STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

PUBLIC UTILITIES COMMISSION

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Date: August 21, 2017

To: Southern California Edison

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 scores[1] contained in this memo are final, and Southern California Edison Company (SCE) shall use the total final ex ante review performance points from the table below together with the weighting[2] for each category to calculate the 2016 ESPI ex ante review component award.

SCE 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
1	Timing and Timeliness of Submittals	5	10%	4.25	4.25	5	10%	2.19	2.19
2	Content, Completeness, and Quality of Submittals	15	30%	1.55	4.65	15	30%	1.97	5.91
3	Proactive Initiative of Collaboration	5	10%	2.29	2.29	5	10%	2.50	2.50
4	Due Diligence and Quality Assurance/Quality Control Effectiveness	12.5	25%	1.52	3.80	12.5	25%	2.40	6.00
5	Responsiveness to Needs for Process and Program Improvements	12.5	25%	2.61	6.53	12.5	25%	2.60	6.50
Total		**50**	**100%**		**21.52**	**50**	**100%**		**23.10**

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

In the area of ex ante review for custom projects, on a positive note Commission staff observes that SCE's engineering team continues with its internal quality control and quality assurance project review

[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.

process along with their technical review of custom projects. In addition, SCE's engineering team informed Commission staff that they developed a database to track and centralize Commission staff disposition findings and issues with the intent to make them readily available to their internal and contractor technical reviewers. Commission staff acknowledges and applauds this effort. Nonetheless, evidence suggests that the SCE review procedures and processes have not yet successfully penetrated the range of portfolio activities to ensure prior staff directives and guidance are being followed. For instance, Commission staff observes a continued reluctance from SCE implementation staff to apply Commission staff guidance from one project to other similar projects and activities in the portfolio. Although the SCE project tracking data includes many withdrawn and rejected project notations, for projects selected by Commission staff for review, SCE staff seems unwilling, on its own, to take corrective action on issues brought up on either individual projects or program activities except when specifically directed to do so by Commission Staff. Additionally, areas in need of improvements 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 SCE staff and its review contractors, in consultation with Commission staff and its contractors, 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 SCE'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 SCE's 2016 custom ex ante technical review activities, SCE'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 SCE 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 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 observes efforts by SCE staff to seek out information, input and clarifications on its deemed measure workpaper development activities. As noted in the mid-year review SCE has a well-developed process for updating workpapers. Furthermore, SCE has shown some progress in working with other PAs to develop statewide workpapers for measures that are similar, if not identical, across all three electric PAs. In cases where Commission staff has issued dispositions or direction for additional research or workpaper development, results have been mixed. In some cases, SCE's follow-on work has largely complied with the direction, while in other cases there has been no observable effort to respond to direction.

Of all PAs, SCE appears to have some of the best capabilities for developing new and updating existing workpapers, their process for responding to preliminary reviews and dispositions needs improvement. For example, the mid-year review noted numerous workpapers where preliminary reviews had been issued, but SCE has not yet responded. At the end of 2016, nearly all of these workpaper reviews were still awaiting response from SCE. Most discouraging are cases in which SCE continues to resist previous direction and input, such as the direction to support early retirement claims in their package HVAC program.

Commission staff notes additional areas where SCE's workpaper process needs improvement. SCE's workpaper submittal timeline appears to not allow enough time for Commission staff review before measures are introduced into programs, resulting in measures being offered to customers prior to workpaper approval. Commission staff does not review every workpaper so it is not possible to determine how many workpapers fall into this scenario. In the past, Commission staff has observed this conflict in timing for package HVAC and HVAC quality maintenance and installation measures. As another example, 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, and still need 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. Commission staff also wish to raise that SCE has been resistant to attempts by Commission staff to resolve some of the most straightforward issues, such as ex ante data format, where multiple implementation records are often submitted that resolve to identical cost-effectiveness values. In this case, Commission staff has informed SCE that these types of submissions, with duplicate records, are not acceptable.

Addressing these concerns will require SCE 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 influence of the program over customer decisions to implement technology. In addition to program influence, workpaper development efforts must focus on identifying the likely standard practice looking forward, especially for rapidly advancing technologies like LED lamps and consumer small electrics and electronics. It is important to point out that Commission staff is not beholden to its own direction, and is open to other ideas and alternatives, however, opposing views or alternative values must be supported via technical and market research supporting that these alternatives are reasonable. For other areas, such as ex ante data and review, Commission staff emphasizes that PAs are required to follow previous direction, even if Commission 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.

2016 ex ante activities, Commission staff findings

Custom Projects Ex Ante Reviews Discussion

In early 2016, Commission staff updated the custom projects ex ante review disposition template to include a categorization of the actions that staff requires the PA to implement for the project under review. The categorization serves to identify general problem areas the PA needs to address. Table 1 summarizes the 140 action items requested of SCE through 30 dispositions issued between January 1, 2016 and December 31, 2016. Several of the 30 dispositions issued during 2016 applied to multiple applications selected for review. In addition, many of the dispositions identify issues and provide guidance that should be applied to other project applications in various stages of development. Thus, a more significant portion of the custom portfolio activities are impacted than what the low quantity of issued dispositions suggests.

Overall, the areas of general categories of issues noted has not changed significantly 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 SCE. 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 SCE.

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. 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 SCE staff.

Table 1: Summary of Categorized Action Items

Issue Area	Action Category	Quantity	Percent of Total
Issues Related to Gross Savings Impacts	Analysis Assumptions	20	14.3%
	Calculation Method	10	7.1%
	Calculation Tool	2	1.4%
	M&V Plan	14	10.0%
	Revise to Match CPUC Savings Estimate	5	3.6%
	Subtotals	**51**	**36.4%**
Process, Policy, Program Rules	Baseline	10	7.1%
	CPUC Policy	2	1.4%
	Did Not Follow Previous CPUC Guidance	3	2.1%
	Eligibility	13	9.3%
	ER Preponderance of Evidence	2	1.4%
	EUL/RUL	9	6.4%
	Fuel Switching	0	0.0%
	Incentive Calculation	9	6.4%
	Maintenance	0	0.0%
	Measure Cost	6	4.3%
	Measure Type	5	3.6%
	PA Program Rules	2	1.4%
	Repair	0	0.0%
	Self-Generation	0	0.0%
	Subtotals	**61**	**43.6%**
Documentation Issues	Inadequate Response to Previous EAR	0	0.0%
	Missing Documents	7	5.0%
	Missing Required Information	8	5.7%
	Project Scope Unclear	3	2.1%
	Subtotals	**18**	**12.9%**
Issues Related to Net Impacts	NTG	0	0.0%
	Program Influence	10	7.1%
	Subtotals	**10**	**7.1%**
	Grand Total	**140**	**100.0%**

Project Submittals

SCE made a good effort to comply with the revised Custom Measures and Projects Archive (CMPA) Bi-monthly projects list submission process. SCE staff's use of the Commission staff checklist reduced many of the instances of incomplete initial project documentation submissions. In general, SCE provides initial project documentation in a timely manner when projects are selected for ex ante review. SCE's internal quality control and quality assurance review process is ongoing in parallel to their custom project technical reviews. In 2016, SCE's engineering team developed and implemented a database system to track ex ante review disposition findings, analyze them, and make them readily available to both their internal and contract reviewers. Commission staff believes these activities offer promise to improve the overall SCE ex ante performance. But Commission staff finds that success of these and other efforts require that they overcome and override implementation staff's and third-party contractors' reluctance to comply.

