at its discretion. Staff raises this concern as part of the ESPI assessment as a means to highlight concern over the apparent widespread use of the highest NTG values available in workpapers. Staff offers the following approach to address the concern over the use of high NTG values:
 - 1. The population of the ex ante database will enable the efficient identification and use of any NTG by implementation.
 - 2. Staff will present a request to program administrators to summarize their proposed use of specific NTG values of interest, such as the hard-to-reach and emerging technology values and provide supporting documentation as part of that summary.
- All IOUs inconsistently apply the DEER requirements, as well as Commission policy on early retirement, in determining appropriate code baselines for both replace on burnout and early retirement lighting measures.
- Screw-in LED workpapers present an additional concern. The workpapers followed analysis methods that were not well supported by the large body of work that has already been published for screw-in CFLs. Staff pointed out these concerns during the 2010-2012 cycle, however the same methods were used in the 2013-2014 workpapers.
- Staff has been generally disappointed with the progress on these HVAC QM workpapers. During the 2010-2012 cycle, staff noted several areas needing improvement as well as some areas where there were significant differences in calculation approaches between PG&E and SCE. The submissions for 2013 showed no indication of the IOUs considering staff input. What was submitted for 2013 was almost identical to 2012.

Metric 5 Preliminary Assessment: Needs Improvement

² D12.05.015 at 62 and OP14.

Metric 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

General observations and examples of inferior work with current workpapers developed by thirdparties and PG&E consultants:

- HVAC QM workpapers (PECI) were essentially unchanged from 2010-2012 cycle and considered little staff input provided during that cycle.
- In translating upstream HVAC workpapers into the ex ante database format, staff observed that these workpapers improperly weighted together the results from two different system types that had different code requirements. These different code requirements meant that the individual results from these two system types were very different. Therefore, weighting the results together would create results that were not representative of either category.
- The workpaper for swimming pool covers appears to have been prepared by the primary implementer of the swimming pool program. In its disposition of these workpapers, staff noted that the savings are often likely based on a regressive baseline, which is not allowed.

Staff understands that it may seem to PG&E that many comments in this assessment are being formally presented for the first time. Staff also acknowledges that PG&E has responded or are in the process of responding to workpaper dispositions in a more timely and cooperative manner. Staff would like to note, however, that the score reflects PG&E's performance throughout 2013. While ESPI scores may appear low at this time, the continued improvement of PG&E oversight of workpaper development by third parties, consultants and implementers will likely result in higher scores in future ESPI evaluations.

Metric 6a Preliminary Assessment: Needs Dramatic Improvement

Metric 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

6b (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

Staff has reviewed 56 workpapers of the approximately 174 workpapers submitted by PG&E. Staff has directed revisions to all reviewed workpapers. Additionally, the ex ante review team has translated a large number of PG&E workpaper ex ante data into the statewide ex ante database. During this exercise, staff has observed other workpapers that would likely require revision if a disposition were to be issued.

6b (2) **Percentage change from IOU-proposed values to ED-approved values (higher percentage = lower score)**

Excluding lighting, the energy savings reductions due to staff review of Phase 1 workpapers ranges from 20 to 50 percent. Assessment based on revisions to workpaper values alone is challenging as Commission staff recognizes that PG&E produces many statewide workpapers on behalf of the other IOUs, thereby creating larger pool of work to assess when compared to the smaller IOUs. For example, only PG&E and SCE submitted HVAC quality maintenance workpapers. These two utilities also submitted more workpapers for individual maintenance measures (e.g., economizer repair, refrigerant charge adjustment) than did SDG&E. Overall, staff maintains that PG&E should improve the due diligence of its ex ante activities such that the percent change between IOU-proposed values and ED-approved values is reduced.

