

PUBLIC UTILITIES COMMISSION

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Date: March 28, 2014

To: Southern California Edison

From: CPUC Ex Ante Review Staff

Cc: R.12-01-005 and R.13-11-005 Service Lists

Subject: Final 2013 Efficiency Savings and Performance Incentive Ex Ante Review Performance Scores

Pursuant to Decision (D).13-09-023, Commission staff and consultants have completed the 2013 Efficiency Savings and Performance Incentive (ESPI) mechanism ex ante review performance scoring. The scores were developed as prescribed in Attachments 5 and 7 of D.13-09-023. The scores contained in this memo are considered final and SCE should use the final total score of 65.5 out of 100, as presented below, to calculate the 2013 ESPI ex ante review component award. The final score is explained in more detail in Attachment A to this memo.

Attachments B and C of this memo provide the rationale Commission staff and consultants used for the final scoring. The rationale discussions also address SCE's comments on the Preliminary Assessment released in December 2013. Overall, Commission staff is encouraged by the general improvement observed in SCE's ex ante review activities when compared to the 2010-12 ex ante review performance scores. Since the ESPI was adopted and the Preliminary Assessment was distributed, Commission staff has seen SCE make a more concerted effort to collaborate with Commission staff on both workpapers and custom projects and a greater intention to comply the Commission's ex ante review policies. There is, however, more work to be done until Commission staff is comfortable that SCE's ex ante review activities are sufficient and consistent with Commission policies.

With regard to workpaper activities, Commission staff note that, for the most part, SCE makes a good effort to identify workpapers under development and collaborate with Commission staff where input is desired. Commission staff also finds, however, that there are workpapers (e.g., screw-in LEDs and HVAC Quality Maintenance) where the 2013-14 workpapers submitted did not incorporate guidance issued in the 2010-12 dispositions for those workpapers. Moving forward, Commission staff recommends that SCE engage with staff earlier in the workpaper development process when SCE is updating a workpaper that was previously identified as having unsupported methods or requiring additional research.

SCE's cooperation in the development of the ex ante database was a large point of concern for Commission staff throughout 2013. Staff has noticed an earnest improvement in cooperation

since the last quarter of 2013; however, throughout the course of 2013, SCE’s cooperation was inconsistent and, overall, lacking. Commission staff expects SCE to continue on the more recent trend of collaboration to improve future ex ante review performance scores.

With regard to custom project activities, Commission staff finds SCE’s activities to be generally adequate though there are noted areas for improvement. SCE’s use of standard evaluation and research practices and internal quality control processes are valuable assets to their custom ex ante review activities. Commission staff recommends that SCE improve their documentation quality for early retirement, project and measure baseline, and program influence. SCE must also make an effort to reduce reliance on Commission input and post-installation M&V activities to finalize savings estimates.

In accordance with D.13-09-023, the IOUs’ ex ante activities are assessed against a set of 10 metrics on a rating scale of 1 to 5. On this scale, 1 is a low score and 5 is a high score. A maximum score will yield 100 points. The 1-5 rating scale is distinguished as follows:

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

SCE’s final ESPI ex ante review scores for 2013 are as follows:

Metric	Total Possible	Workpaper	Custom	Total Score
1a	5	1.5	1.5	3
1b	5	1.5	2	3.5
2	10	3.5	4	7.5
3	10	3	4	7
4	10	3	3	6
5	10	2.5	3	5.5
6a	5	1.5	1.5	3
6b	5	1.5	1.5	3
7	10	3	4	7
8	10	3	4	7
9	10	3.5	4	7.5
10	10	2.5	3	6
Total	100	30	35.5	65.5

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

The intention of the ESPI ex ante review component is to motivate utilities to employ a superior level of due diligence to their activities and thus reduce the need for the extensive level of oversight currently undertaken by Commission staff and consultants. The due diligence expectations include complying with the Commission's ex ante review policies and procedures in a manner that results in the development and reporting of reliable, defensible, and accurate ex ante estimates. Commission staff finds that all of the utilities tend to rely on Commission staff input and analysis before finalizing ex ante estimates. While collaboration and information-sharing is always encouraged, Commission staff envisions that, through the feedback provided in this ESPI component and ongoing collaboration, the utilities' internal ex ante review policies and activities will become sufficient such that Commission staff can devote more time and resources towards collaboration and less time to correcting or re-analyzing ex ante values on behalf of the utilities. Commission staff recognizes and commends the progress that has been made to date and encourages the utilities to continue to strive for excellence in this area.