SCE provided a timely response to Commission staff's data request for information on third-party contracts and payments. In its review of the third-party data submission, Commission staff noticed that the third-party performance payments can be excessive.

Program Influence

Program influence needs to demonstrate that the energy efficiency program caused a net benefit for the ratepayers by motivating 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 on alternative designs or alternative available higher efficiency products not already under consideration, or analysis of alternatives to demonstrate how the customer requirements can be met or exceeded 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 SCE 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 program influence Commission staff expects to see a discussion of the evidence and why the evidence demonstrating program influence outweighs the evidence against. Too often project documentation provides little or no evidence of program influence beyond 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 project SCE_0043, a hydraulic press project, SCE staff did not bring this project with over 22 million kWh savings to Commission Staff's attention for an early opinion review until the customer's expectation was already set by the third-party implementer. In the past, Commission Staff has repeatedly raised the issue that setting customer's incentive expectations prior to the utility's complete review, and Commission Staff's review if the project was selected for ex ante review, is inappropriate. After interviews with the customer, Commission Staff discovered that neither SCE staff nor the third-party implementer had any identifiable impact on the development and design of this project and that the customer was unlikely to pursue a different design from that project that was implemented. In fact, the project represented a California business development activity which adopted a design incorporating energy efficiency aspects that Commission staff determined would likely happened absent any program incentive.

For SCE_0091, Commission Staff noted that the measure was repeatedly incentivized for this customer over many years, and that evidence of program influence was lacking. Commission Staff found that based on the PA submitted information, the simple payback for the measure was less than one year before incentives, indicating that year-after-year of incentives being offered was not appropriate for this customer for this measure.

For SCE_0128, a proposed retrofit at the gas plant, Commission Staff found little evidence of program influence. There was neither evidence that the customer considered any lower cost, lower efficiency design to achieve the new product mix nor that the PA influenced the customer to change any aspect of the project to improve efficiency. Commission Staff did not find any evidence that the third-party implementer provided analysis of alternative options to influence the adoption of the more efficient approach.

SCE needs to find ways to change program eligibility rules or incentive rates to reduce the dollars paid via incentives to customers for projects planned to be implemented independent of the program activity. For example, Savings By Design program offers incentives for exceeding T24 by a margin and pays the same incentive rate for measures of a similar end use. This program could remove standard practice measures that exceed T24 from the margin and savings calculation and/or offer much reduced incentives for lower efficiency measures compared to higher efficiency. Alternatively, the minimum margin above T24 could be increased to account for standard practice at least by building type or size. For chiller replacements in retrofit projects, a standard or typical practice should be established as the baseline. For packaged HVAC, incentives could be offered only for units at a minimum 20% or more above code. For LED lighting, higher efficacy products should be offered higher incentives with a minimum efficacy requirement that selects the upper half of the market rather than providing incentives for every product available.

Baseline and Industry Standard Practice

Other lingering 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 SCE team needs to broaden the awareness within the implementation staff and third-party contractors on the proper procedures for establishing baselines.

For example, SCE review staff did not recognize either the standard practice or free-ridership aspects of project SCE_0059, which involved the replacement of a 12" diameter pipeline with a 16" diameter pipeline. Commission Staff questioned the PA's program influence on this project and the real motivations behind the project, e.g. increasing capacity. The PA withdrew the project application.

For SCE_0128, the baseline was assigned as existing conditions, inappropriately using a retrofit add-on measure classification with no proper baseline assessment. Commission staff found that the PA documentation provided no evidence of program induced early replacement, hence the project could not be considered an Early Retirement measure type either. Therefore, Commission staff concluded that this project's proposed measure was a Normal Replacement measure type and the Industry

Standard Practice baseline applied. Commission Staff found that the proposed project measure was the industry standard practice baseline for this application and that there were no claimable gross savings impacts. Commission Staff required that the gross savings impacts be set to zero for this project.

Following adopted review process procedures:
For Project SCE_X128, a process modification at a cement plant, Commission Staff found that SCE staff did not follow the Commission's process or its own rules. During the installation phase on this selected project, SCE staff increased the customer incentive rate and increased the customer incentive cap without informing Commission staff. Commission staff learned that this was done for several projects to accelerate installations to meet SCE staff's annual savings goals at the end of 2016. For this project, SCE issued to the customer and implementer a letter that stated four requirements including dates by when the project had to be completed and all invoices submitted. SCE staff, however, did not confirm that the completion date was met and continued to accept invoices after the deadline. It is even more troubling that the customer agreement terms were altered for a project selected for ex ante review without any review opportunity provided to Commission staff, as required by Commission Decision D.11-07-030[3]

Calculation Methods
For SCE_X535, the proposed retrofit of a pumping system with a Variable Frequency Drive (VFD) control on the pump motor, Commission staff found that the SCE's calculation methodology and M&V plan were insufficient to support a project with an expected savings impact of approximately 4 million kWh. Similar issues were noted for SCE_0011. The savings calculation methodology lacked clarity and the M&V plan was insufficient. Commission staff requires that the PA provide a more concise, logically sequenced, step-by-step description of the calculation methodology, which does not require a reviewer to hunt through the calculation workbook to understand and follow the analysis methodology. For SCE_0049, the replacement of compressed air dryers, Commission staff found that SCE's analysis methodology and M&V plans were insufficient. Despite phone conversations and explicit directions from Commission staff, SCE did not correct the deficiencies. Commission staff was forced to write the M&V plan for SCE.

In the case of SCE_0079, a proposed project to replace existing programmable thermostats at a bowling alley, the savings calculation employed had not been properly verified by SCE and Commission staff found formulas in the calculation tool workbook designed to remove increases in peak demand from being reported along with other improper engineering assumptions.

For SCE_0104, Commission staff found inadequate vetting of the third-party submitted calculation workbooks which contained improper engineering assumptions and formulas that doubled the potential energy savings claims. In addition, both the third-party
and SCE's contract technical reviewer explicitly stated that "*...program policy does not enforce any governing code or industry standard practice (ISP) relating to the proposed REA measures.*"

[3] D.11-07-030, Attachment B at Page B6 directs that "Projects Energy Division selects for review will have their complete documentation from the IOU CMPA placed into an Energy Division Review CMPA…"

Commission staff found that this violated Commission policy, at that point in time, that all energy efficiency measures exceed applicable mandatory codes and/or ISP unless granted an exception by the Commission. Commission staff required SCE to take immediate steps to correct this interpretation throughout all ongoing programs and with all its technical reviewers.

Identifying Measure Eligibility and Type

For SCE_0013, the project included the proposed refurbishment of six 200 HP process cooling water pumps. Commission staff found that three of the six pumps were ineligible for program participation as they were operating within a one to two percent of the expected post overhaul efficiency, and one of the six pumps was ineligible because no pump efficiency data was provided . SCE's own pump test reports, submitted with the project files, clearly indicated those pumps were not recommended for overhaul yet the program proceeded accept the application and the internal review did not remove them from eligibility.