Metric 6b Preliminary Assessment: Needs Improvement

Metric 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 workpapers with analysis of existing data and projects that are applicable to technologies covered by workpaper

General observations and examples from reviewed workpapers where existing data was not used:

- HVAC QM workpapers appeared not to consider any of the on-going IOU or Commission research related to packaged HVAC performance.
- Staff is concerned with the practice of introducing and using workpapers for measures that had been removed from DEER. These measures were removed from DEER often because the technology definitions were out of date. IOUs have taken values from previous DEER versions and re-introduced them using workpapers without any updates to the values that consider, for example, changes to standard industry practice technologies, updates to prototypical assumptions for usage profiles that may have changed since the measures were included in DEER, or possible consideration of EM&V results. One of the areas where this occurs is the group of technologies covering agricultural irrigation measures including low pressure sprinkler nozzles and sprinkler to drip irrigation conversions. These were removed from DEER 2011 and noted in the DEER documentation as "out of date³." Even the DEER 2005 documentation noted that some of these technologies may already be standard practice,⁴ calling in to question at least the use of the full EUL for these measures. The guidance decision provided for the establishment of interim values, approved for use while additional research is conducted. Staff would have preferred for at least a review of the existing documentation, then a proposal for interim approved values, instead of simply reintroducing values for technologies that, as far back as 2005, may have been standard practice.
- Staff has been reviewing all workpapers as part of the effort to construct the statewide ex ante database as directed by D.11-07-030. Generally, it does not appear that the 2013 workpapers include updated or more recent data when compared to the 2010-2012 cycle workpapers.

Metric 7 Preliminary Assessment: Needs Improvement

³ "DEER Measure Database Updates, Measure content, modeling method, model input parameter, and database format changes (Version 4.01 released in May 2012)" Appendix A-1 to the DEER update documentation. See p. A-1-44.

⁴ 2004-2005 Database for Energy Efficiency Resources (DEER) Update Study Final Report, Section 4

Metric 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

PG&E has been responsive in revising workpapers per any workpaper dispositions issued. Some workpaper dispositions have emphasized the need for additional research to better support the ex ante savings development. Towards the end of 2013, Commission staff noted that PG&E is undertaking additional research to support workpaper updates. Staff would like to see PG&E continue this trend of developing plans to address concerns, which would likely result in increased scores in future ESPI assessments.

Metric 8 Preliminary Assessment: Needs Improvement

Metric 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

Generally, workpapers attempt to replicate DEER methods within workpapers. This is particularly apparent when reviewing lighting workpapers where IOUs have used DEER operating hours, interactive effects, and coincident demand factors for all measures. Where PG&E differs from DEER assumptions, such as the establishment of a new building type, PG&E has been willing to work with staff to come up with mutually agreeable revisions.

For many technologies, such as package HVAC, refrigerator, clothes washer, and dishwasher measures, the DEER measure definitions do not line up with their preferred program requirements. In these cases, scaling methodologies have been used by PG&E to adjust DEER values to align with program efficiency requirements. In general, PG&E is making progress in this area. PG&E consultants are making progress as well, but throughout 2013 there appeared to be some gaps in the knowledge and application of DEER values and methods.

Metric 9 Preliminary Assessment: Good Performer

Metric 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

There is some improvement in incorporating cumulative experience from previous activities. The most notable is PG&E's initiative in seeking out early involvement from staff at the beginning of new development activities. Many workpapers submitted for the 2013-2014 applications incorporated direction from D.11-07-030 as well as staff direction from previous dispositions. There were some incorrect applications of that direction, such as in the domestic hot water fixture measures discussed earlier, but in general, PG&E attempted to incorporate explicit direction from Attachment A of D.11-07-030 into most of the reviewed workpapers.

There are some areas where improvement is still needed. Some workpapers submitted for 2013-2014 cycle did not incorporate previous direction or did not address concerns highlighted in previous workpaper reviews. Staff noted these concerns in the dispositions for those workpapers. Staff would like to see a greater effort on the part of PG&E to convey staff direction and Commission policy throughout the staff and consultant groups who are involved with the preparation of ex ante values. For example, program delivery methods need to be considered in the development of ex ante values as discussed under Metric 3. However, it is the staff experience that program staff is not familiar with the requirements for developing ex ante values. Staff has similar experiences when meeting with IOU consultants. Staff would prefer to see PG&E take on the responsibility of orienting staff and consultants to the larger history and overall requirements for ex ante development.

