

PUBLIC UTILITIES COMMISSION

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Date: April 4, 2016
To: Southern California Edison
From: CPUC Ex Ante Review Staff
Cc: R.12-01-005 and R.13-11-005 Service Lists
Subject: Final 2015 Efficiency Savings and Performance Incentive Ex Ante Review Performance Scores

Pursuant to Decision (D).13-09-023 and D.15-10-028, Commission staff and consultants completed the 2015 Efficiency Savings and Performance Incentive (ESPI) mechanism ex ante review performance scoring as prescribed in Attachment 7 of D.13-09-023. The scores contained in this memo are final and Southern California Edison Company (SCE) shall use the final total score of 41.91 out of 100, as presented below, to calculate the 2015 ESPI ex ante review component award. The final score is explained in more detail in Attachments A and D to this memo. Attachments B and C of this memo provide the rationale Commission staff and consultants used for the final scoring.

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

This is the first time that the final scores were "built-up" from a detailed assessment of each reviewed work product. Commission staff believes the quantitative scoring utilized for the 2015 review period results in a more accurate assessment of utility performance both comparatively between utilities, and against Commission expectations, but also results in generally lower scores than in previous years. It is Commission staff's expectation that this detailed scoring approach, along with the detailed qualitative workpaper and custom project level feedback, is more consistent with the direction provided in the ESPI D.13-09-023 Attachment A, which defines each metric and provides "benchmarks" for scoring using counts, percentages and fractions of workpapers and custom projects that conform or deviate from Commission and Commission staff guidance¹. We believe this scoring approach will provide more specific guidance to the utilities on how to improve their ex ante due diligence. However, we acknowledge that this quantitative scoring approach does not correlate with the scoring approaches used in the previous

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

two years of the ESPI, so it would be inappropriate to compare these results with past years' results for the purposes of drawing any conclusions regarding improvements or deterioration in SCE's compliance with the CPUC's Ex Ante Review requirements.

For each metric, each reviewed utility work product was first determined to have components either applicable or not applicable to a metric². If not applicable to a metric that item was not used in the final score development for the metric. If an item was determined to have activity applicable to a metric, the item was then assigned a qualitative rating as to the level of due diligence applied to the item as either deficient (or "-"), apparent but minimal (or "yes"), or superior (or "+"). Each of the ratings were then assigned a score percentage level of 0%, 50% and 100%, respectively. The assigned percentage scores were averaged across all the reviewed items. This resulted in a custom review overall percentage metric score and a workpaper process percentage score. Additionally, the workpaper metric benchmarks from D.13-09-023 Attachment 7 were used to calculate a workpaper percentage score and thus workpaper points for each metric. Lastly, utility-specific custom review process "adders" were developed for each applicable metric based on observed QA/QC processes and procedures developed and under implementation in 2015 that are expected to positively impact future selected project reviews. Commission staff believes it is important to provide ESPI points for positive due diligence developments as recognition of the effort and continue encouragement even before a change in project-level results is observed.

To produce final scores, the individual metric scores for the two workpaper contributing areas (benchmarks and processes) were weighted together (65% benchmarks and 35% process) and the three custom review contributing areas (project reviews, QA/QC, and process adders) were summed. The larger weight was given to the workpaper benchmarks due to the large number of workpaper submissions received from SCE. The process scoring provides an avenue for assessing overall QA/QC processes and procedures put into place by SCE³. Attachment D contains tables of the metric components and total scores for each utility. Attachments B and C of this memo provide more specifics on the rationale and project-level issues Commission staff and consultants used in scoring for each metric for SCE.

² 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 ")

³ 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."

As to the 2015 workpaper activities, SCE's workpaper activities at the beginning of 2015 showed improvement over 2014 in terms of data submittals, however, CPUC staff observed very little movement to incorporate previous decisions, input and direction on any scale. One encouraging exception was SCE's efforts to develop an approach to document and properly claim "hard-to-reach" net-to-gross values, which requires coordination across workpaper development, field implementation and claims reporting disciplines.

In 2015, the Commission staff custom projects ex ante review activities spanned across 24 different custom projects. Commission staff found that SCE's Engineering Team exhibited genuine interest to collaborate and work with Commission staff to improve their project reviews due diligence. Commission staff looks forward to continue working with SCE's staff as they strive to better their internal custom projects review processes.

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

Workpapers:

In the mid-year review, Commission staff noted both improved processes and submittals as well as areas where improvement was needed and expected. SCE also had improved its internal process for identifying Hard-to-Reach customers and began the transition to submitting ex ante values in a format that was consistent with the ex ante database specification. SCE also engaged Commission staff in its efforts to more thoroughly support its deemed early retirement programs by proposing program and implementer requirements for properly identifying early retirement versus more conventional, normal replacement projects. One of Commission staff's biggest concerns at the time of the mid-year review was that SCE did not appear to have turned much attention to incorporating previous workpaper reviews, Commission staff direction, or Commission decisions into its workpaper developments.

For this final review, Commission staff commends SCE for its efforts to integrate process for identifying Hard-to-Reach program participants. Commission staff acknowledges that this is a particularly difficult process as it requires advanced identification of eligible measures, then applying the HTR criteria to projects as they get submitted, then ensuring that the HTR designation is properly integrated into claims. SCE stands alone among all IOUs in its efforts to integrate this process across several groups within its organization. There are also several examples of ex ante data submissions that were complete or close to complete, and SCE continues to progressively improve its submissions with successive reviews.

On the other hand, Commission staff is concerned about SCE's apparent lack of initiative to update workpapers despite past direction. Through preliminary review, Commission staff has identified numerous areas where workpapers have not been updated to address previous Decision language, Commission staff direction and/or detailed workpaper dispositions. SCE has an established process to update workpapers when discrete values are updated in DEER, however, there are continued discoveries, during the review of updated workpapers, of areas where consideration and application of past direction falls short of minimal expectations. In some cases, direction provided more than five years ago (such as requirements to investigate standard practice in food service sectors in D.11-07-030) has yet to be addressed. More recent

requirements such as: investigation of performance of highest efficiency, small package HVAC equipment; development of code baselines for non-DEER high intensity lighting equipment; and development of program requirements to support deemed early retirement claims remain unaddressed in the submitted workpapers.

As Commission staff migrates to a statewide compilation of approved ex ante values (an ex ante database or EADB) it is critical that SCE submit data in a format that is compatible with the EADB. SCE has been responsive to preliminary review comments and direction for revision to EADB submissions; however, nearly all data submissions continue to have issues. SCE in some cases still renames and resubmits data that is part of DEER. There are also areas where the submitted data violates fundamental database structure requirements (one example is submitting a single interior lighting implementation intended to apply to multiple sectors, which has never been allowed.) Nevertheless, SCE's efforts to update and submit compatible data are apparent and there is improvement when compared to 2014.

Custom Projects:

In the mid-year feedback, Commission staff identified several high-level issues with the expectation that SCE would take effective steps to address them. Commission staff commends the SCE Engineering Team for introducing new quality control (QC) and quality assurance (QA) processes that begins to address several of the issues that were identified in both the 2014 Final ESPI and in the 2015 mid-year feedback memorandums.

