

PUBLIC UTILITIES COMMISSION

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Date: August 21, 2017
 To: Pacific Gas and Electric
 From: Commission Ex Ante Review staff
 Cc: R.12-01-005 and R.13-11-005 Service Lists
 Subject: Final 2016 Efficiency Savings and Performance Incentive (ESPI) Ex Ante Review Performance Scores

Overview

The scores¹ contained in this memo are final, and Pacific Gas and Electric Company (PG&E) shall use the total final ex ante review performance points from the table below together with the weighting² for each category to calculate the 2016 ESPI ex ante review component award.

PG&E 2016 ESPI Ex-Ante Review Performance Scores and Points		Workpapers				Custom			
Metric	Metric Area of Scoring	Max Points	Max Percent of Total Points	2016 Score	2016 Points	Max Points	Max Percent of Total Points	2016 Score	2016 Points
2	Content, Completeness, and Quality of Submittals	15	30%	2.72	8.16	15	30%	2.41	7.23
3	Proactive Initiative of Collaboration	5	10%	2.55	2.55	5	10%	5.00	5.00
4	Due Diligence and Quality Assurance/Quality Control Effectiveness	12.5	25%	2.21	5.51	12.5	25%	3.44	8.6
5	Responsiveness to Needs for Process and Program Improvements	12.5	25%	2.81	7.01	12.5	25%	3.66	9.15
Total		50	100%		27.47	50	100%		32.31

The metric scoring area descriptions are expanded in Attachment A. The final category scores are explained in more detail below as well as in Attachments B through D to this memo. The weighting for the custom and deemed savings categories will be published by Commission staff in June 2017 after the utilities’ final 2016 savings claims are filed.

Custom Projects

¹ Pursuant to Decision (D).13-09-023, D.15-10-028 and D16-08-019, Commission staff and consultants completed the 2016 Efficiency Savings and Performance Incentive (ESPI) mechanism ex ante review performance scoring as prescribed in Table 3 of D.16-08-019. D.16-08-019 established a consolidation of categories of metrics on which the utilities are evaluated and further directed in Ordering Paragraph 19 that the ESPI scores “shall be weighted for the utility program administrators based on the proportion of deemed savings and custom measures in each utility’s portfolio”.

² D16-08-019 Ordering Paragraph 19 specifies that “Energy Savings Performance Incentive scores shall be weighted for the utility program administrators based on the proportion of deemed savings and custom measures in each utility’s portfolio.” Therefore the final score cannot be determined until the utilities have submitted and Commission staff has compiled their final 2016 savings claims and published for each utility the weights for the custom and deemed categories.

In the area of ex ante review for custom projects, on a positive note Commission staff observes that PG&E staff continues to increase their efforts to collaborate, holds productive discussions to clarify various Commission staff guidance, and solicits Commission staff's opinion for projects earlier in their internal review process. However, areas in need of improvement are those significant concerns that Commission staff highlighted in prior years that still remain. Those concerns include:

- Lack of evidence of program influence,
- Inadequate calculation methodology and analysis approaches, and
- Insufficient measurement and verification plans.

Tackling program influence will require that PG&E staff and its review contractors, in consultation with Commission staff and its contractors, to develop review procedures and eligibility criteria that must be applied during the early project identification and development stages. Program design and rule changes will need to be considered in this process. This requires coordination and collaboration among PG&E's engineering, product management, and program management staff, as well as third party implementers, to acknowledge the problems, develop a workable solution, and take action to implement the solution. Although Commission staff observed some improvements in PG&E's 2016 custom ex ante technical and policy review activities, PG&E's improved efforts must be extended to penetrate the breadth of custom portfolio activities. Commission staff has seen either little or no action in the area by PG&E implementation staff and third party program implementation contractors.

In a related matter, during 2016 Commission staff became aware that some individual third-party implementer contracts include very high and insufficiently limited compensation rates based upon first year gross ex ante savings estimates. Although this does not directly factor into the ESPI scoring, the Commission staff believes it to be a significant contributing factor to the lack of improvement observed in both the ex ante review and ex post evaluation over many years. The misalignment between the use of first year claimed gross savings for implementation team compensation and net savings for portfolio cost-effectiveness appears to be a primary reason why certain ex ante issues highlighted in past ESPI memos (e.g., baseline, measure eligibility) continue to persist.

Workpapers

On a positive note, Commission staff observed PG&E staff efforts to seek out information, input and clarifications on its deemed measure workpaper development activities. For some workpapers, such as LED ambient lighting technologies, PG&E updated the measures and savings values to ensure the programs incent the most efficient products. While Commission staff has not monitored workpaper retirements closely, staff observes that PG&E appears to be retiring measures that have been in the portfolio offerings for long periods of time, and as DEER updates and workpaper dispositions have been issued, the gross and/or net savings have fallen. Commission staff brings particular attention to PG&E staff's efforts to initiate collaboration and seek input in areas where Commission staff has previously issued direction or noted concerns. Over the past year, PG&E staff has clearly increased its efforts to address the rapidly changing market for LED lamps and has also shown initiative to improve understanding and quality of its ex ante data submissions. Commission staff emphasizes that, while the results of these efforts may still fall short of expectations as discussed below, PG&E distinguishes itself from other PAs through these obvious changes in work focus.

In cases where Commission staff issued either dispositions or direction for additional research or workpaper development, results have been mixed. In some cases, PG&E staff's follow-on work largely complied with the direction, while in other cases there was no observable effort to respond to directions. In other cases, PG&E staff has resisted resolving some of the most straightforward issues, such as

submitting workpaper data in the ex ante data format. Most discouraging are cases in which revised workpapers appeared to have no consideration for previous input or direction, and PG&E staff submitted either new or revised workpapers that incorporate methods and assumptions that Commission staff had already informed them would not be approved. Over the past two years, the Program Administrators (PA) increased their reliance on the California Technical Forum for input. This reliance has rarely, if ever, resulted in workpaper revisions or improvements that address Commission staff concerns.

Addressing these concerns will require PG&E staff to change some of the ways in which they respond to Commission staff direction, develop workpapers, and respond to other areas of concern. Development of workpaper savings values should include consideration of all influences over the likely savings, not just the technical potential over status quo technologies and practices. Research is required to critically examine the likely program influence over customer decisions to implement the efficient technology. In addition to program influence, workpaper development efforts must focus on identifying measures which require frequent updating such as where the standard practice is changing quickly, for example, rapidly advancing technologies like LED lamps and consumer small electrics and electronics.

It is important to point out that Commission staff welcomes opposing views on methods and values when a workpaper is under development; however, those methods and values must be accompanied by technical and market research and analysis supporting that the proposed alternatives will result in reasonable and reliable forward-looking savings estimates. In the past, Commission staff has been willing to discuss / negotiate with PAs long after a workpaper disposition was issued. However, moving forward, Commission staff will be referring these disagreements to the dispute resolution process specified in D.12-05-015. For other areas, such as ex ante data and review, Commission staff emphasizes that the PAs are required to follow previous direction, even if staff discover that direction has not been followed long after any prescribed review period has past. This policy applies to all ex ante development activities including workpaper values, ex ante data submissions and claims reporting.

The PAs provide ratepayer funding support to the California Technical Forum (CalTF) as well as invest staff and consulting resources participating on, and presenting to, the CalTF. Over the past two years, the PAs have utilized the CalTF as a resource for the review and input to their workpaper development process. Commission staff supports the PAs' efforts to garner additional input, review and quality assurance feedback on their workpaper activities, such as those available through the CalTF. However, Commission staff also notes that although the CalTF has implemented a process that has the potential to improve the level of due diligence and thus output quality of the PA workpaper efforts coordinated through the CalTF, the new process has yet to provide the expected improvement in terms of addressing primary ex ante development issues. An example of this is provided within this memo below. Note that this is just an observation offered to improve the expenditure of ratepayer funds; it did not influence the ESPI score.

2016 Ex Ante activities, Commission staff findings

Custom Projects Ex Ante Reviews Discussion

In early 2016, Commission staff revised the custom project ex ante review disposition template to include a categorization of the actions that staff requires the utility to address for the project under review. Table 1 summarizes the 133 action items requested of PG&E across 24 dispositions issued between January 1, 2016 and December 31, 2016. Several of the 24 ex ante review dispositions issued during 2016 applied to multiple selected applications. For example, PGE_0046 includes 30 associated project applications. Additionally, many of the dispositions apply to multiple projects in various stages

of project development. Thus, the seemingly low number of dispositions belies the significant portion of the custom projects impacted by those dispositions.

Overall the areas of general categories of issues noted have not changed from the 2016 mid-year ESPI feedback and ESPI reviews from previous years. In some cases, the number of action items identified in a specific issue area may seem low even though that issue area remains a significant concern and requires much improved action by PG&E. For instance, as shown in Table 1, only a small percentage of the issues are associated with the Issues Related to Net Impacts and the Documentation Issues areas; however these areas still require attention from PG&E.

CPUC staff acknowledges that the projects were not selected at random. Our selections drew upon the type of projects that we had found issues in the past or expected to find deficient for various reasons. We also selected project to determine whether the utility has corrected issues from similar project types that CPUC staff reviews identified in the past.