As discussed in the Preliminary Assessment, one of the biggest shortcomings in 2013 activities is the lack of cooperation with staff to develop the common ex ante database for DEER values. D.11-07-030 directed the IOUs to work with staff to develop this central database. The first staff draft of the data format was presented to the utilities in September of 2011. In general, utilities were resistant to working with staff on the development and population of this database. Commission staff have explained to the IOUs on several occasions, that the current data format for the ex ante database is needed for several important purposes including identification of broad groups of measures to be reviewed across multiple IOUs; installation of interim approved values in place of IOU proposed values; automatically attaching approved values to claims; sampling of high profile technologies across multiple programs for ex post evaluation. Commission staff has developed the ex ante data format as a means for the Commission to more efficiently undertake multiple efforts related the development, application to claims and evaluation of ex ante values. All proposals from IOUs to revise the ex ante data specification would have hindered those efforts, which is why very few IOU proposals have been incorporated into the spec.

Metric 10 Preliminary Assessment: Needs Dramatic Improvement

Efficiency Savings and Performance Incentive Ex Ante Performance – Custom Project Scores –

Pacific Gas and Electric

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	PG&E Comments	CPUC Response to Utility Comments
Metric 1a(1) – Score: 3	Needs Improvement	Percentage of projects in quarterly or annual claims that were reported in the CMPA twice monthly list submissions	Custom projects reported in claims have not been completely compared with the CMPA submissions at this time since a claims review has not been undertaken. ⁵ PG&E did not report steam traps measures as custom projects until late 2012 despite staff instructions to treat high pressure steam traps projects as custom measures. Instead, PG&E decided to use a hybrid approach and include custom steam trap projects as part of the deemed program. The Agricultural Pumping Efficiency Program projects were not reported until after staff had discussion with PG&E on the structure of this program. Similarly, nonresidential audit, and residential new construction projects were not being submitted in the CMPA submissions. For these reasons, the number of custom claims and reported projects in the CMPA lists do not match for PG&E.	PG&E decided to claim custom savings and therefore put Advanced Pumping Efficiency Program (APEP) Pump Tests on the CMPA list for the first time on Monday, 12/9/13. PG&E has been putting the APEP projects on the CMPA list since September 2013. Many custom projects have significant lead time. This time lag makes it difficult to compare the number projects submitted on CMPA lists with quarterly or annual claims as many submitted projects will be claimed in future years, as has been noted by the Commission and is the purpose of IOUs carrying funding forward for committed projects. Additionally, guidelines and policies can change during a cycle or in between cycles causing some custom projects to be withdrawn/cancelled, processed as deemed projects or adjusted.	Staff understands that the lead time to implement a custom project can be long. However, PG&E must submit projects in CMPA submissions that are intended to be claimed as custom projects. All projects in custom claims that have the application date shown as on or after PG&E started submitting custom project lists in December 2011 must have been disclosed in CMPA submissions. The preliminary assessment stands. Staff will observe PG&E is awarded a score of 3 for metric 1a.

⁵ Commission staff did not have time to complete a comprehensive claims review. This is in part due to the extensive effort required to translate the IOUs' Q3 claims into a reviewable format.

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Metric 1a(2) – Score: 3	Needs Improvement	Percentage of projects for which there is a two weeks or less difference between the application date and the date reported on the CMPA list	The PG&E CMPA lists do not contain the date of actual application receipt. All IOUs provide the date of recent or first entry to the CMPA list which is not the same as the date of application receipt. The date of application is available only when the application hard copy is provided on selected projects. The data from hard copies are not entered into the tracking spreadsheet; neither does PG&E's tracking system appear to provide an automated means of checking the date of application. Staff believes that the time taken by field staff and third parties to report applications for data entry into an IOUs' tracking system and reporting of such applications in the CMPA lists most likely exceeds two weeks.	PG&E includes the application received date on our CORE CMPA lists sent to staff. At times, the customer signs an application and develops the project. They then wait to complete their savings calculation before submitting the signed application to PG&E, creating a gap between signed application and submittal date. PG&E is in the process of including the difference between the application date and the date reported in the CMPA list.	PG&E should continue to work with staff to improve its tracking system to provide better project descriptions and project status, and align the CMPA data fields with the needs of ex ante reviews as required in D.11-07-030 and subsequent revisions. The preliminary assessment stands. PG&E is awarded a score of 3 for metric 1a.