If you have any questions or comments about the feedback or final scores, please contact Katie Wu (katie.wu@cpuc.ca.gov). Note that pursuant to D.13-09-023, Commission staff will schedule time with the utilities to discuss the final 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	3	60%	1.5	2.5	3	60%	1.5	3
1b	Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the post-submittal/ implementation phase: Timing of responses to requests for additional information	2.5	3	60%	1.5	2.5	4	80%	2	3.5
2	Breadth of response of activities that show an intention to operationalize and streamline the ex ante review process	5	3.5	70%	3.5	5	4	80%	4	7.5
3	Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes)	5	3	60%	3	5	4	80%	4	7
4	Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to Commission staff in the formative stage for collaboration or input	5	3	60%	3	5	3	60%	3	6
5	Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives)	5	2.5	50%	2.5	5	3	60%	3	5.5

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	3	60%	1.5	2.5	3	60%	1.5	3
6b	Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V	2.5	3	60%	1.5	2.5	3	60%	1.5	3
7	Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience	5	3	60%	3	5	4	80%	4	7
8	Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated	5	3	60%	3	5	4	80%	4	7
9	Professional care and expertise in the use and application of adopted DEER values and DEER methods	5	3.5	70%	3.5	5	4	80%	4	7.5
10	Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products	5	2.5	50%	2.5	5	3	60%	3	6
Total		50			30	50			35.5	65.5

Final 2013 Efficiency Savings and Performance Incentive

Ex Ante Performance Scores – SCE

March 31, 2014

Metric 1a: Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the pre-submittal/ implementation phase: Timing of disclosure in relation to reporting

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

At this time, Commission staff is not aware of any deemed measures being offered in SCE programs without workpapers being provided to the Commission.

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

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

There are several IOU-sponsored evaluation activities going on that are oriented toward workpaper development. LED market characterization and multi-family swimming pools, both led by SCE, are two specific areas. The ex ante team was not informed of these activities and not given a chance for input until very late. Given that these evaluation studies would directly inform a workpaper update, Commission staff considers these activities to be relevant to ex ante estimates.

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

It is generally SCE's practice to submit workpaper proposals through the Workpaper Project Archive. At this time, the ex ante team is not aware of any significant efforts for SCE to develop deemed measures for new technologies. Workpapers submitted with applications as well as those submitted in Phase 2 cover similar technologies that been incentivized over the past four or five years. Staff is concerned about the lack of collaboration on the M&V activities that pertain to workpaper updates. Commission ex ante staff should be aware of these activities to ensure that the data collection is adequate for ex ante purposes.

There are a number of areas where the IOUs are incorporating new delivery mechanisms for measures that have been included in IOU programs for several years. The Energy Upgrade California (EUC) program includes many common DEER and non-DEER residential measures. EUC workpaper development, led by SCE, was a reasonably successful collaborative effort

between IOUs and Commission staff. Another example is the residential and commercial quality maintenance programs. Commission staff views the collaborative process on quality maintenance projects much less favorably, primarily due to IOUs' lack of consideration of staff input provided during the 2010-2012 review of the same workpapers.

Metric 1a Preliminary Assessment: Good Performer

Final Workpaper Score: 3

Metric 1b: Timeliness of action in the implementation of ordered ex ante requirements (e.g., A.08-07-021, D.11-07-030, D.12-05-015, etc.) in the post-submittal/ implementation phase: Timing of responses to requests for additional information

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

In their response to the preliminary ESPI review, SCE states that the June 20, 2013 Ex Ante Data Request was the first official direction to supply data in the ex ante database format. Staff disagrees that this was the first direction and instead believes the first direction was provided in D.11-07-030. The staff proposal for the ex ante database was presented in the third quarter of 2011, shortly after D.11-07-030. Staff and ex ante consultants had several meetings with SCE staff including SCE database specialists. At one time, SCE staff confirmed with ex ante consultants that data could be produced in the proposed format from existing internal systems¹.

SCE has made an attempt to provide information in that format, but still has much room for improvement. There are specific areas of the content that lack the information necessary to identify the exact and full set of ex ante values associated with a particular claim. SCE points out in its response to the preliminary ESPI assessment that the data request was directed to the reporting team. Additionally, SCE states that the ex ante review team had not given any written direction to submit ex ante values in the required format until the most recent lighting retrofit disposition was issued in December 2013. Again, Commission staff disagrees and falls back on D.11-07-030 as the initial direction to provide ex ante data in a specific format. As a result of the lack of progress towards an ex ante database throughout 2013, scores for this metric remain low; however, future compliance with the ex ante data specification will likely increase scores throughout the ESPI scoring areas.

On a positive note since the preliminary assessment was issued, SCE has increased its efforts to provide ex ante data in the directed format. SCE recently provided a full list of all its measure technologies classified according to the ex ante database format. While this data was not yet in the directed format, SCE's recent efforts demonstrate the intent to eventually provide data in the required format.

Metric 1b Preliminary Assessment: Consistent Underperformer

Final Workpaper Score: 3

¹ Email thread with final email dated December 13, 2011. Full thread included as Attachment A.

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

Percentage of workpapers that address all aspects of the Uniform Workpaper Template (as described in A.08-07-021, or any superseding Commission directive)

There has been no workpaper template issued pursuant to A.08-07-021. Staff did publish an executive summary template but this has received little use since it was published. Generally, workpapers submitted as part of the application for 2013-2014 incorporated direction from previous workpaper reviews in terms of calculation assumptions and methods.