SCE staff must ensure that projects do not violate its own program rules. For SCE_0091, the proposed replacement of submersible pumps for oil production, Commission staff found, from ex post evaluation findings for the same ongoing activity at the site, that the measure EUL was 3.5 years while the Statewide Program Rules require that measures have an effective useful life greater than five years.

Throughout 2016, SCE listed several proposed compressed air projects in the Bi-monthly CMPA Lists. Commission staff found that some of these projects did not follow the 2014 Statewide Compressed Air Guidelines that the utilities and Commission staff has agreed upon. Commission staff required SCE to either modify or remove these projects from consideration.

When reviewing project SCE_0079, Commission staff encountered an SCE program that was designed around the premise of replacing existing hardwired thermostat controls with wireless thermostat controls. Commission staff found that the proposed replacements were only like-for-like replacements and not eligible measures and that no incremental savings potential above code mandated requirements would accrue. Commission staff rejected the project application and required SCE to suspend these measure offerings going forward across the program portfolio.

For SCE_0128, the measure was misclassified as a Retrofit Add-on measure type rather than the more appropriate choice of either early retirement or normal replacement. Lacking evidence of program induced early replacement, Commission Staff concluded that this project's proposed measure was a Normal Replacement measure type and the Industry Standard Practice baseline applied.

Based on the above project issues, Commission staff has concerns about SCE progress towards addressing important issues raised in the past related to both program implementation approaches as well as to internal project review activities. Some of these issues raise serious questions for Commission staff as to:

- Whether SCE's review staff is capable of objectively reviewing projects and overriding program staff and third-party implementer desires; and

- Whether SCE program staff and third-party implementers take seriously CPUC policy and review direction regarding ex ante values and project or measure eligibility.

Although SCE staff continues to bring early opinion requests to Commission Staff, SCE staff needs to do so earlier in the project development phase and provide the SCE internal analysis and any questions to Commission staff in a clear manner. In one early opinion review request regarding baseline policy for projects undertaken by a state agency, it took over six months of back and forth between SCE review staff, SCE implementation staff, the customer, and Commission staff, before Commission staff fully understood the SCE staff analysis and proposed alternate treatment that was being requested for approval. In this situation, the high level question was posed such as "*SCE staff does not believe Title 24 codes apply to this customer. What do you think?*" was too broad for Commission staff to formulate a concise response.

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 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 team's 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[4]. 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, SCE 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

[4] 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.

and the related Commission staff estimated third-party performance payments observed in 2016 are provided below.

- SCE_0043, the proposed customer incentive for this hydraulic press project was $1.77 million with an estimated third-party performance payment of $1.9 million.
- SCE_0128, the proposed incentive to the customer for this retrofit project was $290,871 with an estimated third-party performance payment of $185,681.
- SCE_0011, the proposed customer incentive for this refrigeration project was $129,044 with an estimated third-party performance payment of $97,370.
- SCE_0027, the proposed incentive to the customer for this waste water project was $66,411 with an estimated third-party performance payment of $62,695.
- SCE_0091, the proposed incentive to the customer for this pump project was $115,050 with an estimated third-party performance payment of $73,265.
- SCE_0049, the proposed customer incentive for this compressed air project was $111,280 with an estimated third-party performance payment of $95,850.
- SCE_0117, the proposed incentive to the customer for this compressed air project was $78,761 with an estimated third-party performance payment of $65,904.
- SCE_0100, the proposed incentive to the customer for this cooling project was $188,954 with an estimated third-party performance payment of $363,737.

Although Commission staff agrees that third-party implementer activities deserve support, many of the payments observed do not appear to be commensurate with the effort, cost or contributions made to the projects based on information provided in response to ex ante data requests. 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 in meetings with SCE staff, a conflict of interest exists for several of SCE'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. SCE has not informed Commission staff what actions have or will been taken to address and mitigate this problem.

Workpapers Ex Ante Reviews Discussion:

In 2016 Commission staff began to hold regular meetings with each PA, typically every other week, to discuss topics related to development of workpapers and deemed measures. SCE has been pro-active in their preparations for these meetings, typically providing advanced documents, which contributes to a productive meeting. See the section "Notable Accomplishments" below for some specific examples of areas where SCE'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, SCE 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 SCE's efforts fall far short of Commission staff expectations as defined the ESPI metrics.

Notable Accomplishments:

Commission and SCE staff completed an accelerated effort to develop, review and approve three workpapers intended to address a potential natural gas and related electricity generation shortage due to the closing of the Aliso Canyon natural gas storage facility. One workpaper, SCE13LG117, covers tube LED (TLED) replacements and was the first deemed workpaper for TLEDs to be approved from any PA. Commission staff's initial concerns were SCE's initial estimate of typical wattage reduction per TLED was too high and that the data and analysis initially submitted did not support SCE's recommended savings values. Commission staff approved the workpaper, with reduced savings and directed SCE to perform additional pre/post installation research on additional installations. SCE has provided regular updates on the progress of the research. Commission staff generally reviews this workpaper development a constructive collaboration and looks forward to reviewing the final research results and recommended savings values during 2017.

On a more purely administrative level, SCE is probably the most proactive of all PAs in informing Commission staff of the progress of their workpaper development activities. SCE regularly inquires with Commission staff, usually during bi-weekly meetings, for advanced advice and direction about how their anticipated revisions should be incorporated into their workpapers and documented for submission. During the fourth quarter of 2016, Commission staff worked with PAs to develop a timeline and requirements for the 2017 Phase 1 workpaper submittal, due on January 1, 2017. SCE's provided useful input to these guidelines that resulted in a comprehensive document that covered many different submission scenarios. For example, SCE specifically requested that they be allowed to submit some workpapers for Phase 1 review that may have been more appropriately submitted for a Phase 2 review. The longer Phase 1 review period (60 days for Phase 1 versus 25 days for Phase 2) was acceptable to SCE because it was more important that Commission staff direction be effective on January 1, rather than prospectively (which is required under Phase 2 review).

Areas of Concern:

There are numerous areas where SCE does not incorporate Commission 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 more than seven years old. More detail on areas of previous direction and input can be found in the attached tables. Commission staff is particularly discouraged with SCE's progress on implementing requirements and procedures to identify program influence in its package HVAC early retirement claims. More than three years ago, Commission staff directed SCE to develop some type of survey or questionnaire targeted at identifying and screening out normal replacement HVAC installations from early retirement claims. During 2016, Commission staff and SCE discussed this work several times during an in-person meeting and bi-weekly calls with the intent of implementing a process

for the 2017 program cycle. To date, staff is not aware of any additional efforts on the part of SCE to identify early retirement versus normal replacement installations. A review of the Q1-Q3 claims for 2016 shows that SCE is still claiming early retirement for a substantial fraction of its package HVAC accomplishments. As part of the 2015 deemed ESPI payment calculation, Commission staff reviewed all PAs' package HVAC claims. SCE's claims stood out as the only PA with reduced total installed tons of cooling capacity from 2013 to 2015 while savings actually increased. This is because large amount of savings were now being attributed to the "to-code" portion of an early retirement claim, with Commission staff not being able to determine program influence. In comparison, PG&E, whose program consists only of ROB measures, reported an increase in total installed tons in 2015. Commission staff maintains its concern that early retirement claims in SCE's package HVAC program have a combination of very low net and gross savings.