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Metrics 1a(3) – Score: 3	Needs Improvement	Percentage of tools used for calculations disclosed prior to use	For 2013, PG&E did not post all applicable tools to the CTA website. Overall, the tools are reviewed in conjunction with a project. Nevertheless a complete list of tools is required to be disclosed and posted to the CMPA web site.	PG&E together with the other IOUs complied and posted a list of tools on the CMPA site on 12/24/13. In addition, there are 3 PG&E tools posted on the CTA site. The Modified_Lighting_Calculator, was developed with significant review and input by Commission Staff and not implemented until full approval was received.	Staff believes that posting the list of tools in December of 2013 after staff feedback is generally late as the utilities are using those tools throughout 2013. Although PG&E cites the Modified Lighting Calculator as developed with significant input from Commission staff, this is only one example in which a PG&E third party implementer pushed hard for a review. The preliminary assessment stands. PG&E is awarded a score of 3 for metric 1a.
Metric 1b – Score: 3	Needs Improvement	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)	Delays at the final stage of savings approval have declined but have not been completely eliminated. Typical reasons for delays are because of lack of evidence of working measures, invoice documentation, savings calculations inconsistent with prior direction, and lack of supporting documentation. All of these reasons have an impact on final ex ante parameters to be frozen. When evidence is lacking, staff cannot decide in a reasonable time whether final parameters would likely be within a reasonable margin of safety. Delays in submission of requested documents that have been	Nearly 60% of PG&E selected projects are complex projects, many with both gas and electric measures. Our responses to requested information may be delayed by customers who are unfamiliar with the particular data requested. In those cases PG&E requests an extension before the submission due date and the extensions were granted. As the customers become more familiar with the EAR process PG&E expects the response time will improve. PG&E is working to improve	The custom projects review process is intended to improve the utilities' internal review process, not for Commission staff to be the quality control reviewers for the utilities. PG&E should educate its staff and reviewers on documentation expectations and use checklists and other means to ensure that all the appropriate project documentation, from the application stage through

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			specifically identified as required upon project completion forces staff to repeat data requests that can be avoided by improving PG&E's internal process through the use of appropriate forms and checklists.	response times.	project completion, is in place and accessible. The preliminary assessment stands. PG&E is awarded a score of 3 for this metric.

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Metric 2 – Score: 3	Needs Improvement	Percentage of custom project submissions that show standardization of custom calculation methods and tools Development and/or update of comprehensive internal (to IOUs, their parties, and local government partners, as appropriate) process manuals/ checklists and quality control processes	The use of standardized tools is different from using the correct values in the tools. PG&E largely uses standardized methods and tools. Staff reviewed PG&E's compressed air spreadsheet, steam trap savings calculations spreadsheet and the use of the Department of Energy's calculator for using outside air for air compressors. The air compressor savings calculations spreadsheet was submitted voluntarily by PG&E for early opinion. The differences between the PG&E and staff- reviewed savings estimates, when tools are used, are largely attributable to incorrect assumptions or parameters used in calculations or inappropriate modeling. Staff review also found an error in the Building Optimization Analysis tool used in RCx projects when a selected project was found to be using that tool which was not disclosed. Standardized methods may have to be modified consistent with the appropriate level of effort expected for projects and by including project-specific parameters. The level of internal quality control processes effort made by PG&E is unclear. Judging from the number of quality control issues seen in PG&E's projects, it seems that internal processes have not been fully revised and implemented to improve custom project oversight.	PG&E has been and will continue to work on standardization of custom calculation methods and tools – the lighting calculator is one example. PG&E intends to establish this tool as the standard lighting calculator for all delivery channels. That process is currently underway and will be completed in 2014. PG&E has checklists for the following activities: 3P Energy Savings Reports, PG&E Review Minimum Requirements (Draft Revision 4/2013); 2013-2014 PCIIP Template and PIIP Template for Large 3P implementer; CR CORE Advanced Measure Project Team Checklist. PG&E also has a training template for Retrofit pre- installation reviews (PA) and post-installation reviews (IR)	Staff acknowledges that PG&E was the first utility to utilize the CMPA site, and believes this helped in other IOUs to finally follow Commission directive. However, the lighting tool PG&E referenced was an effort initiated by a PG&E third party implementer, not PG&E. PG&E's check lists were not shared with staff until early 2014. Staff looks forward to seeing the utilities working on the standardization of custom calculation methodologies. The preliminary assessment stands. PG&E is awarded a score of 3 for this metric.