To the extent that the prescribed ex ante data format provided to IOUs in September 2011 counts as a “workpaper template” IOUs are generally non-compliant with that direction. In consideration of late 2013 activities aimed at attempting, in good faith, to implement the directed ex ante submission format, staff has raised the score in this area over the preliminary value. However, staff still feels these efforts continue to require deliberate and focused attention.

In its comments on the Preliminary Assessment, SCE notes that in September 2013, SCE expressed interest in working with Commission staff to develop a common workpaper template. Staff recognizes SCE’s effort in the development of a statewide template and looks forward to continuing to work with SCE on this issue.

Metric 2 Preliminary Assessment: Good Performer

Final Workpaper Score: 3.5

Metric 3: Comprehensiveness of submittals (i.e., submittals show that good information exchange and coordination of activities exists, and is maintained, between internal program implementation, engineering, and regulatory staff to ensure common understanding and execution of ex ante processes)

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

Generally, there is still very limited information in any workpapers covering implementation background. SCE includes all applicable implementation ex ante values in a single workpaper, but doesn't typically provide information about the implementation that may influence the development of those ex ante values. Staff believes that implementation details are often inextricably linked to the engineering assumptions that underlie the development of ex ante values. As an example, consider workpapers covering upstream incentives for variable refrigerant flow (VRF) HVAC systems. The workpapers assume an ideal installation that maximizes the efficiency of the installation, however, there is no implementation mechanism described in the workpaper that would ensure these optimized configurations occur in the actual installations.

3 (2) Percentage of workpapers which, on initial submission, were found to include all applicable supporting materials or an adequate description of assumptions or calculation methods

The Phase 1 review resulted in a data request requiring a significant amount of additional information for most workpapers. This information was mainly related to nomenclature within individual workpapers related to the applicability of cost and impact values. Most of these issues were clarified by SCE in its responses to the data request; however, this still points to the problem of their slowness to adopt the ex ante data format that was presented to them in September of 2011. Following the ex ante data format would have prevented most of the problems identified in the Phase 1 review.

A limited number of workpapers have been reviewed in detail for adequate supporting materials. In general, reviewed workpapers have been lacking in supporting materials in some areas. Lighting workpapers such as fixture replacements, often lack adequate support for pre-existing and measure case assumptions. Many fixture replacement fixtures present the pre-existing and measure cases in the form of ranges of wattages. Often, the lowest wattage of the pre-existing range is lower than the highest wattage of the measure range, which presents the possibility of the measure installation actually increasing energy use.

Metric 3 Preliminary Assessment: Needs Improvement

Final Workpaper Score: 3

Metric 4: Efforts to bring high profile, high impact, or existing (with data gaps) projects and/or measures to Commission staff in the formative stage for collaboration or input

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

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

- HVAC Quality Maintenance (QM): Staff notes that the initial disposition on SCE's workpaper issued during the 2010-2012 cycle directed additional research and established interim values that could be used while the research was being conducted. Staff was expecting that SCE would have pursued some of this research in advance of submitting a new workpaper for the 2013-2014 cycle. Previous submissions for HVAC QM have been nearly complete. Staff would prefer that workpapers submitted for collaboration be submitted in a less developed format. This allows for review of methods and assumptions prior to large amounts of analysis, energy modeling or engineering calculations being performed.
- Energy Upgrade California: SCE appears reasonably responsive to staff input on these workpapers with the exception of the Advanced Path. The Advanced Path uses the EnergyPro software. This by itself is not a problem, however, the assumptions that are used in the EnergyPro software are not consistent with DEER assumptions, which result in savings estimates that are 4-5 times higher than would result if using DEER assumptions. Ex ante consultants provided several documents to IOUs and other implementers documenting the needed revisions to the program inputs and even engaged the EnergyPro authors to develop a version that included the correct DEER assumptions. Staff recommended that the enhanced version of EnergyPro be used for the EUC program, but IOUs elected to use the standard version. Ex ante consultants therefore recommended significant adjustment factors to the savings calculated by EnergyPro. Staff would have preferred the use of the enhanced version of Energy Pro, but the incorporation of savings adjustment factors is an acceptable alternative.
- Integral screw-in LED lamps and pin based MR-16 lamps: IOUs have embarked on an LED market characterization project, however, ex ante consultants and staff have not had the opportunity to contribute to the development of that study. Staff believes the rapid development of program offerings for screw-in and MR16 LED lamps requires early collaboration. As discussed below in Metric 5, workpaper savings estimates are based on the assumptions that are not supported by the body of research related to CFLs. This concern was noted in the original dispositions for LEDs issued during the 2010-2012 cycle, but no additional research was performed in advance of the 2013 workpaper submissions. This type of missing research is necessary to support the assumptions

needed to estimate baseline and measure energy consumption and should be the focus of collaboration related to LED measures.