During 2015 SCE staff initiated a new QA/QC process that randomly selects projects at the application stage for a review of measure eligibility, documentation quality, and completeness prior to being assigned to a technical reviewer for a comprehensive project review. SCE staff reported to Commission staff that since inception of their new QA and QC processes, the number of issues identified in the randomly selected applications has been decreasing. Commission staff expects to observe the impacts of these QA/QC processes in the projects selected for review in 2016. Moving forward, Commission staff expects the QA/QC processes to ensure the comprehensive and timely incorporation of Commission staff guidance from prior review dispositions into SCE's own internal project reviews.

Commission staff observed several areas where the SCE custom project review activity has continued to improve. The areas of most notable improvement are highlighted below. Commission staff encourages SCE to continue to build on these areas and their new review process mentioned above.

- SCE Engineering Team staff continues their efforts to improve and work with Commission staff to better understand and implement Commission directions and policies.
- SCE staff implemented a process to consistently upload custom project tools to the Custom Tools Archive.
- SCE staff is bringing up more projects and questions about Commission policies for early opinion review discussions.
- SCE staff has been proactive about bringing large savings projects to Commission staff's attention to discuss potential issues.

- SCE Engineering Team has been more proactive about including utility program managers in meetings and in the weekly project status conference calls so that they could better understand Commission direction, policies, and Commission staff's review expectations for custom projects.

These above mentioned areas, and especially the newly implemented QA/QC process highlighted above, were the primary reasons Commission staff was able to augment many ESPI metric scores with added points above those assigned from the detailed results of custom projects reviewed during 2015. This augmentation was done to acknowledge the efforts of SCE Engineering staff that have not yet been observed in projects under review in 2015 due to the lag time in moving through the project pipeline. For 2016, the QC/QC process will need to show that selected projects have improved in order to justify increased metric scores.

On the other hand, Commission staff found many areas where the SCE custom activities still need substantial or enhanced attention beyond simply improving the internal review activity. As with Commission staff reviews, it is cost prohibitive for SCE's internal review to touch every project. It is incumbent upon SCE program staff and its implementation contractors to take steps to improve project eligibility screening, to ensure high levels of program attribution, to correctly classify projects, and to improve the quality of the savings estimates, M&V plans, and project documentation. Commission staff looks to the full range of SCE energy efficiency program implementation activities to work together to address the ongoing issues documented here. The areas found during 2015 to be in the most need of attention and improvement include:

- **Measure Eligibility, Measure Types, and Baseline Determinations.**

Commission staff remains concerned by the frequent occurrence of measures and projects that lack appropriate eligibility, measure type, and baseline assessments. As part of its QA/QC process, SCE staff needs to incorporate Commission staff guidance to proactively review project and measure activities and remove those measures that simply meet rather than exceed either mandatory State and Federal code requirements or Industry Standard Practice (ISP) baselines unless those are CPUC approved to-code activities. Specific projects were eligibility, measure type, and baseline determination issues were noted include:

- For Project Application 500203669 (CPUC Tracking ID X057), an airflow management project for a colocation data center, the baseline issues raised in past reviews were not fully considered and addressed.
- For Project Application 500224290 (CPUC Tracking ID X156), a compressed air system project with a medium incentive, Commission staff determined that the proposed air compressor retrofit did not exceed the 2013 Title 24 Standards, and the measure was ineligible for incentives.
- For Project Application 0500468787 (CPUC Tracking ID X462), a proposed replacement of direct current motors in existing extrusion machines with alternating current motors with variable frequency drives (VFD) and upgraded controls, Commission staff asked SCE staff to investigate not only the ISP for this activity, but also what the customer had been implementing at other facilities in

California and across the country so as to also evaluate program influence for early retirement. Commission staff found that the measure is standard practice for many customers and that SCE's ISP assessment for the measure was flawed. SCE later declined and withdrew the application.

- For Project Application 0500487098 (CPUC Tracking ID X486), a very large incentive project with a proposed replacement of a grinding process at a cement plant, Commission staff concluded that the measure is standard practice for most customers and that SCE's ISP assessment for the measure was flawed. SCE withdrew the application.
- In the first Ex Ante Review disposition for Project Application 500393980 (CPUC Tracking ID X370), a retro-commissioning project for a university campus, Commission staff informed SCE that the bundled measures under the designation of "Pneumatic to DDC Conversion" were not a Retrofit Add-on (REA) measure type and should be designated a Normal Replacement (NR). SCE ignored Commission staff's initial finding and did not address the issue until Commission staff rejected their final project claim submittal. During the follow-on discussions, Commission staff recommended that SCE unbundle the measure allowing the optimization portions to be designated as REA measure types and the equipment replacements be designated as NR measure types. Ultimately, SCE decided to remove the measure bundle from the final claim in lieu of adjusting the baselines.
- **Need to Demonstrate and Document Program Influence and Limit Free Ridership.** Commission staff identified that Project Application 500595319 (CPUC Tracking ID X541), a new construction lighting only project, was a free-rider. The design and construction documentation were completed before the customer applied to participate in the new construction program. Commission staff concluded that the SCE program had no influence on the customer's design and that the project approval process ran counter to the Savings by Design program rules designed to ensure program influence.
- **Determination of Net Electrical Grid Impacts and Non-IOU Fuel Sources.** Since 2014, Commission staff has informed the investor-owned utilities that energy efficiency savings must reduce purchases from the utility's grid and not the customer's onsite generation fueled by non-IOU fuel sources; however, compliance with this direction is still lacking. For Project Applications 500605248 (CPUC Tracking ID X536), a retro-commissioning project for an archival library and museum, and Project 500393980 (CPUC Tracking ID X370) an HVAC controls retrofit project at a university, SCE did not recognize the significant level of self-generation at each of the sites. Commission staff required that SCE perform hourly net electrical grid impact analysis and limit the claims for these two sites to the energy efficiency impacts that would reduce electrical grid purchases and not only reduce onsite generation. Commission staff found that SCE's interpretation of the Commission staff's Non-IOU Fuel Source Guidance Document was inaccurate and that their net electrical grid impact analysis for Application 500605248 was incomplete. Likewise, SCE attempted to claim that Project Application 500393980 preceded Commission staff's

requirement to limit energy efficiency savings claims to the hourly net electrical grid purchases. Commission staff found that SCE's claim was unfounded. Once SCE accepted that they were required to follow Commission staff's issued guidance document, SCE's engineering staff was diligent to complete the hourly net electrical impact grid analysis for both applications.

- **Responsible Spending of Ratepayer Funds.**

Commission staff has found occasions where SCE program staff allowed or instituted unnecessarily inflated financial incentive payments and Commission staff has expressed concerns about these ongoing practices on several occasions. For Application 500408706 (CPUC Tracking ID X387), a hotel lighting retrofit project that relied primarily on screw-in LED bulbs, Commission staff found that SCE paid higher incentives than necessary, amounting to an incentive that was orders of magnitude greater than what is offered for the same measure in its deemed catalog. In written replies to Commission staff, the implementer indicated that it was SCE staff that recommended that they apply for custom incentives in lieu of applying for deemed measure rebates.