Table 1: Summary of Categorized Action Items

Issue Area	Action Category	Quantity	Percent of Total
Issues Related to Gross Savings Impacts	Analysis Assumptions	20	15.0%
	Calculation Method	26	19.5%
	Calculation Tool	1	0.8%
	M&V Plan	13	9.8%
	Revise to Match CPUC Savings Estimate	0	0.0%
	Subtotals	60	45.1%
Process, Policy, Program Rules	Baseline	7	5.3%
	CPUC Policy	2	1.5%
	Did Not Follow Previous CPUC Guidance	0	0.0%
	Eligibility	4	3.0%
	ER Preponderance of Evidence	7	5.3%
	EUL/RUL	10	7.5%
	Fuel Switching	0	0.0%
	Incentive Calculation	4	3.0%
	Maintenance	0	0.0%
	Measure Cost	1	0.8%
	Measure Type	10	7.5%
	PA Program Rules	5	3.8%
	Repair	0	0.0%
	Self-Generation	1	0.8%
	Subtotals	51	38.3%
Documentation Issues	Inadequate Response to Precious EAR	0	0.0%
	Missing Documents	4	3.0%
	Missing Required Information	5	3.8%
	Project Scope Unclear	2	1.5%
	Subtotals	11	8.3%
Issues Related to Net Impacts	NTG	5	3.8%
	Program Influence	6	4.5%
	Subtotals	11	8.3%
Grand Total		133	100.0%

Project Submittals

PG&E staff made a good effort to comply with the revised Custom Measures and Projects Archive (CMPA) Bi-monthly projects list submission process. PG&E’s use of the Commission staff checklist reduced many of the instances of incomplete initial project documentation submissions. PG&E staff brought thoughtful discussions to the weekly check-in conference calls.

Although PG&E’s use of the Commission staff checklist has reduced instances of incomplete initial project documentation submissions, complete documentation submission continues to be an issue. For project PGE_0007, a process improvement measure at a refinery, Commission staff found that PG&E staff failed to upload project documentation prior to measure implementation. Commission staff participated in a site meeting with the customer, PG&E internal reviewer and the third-party implementer before the project was implemented and discussed how to perform the analysis and undertake the measurement and verification. PG&E staff did not carefully consider how to integrate

those discussions into the project plans and documentation. The post-installation documentation lacked a complete and concise calculation methodology. Ultimately, PG&E staff rejected the project since it was implemented before the application was approved. Aside from the procedural error that led to the project rejection, the time devoted to providing guidance for the project should have led to a better submission.

Baseline and Industry Standard Practice

Other legacy issues include Baseline and Industry Standard Practice determination. It is not sufficient to simply state that a proposed installation is more energy efficient than a “baseline” measure while referencing a separate “Baseline” document or a “Standard Practice” (often proposed to be the existing condition) without providing complete supporting materials and/or research. The PG&E team needs to continue its work on this topic and broaden the awareness within the implementation staff and third-party contractors on the proper procedures for establishing baselines.

Commission staff recognizes PG&E staff actions to identify projects with potential standard practice baseline issues and initial steps taken to implement procedures to address some of the long-standing issues related to program influence. PG&E has taken a lead role to develop Industry Standard Practice (ISP) assessments and initiate coordination of ISP activities across the utilities. Establishing ISP and changing program eligibility based on ISP results has been a shortcoming of the state-wide portfolios. Commission staff observes that PG&E's steps to address this problem in a serious manner are a significant positive action. PG&E staff, expanding on their ISP activity, has recently begun to pilot a project development review approach with the intent of injecting ISP consideration into their internal review at the earliest stages after project identification.

Calculation Methods

As noted for project PGE_0007, Commission staff observes that not providing a complete and concise description of a calculation methodology and not able to provide an accurate savings estimate remains a weakness for many complex projects. For PGE_0093 involving the proposed replacement of chillers at a high technology facility, this project used an alternative approach that did not yield an acceptable savings estimate. Centrifugal chillers are included in the DEER. The DEER chiller savings estimation methods were recently updated to include an easy-to-use scalable approach and should have been applied. As stipulated in Commission Decision D.12-05-015 custom projects are required to incorporate DEER methods and assumptions when applicable.

Commission staff expects that PG&E will undertake a long-term and ongoing effort to increase the technical skills of its project developers and Quality Assurance/Quality Control (QA/QC) reviewers to ensure that the ex ante savings estimates are accurate and reliable.

Internal Review

PG&E implemented an internal Commission Policy compliance review process which runs in parallel with their custom projects technical review. Commission staff has observed positive results from this policy compliance review on a few projects to date and believes PG&E's efforts with more complete process documentation and formalization may serve as a model for other PAs to follow. In addition, PG&E staff provided a list of results from their internal compliance review processes in 2016. Although PG&E staff is identifying eligibility and project baseline issues, it does not appear that PG&E staff is identifying program influence issues. Commission staff recommends that this process track all projects reviewed and that a summary of results be tabulated so that the data can be used to identify program activities in the custom portfolio that need closer program administrator scrutiny and modification.

Although PG&E staff recently stated that it will implement an early review process for large impact projects, Commission staff observes that this process has not yet commenced. PG&E staff must take steps to develop, pilot and implement this process. PG&E must also clarify with its program staff and third-party implementers that incentive agreements are not to be signed until a project has gone through PG&E staff's internal project quality control review, and the Commission staff's ex ante review if the project was selected for review.

Ineligible Measures

For example, for project PGE_0005, Commission staff found that PG&E staff was working with this customer for more than 10 months before documentation was submitted for Commission staff review. Our review determined that the two largest savings impact measures were ineligible. The customer became justifiably aggravated when we questioned the project's eligibility after PG&E staff had been working with them for such a long period. We have found similar eligibility issues with other large impact industrial projects.

Customer Expectation Issues

In the 2016 mid-year ESPI review, Commission staff directed PG&E staff to develop and present to Commission staff within 60 days a collaborative review process which should be an upfront review process for large impact projects. The intent was to avoid incorrect customer expectations on project approval and possible incentive amounts that lead to customer dissatisfaction. Commission staff, in its July 15, 2015 Mid-Year ESPI Feedback memo, expressed its concern to PG&E staff that "PG&E program staff and third-party implementers continue to set up customer satisfaction issues by setting expectations with the customer for large incentive amounts before any appropriate review is undertaken, then these expectations are not realized when the ex ante review finds that the savings and incentive are overstated due to not following program rules or non-compliance with previously issued Commission policies and directives." Additionally, using this process, Commission staff expects the PA to identify and remove ineligible measures and projects with no evidence of program influence early in the program application process. These objectives work to minimize the waste of ratepayer resources and focus those resources on projects likely to provide incremental savings and the associated net benefits.

Program Influence

Program administrators and/or third party implementers need to demonstrate that the energy efficiency program caused a net benefit for the ratepayers by enticing the customer to implement a more costly more efficient project than they were otherwise planning to implement absent the program intervention. Program influence may be in the form of either information or financial support or both. The information may be providing suggestions of alternative designs or product not already under consideration, or analysis of alternatives to demonstrate how the customer requirements can be met or exceeding by selecting an alternative. Financial influence is when the availability of incentive support to the customer directly becomes the deciding factor in the selection of a more efficient alternative solution to the one or ones that would otherwise be selected.

Issues related to program influence directly affect the scoring on ESPI Metrics 2, 4, and 5. Commission staff expects that PG&E will make a more substantial effort to provide documentation that demonstrates what the customer was planning to do when the energy efficiency program intervened in the project. The documentation needs to demonstrate how the program enabled the customer to adopt an alternative action that improves final efficiency and provides incremental savings benefits to ratepayers over what the customer was otherwise planning to implement.

Commission staff expects to find real and convincing evidence of program influence included in the documentation submitted for every project. The evidence of program influence should outweigh evidence that suggests the customer would have chosen the efficient alternative absent the program information or financial support. When there are substantial indicators or evidence both for and against a program influence positive determination Commission staff expects to see a discussion of the evidence for and against program influence and why the evidence for outweighs the evidence against. Too often project documentation provides little or no evidence of program influence past either a list of meetings attended or a report with a savings calculation also containing an inventory of contact dates. Most often the submissions either overlook the direct evidence against program influence or fail to discuss the relative importance of the various evidence supplied and conclude that the case for program influence is established from a one-sided presentation of meager if not underwhelming program influence statements.

For example, in PGE_0040, the installation of an evaporator at a food processing facility, PG&E staff did not perform an appropriate level of due diligence. Commission staff found little documented evidence of program influence for this project. Another example is PGE_0093 which involved the proposed replacement of major components and controls at the central chilled water plants at a high technology facility. Although a generic corporate policy to pursue efficiency opportunities by itself would not constitute sufficient evidence to establish a lack of program influence, in this case the customer has a specific corporate goal of eliminating all of certain refrigerants from their facilities worldwide that became a primary motivation for the chiller replacement. Additionally, there was a lack of evidence that the third-party implementer or the proposed financial incentive had any influence in the project design or chilled water plant equipment selection. Also, there was no evidence that the selected equipment provided savings above any alternative selection that met the customer requirements.