- Appliance (refrigerator/freezer) Recycling Program (ARP): SCE's ARP workpaper proposed new, higher, ex ante values for a specific intervention where used refrigerators and freezers are collected at the time of delivery of a new appliance. Staff did not approve these values on the grounds that there was no way to tell what fraction of the current collections came through this new mechanism. Therefore it was not possible to tell how the DEER ex ante values should be adjusted as a result of removing this mechanism from the mixture of mechanisms used to derive the DEER values. IOUs, including SCE, have begun M&V activity to investigate a program change where used refrigerators and freezers are collected at the time of delivery of a new appliance. This project is being tracked through the Commission's Basecamp site for IOU EM&V work. In its response to the preliminary assessment, SCE notes that the workpaper was revised to remove savings values for the direct retail channel pickup.

Metric 4 Preliminary Assessment: Needs Dramatic Improvement

Final Workpaper Score: 3

Metric 5: Quality and appropriateness of project documentation (e.g., shows incorporation of Commission policy directives)

Frequency of inappropriate or inferior quality at the time of initial Commission staff review (higher frequency = lower score)

The main source of assessment at this time is the workpaper submissions SCE included with their applications for the 2013-2014 cycle. There are approximately 128 workpapers submitted by SCE to date. The ex ante review team has reviewed 37 workpapers. Staff directed revisions on every workpaper it has reviewed. Additionally, staff is concerned that some of the issues identified in the reviewed workpapers are indicative of a larger problem across other workpapers.

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

Metric 5 Preliminary Assessment: Needs Improvement

Final Workpaper Score: 2.5

² D12.05.015 at 62 and OP14.

Metric 6a: Depth of IOU quality control and technical review of ex ante submittals: Third party oversight

Quality of workpapers prepared by consultants, third parties, and local government partners submitted by IOUs

General observations and examples of inferior work with current workpapers developed by third-parties and SCE consultants:

- HVAC QM workpapers (PECI) were essentially unchanged from 2010-2012 cycle and considered little if any staff input provided during that cycle.

In SCE's case, there has been limited review of workpapers prepared by consultants. In SCE's comments on the Preliminary Assessment, SCE also points out that they have a centralized review process for workpapers prepared by non-SCE staff such as consultants and third parties. Commission staff appreciate that this internal quality control process is in place and will continue to monitor its efficacy in improving third party workpapers.

Metric 6a Preliminary Assessment: Needs Dramatic Improvement

Final Workpaper Score: 3

Metric 6b: Depth of IOU quality control and technical review of ex ante submittals: Clarity of submittals and change in savings from IOU-proposed values not related to M&V

6b (1) Percentage of workpapers which required changes to parameters of more than 10% or required substantial changes to more than two parameters among UES, EUL/RUL, NTG, impact shape, or costs

Staff has reviewed 37 workpapers of the approximately 128 workpapers submitted by SCE. Staff has directed revisions to all reviewed workpapers. Additionally, the ex ante review team has translated a large number of SCE workpaper ex ante data into the statewide ex ante database. During this exercise, staff has observed other workpapers that would likely require revision if a disposition were to be issued.

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

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

Metric 6b Preliminary Assessment: Needs Improvement

Final Workpaper Score: 3

Metric 7: Use of recent and relevant data sources that reflect current knowledge on a topic for industry standard practice studies and parameter development that reflects professional care, expertise, and experience

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

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

- HVAC QM workpapers appeared not to consider any of the on-going IOU or Commission research related to packaged HVAC performance.
- Staff is concerned with the practice of introducing and using workpapers for measures that had been removed from DEER. These measures were removed from DEER often because the technology definitions were out of date. IOUs have taken values from previous DEER versions and simply re-introduced them using workpapers without any updates to the values that consider, for example, changes to standard industry practice technologies, updates to prototypical assumptions for usage profiles that may have changed since the measures were included in DEER, or possible consideration of EM&V results. One of the areas where this occurs is the group of technologies covering agricultural irrigation measures including low pressure sprinkler nozzles and sprinkler to drip irrigation conversions. These were removed from DEER 2011 and noted in the DEER documentation as “out of date³.” Even the DEER 2005 documentation noted that some of these technologies may already be standard practice,⁴ calling in to question at least the use of the full EUL for these measures. Staff understands from SCE that these measures are not HIMs in its service territory and includes these workpapers in support of statewide programs. Nevertheless, all workpapers should be based on the best available information and current industry standard practice. The guidance decision provided for the establishment of interim values, approved for use while additional research is conducted. Staff would have preferred at least a review of the existing documentation, than a proposal for interim approved values, instead of simply reintroducing values for technologies that, as far back as 2005, may have been standard practice.
- Staff has been reviewing all workpapers as part of the effort to construct the statewide ex ante database as directed by D.11-07-030. Generally, it does not appear that the 2013 workpapers include updated or more recent data when compared to the 2010-12 cycle workpapers.

