

**CPUC Staff Ex Ante Review**

CPUC Staff Project ID Number	SCE 20 C I 566 [REDACTED]
CPUC Directory Link	<a href="https://deeresources.info/cmpa/projects/18758">https://deeresources.info/cmpa/projects/18758</a>
PA	SCE
PA Application ID	[REDACTED]
PA Application Executed Date	2/5/2020
PA Program ID	SCE-13-SW-003D
PA Program Name	Industrial Strategic Management Program (SEM)
PA Program Year	2020
Date of CPUC Staff Review:	
PA CMPA Upload Dates Included in this review:	
First PA Upload	9/1/2020
Second PA Upload	10/6/2020
Third PA Upload	#N/A
Fourth PA Upload	
Fifth PA Upload	
Sixth PA Upload	
Seventh PA Upload	
Eighth PA Upload	
PA Measure Description(s):	
Measure 1	Whole Building behavioral, operational, and process efficiency optimization
Measure 2	
Measure 3	
Measure 4	
Measure 5	
Measure 6	
Measure 7	
Measure 8	
Measure 9	
Measure 10	
PA Project Description:	0
BI-Monthly Upload kW Demand Reduction	[REDACTED]
BI-Monthly Upload Annual kWh Impacts	[REDACTED]
BI-Monthly Upload Therm Impacts	[REDACTED]
PA Proposed Incentive \$ (to Customer)	[REDACTED]
Project Documentation kW Demand Reduction	[REDACTED]
Project Documentation Annual kWh Impacts	[REDACTED]
Project Documentation Annual Therm Impacts	[REDACTED]
CPUC Staff Primary Reviewer Name	[REDACTED]
CPUC Staff Primary Reviewer Firm	0
CPUC Staff Review Supervisor Name	[REDACTED]
CPUC Staff Review Supervisor Firm	[REDACTED]
PA Primary Reviewer Name	0.0
PA Primary Reviewer Firm	0.0
CPUC Staff Project Manager	[REDACTED]
CPUC Staff Policy Authorization (as needed)	
CPUC Staff Recommendation:	Advisory
For rejection, action required:	N/A
M&V Review:	Post M&V Review (M&V Results and Final Calculations) Required

Action Number:	Summary of CPUC Staff Required Action by the PA:	Action Category	Due Date	PA Response	ED Resolution
1	No baseline NREs were identified in the Hypothesis Model Report. However, review of the production data shows that from [REDACTED] there is a significant reduction in production that corresponds with lowered energy use and a negative trend in residuals (note during this period, [REDACTED], has no production at all). The impact appears small, but suggest reviewing possible causes with customer, examining if cause continues into Reporting Period, and assessing if impact is statistically significant.	Analysis assumptions	N/A	All outliers of residuals were investigated and confirmed with site personnel. Outliers dated on [REDACTED] did not reveal a major event that required adjusting the variables used in the model. The reduction in production presented at the end of [REDACTED] is not associated with any NRE identified by site personnel. Line [REDACTED] has no production from [REDACTED] until the end of the baseline period, and even though it has the highest coefficient, it is the lowest production in lb/day. This reduction in production in lines [REDACTED] and [REDACTED] was then associated with normal conditions. Additionally, the CUSUM of residuals was inspected during this period, and it fluctuates less than [REDACTED] % relative to the annual use.	No further comments