As part of its program influence reviews, PG&E staff should pay closer attention to properly identify projects that are only meeting, not exceeding, mandates or guideline set by other governmental agencies. Proposed ratepayer support should be used to enable the customer to exceed the actions they would otherwise take in their project designed to address those other agency guidelines. For example in PGE_0054 our review questioned the customer's motivation for implementing this project. We identified the project to be primarily a water conservation project driven by the customer's desire to comply with requests from government agencies to conserve water during the Statewide drought. Commission staff found no evidence that the energy efficiency incentive offered had any incremental effect on the customer plans. This project also appears to be an example of a third-party implementer "harvesting" an already customer planned for implementation project into their program without any incremental benefit to ratepayers. The customer ultimately implemented this project without any ratepayer incentives and PG&E withdrew the application.

It is important that PG&E make significant progress in reducing free ridership starting now as directed in multiple previous Commission Decisions and in many ex ante dispositions and guidance documents. PG&E staff noted in recent meetings with Commission staff that the Commission directed change from gross to net annual goals will result in a shift in attention to reducing free riders. However the direction to improve net portfolio performance has been constant since 2006 and should be acted on immediately rather than using the 2018 goal shift as another excuse to delay directed action.

Identifying Measure Type

Commission staff continues to find the identification of appropriate measure type to be an issue. For

PGE_0040 the installation of an evaporator at a food processing facility, PG&E staff and its third-party implementer were unable to correctly identify the measure type and baseline for this project. PG&E staff ultimately acknowledged that the project was not a program-induced Early Replacement (ER) measure type and the application was withdrawn. Commission staff expects PG&E staff to catch this early in the application process before any customer expectations are set. For PGE_0046, thirty (30) associated applications for pump refurbishment were selected under this review. Commission staff found that PG&E staff was proposing that a pump refurbishment (repair/replacement of pump impellers and pump bowls) as Retro-commissioning (RCx). Commission staff responded that RCx is not a Commission-adopted measure type but a general description of an overall project process. PG&E staff further proposed that the project is a retrofit add-on (REA) measure type in order to claim the in-situ baseline. Commission staff responded that REA is a recognized measure type but the repairs and replacements proposed in these applications do not meet the definition of REA. Commission staff has observed an increase in the number of applications where REA is the proposed measure type, when the proposed project does not meet the definition of REA. Commission staff suspects that implementation teams use the REA measure type designation in lieu of the program-induced ER measure type, even though it is the best suited, to avoid the preponderance of evidence requirements. PG&E staff must instruct its reviewers to carefully assess the proposed measure types and ensure that the approved documentation reflects the correct measure type.

For PGE_0093, mentioned above, involved the proposed replacement of central chilled water plant major components (chillers, pumps and cooling towers) at a high technology facility, Commission staff identified the project as a normal replacement and the proposed chillers as the only measures that exceed current Title 24 requirements. The other measures were not approved. This is typical example of an inappropriate measure type selection leading to an incorrect baseline assignment. As with the common incorrect selection of the REA measure type, Commission staff commonly observes the selection of the early retirement measure type, with no credible supporting evidence of program influence. Commission staff believes these are attempts to utilize an in-situ baseline and elevate first year savings and implementer and customer payments as opposed to an unbiased review of evidence supporting early versus normal replacement to make the selection.

For PGE_0122, the proposed replacement of fan rotors at a cement facility, the PG&E quality control review of the project rejected the proposed program induced early replacement measure type claim. The quality control review did not however, state what the correct measure type should be. The proposed baseline, savings analysis and EUL were not provided. Thus, a failure to provide proper documentation, one of the issues noted earlier. The third-party implementer's documentation claimed that the existing equipment, 37-year-old fans, was the standard practice. The implementer based this assessment on correspondence with fan manufacturers. Industry standard practice is what a customer would typically do today if they are installing either a replacement or new equipment, not what has typically been installed in the industry over several decades ago. It is unlikely that the existing 37 year old equipment can be considered a standard practice for what would be installed today.

For PGE_0047, the proposed expansion of evaporator capacity for a refrigeration system, PG&E staff proposed the project as a REA measure type. Commission staff's review of the PG&E's documentation found that the PG&E quality control review had correctly identified the project as a Normal Replacement (NR). The correct baseline designation likely negated most of the proposed savings impacts with this measure. Commission staff were unclear why the PG&E's quality control review did not result in a change of the submission for this project. The project appears to be another example of a third-party implementer "harvesting" an already customer planned for implementation project into their

program without any incremental benefit to ratepayers. The application was withdrawn after Commission staff issued a disposition for the project.

Lastly, PG&E staff must take care to ensure that projects do not violate program rules. For example with PGE_0112, the installation of high efficiency sprinkler nozzles for agricultural irrigation, Commission staff found that the project violated the Statewide Program rule that require systems be a permanent installation.

Contracting issue- Third-party Performance Payments:

In 2016, Commission staff became aware that some projects seemed to have unexpectedly large performance payment rates for third-party contractors. Commission staff has concerns that the high payment rates, especially for medium and large projects, may provide negative incentives to solving the problems discussed earlier. third-party performance payment caps on a per application basis are not included in the current third-party contracts, where the customer incentive is capped. Uncapped third-party payment terms, for medium and large projects, can result in performance payments to third-party implementers that exceed incentive payments to customers - in some cases significantly. Commission staff further believes that uncapped per project performance payments using payments rates based on first year gross savings encourages pursuit of overly optimistic savings claims. Commission staff believes that the existing third-party compensation structure has contributed to recurring problems such as incorrect baseline assignments, unrealistic ex ante savings claims and pursuit of projects with little or no evidence of program influence; the very same concerns that we have raised year after year. The ex ante review teams observation is that the pursuit of large performance payments has created an environment in which implementers have tended to maximize the ex ante savings estimates at the expense of compliance with CPUC policy and appropriate and accurate assessment of program influence, measure eligibility or classification and savings impacts.

As noted above, Commission staff believes that the existing third-party contract terms and conditions do not promote net and lifetime savings attainment.³ Commission staff also believes that recent policy changes regarding the use of existing conditions baselines may increase the first-year savings impacts significantly for certain measures resulting, under current contract terms, in a directly proportional increase in third-party performance payments and customer incentives with little accompanying increase in net benefit to the ratepayers. Although staff has emphasized these problems with the PAs over the past year and requested action, PG&E has not provided so much as an outline of a plan to address the problem in a timely manner.

To demonstrate the issue, typical example medium and large project comparative customer incentives and the related Commission staff estimated third-party performance payments observed in 2016 are provided below.

- PGE_0040, the proposed customer incentive of \$1,314,905 with an estimated third-party performance payment of \$1,308,041.
- PGE_X525, the proposed customer incentive of \$1,637,141 with an estimated third-party

³ This concern is not exclusive to third-party contracts. Commission staff believes that basing both utility staff's internal goals as well as customer incentives and third-party implementer payments on first year gross savings cannot result in a focus on long term net portfolio performance improvement.

- performance payment of \$2,665,428.
- PGE_0093, the proposed customer incentive of \$1,035,293 with an estimated third-party performance payment of \$856,016.
- PGE_0046, the proposed incentive to the customer of \$966,810 with an estimated third-party performance payment of \$1,756,364.
- PGE_0054, the proposed incentive to the customer of \$100,000 with an estimated third-party performance payment of \$257,664.
- PGE_0122, the proposed customer incentive of \$103,063 with an estimated third-party performance payment of \$214,628.
- For PGE_0047, the proposed incentive to the customer of \$205,274 with an estimated third-party performance payment of \$225,201.

Although Commission staff agrees that third-party implementer activities deserve support, many of the payments observed do not appear to be reasonable or commensurate with the effort, cost or contributions made to the projects. In most cases examined, the third-party implementer is not performing the retrofit or projects work but is undertaking marketing activities to identify the project, sometimes design assistance or vendor product analysis, technical analysis to support submitting the project to the PA for an incentive, and pre/post installation analysis and measurements (if required) to estimate savings. Examination of the submitted documents for these projects does not demonstrate levels of effort that justify the levels of payments and, in many cases the quality of the work and customer plans independent of the third-party implementer do not support a payment for “performance.”

Potential Reviewer-Program Implementer Conflicts of Interest Issue:

In the 2015 ESPI review, Commission staff expressed concern that some third-party implementer firms also perform technical review of program applications. Commission staff believes, and has expressed this several times to PG&E staff in meetings that a conflict of interest exists for several of PG&E’s technical review contractors that are also third-party implementers. While Commission staff understand that implementers do not in most cases review projects which their firm is also implementing, there is an inherent conflict related to being on the both the enforcement and user side of rules and policies that has contributed to the lack of progress on many of the issues discussed above. PG&E has not informed Commission staff what actions have or will be taken to address and mitigate this problem.

Workpapers Ex Ante Reviews Discussion

In 2016 Commission staff began to hold regular workpaper meetings with each PA, typically every other week, to discuss topics related to development of workpapers and deemed measures. While PG&E has cancelled most of the bi-weekly meetings, PG&E has been pro-active in their preparations for the meetings that actually took place, typically providing advanced documents, which contributes to a productive meeting. For some workpapers, PG&E has shown noticeable effort to keep the workpapers and programs current and to comply with Commission staff direction. Furthermore, PG&E often leads all PAs in identifying low contribution and low savings measures and retiring workpapers or portions that cover these measures. See the section “Notable Accomplishments” below for some specific examples of areas where PG&E’s efforts are meeting Commission staff expectations as defined in the ESPI metrics. Commission staff remains concerned that for several measure groups with large portfolio contributions, PG&E has not shown effort to incorporate previous direction and sometimes appears to ignore staff input entirely. See the section “Areas of Concern” below for some specific examples of areas where PG&E’s efforts fall far short of Commission staff expectations as defined the ESPI metrics.