Metric 7 Preliminary Assessment: Needs Improvement

Final Workpaper Score: 3

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

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

Metric 8: Thoughtful consideration, and incorporation, of CPUC comments/inputs. In lieu of incorporation of comments/input, feedback on why comments/input were not incorporated

Frequency of revisions to workpapers in response to (and/or appropriate and well-defended rejection of) CPUC reviewer's recommendations

SCE has been responsive in revising workpapers per any workpaper dispositions issued. Some workpaper dispositions have emphasized the need for additional research to better support the ex ante savings development. SCE is hopefully developing plans to address these concerns, which would likely result in increased scores in future ESPI assessments.

Metric 8 Preliminary Assessment: Needs Improvement

Final Workpaper Score: 3

Metric 9: Professional care and expertise in the use and application of adopted DEER values and DEER methods

Percentage of workpapers, including those covering new or modified existing measures, that appropriately incorporate DEER assumptions and methods

Generally, workpapers attempt to replicate DEER methods within workpapers. This is particularly apparent when reviewing lighting workpapers where SCE has used DEER operating hours, interactive effects and coincident demand factors for all measures. Where SCE differs from DEER assumptions, such as the establishment of a new building type, SCE has been willing to work with staff to come up with mutually agreeable revisions. For many technologies, such as package HVAC, refrigerator, clothes washer and dishwasher measures, the DEER measure definitions do not line up with their preferred program requirements. In these cases, scaling methodologies have been used by SCE to adjust DEER values to align with program efficiency requirements. In general, SCE is making progress in this area. SCE consultants are making progress as well, but throughout 2013, there appeared to be some gaps in the knowledge and application of DEER values and methods.

Metric 9 Preliminary Assessment: Good Performer

Final Workpaper Assessment: 3.5

Metric 10 Ongoing effort to incorporate cumulative experience from past activities (including prior Commission staff reviews and recommendations) into current and future work products

Percentage of workpapers including analysis of previous activities, reviews and direction

There is some improvement in incorporating cumulative experience from previous activities. The most notable is SCE's initiative in seeking out early involvement from staff at the beginning of new development activities. Many workpapers submitted for the 2013-2014 applications incorporated direction from D.11-07-030 as well as staff direction from previous dispositions. There were some incorrect applications of that direction, such as in the domestic hot water fixture measures discussed earlier, but in general, explicit direction from Attachment A of D.11-07-030 was incorporated into workpapers. As discussed above, some early direction on workpapers for the 2010-2012 cycle was not included in D.11-07-030, such as for HVAC QM. It was still staff's expectation that it would be considered in future workpaper developments.

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

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

Metric 10 Preliminary Assessment: Consistent Underperformer

Final Workpaper Score: 3

ATTACHMENT 1: Email exchange between SCE staff and ex ante consultants covering the ex ante database.

From: Steve.Fredrickson@sce.com [mailto:Steve.Fredrickson@sce.com]
Sent: Tuesday, December 13, 2011 1:27 PM
Subject: Submittal comments to ED for the 4 tables in the .096 spec

Paul,

Here's the package:

I put the sample data into the .096 spec so you can see it right there with the fields and so forth.

I also make some additional rows that discusses some of the issues as well as what needs to be vetted.

The additional comment docs were reviewed here by the engineers and myself at the system level and include many of the items we discussed including the additional fields.

I think this effort is good and I believe the collaboration that has been used so far will produce dividends as we go through this vetting process.

In any event, lets discuss at your convenience.

As I noted, I'll be gone from the 19th to the 3rd.

Regards,

Steve Fredrickson
Strategic Planning and Technical Services, Energy Systems Group
Southern California Edison
1515 Walnut Grove, 3C11-03
Rosemead, CA. 91770
Email/ steve.fredrickson@sce.com
Tel/626-302-0774 PAX 20774
Pony: Steve Fredrickson, GO5 - 3rd Floor - Cube 3C11-03

From: "Paul Reeves" <paulreevesprc@gmail.com>
To: <Steve.Fredrickson@sce.com>
Date: 11/23/2011 07:42 AM
Subject: RE: Additional Visio Diagrams regarding the SPTd Database

Steve,

I've looked over the two diagrams and would like to discuss them early next week. I don't foresee any problem adding the EECycle fields in each of the Ex-Ante tables. Also, I will evaluate adding the Measure Application Type

to the Cost table, this would tie the Implementation to a specific set of Measure Costs, which seems like it is probably needed.

In order to allow these tables structures to be compatible with DEER and be a bit more flexible I have the following suggestions for some of the other SCE proposed changes in the Ex-Ante tables:

When creating the SCE SPTdb Measure Table:

- ☐ ☐ ☐ ☐ Set the EnImpactID field equal to the MeasureID field
- ☐ ☐ ☐ ☐ Set MeasCostID field equal to the MeasureID field

When creating the SCE SPTdb Energy Impact Table:

- ☐ ☐ ☐ ☐ Rename the field what you currently have as "ImpactID" to another field name, such as "ImpactKey". The SPTdb does not need this field.
- ☐ ☐ ☐ ☐ Rename the field you currently have as "MeasureID" to "ImpactID"
- ☐ ☐ ☐ ☐ Include the applicability fields that are embedded in what is currently called your "ImpactID": Location, Building Type, Building Vintage

When creating the SCE SPTdb Measure Cost Table:

- ☐ ☐ ☐ ☐ Rename the field you currently have as "MeasCostID" to another field name, such as "MeasCostKey". The SPTdb does not need this field.
- ☐ ☐ ☐ ☐ Rename the field you currently have as "MeasureID" to "MeasCostID"
- ☐ ☐ ☐ ☐ Include the applicability fields that are embedded in what is currently called your "MeasCostID": Location

Note that I'm not asking you to change how you deal with the data internally. Your current structure works for SCE and ED does not want to change that. The changes I describe above are needed to make the SCE data compatible with the DEER and other IOU data sets.