Commission staff observed many lighting project undertaken via the custom process that are more cost-effectively handled via the deemed offering and it appears as if the only reason the projects are handled via the custom program is to offer increased incentives and higher program claims which are later reduced via the ex post evaluation. Commission staff has requested on many occasions in the past that this practice be terminated and deemed offerings be utilized rather than custom when the measure is in the deemed catalog.

For Application 500189909 (CPUC Tracking ID X128), a VFD fan control project for a cement plant, Commission staff objected to SCE providing a 50% increased incentive rate as well as doubling the incentive payment limit, effectively offering to pay for 100% of this large (over \$1 million dollar) project to encourage the customer to complete the work before the end of the year. This was apparently done so that SCE could claim the program savings earlier since the agreement was already signed, the project contracted, and the equipment already ordered. Although this project was undergoing parallel review, SCE program staff neglected to inform Commission staff of the proposed changes to the Commission staff-approved customer agreement offer and did not provide this information to Commission staff until more than a year later during post-installation review, when incentives were partially paid and M&V completed. Further, Commission staff found that many of the submitted invoices for this project did not appear to be justifiable costs (such as spare parts) and did not meet the agreement requirements for the project to be completed and invoiced by specified dates (such as commissioning/tuning/etc. undertaken long after the required completion date). These are troubling examples of an apparent lack of reasonable judgement in SCE program staff's stewardship of ratepayer funds that requires serious attention from SCE management.

- **Filed Savings Claims before the Ex Ante Review Process Completed.**

For Application 500189102 (CPUC Tracking ID X073), an evaporative cooling system replacing an air cooled kiln gas conditioning system for a cement plant, SCE filed a savings claim for the second quarter of 2013 and paid 60% of the incentives based on the pre-installation estimated 8,531,480 kWh saved and 1,061 kW peak reduction. Commission staff was alerted by the Commission's Ex Post Impact Evaluation team during 2014 that the project was selected as part of their 2013 sample. The project was undergoing post-installation M&V ex ante review at the time. SCE did not inform Commission staff via the custom review process that the project had been claimed and partially paid, despite Decision direction that such selected projects cannot be claimed without approval. Commission staff's final ex ante review disposition issued on May 1, 2015 approved 6,648,990 kWh saved and 813 kW peak reduction and ordered SCE to revise its filed 2013 savings claims. This is an example of apparent lack of appropriate controls over program staff approval of incentive payments and claims that requires SCE management attention.

- **ISP Studies are not Following Prior Commission Staff Guidance.**

Although SCE conducted many ISP studies in the past few years, its contractors and evaluation staff seem to struggle with identifying the most pertinent issues in ISP assessments. Commission staff observes that SCE contractors typically do not examine the customers' current practices (e.g., orders and installations within 1-2 years, perhaps longer depending on changes in the market) for implementing the measures in question, but rather only investigate the installed base measures that may have been installed more than ten years ago. Commission staff observed these issues in the ISP studies supporting Project Applications 500487098 and 500468787 and also brought this to the attention of SCE staff and contractors several times over the past several years. Commission staff acknowledges that ISP studies are sometimes difficult to scope for technologies where utility staff and their consultants are unfamiliar, or for markets that are in flux, highly segmented, or complex. However, SCE needs to redouble their efforts to understand how to execute these studies and not just expect Commission staff and their consultants to perform the work. It is notable that PG&E has made progress in this area and SCE is encouraged to collaborate with PG&E and Commission staff to come up this learning curve and develop more expertise in this important area that directly impacts portfolio gross as well as net performance as reflected in recent evaluation results.

In accordance with D.13-09-023, the IOUs' ex ante activities are assessed against a set of 10 metrics on a rating scale of 1 to 5. Once activities are assessed the ratings for each are converted onto this scale, where 1 is the lowest score assigned and 5 is a highest score assigned. A maximum score on all metrics for both workpapers and custom projects will yield 100 points whereas a minimum score on all metrics would yield 20 points. The 1-5 rating scale is distinguished as follows:

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

5. Consistently exceeds Commission expectations.

SCE’s final ESPI ex ante review scores for 2015 are as follows:

| Metric | Total Possible | Workpaper | Custom | Total Score |
|---------------|-----------------------|------------------|---------------|--------------------|
| 1a | 5 | 0.92 | 1.00 | 1.92 |
| 1b | 5 | 1.73 | 1.25 | 2.98 |
| 2 | 10 | 1.51 | 2.30 | 3.81 |
| 3 | 10 | 1.66 | 1.60 | 3.26 |
| 4 | 10 | 2.00 | 3.72 | 5.72 |
| 5 | 10 | 1.62 | 1.14 | 2.76 |
| 6a | 5 | 1.29 | 0.50 | 1.79 |
| 6b | 5 | 0.51 | 0.50 | 1.01 |
| 7 | 10 | 1.67 | 1.00 | 2.67 |
| 8 | 10 | 2.06 | 2.75 | 4.81 |
| 9 | 10 | 2.42 | 3.00 | 5.42 |
| 10 | 10 | 1.99 | 3.77 | 5.76 |
| Total | 100 | 19.38 | 22.53 | 41.91 |

It should be noted that in the preparation of the final 2015 ESPI ex ante review scores, Commission staff did not have all desired data available. For instance, Commission staff did not conduct a comprehensive claims review for these scores. For custom projects, Commission staff reviewed the 2015 activities and issued dispositions issues. Commission staff based the scoring on the data available and on what the individual utility has done to improve its internal due diligence process.

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

While collaboration and information-sharing is always encouraged, Commission staff envisions that, through the feedback provided in this ESPI component and ongoing collaboration, the utilities’ internal ex ante review policies and activities will become sufficient such that Commission staff can devote more time and resources towards collaboration and less time to correcting or re-analyzing ex ante values on behalf of the utilities. Commission staff recognizes

and commends the progress that has been made to date and encourages the utilities to continue to strive for excellence in this area.

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

Attachment A: Final ESPI Ex Ante Review Scores

| | Metric | Workpapers | | | Custom | | | Total | | |
|----|---|------------|-------|---------------|--------------|------------|-------|-------|---------------|--------------|
| | | Max Points | Score | Percent Score | Total Points | Max Points | Score | | Percent Score | Total Points |
| 1a | Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the pre-submittal/ implementation phase: Timing of disclosure in relation to reporting | 2.5 | 1.84 | 36.8% | 0.92 | 2.5 | 2.0 | 40% | 1.0 | 1.92 |
| 1b | Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the post-submittal/ implementation phase: Timing of responses to requests for additional information | 2.5 | 3.46 | 69.2% | 1.73 | 2.5 | 2.5 | 50% | 1.25 | 2.98 |
| 2 | Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process | 5 | 1.51 | 30.2% | 1.51 | 5 | 2.30 | 46% | 2.30 | 3.81 |
| 3 | Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes) | 5 | 1.66 | 33.2% | 1.66 | 5 | 1.6 | 32% | 1.6 | 3.26 |
| 4 | Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to Commission staff in the formative stage for collaboration or input | 5 | 2.0 | 40% | 2.0 | 5 | 3.72 | 74.4% | 3.72 | 5.72 |
| 5 | Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives) | 5 | 1.62 | 32.4% | 1.62 | 5 | 1.14 | 22.8% | 1.14 | 2.76 |