Another example of Commission staff requesting additional research that was not completed is for a workpaper covering Variable Refrigerant Flow (VRF) HVAC systems (SCE13HC036). One of the primary factors in the savings assumptions for the VRF workpapers is that the standard practice is a different system type with entirely different installation and sometimes operating characteristics. The suggestion in the PAs' workpapers is that upstream incentives for VRF systems will cause customers to purchase VRF systems instead of some other system with generally higher energy use characteristics. 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 all PAs to investigate the program influence and standard practice concerns. 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.

Commission staff issued five preliminary reviews on workpapers submitted in 2016. Additionally, many preliminary reviews from 2015 and 2016 remain unresolved. Some preliminary reviews are for statewide workpapers where either the lead PA has not submitted a workpaper or the lead PA's workpaper also has an unresolved preliminary or detailed review. When SCE intends to be a participant in another PAs' workpaper, they should first check with the lead PA to ensure that the lead workpaper has been submitted and that it at least received interim approval. Commission staff emphasizes that participant workpapers that pass the directed 25 day review period are not approved if the lead PA's workpaper has either not been submitted or it has an outstanding preliminary or detailed review. Commission staff issued 13 detailed reviews on workpapers submitted in 2016, including five reviews of workpapers submitted in 2016 for 2017 phase 1 review.

The establishment of industry standard practice for baselines remains a concern in nearly all workpapers. Commission staff remains concerned that workpaper development efforts do not place enough emphasis on establishing industry standard practice. For example, a workpaper covering LED retrofits for parking garage luminaires (SCE13LG123) included only an analysis of what types of linear fluorescent fixtures and their input power ratings that Title 24 would allow and did not include any research of what types of fixtures were typically installed outside of the PA's program. As another example, workpapers for residential hard-wired LED fixtures (SCE13LG115) followed a wattage reduction ratio that had been passed-through in a previous staff review. For this workpaper, Commission staff analysis showed that proposed savings values did not consider that Title 24 requires high-efficacy (such as LED or CFL) fixtures for many space types in homes.

One of the biggest challenges for Commission staff and ex ante consultants is to populate the ex ante database with approved ex ante values for measures covered by workpapers. SCE continues to struggle with developing ex ante data sets for workpapers that are compatible with the database specification. SCE 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. One of the biggest problems with SCE data is that they submit numerous measures and implementation records that have identical ex ante values, resulting in identical cost-effectiveness values, with the only difference being that records have different names. This appears to be an effort on SCE's part to align ex ante data with how they internally track individual measures and implementations across various programs. Commission staff has informed SCE in the past that identical records, with the record name being the only difference, are not acceptable and will be rejected.

The PAs have utilized the CalTF as a resource for workpaper development. Commission staff acknowledges that the ESPI process is not an evaluation of the CalTF, however, the PAs have chosen to devote resources to participate in, and provide funding to the CalTF; this costs both ratepayer dollars, PA staff and consultant resources. Therefore, for this reason Commission staff believes it is incumbent upon the PAs to guide the CalTF process in a way manner that results in the desired and expected improvements to the overall workpaper ex ante development activity. Unfortunately, Commission staff observes similar problems with workpapers and workpaper development efforts that have been routed through the CalTF review process as have been noted over several years of ESPI memos. For example, SCE utilized the CalTF for added review their tube LED workpaper (SCE13LG117) before submitting the workpaper to Commission staff for review. Upon review, Commission staff observed that SCE had completed little research on baseline power consumption, an issue that Commission staff had expected would have been noted and addressed during the CalTF review. Commission staff acknowledges SCE's efforts to address issues related to this workpaper in a timely fashion, however, for this particular workpaper, the effect of utilizing the CalTF process prior to submitting to Commission staff only resulted in extending the time before submission to Commission staff and thus possibly delaying the approval of the workpaper and delaying the inclusion of the measures in programs with little realized benefit to the quality of the submitted workpaper.

Commission staff agrees that a separate, collaborative review and development body, such as the CalTF, could improve and expedite workpaper development and review. However, in order for the CalTF to be successful, the PAs should provide guidance to ensure that input and comments from the CalTF are oriented toward addressing the most critical ex ante review issues. This will require that the CalTF to undertake a more in-depth review and critique of workpaper assumptions, analysis methods and results. Additionally, as noted in the third-party contracting discussion section, use of CalTF member reviewers who have a financial stake in the outcome of the review presents a potential conflict that may prevent important issues from being addressed by their review. Commission staff suggests that the CalTF may need to institute procedures or rules such that potentially conflicted members neither drive the review process of such workpapers nor should they participate in "voting" relative to such a workpaper.

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 on the PA total claims for custom and deemed activities, respectively. The weights for custom and deemed scores will be developed and published by Commission staff in June 2017 based upon the PA's 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 metric.[5] 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 assigned a qualitative rating as to the level of due diligence applied to the item as either deficient (or "-"), apparent but minimal (or "yes"), or superior (or "+"). Each of the ratings was then assigned a score percentage level of 0%, 50% and 100%, respectively. The assigned percentage scores were averaged across all the reviewed items. This resulted in 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.

[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").

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 SCE staff's positive efforts in these metric areas as discussed earlier. Those initiatives include review procedures and processes including SCE's engineering team development and implementation of a database system to track ex ante review disposition findings, analyze them, and make them readily available to both their internal and contract reviewers. Although these efforts have not yet reflected themselves into the dispositions scores Commission staff believes recognition of the efforts of SCE technical review staff is warranted.

Commission staff has observed almost no similar efforts in the program implementation area and thus very minimal "Review Process Score Enhancements" were assigned as an "Implementation Increase." The absence of such evidence of improvement on the program implementation side is disappointing and Commission staff urges SCE staff to take such actions as outlined earlier so as to allow further improvement in performance and scoring during 2017. Occasionally SCE staff brings Commission staff projects for an early opinion before the project is listed on the CMPA list as ready for review. Often, however, those projects have already progressed to the point of having preliminary studies with savings and incentive estimates provided to the customer.

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 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, SCE submitted workpapers for LED lamps in early 2016, revised them based on dispositions and Commission staff direction, and them submitted new versions of the same workpapers in early 2017 to the Phase 1 review process for the 2017 program year. In the third and fourth quarter of 2016, SCE submitted additional workpapers for either 2016 Phase 2 review or 2017 Phase 1 review. Staff assigned a weight of 0.25 to the earlier submitted 2016 LED workpapers 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 SCE.[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.

[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."

If you have any questions or comments about the feedback or final scores, please contact Peter Lai (peter.lai@Commission.ca.gov). Note that pursuant to D.13-09-023, Commission staff will schedule a time with SCE staff to discuss its final scores.