Example Notable Accomplishments:

Commission staff has noted in previous ESPI discussions that PG&E's workpaper for Ambient LED Commercial Fixtures (PGECOLTG179) stands out as a good example for both collaborative development, innovative savings methods and, most importantly, PG&E's efforts to "stay ahead of the market" providing incentives to only the most efficient LED products. PG&E's notes with its most recent update state "Added DLC Premium Tier requirement, removed 12 measures below requirement, updated costs." The review on this most recent submittal was waived, and Commission staff may choose to review on a prospective basis in the future. Nevertheless, Commission staff applauds PG&E's efforts to keep this workpaper up-to-date.

Commission staff commends PG&E staff's efforts over the past year to proactively address previous direction and dispositions. The outcome and results of those efforts notwithstanding, PG&E has taken on efforts to update LED workpapers with the intent of establishing savings values that reflect both lamp performance and market availability. PG&E's first effort was to coordinate a working group, contract for initial market research and develop a savings calculation method for A-lamps with the intent of establishing higher savings for the highest performing LED lamps. PG&E has also invested significant resources to analyze and understand Commission staff reviews of PGE's ex ante data submissions. PG&E staff prepared detailed comparisons of ex ante and cost effective values between PG&E proposed and Commission staff directed values.

PG&E staff has also followed through on CPUC staff direction for additional research and analysis related to measures included in the Retail Products Platform (RPP) workpaper (PGECOAPP128). As part of the RPP disposition issued in 2015, PG&E was required to investigate: a) non-cost barriers to adoption for several product groups where there appeared to be no cost premium for more energy efficient models; b) investigate purchasing practices for Energy Star clothes washers and dryers; and c) complete laboratory studies for consumer products, such as air cleaners and sound bars, for which no baseline energy performance data exists. All work was completed before the end of 2016 and PG&E recently submitted a revised workpaper for a 2017 phase 2 review.

Example Areas of Concern:

There are numerous areas where PG&E does not incorporate CPUC staff direction into their workpaper development. Some of this direction dates back to workpaper dispositions issued as part of D.11-07-030, which is close to six years old. More detail on areas of previous direction and input can be found in the attached tables. Commission staff observed one of the most disappointing examples of this with the recent submittal in December of a revised workpaper for screw-in LED A-lamps (PGECOLTG165). PG&E began in 2016 an effort to develop new savings methods for LED A-lamps and participated in several meetings with Commission staff, ex ante consultants, evaluators and staff from other PAs as well as the CalTF where concerns with methodologies for estimating savings were discussed. The PG&E's December submission savings methods are no different than the traditional approach which Commission staff and PAs agreed in the past is inadequate. All of the concerns regarding the recently submitted workpaper are covered in the 2017 Phase 1 disposition⁴.

⁴ Comprehensive Workpaper Disposition for: Screw-In Lamps, California Public Utilities Commission, Energy Division, March 1, 2017

Another example of Commission staff directing additional research that was not completed is for a workpaper covering Variable Refrigerant Flow (VRF) HVAC systems (PGECOHC142). One of the primary factors in the savings assumptions for the VRF workpapers is that the standard practice or baseline used in the workpaper is a different HVAC system technology type with entirely different installation and sometimes operating characteristics as well as gas rather than electric heating source. The suggestion in the PAs' workpapers is that upstream incentives for VRF systems will cause customers to purchase VRF systems instead of the baseline system. In reviews of workpapers and during meetings with PAs, Commission staff and ex ante consultants emphasized that the workpapers did not include any evidence to support that this system technology shift was being influenced by the upstream incentives. Commission staff allowed these workpapers to be used for claims, but directed PG&E to investigate the program influence and standard practice concerns. PG&E and Commission staff worked together to develop a framework for a survey of customers who had purchased VRF systems through the upstream packaged HVAC program. CPUC staff provided their input to PG&E in May of 2016. Commission staff is not aware of any additional work in this area. Consequently, Commission staff published a 2017 Phase 1 disposition for VRF workpapers that removed consideration of a system switch from the savings calculations.

One of the challenges for Commission staff and ex ante consultants, with the cooperation of PA as directed by D.11-07-030, is to populate and publish publicly the ex ante database with approved ex ante values for measures covered by workpapers. PG&E continues to struggle with developing ex ante data sets for workpapers that are compatible with the database specification and appears to still lack the necessary understanding of some of the basic principles of the ex ante database structure. PG&E should review previous ESPI narratives, preliminary reviews, and workpaper dispositions for more information on these concerns as Commission staff and the ex ante team have been noting these concerns for at least three years. Prior to 2016, Commission staff and ex ante consultants have focused primarily on ensuring that ex ante data for approved workpapers was properly formatted.

In many cases, this has led to minor differences in the cost-effectiveness values generated from the ex ante database typically due to small differences in decimal precision of the approved values in the ex ante database compared to values PG&E incorporated into their own data systems. At this point it is necessary to emphasize that many differences are the result of submitting data that was not formatted per previous direction. Nevertheless, PG&E has been unwilling to accept the values in the ex ante database despite that the values are from workpapers have been approved and therefore are considered frozen. PG&E believes that the minor corrections staff made to their previous data submission are incorrect, while staff believes they represent the correct use of DEER. Commission staff is frustrated by this lack of cooperation as directed on the part of PG&E, however we decided not to spend more time on the issue. This lack of cooperation has contributed to the suspension of work to complete the ex ante database, an undesirable outcome.

In 2016, efforts to add data to the ex ante database became more difficult as PG&E took exception to ex ante data that had been published as part of a workpaper disposition. For example, it has long been a Commission staff position that PAs should collaborate to develop uniform statewide costs for common measures and technologies, when those measures or technologies are not included in DEER. Commission staff's first disposition covering screw-in LED lamps was issued in 2012 and included direction for the PAs to develop uniform statewide costs. Over the course of 2016, Commission staff and ex ante consultants developed a uniform disposition for LED lamps and low-wattage fixtures that included the development of uniform costs that could be used by all PAs. This impacted PG&E's

proposed values for some products by restructuring and reducing the number of cost records as well as changing the full measure cost for some technologies by a few cents. Based on a review of PG&E's most recently submitted workpapers for LED lamps, most of the direction from the 2016 disposition has not been incorporated into their submitted measure and technology cost records.

To add to the difficulties in resolving the LED disposition, efforts to add data to the ex ante data base became more difficult as PG&E conflated the ex ante consultants' efforts to develop a data approval process with the workpaper disposition process. Instead of focusing on Commission staff and ex ante consultants efforts to work together and gain agreement on the data approval process, PG&E staff used ex ante database meetings to ask questions about a recently published workpaper disposition. This lack of reasonable collaborative assistance has stymied Commission staff's efforts to develop a process that could lead to the statewide public ex ante database directed in D.11-07-030.

The Scoring:

The 2016 ex ante review performance score was developed using a detailed scoring by metric for each directly reviewed work product (i.e., workpaper and custom project), as well as a scoring of the utility's internal due diligence processes QA/QC procedures and methods as well as program implementation enhancements to support improved ex ante values. Attachment A summarizes the Metrics adopted in D.16-08-019 for 2016 and beyond as well as the Commission staff developed scores and points for 2016. D.16-08-019 also directed that the custom and workpaper scoring be weighted together into a final score based of the PA total claims for custom and deemed activities, respectively. The weights for custom and deemed scores will be developed and published by Commission staff in June 2017 based upon the PAs filed final 2016 savings claims.

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

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

As with the 2015 ex ante review performance scores, the final scores were "built-up" from a metric-by-metric assessment of each reviewed work product. It is Commission staff's expectation that this detailed scoring approach, along with the detailed qualitative workpaper and custom project level feedback, is consistent with the direction provided in D.16-08-019. We believe this scoring approach provides specific guidance to the utilities on how to improve their ex ante due diligence and scores moving forward.

A "Direct Workproduct Review" portion of each metric score was developed based upon the individual scoring of dispositions issued for custom project or workpapers. Each reviewed utility work product

was first determined to have components either applicable or not applicable to a metric⁵. 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 were 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 custom and workpaper work product review scores. Next, utility-specific review process “Review Process Score Enhancements” were developed for each applicable metric based on observed policy and technical review or program implementation processes and procedures developed and under implementation in 2016 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.

Individual custom project level disposition scoring is provided in Attachment B and individual workpaper level disposition scoring as well as related workpaper activities is provided in Attachment C.

In the custom scoring process Commission staff added points as “Enhancements” in the area of Policy/Technical QA/QC for Metrics 2, 3, 4 and 5 to reflect PG&E staff’s positive efforts in these metric areas as discussed earlier. Those initiatives include ISP and related baseline development and assessment work, as well as policy compliance and early project development stage review procedures and processes. Although these efforts have not yet reflected themselves into the dispositions scores Commission staff believes recognition of the efforts of PG&E technical and policy review staff is warranted. PG&E staff has described to Commission staff other planned additions to their early review activities to address recurring issues identified in previous ESPI memos and earlier in this memo. Commission staff believes these activities offer promise to improve the overall PG&E ex ante performance, however, Commission staff must defer review those activities until later after implementation to assess if they warrant further augmentation of the PG&E ex ante performance scoring for 2017 and beyond.