It looks like we're getting pretty close. Perhaps we can exchange some sample or test data for the four ex-ante tables soon.

In the meantime, have a nice holiday and "go Trojans!" (I'm not a big fan of Neuheisel).

Paul Reeves
The Partnership for Resource Conservation
140 S. 34th Street Boulder, CO 80305
303-747-3506 PaulReevesPRC@gmail.com

From: Steve.Fredrickson@sce.com [<mailto:Steve.Fredrickson@sce.com>]

Sent: Tuesday, November 22, 2011 12:25 PM

To: PaulReevesPRC@gmail.com

Subject: Additional Visio Diagrams regarding the SPTd Database

Paul,

I've attached the two Visio diagrams that indicate the additional fields needed to be added to your tables in order for us to properly export our data that is normalized using these fields.

As we discussed, since all three utilities use different schemas if you will, the 'first pass' toward standardization will require some compromise to get the first data into the SPTd.

I've also added some notes and comments to the diagrams that I hope will add some clarity to them.

After studying the SPTd data flow from your .096 Excel specification, I believe we can use your strategy with our current systems based on the new fields being approved.

As you can see from the diagram, one of the key field additions across most tables is the EECycle. This permits data from different cycles to coexist in your database.

Additionally, as we start to export data, we can internally work on the additional fields in the various tables and add them as required into our tracking systems. This will be no small effort since at present; many of the fields are not being tracked.

In any event, I hope these help and you can give me the go ahead to affirm the additional fields so we can send you some data in the near future so you can at least get a feel for the data.

I can call and discuss further as your time permits.

Regards,

Steve Fredrickson
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Efficiency Savings and Performance Incentive – Ex Ante Performance – Custom Project Scores – Southern Edison Company

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
Metric 1a(1) – Score: 3	Needs Improvement	Percentage of projects in quarterly or annual claims that were reported in the Custom Measure and Project Archive (CMPA) twice monthly list submissions	Custom projects reported in claims have not been completely compared with the CMPA submissions at this time since a claims review has not been undertaken. ⁵ SCE’s claims include custom projects that have not been included in the CMPA lists. These typically include participants in the nonresidential audits, residential new construction and pump test programs. SCE had decided to claim custom savings for these programs but did not report projects in the CMPA lists. For these reasons, the number of custom claims and reported projects in the CMPA lists do not match for SCE.	During the December 16, 2013 meeting, SCE clarified that incentivized custom projects where pumps are overhauled after receiving a pump test are included in weekly project lists. What is not included on the project lists is an estimated portion of custom savings credit claimed for customers that do not pursue SCE incentives, but still overhaul their agricultural pumps. These are not considered actual SCE “projects” so SCE is currently coordinating with the Commission’s review team to figure out how to report these on the project lists. SCE requests this distinction be taken into account when scoring this metric.	Staff believes that savings credit for customers of education programs that do not pursue SCE incentives but might have implement energy efficiency measures on their own should not be claimed as these savings are already taken into account under the 5% Market Effects credit. The preliminary assessment stands. All projects in custom claims that have the application date shown as on or after SCE started submitting custom project lists in February 2012 must have been disclosed in CMPA submissions. SCE is awarded a score of 3 for metric 1a.
Metric 1a(2) – Score: 3	Needs Improvement	Percentage of projects for which there is a two	The SCE CMPA lists do not contain the date of actual application receipt. SCE provides the date of first entry into	Regarding application dates on the CMPA lists, SCE provides the	Staff has found that the date application received and the CMPA