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Metric 3 – Score: 4	Needs Improvement	Number of data requests for additional documentation for project information and/or reporting claims that support ex ante review activities (fewer requests = higher score)	Same as 1b except that this metric refers to data requests at the interim and final stages of a project reviews. The number of additional data requests made is relatively higher for PG&E as compared to other IOUs. Compiling the entire package of information using a checklist before sending to Staff for review will reduce the number of data requests.	PG&E's efforts with the custom review process were initially structured to facilitate a parallel review with CPUC staff. We understood that CPUC staff preferred faster delivery of less thorough basic project information and that by using CMPA site effectively, this structure would encourage communication between PG&E technical staff and CPUC staff. In addition, PG&E sought to reduce the delay for our customers by submitting project data as soon as it was available. If staff would prefer to have more complete projects submitted PG&E can facilitate that by delaying submittal of initial items and waiting for a more complete list and/or including a checklist of expected items with submittals such that if ED staff looks at a submittal they can tell if it is complete or not up-front.	The preliminary assessment of Needs Improvement was based on the submission of data only after reminders had to be sent, not based on partial submissions when complete a package was expected. Staff recognizes that PG&E was not asked to wait to compile a complete set of documentation. Staff is concerned about unavailability of documentation after initial and final reviews by PG&E. However, considering that a communication gap possibly led PG&E to fulfill data requests as data became available, staff is changing its assessment and awarding PG&E a score of 4 for this metric. Staff will continue to assess PG&E's data request fulfillment response.
Metric 4 – Score: 3	Awaiting Claims Review	Percentage of large high impact projects or measures referred to CPUC early or	PG&E has referred projects for Staff opinion. The referred projects had good issues for staff to address. Whether PG&E should have referred certain projects they did not refer is not possible to assess without a	No comments received	PG&E's quarterly claims were not in a reviewable format in time for this assessment. Staff has provided a list of typical reasons custom projects

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		flagged for review.	claims review or ex post evaluation. However, judging from baseline and eligibility issues identified in selected projects and the fact the staff only samples a small fraction of custom projects, it appears that more projects should have been referred for staff opinion.		were found to be zero savers in prior evaluations and reviews. Staff encourages PG&E to avoid those pitfalls and continue to work collaboratively to improve project screening. Given that a claims review was not performed for this metric, the preliminary assessment stands. PG&E is awarded a score of 3 for this metric. PG&E should continue to strive to bring high impact projects and measures to staff's attention.

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Metric 5 – Score: 2	Needs Dramatic Improvement	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)	PG&E's documentation of early retirement, baseline, and program influence has been weak. Documentation on assumptions and site-specific data supporting savings and project cost is of low-to- moderate quality that is reflected in the variance in the staff-approved and the PG&E-proposed savings as well as repeated data requests to support proposed savings. Common reasons for project denial during ex ante reviews are the same as those seen in prior evaluations of PG&E's projects. Only recently has PG&E started conducting industry standard practice (ISP) studies.	There were inconsistencies among implementers/consultants but this does not characterize the majority of projects, only a select few. PG&E is focused on improving the documentation submitted with selected custom projects.	The preliminary assessment stands. Staff recognizes that documentation of data supporting savings varies among contractors. However, the overarching concern about lack of documentation on baseline, program influence and the applicability of ISP and T24 remains. Staff will continue to observe PG&E's efforts moving forward. PG&E is awarded a score of 2 for this metric.

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Metric 6a – Score: 2	Needs Dramatic Improvement	Quality of custom project estimates prepared by customers, third parties, and local government partners submitted by IOUs.	The quality of documentation on savings estimates from some of PG&E third parties and customers is somewhat weaker than the quality of documentation from its core programs. The performance of third parties varies; some large third parties have more complete and accurate documentation whereas smaller third party contractors have still have not caught up with larger firms or core programs. The quality of savings estimates on local government projects is about the same as that of smaller third parties and requires considerable improvement.	PG&E is working with customers, Third Parties, and Local Government Programs to improve the quality of customer project savings estimates.	The preliminary assessment stands. Staff will continue to observe PG&E's efforts moving forward. PG&E is awarded a score of 2 for this metric.