Attachment A: Final ESPI Ex Ante Review Scores

| | | | | | | | | | | |
|--------------|---|-----------|------|-------|--------------|-----------|------|-------|--------------|--------------|
| 6a | Depth of IOU quality control and technical review of ex ante submittals: Third party oversight | 2.5 | 2.58 | 51.6% | 1.29 | 2.5 | 1.0 | 20% | 0.5 | 1.79 |
| 6b | Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V | 2.5 | 1.02 | 20.4% | 0.51 | 2.5 | 1.0 | 20% | 0.5 | 1.01 |
| 7 | Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience | 5 | 1.67 | 33.4% | 1.67 | 5 | 1.0 | 20% | 1.0 | 2.67 |
| 8 | Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated | 5 | 2.06 | 41.2% | 2.06 | 5 | 2.75 | 55% | 2.75 | 4.81 |
| 9 | Professional care and expertise in the use and application of adopted DEER values and DEER methods | 5 | 2.42 | 48.4% | 2.42 | 5 | 3.0 | 60% | 3.0 | 5.42 |
| 10 | Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products | 5 | 1.99 | 39.8% | 1.99 | 5 | 3.77 | 75.4% | 3.77 | 5.76 |
| Total | | 50 | | | 19.38 | 50 | | | 22.53 | 41.91 |

**Final 2015 Efficiency Savings and Performance Incentive – Ex Ante Performance – Workpapers Scores –
Southern Edison Company**