Commission staff has not observed similar efforts in the program implementation area and thus no “Review Process Score Enhancements” was assigned as an “Implementation Increase”. The absence of such evidence of improvement on the program implementation side is disappointing and Commission staff urges PG&E staff to take such actions as outlined earlier so as to allow further improvement in performance and scoring during 2017.

Workpaper scores are also comprised of the two components, “Direct Workproduct Review Score” and “Review Process Score Enhancements.” Direct review items include workpaper dispositions, preliminary reviews, reviews of ex ante data submissions and direct interaction between Commission and PA staff on workpaper development issues. Process issues represent critical deemed measure

⁵ 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”)

development topics where Commission staff believes improvement is needed or improvement has occurred, but those activities are not necessarily reflected in the areas of direct review.

To produce final scores, the individual metric scores for the two workpaper contributing areas were added together, using a 50% weight for the process issues score. The 50% weight given to the process review has the effect of being a “score enhancement” or increase to the direct review score. Furthermore, within each contributing area (direct and process review areas), Commission staff also assigned weights for individual items as a way to reflect greater importance of different individual review items. For example, PG&E submitted workpapers for LED lamps in early 2016, revised them based on dispositions and Commission staff direction, and then submitted new versions of the same workpapers in late 2016 to the Phase 1 review process for the 2017 program year. Staff assigned a weight of 0.25 to the first submissions and 1.0 to the second set of submissions, which enabled all work to be considered in the direct review score, but also gave greater emphasis to the most recent submissions. The separate process scoring provides an avenue for assessing overall QA/QC processes and procedures put into place by PG&E.⁶

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

Questions or comments about the feedback or final scores should be directed to Peter Lai (peter.lai@Commission.ca.gov). Note that pursuant to D.13-09-023, Commission staff will schedule a time with PG&E staff to discuss its final scores.

⁶ 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.”

Metric		Workpapers				Custom			
		Max Points	Max Percent of Total Points	2016 Score	2016 Points	Max Points	Max Percent of Total Points	2016 Score	2016 Points
1	Timing and Timeliness of Submittals Timely submittals: all lists, inventories, plans, studies, workpapers and project/measure documentation; timing and advanced announcement of submittals (spreading out submission when available rather than holding and turning in large batches); timely follow-up PA responses to review disposition action items including intention to submit/re-submit with proposed schedule.	5	10%	4.24	4.24	5	10%	2.33	2.33
2	Content, Completeness, and Quality of Submittals Completeness, appropriateness, comprehensiveness, accuracy, and clarity of submittals. Submittal adherence to Commission policies, Decisions, and prior Commission staff dispositions and/or guidance. Do the submittals include all materials required to support the submittal proposed values, methods and results. Is the project or measure clearly articulated? Are proposed or utilized methods clearly explained including step-by-step method or procedure descriptions. Will the proposed or utilized approach provide accurate results. Are all relevant related or past activities and submittals appropriately noted or disclosed, analyzed or discussed. Are the pros/cons of alternate possible approaches or conclusions discussed to support that the chosen one is most appropriate.	15	30%	2.72	8.16	15	30%	2.41	7.23
3	Proactive Initiative of Collaboration PA efforts to bring either measures, projects, studies, questions, and/or savings calculation methods and tools to Commission staff for discussion in the early formative stages, before CPUC staff review selection. In the case of tools, before widespread use in the programs. Commission staff expects collaboration among the PAs to develop common or coordinated submissions and for the PAs to undertake joint or coordinated planning activities and study work. The PAs are expected to engage with CPUC staff in early discussions on unique or high profile, high impact measures or projects before program or customer commitments are made. The PAs are expected to engage with CPUC staff on planning and execution of studies that support proposed offerings, tools, or determination of proposed baselines or other programmatic assumption that can impact ex	5	10%	2.55	2.55	5	10%	5.00	5.00

ante values to be utilized.

4	Program Administrator’s Due Diligence and Quality Assurance/Quality Control Effectiveness	12.5	25%	2.21	5.51	12.5	25%	3.44	8.6
	<p>Commission staff expects the PA to have effective Quality Control (QC) and Quality Assurance (QA) processes for their programs and measures. The PAs are expected to have a pro-active approach to reviewing existing measure and project assumptions, methods and values and updating those to take into account changes in market offerings, standard practice, updates to DEER methods and assumptions, changes to codes, standards and regulations, and other factors that warrant such updates. The depth and correctness of the PA's technical review of their ex ante parameters and values, for both Core, Local Government and Third Party programs, are included under this metric. The depth and correctness of the PA's technical review of their own staff and subcontractor work related to supporting deemed and custom measure and project submissions are included in this metric. Evidence of review activities is expected to be visible in submissions so that Commission staff can evaluate the effectiveness of the PA internal QA/QC processes.</p>								
5	Program Administrator’s Responsiveness to Needs for Process and Program Improvements	12.5	25%	2.81	7.01	12.5	25%	3.66	9.15
	<p>This metric reflects the PAs ongoing efforts to improve their internal processes and procedures resulting in increased ex post evaluated gross and net savings impacts. Commission staff looks not only to the PA's internal QC/QA processes, but also whether individual programs and their supporting activities incorporate and comply with CPUC policies and prior Commission staff disposition guidance in their program rules, policies, procedures and reporting. This includes changes to program rules, offerings and internal operations and processes required to improve overall review and evaluation results. A particularly important area for focus is the improvement of net portfolio performance via the removal of measures and or participation with low program attribution (NTG).</p>								
Total		50	100%	27.47		50	100%	32.31	

2016 Efficiency Savings and Performance Incentive Custom Projects Ex Ante Performance Scores

The table below lists the ID numbers associated with each disposition. The PA may refer to the individual dispositions for more detailed descriptions of the specific actions staff required for each application. All custom project were scored using the old metric system since most scoring was completed before the new metrics were adopted, The scores from the old metrics were mapped into the new metric using the relationship provided in Appendix A of the ALJ Ruling dated 8 June 2016 in R.13-11-005 and included at the end of this Attachment. The qualitative ESPI scoring feedbacks are designated as follows:

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

Summary Count by Old Metric													
	1a	1b	2	3	4	5	6a	6b	7	8	9	10	
Yes	2	1	13	13	0	11	5	3	2	1	7	4	
No	12	19	2	1	20	2	5	9	13	17	9	3	
+	3	1	1	1	2	0	1	1	0	0	1	0	
-	5	1	6	7	0	9	11	9	7	4	5	15	
Scoring Detail by Old Metric													
CPUC ID	1a	1b	2	3	4	5	6a	6b	7	8	9	10	CPUC Staff Summary Comments of Disposition
0004 1st	No	+	-	+	No	-	-	-	-	No	No	-	No written comments
0005 3rd	No	+	Yes	Yes	No	-	No	-	No	-	No	Yes	Submitted documents do incorporate previous guidance on EUL/RUL and measure types. The documentation did not however address some concerns from the previous EAR regarding accounting for the process sensitivity to ambient temperature and using the improved process efficiency associated with EEM-1 and EEM-2 as the baseline for EEM-3 and EEM-4. The PA still does not understand that CPUC Staff found that there were no higher cost, higher efficiency options for these measures considered by the customer and therefore concluded that the proposed measures were the only alternatives which met the customer's technical requirements for the project. The in situ baseline cannot be used for a capacity expansion measures since the in situ cannot meet the new capacity requirement. This is an important point which the PA should carefully consider as it relates to many other projects that Commission Staff have identified problems with.
0007 1st	-	-	-	Yes	No	-	Yes	No	No	-	No	-	The PA failed to upload project documentation prior to the customer implementing the measure. The first PA documentation upload was on 10/27/15. CPUC Staff noted that the upload did not include the PA

													technical review. The PA technical review was not uploaded until 3/29/16. Significant delays in providing project documentation. Documents are reasonably comprehensive although missing some key information and concepts. The PA did not carefully consider how to integrate the discussions that occurred between the customer, PA reviewer, third-party implementer and CPUC staff during the onsite meeting in August 2015 into the project documentation and analysis. The PA reviewer made a reasonable effort to review the third-party implementer's analysis but missed some key items discussed in August 2015. The PA did not carefully consider how to integrate the discussions that occurred between the customer, PA reviewer, third-party implementer and CPUC staff during the onsite meeting in August 2015 into the project documentation and analysis. CPUC Staff informed the PA that rigorous analysis and M&V is required for this measure. The documentation provided lacks a complete and concise calculation methodology. The PA has previously received guidance in this area. This remains a weakness for many projects.
0022 1st	-	No	Yes	-	No	No	-	No	No	-	-	-	PA submitted the requested initial documentation 249 days after the project was selected for review. PFS contained adequate pre-M&V data and post-implementation M&V plan. However, fails to recognize the need to use CZ2010 weather data for determining impacts. Key PA documentation missing, signed customer application and CPUC checklist, influence documentation. PA RCx Review represents an incomplete PA Technical Review and is missing key assessments on eligibility and baselines, EUL/RUL, eligible costs, lacks affiliation identification, and QC dates and sign-offs. In the 12/21/2015 CMPA List, the PA identifies the RCx implementer as the Technical Reviewer failing to identify the conflict of interest. PA continues to use "RCx" as a measure type designation. PA did not apply an appropriate DEER EUL/RUL to the measures. PA did not apply past CPUC staff guidance and directives regarding the baseline and eligibility requirements for RCx projects under current CPUC Policy, must exceed code requirements for system shut-offs during unoccupied time periods, and did not assess the project's eligibility under the "No Double-Dipping" clause found in the standard Terms & Conditions for energy efficiency projects (program rules).
0040 1st	No	No	-	-	+	-	-	-	-	No	No	-	The PA failed to provide the CPUC Checklist and the PA technical review. Measure types, EULs are not provided. It is unclear if the PA has reviewed the savings calculations or if M&V is required. PUC Staff are disappointed in the PA's performance on this project. The PA proposes to spend more than an estimated \$2,600,000 of ratepayer funds on this project (50% of the funds are incentives to the customer, 50% of the funds are "performance" payments to the implementer). Although the PA first uploaded documents for this project in December 2015, the PA seems to be rushed and is neglecting to perform due diligence. Considering that a PA technical review has not been provided, the CPUC "Checklist was not provided and the project documentation is lacking several key documentation requirements, CPUC Staff have concluded that the PA may be distracted from its duty to perform due diligence and that the PA appears to be attempting to push the project through, possibly without following its own internal process requirements. The PA brought the project to Staff's attention in relationship to performing an ISP Study. The documents provided by the PA do not address the second baseline issues. CPUC Staff and the PA have had discussions regarding the ISP for the evaporator measure.