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

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
		weeks or less difference between the application date and the date reported on the CMPA list	its tracking system in the CMPA lists which is not the same as the date of application receipt. The date of application is available in the hard copy of application. The data from hard copies might not be entered immediately in SCE's tracking system. Staff believes that the time taken by field staff and third parties to report applications for data entry into an SCE's tracking system and reporting of such applications in the CMPA lists most likely exceeds two weeks.	"Application Received Date" for all projects on the weekly custom project lists. This date typically matches or is within one day of the electronically signed date on the application. SCE believes that the majority of projects are reported on the Early Project List within two weeks of receiving the application.	submission date often exceeds two weeks in the Early Project List. SCE should continue to improve its application reporting practice to decrease the time lag in reporting applications in its CMPA submissions. The preliminary assessment stands. SCE is awarded a score of 3 for metric 1a.
Metrics 1a(3) – Score: 3	Needs Improvement	Percentage of tools used for calculations disclosed prior to use	SCE submitted tools on the Calculation Tool Archive (CTA) web site during the 10-12 cycle; however, the 10-12 cycle submission did not include any third party program tools. It is likely that some or all tools submitted for the 10-12 cycle are still being used in the 13-14 cycle, however, SCE has not resubmitted those tools or notified staff about its intent to continue using those tools. For the 13-14 cycle, all applicable tools have not been posted to the CTA website. Overall, the tools are reviewed in conjunction with a project. Nevertheless, a complete list of tools is required to be disclosed and posted to the CMPA web site initially and as tools are updated. This has not been done by SCE.	No comments.	The preliminary assessment stands. SCE is awarded a score of 3 for metric 1a.
Metric 1b – Score: 4	Good Performer	Percentage of projects which experience	Delays at the final stage of savings approval have declined but have not been completely eliminated. Typical	No comments.	The preliminary assessment stands. SCE is awarded a score of 4

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
		significant delay due to slow response to requests for readily available (or commonly requested) additional information (higher percentage = lower score)	reasons for delays occurring are because of lack of evidence of working measure, invoice documentation, savings calculations not per prior direction and lack of supporting documentation. All of these reasons have an impact on final ex ante parameters to be frozen. When evidence is lacking, staff cannot decide in a reasonable time whether final parameters would likely be within a reasonable margin of safety.		for this metric.
Metric 2 – Score: 4	Good Performer	<p>Percentage of custom project submissions that show standardization of custom calculation methods and tools</p> <p>Development and/or update of comprehensive internal (to IOUs, their parties, and local government partners, as appropriate) process manuals/checklists and quality control processes</p>	<p>The use of standardized tools is different from using the correct values in the tools. SCE largely uses standardized methods and tools. The differences between the SCE- and staff-reviewed savings estimates, when tools are used, are largely attributable to incorrect assumptions or parameters used in calculations or inappropriate modeling. Standardized methods may have to be modified consistent with the appropriate level of effort expected for projects and by including project-specific parameters.</p> <p>SCE has developed internal quality control processes, check lists and manuals to improve their review of custom projects.</p>	No comments	The preliminary assessment stands. SCE should refine assumptions in its tools using more recent data. SCE should continue updating its internal processes and manuals as project dispositions and staff directions requires, and disseminate updates at all levels of implementing organizations. SCE is awarded a score of 4 for this metric.

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
Metric 3 – Score: 4	Good Performer	Number of data requests for additional documentation for project information and/or reporting claims that support ex ante review activities (fewer requests = higher score)	Same as 1b except that this metric refers to data requests at the interim and final stages of a project reviews. Compiling the entire package of information using a check list before sending to staff for review will reduce the number of data requests.	No comment.	The preliminary assessment stands. SCE is awarded a score of 4 for this metric.
Metric 4 – Score: 3	Awaiting Claims Review	Percentage of large high impact projects or measures referred to CPUC early or flagged for review.	SCE has referred projects for staff opinion. The referred projects had good issues for staff and utility to address. Whether SCE should have been referred certain projects it did not refer is not possible to assess without a claims review or ex post evaluation. However, judging from baseline and eligibility issues identified in selected projects and the fact the staff only samples a small fraction of custom projects, it appears that more projects should have been referred for staff opinion.	SCE awaits the results of the claim review.	The 3rd and 4 th quarter utilities claims were not in a reviewable format in time for this assessment. Staff has provided a list of typical reasons custom projects were found to be zero savers in prior evaluations and reviews. Staff encourages SCE to avoid those pitfalls and continue to work collaboratively to improve project screening. Given that a claims review was not performed for this metric, the preliminary assessment stands. SCE is awarded a score of 3 for this metric. SCE should continue to strive to bring high impact projects and measures to staff's attention.

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
Metric 5 – Score: 3	Needs Improvement	Frequency of inappropriate or inferior quality documentation on project eligibility, baseline determination, program influence, use of custom elements in projects, assumptions and data supporting savings, and project costs (higher frequency = lower score)	SCE’s documentation of early retirement, baseline and program influence has been weak. Documentation on assumptions and data supporting savings and project costs is of moderate quality that is reflected in the variance in the staff-approved savings and the SCE-proposed savings as well as repeated data requests to support proposed savings estimates.	The comments provided by the Commission’s technical staff in their draft assessment acknowledge the improved quality of SCE’s submissions through 2013. While more work needs to be done SCE believes these acknowledgements should be taken into consideration for the metric scoring.	The preliminary assessment stands. Staff will observe SCE’s efforts moving forward. SCE is awarded a score of 3 for this metric.
Metric 6a – Score: 3	Needs Improvement	Quality of custom project estimates prepared by customers, third parties, and local government partners submitted by IOUs.	The quality of documentation from SCE’s third parties and customers is somewhat weaker than the quality of documentation from SCE’s core programs.	No comment.	The preliminary assessment stands. SCE should require its third party contractors to use the same checklists and guidance that is being used for its core programs. Staff will observe SCE’s efforts moving forward. SCE is awarded a score of 3 for this metric.
Metric 6b – Score: 3	Needs Improvement	Percentage of reviews that required over three reviews or data requests.	This performance is the same as 1b and 3. The change in the SCE-proposed values and staff reviewed values can	SCE recommends Commission staff identify the timing of the IOUs’ proposed savings (i.e., IOU savings submitted at the	Staff recognizes that some ex ante savings value are subject to post-installation measurement and verification.