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**	5	10%	4.25	4.25	5	10%	2.19	2.19
	Timely submittals: all lists, inventories, plans, studies, workpapers and project/measure documentation; timing and advanced announcement of submittals (spreading out submission when available rather than holding and turning in large batches); timely follow-up PA responses to review disposition action items including intention to submit/re-submit with proposed schedule.								
2	**Content, Completeness, and Quality of Submittals**	15	30%	1.55	4.65	15	30%	1.97	5.91
	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.								
3	**Proactive Initiative of Collaboration**	5	10%	2.29	2.29	5	10%	2.50	2.50
	PA efforts to bring either measures, projects, studies, questions, and/or savings calculation methods and tools to Commission staff for discussion in the early formative stages, before CPUC staff review selection. In the case of tools, before widespread use in the programs. Commission staff expects collaboration among the PAs to develop common or coordinated submissions and for the PAs to undertake joint or coordinated planning activities and study work. The PAs are expected to engage with CPUC staff in early discussions on unique or high profile, high impact measures or projects before program or customer commitments are made. The PAs are expected to engage with CPUC staff on planning and execution of studies that support proposed offerings, tools, or determination of proposed								

	baselines or other programmatic assumption that can impact ex ante values to be utilized.								
4	**Program Administrator's Due Diligence and Quality Assurance/Quality Control 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.	**12.5**	**25%**	**1.52**	**3.80**	**12.5**	**25%**	**2.40**	**6.00**
5	**Program Administrator's Responsiveness to Needs for Process and Program Improvements** 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).	**12.5**	**25%**	**2.61**	**6.53**	**12.5**	**25%**	**2.60**	**6.50**
Total		**50**	**100%**		**21.52**	**50**	**100%**		**23.10**

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	4	3	8	12	0	8	3	2	1	3	6	4
No	13	27	5	3	30	2	8	12	18	20	13	4
+	7	0	5	2	0	1	1	0	0	0	2	1
-	8	2	14	15	2	21	20	18	13	9	11	23

	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
X393 2nd	No	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Submitted level of documentation appears adequate for the project. Information requested in prior dispositions were addressed. The PA review was considered adequate. CPUC Staff will not undertake a complete detailed review of the submitted M&V data. CPUC staff will not undertake a complete detailed review of the submitted eQuest modeling. The PA addressed prior CPUC staff comments. PA followed prior guidance on determination EUL values for REA measures types.
X535 1st	-	No	+	+	No	+	+	No	No	No	No	+	Project is adequately described. M&V plan is insufficient, based on pump curves not power measurements. Considering the placeholder savings impacts (~3.9 MM kWh) more effort needs to be made to verify the impacts. The PA has shown improvements with regard to policy related to measure type and measure life. The PA did not include a signed application for the project. The project was selected more than 1 year before any documents were uploaded to the CMPA.
0015 1st	Yes	No	No	+	No	Yes	-	-	-	No	-	Yes	PA Technical Review changed the DEER Building type to Manufacturing Bio/Tech to maximize lighting HOU and apply HVAC IE from what the implementer had appropriately selected as unconditioned space and Light Manufacturing. The PA Technical Review failed to limit the VFD EUL value to the RUL of the host equipment. The PA Technical Review of the submitted calculation methodology and workbooks along with the pre-implementation lacked sufficient depth and professional care. The PA Technical Review did not demonstrate a clear understanding of how code requirements are to

												be interpreted and applied in establishing measure eligibility and baselines. The PA Technical Review did not consider the measure definition requirements stipulated in the SCE Solutions Directory to help determine measure eligibility. The PA Technical Review did not recognize the need to follow a more standardized lighting calculation approach for the de-lamping measure and use approved lighting fixture wattages. The PA Technical Review did not use available RTU specifications to review the M&V data and better determine analysis inputs and did not recognize that RTU serial numbers indicate the date of manufacture. The new SCE PA Technical Review workbook makes it difficult to read, even in edit mode, when the Project Summary narrative length exceeds the maximum cell height. Lastly, the hourly net grid impact analysis was performed incorrectly.
0014 1st	**+**	**No**	**-**	**-**	**No**	**-**	**-**	**-**	**No**	**No**	**Yes**	**Yes**	Appears to have been notices and uploaded according to EAR team review and direction. There was clearly some review of the submittals here, but it didn't seem to catch the most critical issues. Calcs do not match submittals. Assumptions not well documented or supported for energy savings. Most of what EAR team caught could have easily been identified in an in-house review. Missed: DEER requirement for re-lamping being ER for RUL only; incorrect use of interactive effects. Use of ELC spreadsheet tool shows movement toward ensuring lighting calculations follow DEER methods (though EAR team did identify some problems with use of the tool in other categories).
0011 1st	**No**	**No**	**-**	**-**	**No**	**-**	**-**	**-**	**Yes**	**No**	**Yes**	**-**	The calculation methodology for the project lacks clarity. CPUC staff do not feel the proposed M&V will provide reliable savings estimates. CPUC staff require that the PA provide a more concise, logically sequenced, step by step description of the calculation methodology for this project, which does not require the staff reviewer to hunt through the calculations for this project on a sheet by sheet, cell by cell basis to understand the analysis methodology. Of primary interest is the calculation method proposed to be used to estimate the ex ante savings following the collection of post installation data.
0013 1st	**-**	**No**	**+**	**No**	**No**	**No**	**-**	**No**	**No**	**No**	**No**	**No**	Complete and comprehensive documentation provided. The PA included ineligible equipment in the project cost. Incentive appears to be incorrectly calculated.
0027 1st	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	Reasonably complete documentation addressing the major required information. PA tech reviewer accepted most of the third-party implementer's submission. Reasonable DEER EULs used. Documentation addresses most of the important areas required.
0027 2nd	**No**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**No**	**No**	PA response to first EAR in 4 weeks. Responses address action items from the first EAR,
0036-1 1st	**-**	**No**	**-**	**-**	**-**	**-**	**No**	**-**	**-**	**-**	**-**	**-**	Appears to continue practice of submitting projects with little or no program influence. While documentation of project was complete, little if any program influence docs submitted. Inadequate doc of program influence; no support for high HOU. Many shortcomings including P/I, HOU and customer SP. Looks like an after the fact justification. Did not use DEER HOU and justification for non-DEER HOU inadequate. Little if any P/I yet submitted anyway.
0036-2 1st	**-**	**No**	**-**	**-**	**-**	**-**	**No**	**-**	**-**	**-**	**-**	**-**	Appears to continue practice of submitting projects with little or no program influence. While documentation of project was complete, little if any program influence docs submitted. Inadequate doc of program influence; no support for high HOU. Many shortcomings including P/I, HOU and customer SP. Looks like an after the fact justification. Did not use