2	<p>The "Hypothesis Model Report - Electricity" did not include description of why the Drybulb Temperature variable was adjusted to [REDACTED], the methodology to do so, or a Time Series Plot or Scatter Plot of "Daily kWh vs. [REDACTED]. Please describe how this adjustment to the drybulb temperature variable was identified.</p>	Analysis assumptions	N/A	<p>Different combinations of variables were tried for competing models. Trial 1 excluded [REDACTED], trial 2 used [REDACTED], trial 3 used [REDACTED], trial 9 included [REDACTED] and trial 10 included [REDACTED]. This last one returned the best statistical values for the model. This correlates with the site use of office HVAC, and [REDACTED] is traditionally used in calculating HDD. A scatter plot was included in Figure 15 in the report showing Daily kWh vs. Dry Bulb Temperature.</p>	<p>Figure 15 scatter plot does not indicate a temperature dependent response. Note a base temperature of [REDACTED] is appropriate for older residential buildings, commercial buildings tend to have lower balance point temperatures due to higher internal loads. Excluding data where outdoor temperature exceeds [REDACTED] has no physical basis and removes at least half of the data points. Consider other model specifications.</p>
3	<p>An error in the Hypothesis Model Report was observed regarding the determination of multicollinearity. Table 6 titled "Matrix of Correlation between Variables" represents the Correlation Coefficient (also known as R) between each set of variables, and the text accompanying the table describes the criteria used for assessing multicollinearity as, "An absolute value of bivariate correlation &gt; 0.7 is not an exclusionary criterion, ..." According to Annex C of the CA Industrial SEM MV Guide, however, the criterion for examining collinearity is based on the Coefficient of Determination, or R<sup>2</sup>&gt;0.7, rather than the Coefficient of Correlation, R, used in the reports. We suggest examining the variables based on the Coefficient of Determination, R<sup>2</sup>, to reassess the multicollinearity and inclusion of variables in the models.</p>	Calculation method	N/A	<p>Please note that the SEM M&amp;V Guide does not require variables with high colinearity be removed. This change makes the colinearity test less restrictive. For example, a suggested limit on R-squared of 0.7 is equivalent to a limit on R of 0.84. No variables were excluded based on the Matrix of Correlation using R, so making this less restrictive would also result in no variables being excluded. This may mean that some of these variables add little new information to inform the model. There may be a risk of overfitting. Cascade will reassess the independent variables to see if it can reduce the colinearity among the models for the future savings report.</p>	No further comments
4	<p>Building type not stated in documentation. Identify building type in project documentation package.</p>	Missing required information	N/A	<p>The SEM Design and M&amp;V Guides do not mention "Building Type". None of our prior SEM documentation included this data point. Can you please confirm (a) where this requirement comes from, (b) what data dictionary we should use, and (c) which documents need to include the building type going forward?</p>	<p>Building type is tracked by SBW CPR team and is required for claim upload to CEDARS. Suggest adding a field to the Technical Review workbook and using CEDARS standard building types found here <a href="https://cedars.sound-data.com/cet_ui/spec/bldgtype/">https://cedars.sound-data.com/cet_ui/spec/bldgtype/</a></p>
5	<p>Initial savings estimates based on [REDACTED] % of annual consumption. Please provide documentation supporting the [REDACTED] % fractional savings estimate.</p>	Analysis assumptions	N/A	<p>The Scoping Report is developed before the implementer has done any work at the site. Therefore the [REDACTED] % estimation is acceptable, as no investigations or treasure hunts have been performed prior to the Scoping study. Choosing a target savings value of 10% or more is an acceptable practice to understand how accurately the savings may be reported. Page 63 of the Design Guide asks for the Scoping Report to include "Estimated Savings" but does not specify that any documentation is required.</p>	<p>[REDACTED] % as a placeholder value seems high and may result in an underestimate of the upfront fractional savings uncertainty for projects using an IPMVP Option C approach. Whole facility savings fractions on the order of 3%-5% are more common for SEM projects. Suggest tracking actual savings fractions from completed projects and updating the [REDACTED] % assumption as results come in.</p>



CPUC Staff Recommendation Definitions	
CPUC Staff Recommendation	Definition
Application ready to proceed without exception	The PA will continue to upload application documents to the CMPA directory through the implementation and claims phases of the project. The PA may proceed to approve the project without waiting for CPUC Staff response. A project is waived from further review at the post-installation stage by CPUC staff, but the PA is responsible for post-installation (IR) review. There will not be conditional approval.
Application ready to proceed with exception(s), as noted	<p>The PA must make revisions or changes as noted in CPUC Staff's review comments. The PA will continue to upload application documents to the CMPA directory through the implementation and claims phases of the project. The PA may proceed to approve the project without waiting for CPUC Staff response. If CPUC Staff decides to perform IR review of a project, CPUC Staff will notify the PA. The scope will be limited to determine if the project was carried out consistent with the application and notes provided during pre-installation review and to obtain information pertaining to whether the eligibility criteria or metrics should be revised.</p> <p>Unless the scope of work presented in project application has changed at IR review, the project will not be reviewed again in the areas specified below. Scope change is defined by substantial changes include significant modifications to the proposed equipment type, size, quantity, configuration, the expansion of a project to include additional retrofits, or the splitting of a project into multiple phases.</p> <p>The following areas will not be reviewed again by CPUC Staff</p> <ul style="list-style-type: none"> <li>• Calculation Tool</li> <li>• Calculation Methodology</li> <li>• M&amp;V Plan</li> <li>• Baseline</li> <li>• Eligibility</li> <li>• EUL/RUL</li> <li>• Measure Type</li> <li>• Program Influence</li> </ul>
Application rejected.	<p>The application is rejected as submitted. The PA shall promptly inform the applicant as to the reasons why the project was rejected and the specific recommendations for the conditions under which the project would be approved. CPUC Staff shall provide the reasons for the rejection or request for modification, including each basis as to why the project is rejected, or modification is requested. In addition, CPUC Staff shall provide specific recommendations for the conditions under which the project would be approved.</p> <p>If any party to the project is unsatisfied with the Commission's directions for the project, a dispute resolution process may be initiated by that party. The Commission shall adopt rules for the conduct of the dispute resolution process. – Section 381.2 (g) (3) (F)</p>