0044 1st	No	No	+	Yes	No	Yes	Yes	Yes	No	No	Yes	No	A relatively simple project, reasonably explained and documented. Minor comments on the M&V plan were provided. The PA technical reviewer name was not included in the technical review document. The PA correctly estimated the EUL for the REA measure.
0045 1st	+	No	Yes	-	No	-	Yes	Yes	Yes	No	Yes	-	PA did not limit the EUL of the chiller VFD control additions to the RUL of the chiller equipment. PA has been told in prior dispositions for multiple projects and in meetings that for REA measure types, the EUL shall be limited to either the appropriate DEER RUL for the host equipment or the PA must provide adequate support the RUL of the existing equipment. Initial documentation submitted within a reasonable timeframe. Missing chiller performance specs. Derivation of the chilled water loop loads not clearly explained. Missing the PA approved savings workbook in the initial upload but PA provided it quickly upon CS follow-up CMPA message request. Economizers are not mentioned and may not be accounted for in the baseline. Measure costs are not clear with savings workbook having a value of about half of the vendor quote. PA Technical Review did disqualify two measures from the Third Party original scope appropriately. Used an adequate approach in the bin impact calculations to account for the DEER peak demand period definition. Incentive calculations are not fully documented and contradiction between \$/kWh rates in the savings workbook and the PA review.
0046 1st	No	No	-	Yes	No	Yes	-	-	No	No	No	-	The PA technical reviewer does not understand that refurbishing pumps is not an REA measure type, and that RCx is not a measure type. The reviewer's lack of understanding of this fundamental issue leads to numerous errors including the correct assignment of baseline, and errors with the calculation methodology. Documentation is adequate.
0047 1st	No	No	Yes	Yes	No	Yes	-	-	No	No	No	-	Submittals are comprehensive, though contradictory and lack some details. Most key areas of CPUC Staff concern are addressed, although not correctly in all cases in the documents. The PA technical reviewer did a good job of reviewing the savings analysis and determined that the floating head pressure controls measure was ineligible since the customer already had that control capability. Unfortunately, the PA technical reviewer missed the fact that EEM-1 is a NR measure type and not an REA measure type, and this makes the baseline used in the savings analysis incorrect and will likely result in a significant reduction in the savings and incentive for this project. Additionally, the PA QC reviewer did identify that the measure type for EEM-1 was incorrect but did not require the documentation to be revised to reflect this fact. There are also some troubling details regarding the sequencing of events for this project which lead CPUC staff to question how the third-party EE program has influenced the customer's decision to move ahead with this project. The PA technical reviewer missed the fact that EEM-1 is a NR measure type and not an REA measure type, and this makes the baseline used in the savings analysis incorrect.
0054 1st	No	No	Yes	+	No	Yes	+	+	No	No	Yes	Yes	Reasonably complete submittal addressing most of the required areas. PA tech review is thoughtful and comprehensive. Main issue is basing the analysis on assumptions without an M&V approach defined to eliminate the uncertainty associated with the key assumptions.
0057 1st	-	NO	-	-	+	-	-	NO	-	NO	+	-	No apparent revisions in process to properly assess early retirement. Inadequate information for EAR team to asses ER claim. PG&E does not appear to require adequate project timeline accounting, which then

													requires information to be generated after an EAR team request for more information. Inadequate information for EAR team to assess ER claim. PG&E pointed out that they would like feedback that specifically examines their revisions to administration of projects of this type (3p MLC projects) that were implemented in response to CPUC comprehensive review from late 2015. Inadequate information for EAR team to assess ER claim. ER analysis does not appear to consider corporate practices or previous EE history of this customer. MLC uses DEER methods for lighting savings calculations. EAR team disappointed with lack of PG&E effort to implement processes to assess ER claims in a more comprehensive fashion.
0071 1st													Project waived without documentation review. No ESPI scoring.
0088 1st	No	No	Yes	Yes	No	-	Yes	-	No	No	Yes	-	Comprehensive well documented applications. Thoughtful review comments, may have missed the fact that the customer's processing season peak may not coincide with the DEER peak demand period. Appropriate application of RUL for the REA measures as 1/3 of the DER EUL. Many submitted projects lack concise calculation methodologies and M&V plans. This crucial point has been commented on by CPUC Staff numerous times in the past and needs to be addressed by the PA.
0089 1st	+	No	Yes	Yes	No	Yes	-	No	No	No	-	-	Initial documents were uploaded to the CMPA 15 days after the project was selected for review. It appears that the PA strove to ensure completeness of project information. However, a clear and concise project description was lacking. CPUC Staff wrote the summary that appears as the PA Project Description in the disposition. The initial information data submittal was comprehensive. Although the submitted documentation was comprehensive and demonstrates the PA's effort to incorporate Commission policy directives, the information is still largely Ad Hoc and disorganized. Relevant information was scattered in multiple documents which were not aptly named to identify the information contained within them. The PA included a comprehensive explanation of the 3rd party calculation workbook, the review did not identify and correct problematic data and assumptions. The PA Technical Review was not comprehensive and lacked depth. For example, the 3rd party classification of Measure 2 as a REA measure type was not questioned. The PA is not systematically checking that weather sensitive measures are using the corresponding CZ2010 weather datasets and the revised DEER peak periods that were adopted in the 2013 DEER Updates. The PA failed to properly apply prior CPUC Staff guidance on the determination of EUL and RUL values as they pertain to REA measure types.
0092 1st	Yes	No	Yes	Yes	No	Yes	No	-	No	No	Yes	Yes	Timely upload of project documents. Project adequately explained and documented. Incorrect measure type assigned. Correct DEER EUL identified. Most common EAR identified issues are adequately documented.
0093 1st	+	No	-	-	No	-	-	No	-	No	-	-	All project information submitted although there are some shortcomings as described below. Documents show that PG&E is attempting to incorporate review for critical ex ante requirements an policies. Primary shortcoming is no evidence of program influence. All program influence support is provided in the implementer's project documentation, but no actual communications or policies of the customer are provided. Project report is generally inadequate to support the existence of program influence. It also does

													not provide any analysis of measures in comparison to DEER nor does it provide supporting documentation for the selected savings calculations baselines. The PA must endeavor to improve its due diligence review of proposed projects. Recent CPUC decision 16-08-019 states that in 2017 all portfolio goals will be Net savings impacts. This project appears to have little net impacts as CPUC Staff could not identify any documentation to demonstrate that the PA's program influenced this customer to adopt a costlier, more efficient option that they were planning to do absent the PA's intervention. No information indicating PA reviewed project information for program influence, DEER applicability or savings baselines. The PA's technical reviewer did not appear to adjust or question any of the third-party implementer's analysis and the technical review seems to lack credibility. CPUC Staff expect that the PA will consider that when large expenditures of ratepayer money are proposed (\$1,035,293 plus \$856,016 performance payment to the third-party implementer, total equals \$1,891,309) the due diligence efforts must be increased to safeguard the ratepayer's interests. Project report does not include any examination of current ISPs for projects of this size. CPUC Staff note that the PA continues to use the minimum Title 24 efficiency as the baseline for water chiller projects. CPUC Staff believe that it may not be appropriate to use Title 24 as the baseline for NC or ROB measure type chiller projects and in particular higher capacity (greater than 500 ton nominal capacity) chillers. CPUC Staff require that the PG&E ISP team investigate this measure and commence work on determining the ISP for water cooled chillers. VFD chillers in DEER. Implementer should have reviewed DEER for appropriate methods. CPUC Staff are disappointed that the third-party implementer and the PA technical reviewer have not followed D.12-05-015, which requires custom projects to incorporate DEER methods and assumptions. The PA must inform its reviewers and implementers to follow this requirement for all future projects. Does not appear that previous CPUC staff concerns about program influence, DEER applicability and baselines have been addressed in the development of this project.
0094 1st	No	No	-	-	No	-	-	No	No	No	No	-	Did not include PA technical review or signed application in first upload. PA failed to incorporate previous guidance regarding concise calculation methodology and M&V plans.
0110 1st	-	No	Yes	Yes	No	No	No	No	No	-	-	No	Initial documents were uploaded to the CMPA about 29 days after the projects was selected for review. No PA Technical Review submitted. With the exception of a written PA Technical Review, the documentation was reasonably complete. The PA did not follow thru on its freeridership screening that indicates a high potential free rider. In past conversations with the PA's, CPUC Staff has expressed concerns about giving incentives to an entire customer chain for the same measure once it has been demonstrated that the measure is beneficial. The PA did not use the DEER food service equipment EUL values to assess and assign the measure EUL value.
0111 1st	Yes	No	Yes	Yes	No	Yes	-	No	Yes	No	-	-	Initial documents were uploaded to the CMPA 23 days after the projects was selected for review. PA Technical Review did not question the third-party definition of what would constitute a normal replacement of an air handler that has exceeded its useful life. The third-party submitted evidence of a materials quote is not evidence of the customer intention to operate the existing system indefinitely. The Technical Review did not limit the REA measure type to the RUL of the existing equipment. The PA Technical Review closely