													DEER HOU and justification for non-DEER HOU inadequate. Little if any P/I yet submitted anyway.
0036-3 1st	**+**	**No**	**No**	**-**	**No**	**-**	**No**	**-**	**No**	**No**	**+**	**-**	PA submitted project well in advance of construction. Supporting documentation for program influence was minimal. Initial basis of design documents prepared by lighting consultants are typical and would have served to support the argument for program influence. Calculations used area assumptions that were different than those shown on plans which then caused calculations to yield incorrectly high savings. Errors in calculations vs. construction documents not caught by reviewers. PA follows DEER methods for lighting calculations Concern that commonplace technologies are continuing to show up in custom measures.
0036-4 1st	**-**	**No**	**-**	**-**	**No**	**-**	**No**	**-**	**-**	**-**	**+**	**-**	Standard practice and program influence not supported or documented. Critical areas of calculations missed in review Default assumption across most projects appears to be that LEDs won't be installed without incentives, which is contrary to the trend in lighting designs; presumption that LEDs are never standard practice. Uses DEER lighting calculations methods.
0073 1st	**Yes**	**No**	**+**	**-**	**No**	**Yes**	**No**	**-**	**No**	**No**	**Yes**	**No**	Incorporation of review procedures in advance of submission to CMPA. Documents show that SCE is attempting to incorporate review for critical ex ante requirements an policies. Inadequate information provided to support ISP baseline. Project ISP as adjusted by PA internal reviewer does not appear to be reasonable for proposed project. Internal review adjusted baseline, but adjustments to not appear to consider equivalent level of service. Does not appear to follow DEER requirements for baseline fixtures with similar performance as measure fixtures.
0078 1st	**No**	**No**	**No**	**-**	**No**	**No**	**-**	**-**	**No**	**No**	**-**	**-**	Missing incentive calculations and T24 baseline analysis, did not check for possible deemed measures and applicable work papers. Did not check 3rd party baseline against outdoor lighting T24 requirements and whether the PA already had applicable deemed savings values for claimed measures. PA did not question 3rd party assumptions. PA did not enforce use of DEER operating hours for outdoor lighting. Inadequate PA QC review of the submitted Technical Review.
0075 1st	**No**	**No**	**Yes**	**-**	**No**	**Yes**	**-**	**-**	**No**	**No**	**No**	**-**	Generally complete submission Some crucial information was not provided regarding the existing and proposed control method, cross referencing of pump numbers to pump tests and an audit that is referred to in the documentation but was not provided. Reasonable quality documentation although deficient in some key areas. PA reviewer missed some critical issues such as addressing the seasonality in water usage in the analysis, and the EUL of REA measures. The PA still does not understand the requirements for the EUL of REA measures despite previous guidance.
0075 2nd	**No**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**No**	**No**	PA response to first EAR in less than 4 weeks. Responses address action items from the first EAR.
0079 1st	**Yes**	**No**	**+**	**Yes**	**No**	**-**	**-**	**-**	**-**	**No**	**No**	**-**	Submitted requested initial documentation after 35 days. PA included CPUC Staff checklist, unlocked calculations, PA Technical Review, third-party PFS report, etc. along with a table of content document listing all the submitted filenames and description of their content. It appears that PA did not subject the WEMS program to a review that it is following CPUC policies and guidance on measure eligibility and calculation methods. The program tool does not appear to have been closely examined and vetted. The tool was not submitted to the CTA prior to its widespread use in the WEMS program. PA technical review did not subject the baseline and submitted calculations to a careful and complete examination.
0091	**No**	**No**	**Yes**	**Yes**	**No**	**-**	**Yes**	**Yes**	**No**	**No**	**-**	**-**	M2, M3: reasonably comprehensive and complete submittals. M5, M9, M10: failed to incorporate ex post findings

1st													regarding the measure EUL, should not have applied DEER pump EUL to this unique project. M6, M6a: Reasonable review effort however missed some important details on clarification of the calculation method and M&V plans. The documentation seems to largely be "cut and paste" from past projects with slightly different measures, leading to a lack of clarity on some important issues which CPUC Staff have required be clarified in a documentation resubmittal.
0104 1st	**+**	**No**	**Yes**	**Yes**	**No**	**-**	**-**	**No**	**No**	**No**	**-**	**-**	Initial documents were uploaded to the CMPA about 17 days after the project was selected for review. The PA and 3rd party program policies continue to be in violation of CPUC Policy. The PA technical review did not thoroughly check the 3rd party calculations. M&V plan does not elaborate on what parameters are available from the EMS now and once the project is implemented. Hence, is it difficult to judge whether the M&V plan is taking full advantage of available data and information. The analysis does not use CZ2010 weather data. PA oversight on their contract technical reviewers continues to lag behind CPUC Staff expectations.
0049 1st	**+**	**No**	**+**	**-**	**No**	**-**	**-**	**-**	**-**	**No**	**Yes**	**-**	Uploaded documents in 14 days. Submittals reasonably complete, though flawed. Submittal lacking critical information on system controls. Included redundant equipment cost in cost analysis- correction likely to significantly reduce incentive cap. Poor QC missed several key items on incentive cap, calculation double counting, weak M&V plan. Good assessment of EUL for measure leading to classification of the measure as ROB. Missed several key areas which have been the subject of past reviews, cost, M&V, calculation method.
0049 2nd	**No**	**Yes**	**-**	**-**	**No**	**-**	**-**	**-**	**-**	**-**	**No**	**-**	The PA responded in a timely fashion. CPUC Staff are disappointed in the PA's response to the First EAR and the phone conference which was help on May 27, 2016 to discuss the project. The PA's response to issues affecting parameters which are critical to the savings impact analysis lack substance. CPUC Staff observe that the PA and its reviewers lack a commitment to addressing CPUC staff's concerns about the calculation methodology and M&V plans for this project. CPUC Staff therefore felt compelled to write the calculation methodology and M&V plan for this project. The PA continues to exhibit weakness in documenting calculation methodologies and M&V plans for complex projects.
0059 1st	**No**	**No**	**No**	**Yes**	**No**	**Yes**	**-**	**No**	**-**	**No**	**No**	**-**	The project is reasonably documented and explained. Submittals cover the key areas however there are some discrepancies in the documentation. Program influence seems questionable as the real drivers for this project are not discussed or questionable and this was not addressed by the PA. The PA still seems to struggle with identifying and declining projects where the EE program has little influence.
0074 1st	**No**	**No**	**-**	**Yes**	**No**	**-**	**-**	**-**	**-**	**No**	**No**	**-**	The third-party implementer has not followed the 2014 Statewide Compressed Air Guidelines, and the PA technical reviewer did not catch and correct these deficiencies. Submittals are reasonably complete.
0097-1 1st	**-**	**No**	**-**	**No**	**No**	**-**	**-**	**No**	**No**	**-**	**-**	**-**	Most of project should have gone through deemed path. Peer review does not appear to be conducted with an understanding of previous direction such requirements for EM&V or to follow DEER methods. Adequate information to perform technical review, but inadequate to perform program influence and NTG review. Inadequate program influence documentation. Not following DEER methods for lighting, which should have used deemed values. Reviewer missed many important points. Pretty much missed all previous direction on EM&V, DEER methods and program influence. High Hours of Use claimed for a DEER building type.
0097-2 1st	**-**	**No**	**-**	**No**	**No**	**-**	**-**	**No**	**No**	**-**	**-**	**-**	Most of project should have gone through deemed path. Peer review does not appear to be conducted with an understanding of previous direction such requirements for EM&V or to follow DEER methods. Adequate information to perform technical review, but inadequate to perform program influence and NTG review. Did not following DEER