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|--|---|-------|--|
| 1a | Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the pre-submittal/ implementation phase: Timing of disclosure in relation to reporting | <ol style="list-style-type: none"> 1. Fraction of deemed measures for which workpapers have been submitted to Commission prior to measure being offered in the portfolio; 2. Fraction of workpapers disclosed prior to or during work commencement and submitted upon completion rather than withheld and submitted in large quantity; 3. Fraction of workpaper development projects for new technologies submitted for collaboration versus total number of workpapers for new technologies submitted | 1.84 | <p>There does not appear to be a comprehensive workpaper update process that involves a proactive review of underlying assumptions and methods with respect to direction and policy established through previous decisions. For example, recently reviewed LED and CFL fixture workpapers have little, if any, research or analysis of how Title 24 requirements may result in a more stringent baseline than the previously allowed wattage reduction ratio. Some lighting workpapers where code baselines were not part of DEER or covered in the 2013-2014 lighting dispositions were resubmitted without any additional analysis to revise the code baseline. Previous ESPI reviews have noted the increase in custom projects that only include lighting measures (for technologies such as LED and CFL fixtures and lamps and tube LED replacements) where there is little information that indicates these sites have significantly different characteristics from DEER building types or that the measures are significantly different than approved deemed measures.</p> <p>SCE submitted 74 workpapers in 2015. Although the submissions tended to come in chunks (up to 6 workpapers per day), there were no submissions made between 7/8 and 10/20/2015. Then, 4 batches of submissions totaling 19 workpapers were made over a 10-day period toward the end of 2015. EAR team reviewed 4 workpapers from SCE which considered technologies that were first proposed in 2015. None of these workpapers were submitted for collaboration.</p> <p>CPUC staff noted in the mid-year review its concerns over workpapers submitted after measures were offered in programs; custom measures that were likely more appropriate for deemed workpapers; and disclosure of workpaper development activities. CPUC staff remains concerns that deemed measures are being offered and claimed without workpapers (e.g. residential surveys) and some measures are widespread in custom projects but should really be included in deemed programs (e.g. tube LED replacements).</p> |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|--|--|-------|---|
| 1b | Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the post-submittal/ implementation phase: Timing of responses to requests for additional information | Percentage of workpaper reviews which experience significant delay[3] due to slow response to requests for readily available (or commonly requested)[4] additional information (higher percentage = lower score) | 3.46 | <p>The mid-year review noted that preliminary reviews would continue throughout the year, with a focus on reviewing for complete information. CPUC staff reviewed 24 workpapers with 3 of them being complete the first time they were reviewed. Of the 21 incomplete workpapers, 2 were not re-submitted (Quality Installation for Residential systems – SCE13HC023 and Commercial High Density Universal Holding Cabinets – SCE13CC015). Additionally 2 workpapers weren’t re-submitted for 7 months (SCE13LG115 and SCE13LG116); however, the information required to complete these workpapers included SCE re-evaluating the way they account for the hard-to-reach net-to-gross. Overall, SCE has shown some improvement in responding to workpaper review comments with an average resubmission time around 2 months.</p> <p>Efforts on updating the residential quality maintenance workpaper have not addressed CPUC staff direction to consider most recent EM&V findings. SCE’s revised workpaper covering residential quality HVAC installation, submitted in July of 2015, did not consider the most recent EM&V results for residential quality installation that were published several months earlier. CPUC staff direction from October 2014 required consideration of EM&V findings when updating workpapers.</p> |
| 2 | Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process | Percentage of workpapers that address all aspects of the Uniform Workpaper Template (as described in A.08-07-021, or any superseding Commission directive) | 1.51 | <p>In 2015, additional EAR team emphasis and resources were spent on Preliminary review of SCE workpapers, particularly in providing specific review comments regarding each workpaper’s ex ante database submission. EAR team reviewed and scored 31 SCE workpaper submissions for this metric. Nine of these submissions address all (or almost all) of the Uniform Workpaper Template and ex ante database format (typographic issues only) leaving 70% which have multiple errors such as the following:</p> <ul style="list-style-type: none"> • Several workpapers were submitted with duplicate, repeating entries whereas the ex ante team has stated multiple times that only a unique records should be submitted. • Several workpapers were submitted with detailed cost information in the narratives that were not reflected in the ex ante submission. <p>While substantial improvements in ex ante data development are still needed, SCE worked diligently, during the summer of 2015, to update their ex ante submission format in order to meet the 2014 EAR team cost guidance. There were still some problems with duplicate data as discussed, however, the submissions made in December included cost records which were well-formatted and met the EAR team guidance.</p> |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|---|---|-------|--|
| 3 | Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes) | <ol style="list-style-type: none"> 1. Percentage of workpapers that include appropriate program implementation background as well as analysis of how implementation approach influences development of ex ante values; 2. Percentage of workpapers which, on initial submission, were found to include all applicable supporting materials or an adequate description of assumptions or calculation methods | 1.66 | <p>Shortcomings with supporting documentation were observed including:</p> <ul style="list-style-type: none"> • Information describing how early retirement evidence requirements will be met through deemed programs (upstream package HVAC, direct install lighting.) • Technical development of savings values for package HVAC measures not included in DEER. • Standard practice research on food service holding cabinets • Code baseline development for non-DEER lighting technologies including induction and LED fixtures • Supporting program information and analysis for the use of the hard-to-reach net-to-gross value. (Note: While SCE has developed a programmatic process for identifying and reporting HTR customers, improvement is still needed in translating the higher level processes to workpaper specific requirements.) • Code baseline and program influence information to support baseline energy use values for LED fixtures installed in school buildings <p>CPUC staff noted in the mid-year review that it is often difficult to quickly determine the nature of revisions to the workpapers, the areas and magnitude of changes, and, for workpapers developed in cooperation with the CalTF, what the CalTF involvement was. An example of an improvement in this area is SCE’s proposed workplan for updating the residential HVAC quality installation workpaper, which included a summary of CalTF recommendations and data sources. While CPUC staff as significant concerns about the workplan, the summary provided enabled CPUC staff to develop feedback more quickly.</p> |
| 4 | Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to Commission staff in the formative stage for collaboration or input | Percentage of high profile program, or high impact measure, workpapers submitted for collaboration or flagged for review | 2.0 | <p>SCE engaged CPUC staff on their plans to revise the HVAC residential quality installation workpaper. Other than that, SCE regularly updates their workpaper development activities report, but does not take initiative to seek input from CPUC staff on high profile or high impact workpapers. Areas where SCE fell short are:</p> <ul style="list-style-type: none"> • Package HVAC early retirement: The use of early retirement implementations approved for deemed measures in 2013 through the advice letter process; however, the workpaper still needs to document by which the early retirement evidence requirements can be met through a deemed program. • Tube LED lamp replacements where it appears all utilities have elected to promote these products through custom programs instead of more appropriately developing a deemed workpaper that addressed CPUC staff concerns issued in late 2014. The mid-year review noted SCE progress in SCE’s effort to use a pilot program as part of its workpaper development, however, it appears that LED tubes are only being offered (in very large quantities) through custom programs. |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|--|--|-------|--|
| | | | | <ul style="list-style-type: none"> School LED fixture replacements: This workpaper contained several problems with program influence and code baseline that could have been more easily addressed through early engagement. |
| 5 | Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives) | Frequency of inappropriate or inferior quality at the time of initial Commission staff review (higher frequency = lower score) | 1.62 | <p>EAR team reviewed and scored 24 SCE workpapers for this metric. One-third of the submissions (8) were of appropriate quality and included all information needed to understand and review the workpaper. The workpapers scored for the metric included just the “initial” submission in 2015; subsequent submissions were excluded from consideration.</p> <p>Workpapers which represent the type of issues found in SCE workpapers include the following:</p> <ul style="list-style-type: none"> Commercial High Density Universal Holding Cabinet Systems (SCE13CC015): submission did not include sufficient field observations or data regarding industry standard practice. Therefore, it is unclear whether the proposed measure savings are justified. Five heating and package HVAC workpapers proposed early retirement measures but split the “to-code” and “above-code” into two different measures, which would make identifying these early retirement measures in claims very difficult. Furthermore, the workpapers did not include adequate support for how early retirement evidence requirements would be met. The reviewed workpaper IDs are: SCE13HC012, -23, -25, -35, -48. Interior induction lighting (SCE13LG090r2) did not appear to include analysis of code baseline (NOTE: code baselines based on the measure technology performance for induction technologies were not addressed in the 2013-2014 lighting disposition nor in DEER, and therefore should be addressed in workpapers.) <p>Examples of the submissions that EAR team counted as “appropriate quality” for this metric include the following:</p> <ul style="list-style-type: none"> Interior Integral, Non-Dimmable (Screw-in) CFLs (SCE13LG017r2) Residential Audits (SCE13MI001.2) |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|---|---|-------|---|
| 6a | Depth of IOU quality control and technical review of ex ante submittals: Third party oversight | Quality of workpapers prepared by consultants, third parties, and local government partners submitted by IOUs | 2.58 | CPUC staff identified two workpapers submitted by SCE that were developed by consultants. Ambient LED Fixtures (SCE13LG118) is nearly identical to the approved PG&E version. CPUC staff determined this workpaper to be well developed and revisions coming out of the initial workpaper review were adequately resolved. The other workpaper covered circulating block heaters (SCE13HC055) may have had contributions from consultants, but it is difficult to tell. CPUC staff identified errors in the ex ante data submission. This workpaper did not receive a detailed review (and therefore received interim approval), CPUC staff notes the very limited research performed on standard practice, apparently relying on consensus input from the CalTF that constant flow block heaters are standard practice. |
| 6b | Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V | <ol style="list-style-type: none"> 1. Percentage of workpapers which required changes to parameters of more than 10% or required substantial changes to more than two parameters among UES, EUL/RUL, NTG, impact shape, or costs; 2. Percentage change from IOU-proposed values to ED-approved values (higher percentage = lower score) | 1.02 | <p>CPUC staff issued preliminary reviews and dispositions on workpapers that included either revised values or direction for further analysis that will likely result in revised values. Of the 16 workpapers where revisions to ex ante values are required, CPUC staff estimate that 12 require changes to at least two values or any one value requires a downward revision by more than 10%. CPUC staff highlights specific concerns about the following workpapers:</p> <ul style="list-style-type: none"> • Residential Quality Installation (SCE13HC023): CPUC staff approved a minor revision to the workpaper that did not include revisions in consideration of EM&V findings published in February Of 2015. • Package HVAC Workpapers (e.g. SCE13HC012) utilized incorrect calculation methods for higher efficiency units that had been previously allowed by CPUC staff on an interim basis. However, workpaper authors chose to submit these same methods without performing additional analysis, while the initial CPUC input was more than three years old. <p>At the time of the mid-year review, CPUC staff had not performed any values review of submitted workpapers so it was difficult to provide specific feedback at that time. As discussed in item 1a above, CPUC staff expects utilities to broadly examine all decisions, workpaper feedback and staff direction in terms of how it may apply to all workpapers, not just those selected for review in the past.</p> |
| 7 | Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience | Percentage of workpapers with analysis of existing data and projects that are applicable to technologies covered by workpaper | 1.67 | <p>Using review comments from 2015 Preliminary and Detailed workpaper reviews, EAR team rated workpaper submissions for whether or not they correctly used recent and relevant data sources. All reviewed submissions (32) were counted for this metric, which means that SCE gets a lower score in cases where they submitted or re-submitted workpapers that did not incorporate previous EAR team comments.</p> <p>14 of SCE’s submissions used irrelevant or outdated data sources, including the following:</p> <ul style="list-style-type: none"> • Commercial food service workpapers continued to be the basis for program savings without completion of ISP studies (Industry Standard Practice). In 2015, EAR team reviewed 3 commercial |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|--|---|-------|--|
| | | | | <p>food service workpapers and only 1 of them had recent ISP analysis (hand wrap machines).</p> <ul style="list-style-type: none"> • The workpaper called “Unitary Air Cooled Commercial Air Conditioning and Heat Pump Units Under 65 kBtuh” (SCE13HC012) did not include or incorporate the data SCE provided to EAR team in October of 2014 regarding early retirement projects. • One reviewed workpaper directly used cost data from outdated versions of DEER: Water Source Heat Pumps (SCE13HC048). • Energy Star Ceiling Fan with CFLs (SCE13LG019): submission failed to use recent data including the EAR team lighting disposition as a basis to update the standard practice for screw-in lamps • Several exterior lighting workpapers proposed to change the hours of use away from the values in the 2013-2014 lighting disposition. No justification was provided for increasing the hours of use and recent EM&V results regarding exterior lighting hours of use were not referenced and, therefore, it appears SCE is unaware of the findings. <p>Similar to the mid-year review, CPUC staff emphasizes that SCE does not appear to be utilizing program participants as a source for investigating, understanding and proposing reasonable baselines for many measures.</p> <p>SCE initiated a series of research projects intended to update screw-in and MR-16 LED workpapers. CPUC staff recommends that SCE utilize the vast dataset of program sales data as a source for understanding consumer preferences for LED lamps. SCE has also started a collaborative review and revisions of the residential HVAC quality installation workpaper using measurements from program participants along with input from the CalTF. CPUC staff notes that it has concerns with the update plan and data analysis but, at the same time, is encouraged by SCE’s efforts to examine and share the data with CPUC staff and ex ante consultants.</p> |
| 8 | Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated | Frequency of revisions to workpapers in response to (and/or appropriate and well-defended rejection of) CPUC reviewer’s recommendations | 2.06 | <p>10 SCE 2015 workpapers were scored for this metric including all workpapers where SCE provided a response to EAR team preliminary or detailed reviews.</p> <p>5 of SCE’s responses were appropriate and included either corrections or additional discussion regarding CPUC reviewer comments. We appreciate SCE’s work to respond to EAR team comments regarding the ex ante data submissions. Also SCE’s resubmission of the LED Ambient lighting workpaper was scored on the positive side of this metric as it addressed EAR team concerns.</p> <p>On the other hand, 5 of SCE’s responses either had further errors or did not address all of CPUC</p> |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|--|---|-------|---|
| | | | | <p>comments. 3 workpapers are scored in the category because EAR team received no resubmittal or other feedback for the remainder of 2015 after a Preliminary workpaper review was returned as incomplete in April (Commercial Pressure Fryers, LED GU-24 Lamps) and July (Commercial High Density Universal Holding Cabinet Systems). 2 workpaper responses did not address all of CPUC comments and did not provide reasoning or discussion of the recommendations which were not followed (LED Exterior Landscape Lighting Fixture, Residential Variable Speed Spa and Wading Pool Pump).</p> |
| 9 | Professional care and expertise in the use and application of adopted DEER values and DEER methods | Percentage of workpapers, including those covering new or modified existing measures, that appropriately incorporate DEER assumptions and methods | 2.42 | <p>EAR team used all workpaper reviews for this metric and scored the metric based on the accuracy of SCE’s ex ante data submission. 32 submissions were scored for this metric and 25 of them appropriately incorporate DEER assumptions and methods including correct (or nearly correct) selection of ex ante database values from the DEER support tables. In particular, SCE worked hard during the 3rd quarter of 2015 to make adjustments to their submission format to remove duplicate records, enhance the description fields to meet ex ante team standards, and conform to the EAR team guidance on creating cost records for the ex ante database.</p> <p>Despite these efforts, SCE’s submissions in the 4th quarter continue to have issues. Several of the reviews conducted by EAR team in December showed that SCE does not consistently refer to DEER measures and energy savings (impacts) when they are required to. Also, there appears to be a disconnect between the implementation and program description information presented in the narrative workpapers and the data that is submitted; several recent workpapers have mis-matches between the narrative program description and the parameters submitted within the Implementation / Measure Catalog table (e.g. Unitary Air Cooled Commercial Air Conditioning and Heat Pump Units Under 65 kBtuh – SCE13HC012, Ductless Mini-Split and Multi-Split Air Conditioning and Heat Pumps under 65 kBtu/hr – SCE13HC033, and Water Source Heat Pumps – SCE13HC048).</p> <p>Finally, SCE makes mistakes in selecting the proper values from the DEER support tables. Examples from the 12 submissions that were scored down for this metric include the following: mismatches between the narrative workpaper net-to-gross IDs (NTG ID) and the NTG ID submitted in the ex-ante format, mismatches in the selection of Tech Group and/or Tech Type, and selecting the wrong net-to-gross (NTG) ID indicating that some workpapers were not correctly updated for DEER2016.</p> |