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Metric 6b – Score: 2	Needs Dramatic Improvement	Percentage of reviews that required over three reviews or data requests. Percentage change from IOU-proposed savings and ED-approved savings (higher percentage = lower score)	The change in the IOU-proposed values can primarily occur at the final stage of review when the IOU has completed its post-installation inspection or M&V and finalized savings. Additionally, the initially proposed project may also be modified because of eligibility and baseline issues that may rule out the project or some of the measures. PG&E's performance on this metric has been improving. Across the board though a number of ineligible projects/measures have been identified for all IOUs. PG&E has more ineligible measures as compared to SCE. Savings for lighting projects were not much different from staff-recommended values for all IOUs. However, the IOU-proposed final savings for non- lighting measures, especially for large projects, were far higher than final staff-approved values. The deviation seemed the most significant for PG&E.	Many of PG&E selected projects are complex industrial process projects. The early savings estimates are often based on very preliminary/limited information especially given our understanding that Commission staff desire project information early in the process. It is expected that these savings estimates will be refined as more data is collected.	Staff wishes to see PG&E provide its ex ante estimates after a selected application has gone through PG&E's internal reviews as well as proposed savings after inspection/M&V are completed. Staff will continue to observe PG&E's efforts. The preliminary assessment stands. PG&E is awarded a score of 2 for this metric.

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Metric 7 – Score: 4	Good Performer	Percentage of custom projects that use data sources and methods per standard research and evaluation practices	The need to use standard research and evaluation practices in custom projects arises mainly for ISP studies and the use of default values that draw from secondary data. Staff- conducted ISP studies have been often used to evaluate projects. PG&E only recently initiated one low-rigor ISP study in the last month when many more were needed. Certain ISP studies PG&E relies on are outdated, did not use guidance from D.11-07-030, and are in need for an update. PG&E and its implementers sometimes cite ASHRAE values and methods and manufacturers' data. Staff reviewers still have to ask for applicability and supporting evidence for assumptions despite noticeable improvements.	No comments.	The preliminary assessment stands. PG&E is awarded a score of 4 for this metric.

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Metric 8 – Score: 4	Good Performer (may change based upon claims review that has not yet been done)	(1) Frequency of improved engineering/ M&V methods and processes resulting from (and/or appropriate and well-defended rejection of) CPUC reviewer's recommendatio ns; (2) Percent of projects in custom reviews that reflect guidance provided in prior reviews.	PG&E's methods for non-HVAC projects are vastly improved. A noticeable progress is seen for modeling HVAC measures as well. Certain measures such as retrocommissioning and monitoring- based commissioning continue to pose challenges at times for PG&E. None of the reviewers' recommendations on methods have been challenged by the PG&E. Eligibility assessment made by reviewers was well-argued by PG&E in one instance.	No comments received	PG&E's quarterly claims were not in a reviewable format in time for this assessment to check whether guidance provided on selected projects was applied to non-reviewed projects. The preliminary assessment stands. Staff will observe PG&E's efforts moving forward. PG&E is awarded a score of 4 for this metric.
Metric 9 – Score: 4	Good Performer	Percentage of custom projects including, and not limited to, new or modified existing technologies or project types that appropriately incorporate DEER assumptions and methods.	The percentage of custom projects that appropriately incorporate DEER assumptions and methods could be identified more thoroughly from a review of claims and sampled projects. Staff has not undertaken a claims review yet. Overall the IOUs have lately exhibited improvements; however, year-to-date cumulative performance is somewhat inferior compared to more recent performance.	No comments received	The preliminary assessment stands. Staff will observe PG&E's efforts moving forward. PG&E is awarded a score of 4 for this metric.

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Metric 10 – Score: 3	Awaiting Claims Review	Percentage of projects identified in claims review that were implemented per CPUC directions in previous reviews.	A comprehensive claims review has not been undertaken for 2013. Commission staff and PG&E need to work out a better process and content for custom claims to facilitate this review in the future. The score for this metric reflects our overall view that PG&E is making an effort to meet expectations but improvement is needed, as noted in earlier metrics in both facilitating claims review as well as ensuring that projects that have not been selected for review at the pre-agreement phase undergo similar levels of IOU review as those projects selected for staff review.	No comments received	PG&E's quarterly claims were not in a reviewable format in time for this assessment. Staff will observe PG&E's efforts moving forward. PG&E is awarded a score of 3 for this metric.