												methods for lighting, which should have gone deemed. Reviewer missed many important points. Pretty much missed all previous direction on EM&V, DEER methods and program influence. High hours of use claimed for a DEER building type.
0098-1 1st	**No**	**-**	**-**	**-**	**No**	**-**	**-**	**No**	**No**	**-**	**-**	**-**	Documents submitted in advance of installation, though documents also lack some critical info and have errors. Very frustrating call with PA about project and ELC software. PA says all issues need to be addressed by review and cannot be addressed by the software but clear that reviewer is not catching issues. PA seems to be saying they can't solve this problem. PA's software AND internal review system are not catching fundamental DEER and CEV issues. Inadequate support for program influence. Documents show a number of areas where direction not being followed. Reviewer appears to have missed a number of critical DEER issues. Follow up meeting seemed to have software folks pointing out that the reviewer needed to catch all the things wrong and not offer any ideas about how to update software to avoid errors. Did not follow many DEER requirements related to HOU, IEF and EUL/RUL.
0098-2 1st	**No**	**-**	**-**	**-**	**No**	**-**	**-**	**No**	**No**	**-**	**-**	**-**	Documents submitted in advance of installation, though documents also lack some critical info and have errors. Very frustrating call with PA about project and ELC software. PA says all issues need to be addressed by review and cannot be addressed by the software but clear that reviewer is not catching issues. PA seems to be saying they can't solve this problem. PA's software and internal review system are not catching fundamental DEER and CEV issues. Inadequate program influence support. Documents show a number of areas where direction not being followed. Reviewer appears to have missed a number of critical DEER issues. Follow up meeting seemed to have software folks pointing out that the reviewer needed to catch all the things wrong and not offer any ideas about how to update software to avoid errors. Did not follow many DEER requirements related to HOU, IEF and EUL/RUL.
0100 1st	**+**	**No**	**Yes**	**-**	**No**	**-**	**-**	**No**	**-**	**No**	**No**	**-**	Initial documents were uploaded to the CMPA 16 days after the project was selected for review. The PA provided their Technical Review narrative in a separate Word document besides the Technical Review workbook. The PA did not scrutinize the submittal carefully and determine that the measure is already installed. The PA did not scrutinize the submittal carefully and determine that the measure is already installed. In addition, the PA did not conduct an independent Title 24 code requirements assessment and simply restated the Third Party implementer's incorrect conclusions. Title 24 code interpretation was erroneous and did not recognize the nature of indirect cooling. In addition, the regression analysis were not thoroughly scrutinized and questioned. The regressions were extrapolated outside of their valid data ranges and projected cooling loads that are greater than the total chiller plant capacity. CPUC staff has repeatedly told the PA that the REA EUL requirements and the submitted assessment simply applied a default DEER RUL without justification. It appears that at least one of the chillers was installed in 1994.
0117 1st	**Yes**	**No**	**Yes**	**Yes**	**No**	**-**	**-**	**-**	**-**	**No**	**No**	**-**	Prompt upload after selection. Reasonably complete documentation. PA reviewer incorrectly established a baseline for a ROB project leading to ex ante savings estimation errors and cost basis errors. Reviewer did not comprehend that the customer's decision to replace oil flooded compressors with oil free compressors affected the baseline and ISP determination for this project. CPUC Staff are disappointed that after 5 years of EAR PA technical reviewers appear to lack a basic understanding of how the assigned measure type affects the baseline determination for a project and the associated cost basis determination for a project.
0119	**-**	**No**	**-**	**Yes**	**No**	**-**	**-**	**-**	**-**	**-**	**Yes**	**-**	The initial documents were uploaded to the CMPA more than 3 months after the PA was advised the project was

1st													selected for EAR. Despite CPUC staff guidance during the 9/1/2016 phone call that the air compressor measure was ineligible, the PA failed to revise the documentation to remove the measure. The PA technical reviewer did not appear to consider the 2014 Statewide Compressed Air Guidelines in their review process. The documentation is reasonably complete and comprehensive. Appropriate DEER EUL applied; however ER and REA measures were combined.
0128 1st	**+**	**No**	**-**	**Yes**	**No**	**-**	**-**	**-**	**-**	**No**	**No**	**-**	The first upload was within two weeks of the project being picked. The PA implementer and reviewer incorrectly assessed the measure type and associated baseline, which has led to a waste of time and resources for both the PA and CPUC review staff. CPUC staff are disappointed that the PA technical reviewer failed to identify that this project cannot be classified as an REA measure type. This misclassification indicates that after 5 years of ex ante review there are fundamental issues with technical reviewer training which remain to be addressed by the PA. Reasonably comprehensive and complete project description.
0072 1st	**+**	**No**	**-**	**-**	**No**	**-**	**No**	**-**	**No**	**No**	**-**	**-**	Project disclosed on time. PA internal review appears to not be examining for program influence. PA did not submit comprehensive information for all calculations of the project. M&V plan for non-DEER HOU is not adequate. No apparent review of assumptions or program influence. Uses DEER interactive effects, but does not support the use of non-DEER HOU. Project appears to have been well on its way to an LED based design before PA got involved with the project.

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**

Metric 5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives).		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 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**	**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.
Metric 6a	Depth of IOU quality control and technical review of ex ante submittals: Third party oversight.	**Metric 4**	**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

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.		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.
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**	**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 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).
Metric 2	Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process.		

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 emhancements" 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
- none incorporated into final review -									

Direct Review - Workpaper Detailed Reviews									
WP ID	Rev	Title	Comments	Weight	1	2	3	4	5
SCE13LG103	3	Interior LED Downlight Fixtures	Primary Ex Ante development concerns:	0.25	yes	-	no	yes	no
SCE13LG106	3	MR16, PAR20, PAR30, PAR38, A, Candelabra, Globe Lamps, and Residential LED Lamp Giveaway	1. Use of wattage ranges without using the lowest wattage in the range	0.25	yes	-	no	yes	no
SCE13LG109	1	Exterior LED Lamp Replacement	2. Cost data that seemed to have not been reviewed	0.25	yes	-	no	yes	no
SCE13LG115	1	Residential LED Interior Fixtures	internally, such as perhaps transposed labor and material costs	0.25	yes	yes	no	yes	no
SCE13LG119	0	Residential LED Exterior Fixtures	3. Fixtures (SCE13LG103, SCE13LG115, SCE13LG119) assume the a WRR without consideration for Title 24 efficacy requirements nor the likelihood that standard practice may include some fraction of high efficacy installations. Primary Ex Ante data concern: SCE submits numerous measures and implementations that result in identical	0.25	yes	yes	no	yes	no

			cost effectiveness values (CEVs) with the only difference being slight variations in the IDs. This appears to be a way for SCE to keep track of different funding methods, but is not acceptable for the EADB since it results in identical CEVs.							
SCE13LG126	0	LED Ambient Commercial Fixtures - Retrofit Kits with T12 Baseline	Workpaper submitted to support early retirement claims via deemed programs including upstream/midstream incentives. CPUC staff repeated previous concerns about difficulty supporting ER in deemed programs, especially upstream/midstream.	1	yes	yes	no	yes	yes
SCE13LG117	0	LED T8 Replacement Lamps UL Type A	Supporting field work did not appear to adequately verify installed measure power draw. CPUC staff did not accept the proposed use of the emerging technology NTG (0.85). ET budgets funded the research but SCE did not demonstrate that the ET program was instrumental in developing the measure definition or program implementation details.	1	yes	-	+	-	yes
SCE13LG123	0	Interior LED Parking Garage External Driver Lamp-Style Retrofit Kits (UL Type C)	Workpaper not resubmitted; initial staff concerns over appropriate standard practice baseline	1	yes	-	yes	-	yes
SCE17PR008	0	Process VFD Up to 75 hp	Staff concerns over UES calcs and proper identification of applicable building types.	1	+	yes	no	yes	no
SCE17LG097	0	LED street lights	Staff concerns over adequate consideration of standard practice baseline	1	+	yes	no	yes	no
SCE17LG114	0	Exterior LED Luminaire with Integrated Occupancy Sensor	Staff concerns over justification for savings due to motion sensor; adequate consideration of standard practice baseline	1	+	-	no	-	no
SCE17LG017	0	Interior Integral Non-Dimmable (Screw-in) CFLs and Circlines		1	+	yes	no	yes	no
SCE17LG072	0	Upstream Interior 3-way and Dimmable CFLs		1	+	yes	no	yes	no