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
		Percentage change from IOU-proposed savings and ED-approved savings (higher percentage = lower score)	primarily occur at the final stage of review when the SCE has completed its post-installation inspection or M&V and finalized savings. Additionally, the initially proposed project may also be modified because of eligibility and baseline issues that may rule out the project or some of the measures. The SCE performance on this metric has been improving. However, the SCE-proposed final savings for non-lighting measures, especially for large projects, were higher than final staff-approved values.	time of first Commission Staff submission or at the post-installation stage when SCE requests final approval). Please note that very few of submitted projects have actually reached the final approval stage in order for this metric to be assessed.	However, staff is looking for utilities to improve its internal project review process at the initial project ex ante review stage and not necessarily only at the final post-installation stage. Staff has not compared unvetted application-stage estimates with final approved ex ante values. Change in savings estimates because of ineligible measures, baseline issues, inappropriate method or parameters used at the PFS stage contribute to the variance. Going forward, staff will begin reviews only after complete initial SCE-reviewed documentation packages are provided. SCE is awarded a score of 3 for this metric.
Metric 7 – Score: 4	Good Performer	Percentage of custom projects that use data sources and methods per standard research and evaluation practices	SCE has regularly performed risk mitigation studies that are not always correct but an effort is made. SCE and implementers sometimes cite ASHRAE and manufacturers' data. Staff reviewers though still have to ask for supporting evidence for assumptions despite noticeable improvements.	SCE believes we have excelled in this area, especially in the use of industry standard practice evaluations. The initial scores and written comments by Commission Staff in this set of scores also recognize SCE's performance. By assessing	Staff recognizes SCE's effort in conducting risk-mitigation studies. SCE's initiative in this area has been valuable. These studies, however, did not reflect guidance from D.11.07.030 to use current typical practices to determine industry

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
				this metric for all IOUs at once seems to undervalue the individual effort SCE has put forth to improve our custom project estimates. SCE requests that Commission Staff take SCE's self-initiated ISP process into consideration when scoring this metric.	standard practice. The infrastructure put in place by SCE to conduct such research will be helpful going forward. The preliminary assessment stands. SCE is awarded a score of 4 for this metric.
Metric 8 – Score: 4	Good Performer	(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	SCE's methods for non-HVAC projects are vastly improved. A noticeable progress is seen for modeling HVAC measures as well. Certain measures such as retrocommissioning and monitoring-based commissioning continue to pose challenges at times for all IOUs. SCE challenged staff dispositions in several instances – mostly unsuccessfully. In some instances, issues SCE raised had wider implications and required policy guidance. SCE has been providing very detailed models on complex projects. Overall, SCE has improved lately but slowly in the use of appropriate methods and reflecting guidance from prior staff dispositions.	No comment.	SCE's quarterly claims were not in a reviewable format in time for this assessment. The preliminary assessment stands. SCE is awarded a score of 4 for this metric.

Metric Number and Final Score	CPUC Staff Preliminary Assessment	Metric Description	CPUC Staff Assessment	SCE Comments	CPUC Response to Utility Comments
Metric 9 – Score: 4	Good Performer	Percentage of custom projects including, and not limited to, new or modified existing technologies or project types that appropriately incorporate DEER assumptions and methods.	The percentage of custom projects that appropriately incorporate DEER assumptions and methods could be identified more thoroughly from a review of claims and sampled projects. Staff has not undertaken a claims review yet. Overall SCE have lately exhibited improvements; however, year-to-date cumulative performance is somewhat inferior compared to more recent performance.	SCE awaits the results of the claim review.	The preliminary assessment stands. SCE is awarded a score of 4 for this metric.
Metric 10 – Score: 3	Awaiting Claims Review	Percentage of projects identified in claims review that were implemented per CPUC directions in previous reviews.	A comprehensive claims review has not been undertaken for 2013. Commission review staff and the IOUs need to work out a better process and content for custom claims to facilitate this review in the future. The score for this metric reflects our overall view that SCE is making an effort to meet expectations but improvement is needed, as noted in earlier metrics in both facilitating claims review as well as ensuring that projects that have not been selected for review at the pre-agreement phase undergo similar levels of IOU review as those projects selected for staff review.	SCE awaits the results of the claim review.	SCE’s quarterly claims were not in a reviewable format in time for this assessment. Staff will reassess SCE’s efforts moving forward. SCE is awarded a score of 3 for this metric.