													examined the design points of the existing air handlers and made acceptable adjustments. However, the bassline power draws for the fan motors should have been adjusted to reflect premium efficiency motors. CPUC staff observed throughout the PA submitted savings calculations multiple small errors in data range selections and motor demand formulas. The cumulative effect of the errors did not significantly affect the estimated impacts, but indicate the need for improved technical quality assurance by the PA. Savings estimates did not use CZ2010 weather data and revised DEER peak demand period for Climate Zone 12. Design documentation contradicted the PA and third-party statements that they had introduced the measure to the customer. The freeridership assessment lacks depth and appears to have been conducted by either the PA account representative or the third-party implementer.
0112 1st	No	No	Yes	-	No	Yes	No	-	No	No	Yes	No	Well documented considering the magnitude of savings impacts, cited DEER EUL and provided recent ex post evaluation for a similar measure. Lack of details regarding the basis of assumptions used in the analysis. Possible program rule violation not addressed by the PA or discussed by the technical reviewer.
0122 1st	-	No	Yes	Yes	No	Yes	Yes	Yes	-	No	No	-	The PA did not upload documents until 75 days after this project was selected. Documentation is complete and comprehensive. The PA QC review has identified issues with the implementer's documentation and their own internal review, however the QC reviewer's comments have not been addressed by revising the project documentation. The PA QC review has rejected the measure type, but not addressed what the correct measure type is and what the baseline would be for this project. The third-party implementer has proposed that 37-year-old equipment is the baseline. The PA needs to make more effort to understand that ISP is what is being installed today, not what has been installed over several decades.
X361 2nd	No	No	No	No	No	-	-	No	-	No	No	-	The M&V analysis lacks sufficient depth and did not recognize that the measurement data did not match up to the stated implemented measure in the post-implementation report. The PA failed to properly scrutinize the submitted third-party eQuest model against the supplied post-implementation M&V data. The PA's Technical Review and the 3rd party implementer failed to exercise adequate care to reflect the post-implementation measurement data and address simulation modeling errors. The PA did not address shortcomings in the simulation models making the savings estimates unreliable. In addition, the PA program policies do not reflect CPUC policy to affect and pursue deep savings by allowing this project to only implement low or no costs measures.
X447 2nd	No	Yes	No	Yes	No	Yes	-	-	-	No	No	-	PA undertook M&V as requested in the 1st EAR disposition. The post M&V effort did not encompass similar hot weather conditions as the pre- data collection making it difficult to judge the performance of the measures under high OAT conditions and loads. The PA Technical Review did not examine the submitted trend data to discern whether chiller lock-outs, CHW and CW Resets were modeled as implemented. The PA did not recognize that the small VRF unit was likely covered under upstream incentives and therefore ineligible. The PA was informed in prior EAR dispositions for other projects that they need to make sure that measures included in custom claims do not receive incentives from other programs.
X488 3rd	No	No	Yes	Yes	No	Yes	No	-	-	Yes	Yes	Yes	The PA notified us prior to site visit. Submitted material was sufficient for review. No evidence of IOU technical review was found. Several significant deficiencies were observed in the analysis. Issues from

															Phase II EAR were adequately addressed. Calculations are using the corresponding CZ2010 weather datasets and the revised DEER peak periods that were adopted in the 2013 DEER Updates.
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The table below provides the mapping from pre-2016 ESPI EAR performance scoring metrics to 2016 ESPI EAR performance scoring metrics.

Multiple old metrics when mapped into a single new metric are done so with equal weighting for each of the old metric. Thus, if two old metrics are mapped into a single new metric the scores in the old metrics are each given 50% weight in the new metric. When five old metrics are mapped into a single new metric the scores in the old metrics are each given 20% weight.

Pre 2016 CUSTOM PROJECTS EX ANTE REVIEW METRICS		2016 CPUC Adopted EX ANTE METRICS	
Metric 1a	Timeliness of action in the implementation of ordered ex ante requirements in the pre-submittal/ implementation phase: Timing of disclosure in relation to reporting.	Metric 1	Timeliness and Timing of Submittals Timely submittals: all lists, inventories, plans, studies, workpapers and project/measure documentation; timing and advanced announcement of submittals (spreading out submission when available rather than holding and turning in large batches); timely follow-up PA responses to review disposition action items including intention to submit/re-submit with proposed schedule.
Metric 1b	Timeliness of action in the implementation of ordered ex ante requirements in the post-submittal/ implementation phase: Timing of responses to requests for additional information.		
Metric 3	Comprehensiveness of submittals.	Metric 2	Content, Completeness and Quality of Submittals Completeness, appropriateness, comprehensiveness, accuracy, and clarity of submittals. Submittal adherence to CPUC policies, Decisions, and prior CPUC Staff dispositions and/or guidance. Do the submittals include all materials required to support the submittal proposed values, methods and results. Is the project or measure clearly articulated. Are proposed or utilized methods clearly explained including step-by-step method or procedure descriptions. Will the proposed or utilized approach provide accurate results. Are all relevant related or past activities and submittals appropriately noted or disclosed, analyzed or discussed. Are the pros/cons of alternate possible approaches or conclusions discussed to support that the chosen one is most appropriate.
Metric 5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives).		
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.		
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.		
Metric 9	Professional care and expertise in the use and application of adopted DEER values and DEER methods.		

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.	Metric 3	<p>Proactive Initiation of Collaboration PA efforts to bring either measures, projects, studies, questions, and/or savings calculation methods and tools to CPUC Staff for discussion in the early formative stages, before CPUC Staff review selection. In the case of tools, before widespread use in the programs. Commission Staff expects collaboration among the PAs to develop common or coordinated submissions and for the PAs to undertake joint or coordinated planning activities and study work. The PAs are expected to engage with CPUC Staff in early discussions on unique or high profile, high impact measures or projects before program or customer commitments are made. The PAs are expected to engage with CPUC Staff on planning and execution of studies that support proposed offerings, tools, or determination of proposed baselines or other programmatic assumption that can impact ex ante values to be utilized.</p>
Metric 6a	Depth of IOU quality control and technical review of ex ante submittals: Third party oversight.	Metric 4	<p>PA Due Diligence and QA/QC Effectiveness Commission Staff expects the PA to have effective Quality Control (QC) and Quality Assurance (QA) processes for their programs and measures. The PAs are expected to have a pro-active approach to reviewing existing measure and project assumptions, methods and values and updating those to take into account changes in market offerings, standard practice, updates to DEER methods and assumptions, changes to codes, standards and regulations, and other factors that warrant such updates. The depth and correctness of the PA's technical review of their ex ante parameters and values, for both Core, Local Government and Third Party programs, are included under this metric. The depth and correctness of the PA's technical review of their own staff and subcontractor work related to supporting deemed and custom measure and project submissions are included in this metric. Evidence of review activities is expected to be visible in submissions so that Commission staff can evaluate the effectiveness of the PA internal QA/QC processes.</p>
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.		
Metric 10	Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products.	Metric 5	<p>PA Responsiveness to Needs for Process & Program Improvements (Course Corrections) This metric reflects the PAs ongoing efforts to improve their internal processes and procedures resulting in increased ex post evaluated gross and net savings impacts. Commission Staff looks not only to the PA's internal QC/QA processes, but also whether</p>

<p>Metric 2</p>	<p>Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process.</p>	<p>individual programs and their supporting activities incorporate and comply with CPUC policies and prior Commission Staff disposition guidance in their program rules, policies, procedures and reporting. This includes changes to program rules, offerings and internal operations and processes required to improve overall review and evaluation results. A particularly important area for focus is the improvement of net portfolio performance via the removal of measures and or participation with low program attribution (NTG).</p>
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2016 Efficiency Savings and Performance Incentive Workpapers Ex Ante Performance Scores

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

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

Direct Review - Workpaper Submissions Without Reviews Issued in 2016						ESPI Metrics				
WP ID	Rev	Title	Comments	Weight	1	2	3	4	5	
PGECOLTG179	2	LED Ambient Commercial Fixtures and Retrofit Kits	Proactive updates to costs and out-of-date technologies		+	yes	yes	yes	+	