| Metric | Description | Workpaper Benchmark | Final | Commission Staff Assessment |
|--------|---|---|-------|--|
| 10 | Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products | Percentage of workpapers including analysis of previous activities, reviews and direction | 1.99 | <p>SCE makes an effort to meet Commission direction; however, improvement is required. CPUC staff remains concerned that past direction on workpaper development is not being addressed and, of equal importance, is not being broadly considered in overall workpaper development efforts.</p> <p>The mid-year review noted that on-going reviews would focus on SCE’s workpaper developments that consider previous input and reviews. About half of the 2015 work papers EAR team reviewed had major issues in areas that we have repeatedly asked for improvement on. Example of previous activities, reviews and direction that SCE has not consistently incorporated into their workpaper submissions include development of an ISP study prior to submitting workpapers for commercial food service measures, proposing changes to disposition values without accompanying research or sufficient description , use of the hard-to-reach net-to-gross programs without sufficient description or documentation, and on-going underperformance in the descriptive clarity of ex ante data submissions.</p> |

**Final 2015 Efficiency Savings and Performance Incentive – Ex Ante Performance – Custom Project Scores –
Southern Edison Company**

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|---------------|--|---|-------------------------|---|
| 1a | Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the pre-submittal/ implementation phase: Timing of disclosure in relation to reporting | (1) Percentage of projects in quarterly or annual claims that were reported in the CMPA twice-monthly list submissions; (2) Percentage of projects for which there is a two weeks or less difference between the application date and the date reported in the CMPA; (3) Percentage of tools used for calculations disclosed prior to use | 2.0 | <p>Commission staff did not conduct a claims review; though SCE has been doing a better job at uploading tools to the CTA.</p> <p>However, Commission staff observed some timing issues with SCE:</p> <ul style="list-style-type: none"> ● For Application 500645218, SCE did not update Commission staff after our quick email showstopper that they rejected the application. ● For Applications 0500734900, 0500756123, and 0500739310, SCE took almost 2 months to provide initial documents. ● For Application 0500756123, SCE took almost 3 months to provide initial documents. ● For Applications 500203669 and 0500393980, SCE did not address the measure classification and baseline from the initial reviews. ● SCE took almost 8 months to reply to Commission staff review of their ISP assessment on oil wells water shut-off controls and decline Application 0500458257. ● For Application 0500468787, the SCE did not provide any project documentation, only their ISP assessment. ● Application 0500596781 was selected on 10/22/2014 and SCE did not provide initial documentation until 14 months later on 12/31/2015. |
| 1b | Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11 07-030, D.12 05-015, etc.) in the post-submittal/ implementation phase: Timing of responses to requests for additional information | Percentage of projects which experience significant delay due to slow response to requests for readily available (or commonly requested) additional information (higher percentage = lower score) | 2.5 | For Application 500189102 (X073), SCE claimed the project before Commission staff issued its final disposition. For Application 0500408706 (X387), the utility did not adequately oversee the implementer's M&V data-logging to ensure that it was unbiased. For Application 500189102, SCE's post-M&V analysis was inaccurate and corrections were unnecessarily delayed by the SCE. |
| 2 | Breadth of response of activities | (1) Percentage of custom | 2.30 | SCE needs to better follow-up on project statuses. For example Application |

