

CPUC Staff Ex Ante Review

CPUC Staff Project ID Number	SCE 23 T C 862
CPUC Directory Link	
PA	SCE
PA Application ID	
PA Application Executed Date	
PA Program ID	SCE_3P_2020RCEI_005
PA Program Name	Willdan Commercial Energy Efficiency Program
PA Program Year	
Date of CPUC Staff Review:	5/2/2023
PA CMPA Upload Dates Included in this review:	
First PA Upload	3/20/2023
Second PA Upload	N/A
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	WB-21715- Site-level whole building comprehensive retrofit
Measure 2	
Measure 3	
Measure 4	
Measure 5	
Measure 6	
Measure 7	
Measure 8	
Measure 9	
Measure 10	
PA Project Description:	WB-21715 NMEC Whole Building Measure The customer is proposing to implement the following measures under the NMEC framework - Replace the existing UPS units with new high-efficiency units on a 1-for-1 basis - install air partitioning plenum aisle containment that isolates the cooled supply air within direct proximity of the air intake of critical equipment separating the cold supply air from hot equipment exhaust air allows a higher supply air temperature setpoint and a reduction of air handling unit fan speed - Reduce the air handling unit supply fan speed from the current setting of down to and allow modulation according to the desired room temperature
Bi-Monthly Upload kW Demand Reduction	
Bi-Monthly Upload Annual kWh Impacts	
Bi-Monthly Upload Therm Impacts	
PA Proposed Incentive \$ (to Customer)	
Project Documentation kW Demand Reduction	
Project Documentation Annual kWh Impacts	
Project Documentation Annual Therm Impacts	
Project Documentation Incentive \$ (to Customer)	
CPUC Staff Primary Reviewer Name	
CPUC Staff Primary Reviewer Firm	
CPUC Staff Review Supervisor Name	
CPUC Staff Review Supervisor Firm	
PA Primary Reviewer Name	
PA Primary Reviewer Firm	
CPUC Staff Project Manager	
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	PA Response	ED Resolution
1	Please update project documentation to clearly show the calculation of total pre-installation consumption inclusive of grid purchases as well as fuel cell generation. The review team determined that daily fuel cell generation data was correctly added to daily grid consumption data to determine total daily pre-project consumption. However the submittal did not include this intermediate calculation step. In various project documents such as the PFS and savings calculation spreadsheet, it was unclear if the pre installation consumption value included fuel cell generation or not.	Self generation		
2	Based on SCE's update during the 2/16/23 biweekly call with Commission staff it appears that the fuel cell data can be obtained in hourly format allowing for eventual claim of peak demand savings. If peak demand savings are to be claimed for this project please revise the energy and demand models to reflect CZ2022 weather. Additionally the non-IOU energy analysis will require update to reflect hour-by-hour assessment of savings fuel cell generation and grid purchases to determine eligible energy and peak demand savings. The review team is requesting the project is submitted for post-installation review under the assumption that hourly fuel cell data will be collected and peak demand savings will be claimed during the post-installation phase.	Self generation		
3	Please revise the savings calculations with a power factor (PF) reflecting the most recent utility bill. The PF currently assumed in savings calculations reflects a utility bill from November 2021. The utility bill included for PPP proof (from April 2022) corresponds to a PF of . This incremental change in PF affects the estimated savings significantly.	Analysis assumptions		

4	<p>Savings calculations for the project measures affecting the facility's space cooling systems—cold aisle containment and fan speed optimization—reflect an assumption that the chiller plant operates 24/7 throughout the year. It is unclear if the chiller plant is capable of water-side or air-side economizing when conditions are favorable (e.g. when the wet-bulb temperature falls below 50F for water-side). Given the facility's location the review team estimates a significant number of favorable economizing hours per year. The lone mention of economizing in the project documentation (influence Attachment 6) indicates that the customer requested the developer to look into a water-side economizing measure further. If the chillers are capable of water-side or air-side economizing, please revise the analysis to account for reduced chiller consumption during favorable conditions. If the chillers are not capable of economizing please revise the project documentation to explain why the water-side economizer measure was ultimately not included in the scope of the comprehensive NMEC project.</p>	Analysis assumptions		
5	<p>Please provide supporting documentation on the output PF assumed for the existing UPSs as this value defines the assumed consumption of the proposed UPSs.</p> <p>Relatedly our review of the UPS replacement savings calculation showed an unexpectedly high share of savings from reducing UPS power distribution losses. According to Energy Star "electrical distribution system losses can account for 10% to 12% of the total energy consumed by the data center on average." Given that the facility consumes kWh per year (inclusive of grid purchases and fuel cell generation) electrical distribution system losses are estimated at kWh per year. The UPS replacement measure claims kWh per year or % of the estimated existing distribution losses.</p>	Analysis assumptions		
6	<p>The customer operates and maintains a corporate sustainability plan.</p> <p>. When assessing standard practice including customer standard practice documentation should address if and how the measures meet or exceed the customer's standard practice beyond this individual location.</p>	Other 1		
7	<p>Modern UPSs are typically capable of trending energy use at an hourly frequency or less. If the proposed UPSs have this capability please revise the M&V plan to collect this data to define the savings for the UPS replacement measure.</p>	M&V plan		
8	<p>Savings from the project will be affected by significant changes in IT load. The developer should document server activity (e.g. in teraflops processed) and server efficiency (e.g. teraflops capacity per kW of server load) during baseline and reporting periods to identify differences to be addressed through normalization including for the measures affecting HVAC energy use as well. If IT load increases significantly during the reporting period the developer should demonstrate that the existing UPSs (including the redundant units) were capable of meeting the new load in order to confirm the use of existing conditions baseline. If any servers are replaced during the baseline or reporting periods these changes should be documented in detail and addressed as non-routine events.</p>	Analysis assumptions		
9	<p>The facility is and presumably operates under service agreements with various clients. Please include information on whether the existing agreements require the facility to maintain certain space temperatures and humidities and any conditions that would trigger changes to the service agreements between the baseline and reporting period.</p>	Other 2		
10	<p>To support the influence narrative for the project's lone AR measure please provide analysis of the accelerated replacement cost in accordance with Decision 12-05-015 page 349: "The measure or project cost utilized in an early-retirement case is the full cost incurred to install the new high-efficiency measure or project reduced by the net present value of the full cost that would have been incurred to install the standard efficiency second baseline equipment at the end of the remaining useful life period."</p>	Measure cost		

Note or Instruction Number:	CPUC Staff Notes or Instructions:	Instruction Category	PA Response	ED Resolution
1	In accordance with NMEC Rulebook page 10 please submit a maintenance plan signed by the customer at the time of project implementation regarding the project's BRO measure.	Missing documents		
2	Attachment 12 (Analysis Report & Vendor Proposals) page 1 shows a project timeline with the incentive paid out 12 months after application. In accordance with NMEC rules the reporting period requires at least 12 months of facility operation after project implementation and commissioning before savings are finalized and incentives are paid out.	Other 3		

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.

<p>Application ready to proceed with exception(s), as noted</p>	<p>The PA must make revisions or changes as noted in CPUC Staff's review comments before signed agreement with customer. The PA will continue to upload application documents to the CMAPA 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"> • Calculation Tool • Calculation Methodology • M&V Plan • Base line • Eligibility • EUL/RUL • Measure Type • Program Influence
<p>Application rejected.</p>	<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>
<p>Advisory.</p>	<p>The PA is not formally required to follow instructions or recommendations given in an Advisory review. However, issues found will affect ESPI scoring and may come up again in Ex-Post review.</p>