Direct Review - Workpaper Detailed Reviews										
WP ID	Rev	Title	Comments	Weight	1	2	3	4	5	
PGECOLTG165	2	LED A-Lamps		0.25	+	yes	no	yes	no	
PGECOLTG177	3	LED BR/R Lamps		0.25	+	yes	no	yes	no	
PGECOLTG163	4	LED Candelabra Replacements		0.25	+	yes	no	yes	no	
PGECOLTG164	4	LED Globe Lamps		0.25	+	yes	no	yes	no	
PGECOLTG140	5	LED MR-16		0.25	+	yes	no	yes	no	
PGECOLTG141	5	LED PAR20, PAR30 and PAR38 Lamps		0.25	+	yes	no	yes	no	
PGECOLTG175	2	LED Residential Recessed Downlight		0.25	+	yes	no	yes	no	
PGECOLTG141	6	LED PAR20, PAR30 and PAR38 Lamps		0.25	+	yes	no	yes	no	
PGECOLTG139	8	LED Surface, Pendant, Track, Accent, and Recessed Downlight		0.25	+	yes	no	yes	no	
PGECOLTG165	2	LED A-Lamps	Timely submission; Staff concerns over lack of consideration for previous staff input and baseline	1	+	-	-	-	-	

PGECOLTG140	5	LED MR-16	development.	1	+	yes	yes	no	yes
PGECOLTG141	5	LED PAR Lamp	Timely submission; Staff concerns over baseline and use of outdated savings methods, however, workpapers were generally responsive to earlier dispositions.	1	+	yes	yes	no	yes
PGECOLTG163	4	LED Candelabra Replacements		1	+	yes	yes	no	yes
PGECOLTG164	4	LED Globe Lamps		1	+	yes	yes	no	yes
PGECOLTG177	3	LED R-BR Lamps		1	+	yes	yes	no	yes
PGECOLTG151	6	LED Outdoor Street and Area Lighting		1	-	yes	-	-	-
PGECOPUM102	4	Residential Variable Speed Swimming Pool Pump		Lack of statewide coordination; SDGE submitted revision based on recent M&V findings, but PG&E did not.	1	-	yes	yes	-
PGECOPUM102	7	Costs only with no description of cost savings	Participant workpaper to SCE; Staff concerns over UES calcs and proper identification of applicable building types.	1	yes	yes	yes	-	yes
PGECOPRO110	0	Process Fan VSD		1	yes	-	yes	yes	yes
PGECOHC142	1	Variable Refrigerant Flow Nonresidential Systems		Staff concerns over lack of follow-through on customer research into standard practice baselines	1	-	-	yes	-

Direct Review - Completed Ex Ante Data Reviews										
WP ID	Rev	Title	Comments	Weight	1	2	3	4	5	
PGE3PHVC149	2	PTAC/PTHP/Split AC Controller	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes	
PGE3PLTG171	2	LED Lighting in Walk-in Coolers and Freezers	Data generally correct	0.5	yes	+	+	yes	+	
PGE3PLTG173	4	Compact Fluorescent Direct Install	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-	
PGECOHC128	6	Unitary Air-Cooled Commercial Air Conditioners and Heat Pumps >=65 kBtu/h	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-	
PGECOHC166	2	Upstream Residential HVAC	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-	
PGECOLTG107	8	Residential Upstream Compact Fluorescent Lighting	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-	
PGECOLTG109	6	Compact Fluorescent Exterior Fixture	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes	
PGECOLTG110	6	Energy Star Interior CF Fixture	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes	
PGECOLTG111	8	Nonresidential Upstream Compact Fluorescent Lighting	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-	
PGECOLTG113	6	Interior Induction Fixtures	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-	

PGECOLTG114	7	Non Residential Interior High Performance Linear Fluorescent Fixtures with NEMA Premium HE Ballast	Data could be modified by staff/EA team	0.5	yes	-	yes	yes	yes
PGECOLTG116	7	Low or Reduced Wattage T8 Systems (28 & 25 Watt)	Staff issued corrections; PG&E did not resubmit	0.5	-	-	-	-	-
PGECOLTG151	5	LED Outdoor Street and Area Lighting	Data could be modified by staff/EA team	0.5	yes	-	yes	yes	yes
PGECOLTG158	5	Exterior Induction Fixtures	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes
PGECOLTG162	4	Upstream Interior 3-way Compact Fluorescent Lamps	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes
PGECOLTG174	2	LED Refrigeration Case Lighting	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes
PGECOLTG178	2	LED High-Bay and Low-Bay Fixtures		0.5	-	-	-	-	-
PGECOLTG179	1	LED Ambient Commercial Fixtures and Retrofit Kits	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes
PGECOREF111	5	Vending Machine Controller	Data could be modified by staff/EA team	0.5	yes	yes	yes	yes	yes

Direct Review - Other Direction

WP ID	Rev	Description	Comments	Weight	1	2	3	4	5
Several Workpapers		Food service and commercial cooking workpapers	No apparent investigations of food service standard practice. This becomes more important for 2017 with resolution E4818 which may allow for deemed early retirement measures, making identification of standard practice even more important.	0.5	-	-	-	-	-
PGECOAPP128	0	Retail Products Platform	PG&E completed directed research, but results confirmed initial Staff concerns from 2015 that workpaper savings estimates were too high, meaning measures were allowed into programs with savings values that were much too high.	1	+	+	+	+	-
Statewide		Commercial ductless mini-split heat pumps and air conditioners	Appears that measures have been removed from programs for the time being.	1	no	no	no	no	no

Process Review

1	Updates to Unreviewed Workpapers Based on Other Reviews: Initiative of the PA to examine previous workpaper preliminary reviews or dispositions and use that information to identify and update other workpapers that may have similar issues.	1	+	yes	-	-	yes
2	Responsiveness to Previous Direction: Efforts to update workpapers where previous direction has been provided, such as through decisions (e.g. D.11-07-030 that required standard practice research on food service equipment) or through CPUC staff direction	1	no	yes	-	yes	yes
3	Consideration of Standard Practice and/or Code Baselines: Efforts to research typical standard practice or code baseline where it may not be well understood. For example: What are most common applications for program VRF and mini-/multi-split HVAC systems? What portion of small wattage LED fixtures are installed where high efficacy fixtures may actually be required by code? (which would reduce the likelihood that an incandescent baseline is reasonable)	1	no	-	-	-	-
4	Data Gaps in Best Available Information: Appropriateness and adequacy of data to support savings calculations, cost or net-to-gross assumptions. For example, when energy use information about the baseline technology is not readily available, the PA should perform additional research beyond seeking opinions of a limited group of individuals.	1	no	yes	yes	yes	yes
5	Consistency with CPUC Policy and Existing Body of Decision Language: Ex ante values must be developed in a manner that is consistent with existing CPUC policy and all applicable decision language.	1	yes	-	-	-	yes
6	Completeness of narrative on initial review: On first review, a workpaper should include enough descriptive information so that both the delivery approach, the ex ante values, and the relationships between the two are understood by the EAR team and CPUC staff.	1	yes	yes	yes	yes	yes

7 Alignment of workpaper narrative with submitted ex ante data: The descriptions of implementations, measures, technologies and costs should align with the data submitted. A typical observed problem is a description of multiple delivery types in a workpaper without submissions of the implementations in the ex ante data. Since the ex ante data will eventually be the source for cost effectiveness values, CPUC staff will not approve workpapers where ex ante data is not included that matches implementations and measures described in the narrative of the workpaper.

8 Completeness of ex ante data on initial review: Detailed level of completeness and whether it can be uploaded to the ex ante database for successful generation of cost effectiveness values.

1	yes	yes	yes	yes	yes
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1	yes	yes	yes	yes	yes
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2016 Annual Custom Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	PG&E "-"	43%	48%	0%	69%	56%	
	PG&E "+"	36%	4%	100%	6%	2%	
	PG&E "Yes"	21%	48%	0%	25%	41%	
	Dispositions Score %	46%	28%	100%	19%	23%	
	Dispositions Score	2.33	1.41	5.00	0.94	1.16	
Review Process Score Enhancements	Technical & Policy QC Increase	0.00	1.00	2.00	2.50	2.50	
	Implementation Increase	0.00	0.00	0.00	0.00	0.00	
Total Score	Final Metric Score (1-5)	2.33	2.41	5.00	3.44	3.66	Total Points
	Metric points	2.33	7.23	5.00	8.60	9.15	32.31

2016 Annual Workpaper Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	PG&E "-"	29%	35%	30%	48%	38%	
	PG&E "+"	39%	6%	6%	5%	6%	
	PG&E "Yes"	32%	59%	64%	47%	55%	
	Dispositions Score %	55%	35%	38%	28%	34%	
	Dispositions Score	2.74	1.78	1.92	1.42	1.71	
Review Process Score Enhancements	PG&E "-"	0%	25%	50%	38%	13%	
	PG&E "+"	20%	0%	0%	0%	0%	
	PG&E "Yes"	80%	75%	50%	63%	88%	
	Process Score %	60%	38%	25%	31%	44%	
	Process Increase Score	3.00	1.88	1.25	1.57	2.19	
	Process Increase Weight	0.50	0.50	0.50	0.50	0.50	
Total Score	Final Metric Score (1-5)	4.24	2.72	2.55	2.21	2.81	Total Points
	Metric points	4.24	8.16	2.55	5.51	7.01	27.47

Explanations of scoring tables row entries:

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