Direct Review - Workpaper Preliminary Reviews

WP ID	Rev	Title	Comments	Weight	1	2	3	4	5
SCE13CC007		Commercial Ice Machines	Preliminary Review - Incomplete (Lead PA WP #: PGECOFST108)	0.5	yes	-	no	no	no
SCE13LG025		Occupancy Sensors, Wall or Ceiling Mounted, Wired, Battery, or Self Powered Wireless	Preliminary Review - Incomplete (SCE is lead PA)	0.5	yes	-	no	no	no

SCE13RN027	Add Doors to Open Medium Temperature Cases	Preliminary Review - Incomplete (Lead PA WP #: PGE3PREF116)	0.5	yes	-	no	no	no
SCE13WP003	Farm Sprinkler to Micro Irrigation Conversion	Preliminary Review - Incomplete (Lead PA WP #: PGECOAGR111)	0.5	yes	-	no	no	no
SCE13WP007	Low Pressure Sprinkler Nozzles	Preliminary Review - Incomplete (Lead PA WP #: PGECOAGR112)	0.5	yes	-	no	no	no

Direct Review - Unresolved Workpaper Preliminary Reviews

WP ID	Rev	Title	Comments	Weight	1	2	3	4	5
SCE13CC013		Commercial Pressure Fryers	Not resubmitted. SCE notes they are working on ISP and measure is not being offered.	0.25	no	-	no	-	no
SCE13LG019		Energy Star Ceiling Fan with CFLs	Not resubmitted.	0.25	no	-	no	-	no
SCE13LG116		LED Residential GU-24 Lamps		0.25	no	-	no	-	no
SCE13PR009		Zero Air Loss Condensate Drains for Compressed Air Systems		0.25	no	-	no	-	no
SCE13CC015		Commercial High Density Universal Holding Cabinet Systems		0.25	no	-	no	-	no
SCE13HC048		Water Source Heat Pumps		0.25	no	-	no	-	no
SCE13LG090		Interior Induction Lighting	Measures not updated; expired in June 2016.	0.25	no	-	no	-	no
SCE13LG025		Occupancy Sensors, Wall or Ceiling Mounted, Wired, Battery, or Self Powered Wireless	Statewide coordination is needed. This workpaper is an example of where that is not happening.	0.25	no	-	no	-	no
SCE13RN027		Add Doors to Open Medium Temperature Cases		0.25	no	-	no	-	no
SCE13WP003		Farm Sprinkler to Micro Irrigation Conversion		0.25	no	-	no	-	no
SCE13WP007		Low Pressure Sprinkler Nozzles		0.25	no	-	no	-	no

Direct Review - Completed Ex Ante Data Reviews

WP ID	Rev	Title	Comments	Weight	1	2	3	4	5
- none incorporated into final review -			Commission staff performs ex ante data reviews on workpapers with interim approval. Data review ensures that the data is compatible with the ex ante database specification. Data reviews are not intended to change any values since the workpapers have previously been given interim approval. Commission staff did not perform any “data only” reviews of SCE workpapers. Any data review was included with the detailed or preliminary reviews covered above.						

Direct Review - Other Direction

WP ID	Rev	Description	Comments	Weight	1	2	3	4	5
Several Workpapers		Food service and commercial cooking workpapers	CPUC staff and EAR team not aware of any PA initiated work in this area.	0.5	-	no	-	no	no
Statewide		Variable refrigerant flow commercial systems	Commission staff and ex ante consultants met with full CalTF and CalTF staff on separate occasions to discuss concerns about measure application type (ER vs NR), fuel switching, standard practice baseline and analysis methods. No further updates from SCE before workpaper resubmission.	1	-	yes	-	-	-
Statewide (Several Workpapers)		Commercial package HVAC <65 kBtuh split and rooftop high SEER equipment	CPUC staff and EAR team not aware of any PA initiated work in this area. Measures in question eventually removed from program by SCE w/out additional work	0.5	-	-	yes	-	yes
Statewide		Commercial ductless mini-split heat pumps and air conditioners	CPUC staff and EAR team not aware of any PA initiated work in this area. Measures in question eventually removed from program by SCE w/out additional work	0.5	-	-	yes	-	yes
(Several Workpapers)		Package HVAC early retirement	Covered in meetings; discussions of how to do the work; but nothing complete yet.	1	-	yes	-	-	-

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	+	-	-	-	-
	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
	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		1	no	-	-	-	-

	efficacy fixtures may actually be required by code? (which would reduce the likelihood that an incandescent baseline is reasonable)						
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.	1	yes	yes	yes	yes	yes
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

2016 Annual Custom Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	SCE "-"	42%	66%	100%	86%	67%	
	SCE "+"	29%	5%	0%	2%	11%	
	SCE "Yes"	29%	29%	0%	11%	22%	
	Dispositions Score %	44%	19%	0%	8%	22%	
	Dispositions Score	**2.19**	**0.97**	**0.00**	**0.40**	**1.10**	
Review Process Score Enhancements	Technical & Policy QC Increase	**0.00**	**1.00**	**1.50**	**2.00**	**1.50**	
	Implementation Increase	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	
Total Score	Final Metric Score (1-5)	**2.19**	**1.97**	**2.50**	**2.40**	**2.60**	Total Points
	Metric points	**2.19**	**5.91**	**2.50**	**6.00**	**6.50**	**23.10**

2016 Annual Workpaper Ratings		Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	
Direct Workproduct Review Score	SCE "-"	23%	57%	45%	58%	33%	
	SCE "+"	33%	0%	18%	0%	0%	
	SCE "Yes"	44%	43%	36%	42%	67%	
	Dispositions Score %	**55%**	**21%**	**36%**	**21%**	**33%**	
	Dispositions Score	**2.75**	**1.08**	**1.82**	**1.05**	**1.67**	
Review Process Score Enhancements	SCE "-"	0%	63%	63%	63%	25%	
	SCE "+"	20%	0%	0%	0%	0%	
	SCE "Yes"	80%	38%	38%	38%	75%	
	Process Score %	**60%**	**19%**	**19%**	**19%**	**38%**	
	Process Increase Score	**3.00**	**0.94**	**0.94**	**0.94**	**1.88**	
	Process Increase Weight	**0.50**	**0.50**	**0.50**	**0.50**	**0.50**	
Total Score	Final Metric Score (1-5)	**4.25**	**1.55**	**2.29**	**1.52**	**2.61**	Total Points
	Metric points	**4.25**	**4.65**	**2.29**	**3.80**	**6.53**	**21.52**

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.