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|--------|---|--|------------------|---|
| | that show an intention to operationalize and streamline the ex ante review process | project submissions that show standardization of custom calculation methods and tools; (2) Development and/or update of comprehensive internal (to IOUs, third parties, and local government partners, as appropriate) process manuals/checklists and QC | | 500645218 was canceled after Commission staff provided a quick email showstopper comment on March 12, 2015 and we didn't learned about its cancellation until the January 19, 2016 CMPA Projects List indicated that it was rejected. Adopting the PG&E MLC Tool should help streamline custom lighting project as long as SCE includes them in the QA/QC process. For Applications 500393980 and 500605248, SCE failed to recognize that it was required to limit the claimed savings to those that impact the electric grid only. |
| 3 | Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes) | Number of repeated formal requests for additional documentation for project information and/or reporting claims that support ex ante review activities (fewer requests = higher score). | 1.6 | Commission staff waived a few projects from further reviews once adequate corrections were submitted, such as for Application 500393980 (X370). For Application 500595319 (X541), after Commission staff obtained the SimCalc tool that allows the underlying DOE-2.1e code to be examined, SCE did not upload any additional documentation related to the project. The Applications reviewed in 2015 were selected before SCE began their new QA/QC when they were not making sure that documentation was comprehensive. For example, SCE missed providing their internal Technical Review for Application 500346952 (X535). |
| 4 | Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to Commission staff in the formative stage for collaboration or input | Percentage of large high impact projects or measures referred to CPUC early or flagged for review | 3.72 | SCE brought 2 projects for early opinion discussions. One additional project review began as an early opinion review inquiry and became a full review (Application 500605248, X536). SCE is proactive and asks informal questions about pending projects and seeks to clarify commission polices. |

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|--------|--|---|------------------|--|
| 5 | Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives) | Frequency of inappropriate or inferior quality documentation on project eligibility, baseline determination, program influence, use of custom elements in projects, assumptions and data supporting savings, and project costs (higher frequency = lower score) | 1.14 | <p>SCE needs to improve in this area. Examples of project deficiencies in the metric category include:</p> <ul style="list-style-type: none"> ● For Application 0500408706 (X387), SCE pushed the project into custom to maximize incentives. ● For Application 0500595319 (X541), SCE has provided no further follow ups to correct the application. We concluded the project may not be eligible for the Savings By Design Program, measure may be standard practice for this customer, savings estimates made with software that has not been reviewed and approved by Commission staff, baselines may not reflect T24 requirements, and cost data not provided. ● For project Application 0500468787 (X462), a proposed retrofit of existing extrusion lines using DC motors with AC motors, VFDs and upgraded controls, staff found that the measure is standard practice for many customers and that SCE's Industry Standard Practice (ISP) assessment for the measure was flawed. ● For project Application 0500487098 (X486), a very large incentive project with a proposed replacement of a grinding process at a cement plant, staff found that the measure is standard practice for most customers and that SCE's Industry Standard Practice (ISP) assessment for the measure was flawed. SCE withdrew the application. ● Project Application 500224290 (X156) a compressed air system project with a medium incentive, we determined that the proposed air compressor retrofit did not exceed the 2013 Title 24 Standards, and that the measure was ineligible for incentives. |

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|--------|--|--|------------------|--|
| 6a | Depth of IOU quality control and technical review of ex ante submittals: Third party oversight (Weight=5) | Quality of custom project estimates prepared by customers, third parties, and local government partners submitted by IOUs | 1.0 | Application 500611124, the cement plant Vertical Roller Mill (VRM) project, did not properly inquire about the industry's standard practice and overall the project was not done well. For Application 0500408706 (X387) SCE oversight of the 3P M&V was poor and did not ensure that the data-logging was unbiased. |
| 6b | Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V | (1) Percentage of Projects requiring three reviews or re-requests for supporting information commonly requested; (2) Percentage of projects for which IOU-proposed savings and ED-approved savings differ by 20% or more (higher percentage = lower score) | 1.0 | <p>The midyear feedback on Application 500605248 (X536) indicated a lack of depth in SCE's internal technical review. Staff required SCE to undertake and limit the project savings to those that impact the electric grid. Ultimately, it was the Commission staff reviewer that determined the deficiencies in the facility design that would not allow for the ASHRAE 90.1 mandated requirements and the National Archives requirements to both be met. Similarly, Commission staff had to point out and require SCE to complete the hourly net electrical grind impact analysis for Application 500393980 (X370). This is the project that SCE elected to remove a measure rather than revise the baseline as directed. For Application 500189909, aka NMMP-12-000147, (X128), SCE's and 3rd party M&V true-up for this cement plant kiln fan VFD are still not fully resolved. Staff review of the first batch of projects using the PG&E MLC Tool found issues with the selected baselines and SCE needs to better QA/QC these projects.</p> <p>In contrast, the SCE's IR Technical Review for Application 500346952 (X204) proved sufficient to allow Staff to waive all further project review.</p> |

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|--------|---|--|------------------|--|
| 7 | Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience | Percentage of custom projects that use data sources and methods per standard research and evaluation practices | 1.0 | <p>SCE needs improvement in this area. Twelve touched projects had issues.</p> <ul style="list-style-type: none"> ● Project Application 0500468787 (X462), a proposed retrofit of existing extrusion lines using DC motors with AC motors, VFDs and upgraded controls, staff found that the measure is standard practice for many customers and that SCE's ISP assessment for the measure was flawed. ● For project Application 0500487098 (X486), a very large incentive project with a proposed replacement of a grinding process at a cement plant, staff found that the measure is standard practice for most customers and that SCE's ISP assessment for the measure was flawed. SCE withdrew the application. ● Project Application 500224290 (X156) a compressed air system project with a medium incentive, we determined that the proposed air compressor retrofit did not exceed the 2013 Title 24 Standards, and that the measure was ineligible for incentives. ● X370 had baseline issues. ● X387 SCE tried to push deemed into custom to maximize incentives. ● X541 did not consider SP for the customer. ● X536 had baseline issues. ● On a positive note though, in Project X453 SCE's ISP identified the standard practice and therefore declined the project. |

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|--------|--|--|------------------|--|
| 8 | Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated | (1) Frequency of improved engineering/M&V methods and processes resulting from (and/or appropriate and well-defended rejection of) CPUC reviewer's recommendations; (2) Percent of projects in custom reviews that reflect guidance provided in prior reviews | 2.75 | SCE needs improvement in this area. In Project X073, SCE claimed savings before final approval. In Project X370, the initial SCE response was inadequate and did not address the significant issues Commission staff identified. Although minor, the savings calculations for the lighting measures for X387 missed simple items that were pointed out in multiple past lighting review dispositions such as claiming peak demand reduction for exterior lighting and applying HVAC interactive effects to unconditioned spaces. |
| 9 | Professional care and expertise in the use and application of adopted DEER values and DEER methods | Percentage of custom projects including, and not limited to, new or modified existing technologies or project types that appropriately incorporate DEER assumptions and methods | 3.0 | For Project X387, SCE should have used deemed incentives but instead pushed the project into custom in order to maximize incentives for the customer. The lighting calculations for Application 500752020 (SCE-15-C-C-0015_0500752020+Multiple_RCx+Ltg) are flawed for lamp removals and the SCE Technical Review gamed the DEER lighting HOU by selecting a different building type that the 3rd party implementer had correctly selected. In contrast, the lighting calculation approach used for Applications 0500734900 and 0500748187 appear to be an effort to use the DEER methods with some corrections. |
| 10 | Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and | Percentage of projects identified in claims review that were implemented per CPUC directions in previous reviews | 3.77 | This score is a reflection that there are still a good deal of legacy projects that did not incorporate Commission staff guidance and directives over the review period. As the new QA/QC process takes hold we should expect to see SCE proactively incorporating past guidance in all their projects and their Technical Reviewers better identifying issues and able to go into depth where necessary. |

| Metric | Description | Custom Benchmark | Final 2015 Score | CPUC Staff Assessment |
|---------------|----------------------|-------------------------|---------------------------------|--|
| | future work products | | | At times it appears that the SCE contractor technical reviewers limit the scope of their reviews and are careful not to step on some toes. |

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

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

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

Details of SCE custom measure and project activities scoring:

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

Explanations of scoring tables row entries:

1. The row labeled with *IOU* “-“ lists the percent of custom project reviews undertaken in 2015 where the Commission staff evaluation of the project materials or information indicated that the IOU performance in this metric for the submission did not meet minimum expectations or requirements relative to the metric.
2. The row labeled with *IOU* “+“ lists the percent of custom project reviews undertaken in 2015 where the Commission staff evaluation of the project materials or information indicated that the IOU performance in this metric for the submission exceeded minimum expectations or requirements relative to the metric.
3. The “Overall Score” row indicates how the combination of the three rows of scores (+, -, and yes) sum into a total points multiplier for each metric. Each row contributes to the total based on the row count over the total count for all three rows.
4. The “Metric Points” row provides the point value derived from the three scoring rows and the resulting overall score row with the final score constrained between a maximum score of 5 and a minimum score of 1. Even if the overall goes negative, due to the “-“ rows overwhelming the total, a minimum score of 1 is assigned.
5. The row labeled with *IOU* “Yes“ lists the percent of custom project reviews undertaken in 2015 where the Commission staff evaluation of the project materials or information indicated that the IOU performance in this metric for the submission exceeded met minimum expectations or requirements relative to the metric.
6. The row labeled with *QA Adders* lists Commission staff points added to the metric based on an evaluation of the overall IOU performance in putting into place quality assurance and/or quality control methods, documents and/or training for staff and contractors in 2015 related to this metric area that are expected to improve the ability of review personnel to identify and cure issues going forward on projects started during 2015 but not yet seen in the custom review activity.
7. The row labeled with *Process Adders* lists Commission staff points added to the metric based on an evaluation of the overall IOU performance in putting into place new internal review processes and procedures in 2015 related to this metric area that are expected to improve performance going forward on projects started during 2015 but not yet seen in the custom review activity.
8. The final points row indicated the total score for each metric as a sum of the overall score plus the two types of adder points.

Details of other IOU custom measure and project activities scoring:

| 2015 Annual Rating | Metric 1a | Metric 1b | Metric 2 | Metric 3 | Metric 4 | Metric 5 | Metric 6a | Metric 6b | Metric 7 | Metric 8 | Metric 9 | Metric 10 | |
|---------------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|-----------------|-----------------|-----------------|------------------|---------------|
| PG&E "-" | 94% | 65% | 57% | 62% | 75% | 78% | 74% | 67% | 84% | 68% | 50% | 70% | |
| PG&E "+" | 0% | 25% | 13% | 21% | 25% | 17% | 19% | 14% | 11% | 26% | 0% | 22% | |
| PG&E "Yes" | 6% | 10% | 30% | 17% | 0% | 4% | 7% | 19% | 5% | 5% | 50% | 7% | |
| Overall Score | 3% | 30% | 28% | 29% | 25% | 20% | 22% | 24% | 13% | 29% | 25% | 26% | TOTALS |
| Metric Points | 0.50 | 0.75 | 1.42 | 1.47 | 1.25 | 1.00 | 0.56 | 0.60 | 1.00 | 1.45 | 1.25 | 1.30 | 12.55 |
| QA Adders | | | | | | | | | | | 0.50 | | 0.50 |
| Process Adders | | | 1.00 | 0.50 | 3.00 | | | | | 1.00 | | 1.50 | 7.00 |
| Final Points | 0.50 | 0.75 | 2.42 | 1.97 | 4.25 | 1.00 | 0.56 | 0.60 | 1.00 | 2.45 | 1.75 | 2.80 | 20.05 |
| | | | | | | | | | | | | | |
| 2015 Annual Rating | Metric 1a | Metric 1b | Metric 2 | Metric 3 | Metric 4 | Metric 5 | Metric 6a | Metric 6b | Metric 7 | Metric 8 | Metric 9 | Metric 10 | |
| SDG&E "-" | 57% | 67% | 56% | 57% | 0% | 71% | 80% | 67% | 75% | 67% | 0% | 50% | |
| SDG&E "+" | 43% | 33% | 44% | 29% | 100% | 29% | 20% | 33% | 13% | 33% | 0% | 38% | |
| SDG&E "Yes" | 0% | 0% | 0% | 14% | 0% | 0% | 0% | 0% | 13% | 0% | 0% | 13% | |
| Overall Score | 43% | 33% | 44% | 36% | 100% | 29% | 20% | 33% | 19% | 33% | 0% | 44% | TOTALS |
| Metric Points | 1.08 | 0.84 | 2.23 | 1.79 | 5.00 | 1.43 | 0.50 | 0.84 | 1.00 | 1.67 | 1.00 | 2.19 | 19.57 |
| QA Adders | | | | | | | | | 1.00 | | 1.50 | | 2.50 |
| Process Adders | 0.50 | 0.50 | 1.00 | 0.50 | | | | | | 1.00 | | 1.00 | 4.50 |
| Final Points | 1.58 | 1.34 | 3.23 | 2.29 | 5.00 | 1.43 | 0.50 | 0.84 | 2.00 | 2.67 | 2.50 | 3.19 | 26.57 |
| | | | | | | | | | | | | | |
| 2015 Annual Rating | Metric 1a | Metric 1b | Metric 2 | Metric 3 | Metric 4 | Metric 5 | Metric 6a | Metric 6b | Metric 7 | Metric 8 | Metric 9 | Metric 10 | |
| SCG "-" | 100% | 67% | 80% | 71% | 50% | 100% | 100% | 75% | 100% | 83% | | 57% | |
| SCG "+" | 0% | 0% | 0% | 14% | 50% | 0% | 0% | 0% | 0% | 17% | | 0% | |
| SCG "Yes" | 0% | 33% | 20% | 14% | 0% | 0% | 0% | 25% | 0% | 0% | | 43% | |
| Overall Score | 0% | 17% | 10% | 21% | 50% | 0% | 0% | 13% | 0% | 17% | 0% | 21% | TOTALS |
| Metric Points | 0.50 | 0.50 | 1.00 | 1.08 | 2.50 | 1.00 | 0.50 | 0.50 | 1.00 | 1.00 | 1.00 | 1.08 | 11.66 |
| QA Adders | | | | | | | | | | | 1.50 | | 1.50 |
| Process Adders | | | | | 1.00 | | | | | | | | 1.00 |
| Final Points | 0.50 | 0.50 | 1.00 | 1.08 | 3.50 | 1.00 | 0.50 | 0.50 | 1.00 | 1.00 | 2.50 | 1.08 | 14.16 |

IOU workpaper review activities scoring details for the 2015 annual review:

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