CPUC Staff Ex Ante Review

CPUC Staff Project ID Number	PGE_22_T_C_767_PRJ - 03714212_Service
CMPA Directory Link	https://deeresources.info/cmpa/projects/20353
PA	PGE
PA Application ID	PRJ - 03714212
PA Application Executed Date	
PA Program ID	PGE_COM_004
PA Program Name	Nexant - Advanced Energy Program - Custom Retrofit
PA Program Year	
Date of CPUC Staff Review:	7/21/2022
PA CMPA Upload Dates Included in this review:	
First PA Upload	5/16/2022
Second PA Upload	6/1/2022
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	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 2	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 3	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
Measure 4	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 5	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 6	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SCHEDULE CHANGE
Measure 7	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 8	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 9	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 10	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
Measure 11	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 12	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 13	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SCHEDULE CHANGE
Measure 14	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 15	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 16	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
Measure 17	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SCHEDULE CHANGE
Measure 18	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 19	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 20	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 21	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 22	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 23	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
Measure 24	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SCHEDULE CHANGE
Measure 25	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 26	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 27	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 28	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 29	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 30	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 31	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 32	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
Measure 33	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 34	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SCHEDULE CHANGE
Measure 35	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 36	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 37	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 38	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 39	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 40	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
Measure 41	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SCHEDULE CHANGE
Measure 42	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 43	COMMISSIONING-RCX RECODE CONTROLS-HVAC-SETPOINT CHANGE
Measure 44	COMMISSIONING-RCX RECODE CONTROLS-HVAC-OTHER
Measure 45	Commissioning-Restore Optimize Equip Op-HVAC-EconomizerOutside Air
PA Project Description:	Implement twelve 12 BRO HVAC Optimization measures over multiple site locations
Bi-Monthly Upload kW Demand Reduction	340.9
Bi-Monthly Upload Annual kWh Impacts	1,848,246.9
Bi-Monthly Upload Therm Impacts	55,236.8
PA Proposed Incentive $ (to Customer)	$81,755.43
Project Documentation kW Demand Reduction	340.9

Project Documentation Annual kWh Impacts	1,848,246.9
Project Documentation Annual Therm Impacts	55,236.8
Project Documentation Incentive $ (to Customer)	81,755.4
CPUC Staff Primary Reviewer Name	
CPUC Staff Primary Reviewer Firm	DNV
CPUC Staff Review Supervisor Name	
CPUC Staff Review Supervisor Firm	Quantum Energy Analytics
PA Primary Reviewer Name	
PA Primary Reviewer Firm	
CPUC Staff Project Manager	
CPUC Staff Policy Authorization (as needed)	
CPUC Staff Recommendation:	**Application ready to proceed with exception(s), as noted**
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
#REF!	Please resubmit the project for post-installation review.	Continue Document Upload		
	The PA used the PG&E HVAC Tool v1.4.1 to estimate savings for majority of measures. The tool does not have a way to adjust the savings based on the building occupancy and estimate savings based on inputs that are related to the HVAC system size, schedule and setpoints. To account for the occupancy change, the PA came up with some normalization factors and applied these factors directly to the savings calculated by the tool. These normalization factors are estimated based on a mix of 2019 (pre-COVID and full occupancy), and 2021 (after initial opening of offices in July 2021 and partial occupancy) occupancy and usage data as well as an assumed "new normal" operation (employees required to work from offices three days per week) since March 2022. No occupancy data was provided to support the "new normal" operation since March 2022. The normalization approach is not appropriate, and the PA did not fully explain the logic behind the measure specific normalization adjustments. For example, in the base case of the "EEM 1 – Static Pressure Reset for ACs/AHUs", the system mostly operated close to a maximum duct static pressure (DSP) setpoint of 1.5 in-w.g.. If the base case lacked the programming that allowed the fans to push up to 1.5 in-w.g. most of the time, then the lower or higher occupancy is unlikely to have an impact on the operation of the system. The PA multiplied the savings calculated but the HVAC tool by the normalization factor estimated based on occupancy data to adjust the savings for occupancy. The PA did not explain why the percent occupancy has a direct impact on savings associated with this measure. Other measures have similar issues. In addition to the normalization issue, the PA did not explain whether the "new normal" operation of the HVAC system has changed since the pre-COVID operation and the initial opening after COVID. It is common for the building operators to adjust HVAC system operation (e.g., increased minimum outside air, extended HVAC on/off schedule, etc.) due to COVID. The PA did not explain the current (after March 2022) operation of the HVAC systems has changed compared to pre-COVID or 2021 period. Given all of these uncertainties in the calculation, we suggest the PA to use Option C with a full year of pre- and post- data to estimate savings. If Option C is not feasible, then the PA needs to clearly document the new normal (after March 2022) operation of the HVAC system, clearly explain how occupancy has an impact on savings associated with each measure and provide updated occupancy data to support any needed occupancy adjustments.	Calculation method		

Note or Instruction Number:	CPUC Staff Notes or Instructions:	Instruction Category	PA Response	ED Resolution
1	The bi-monthly upload (BMU) addresses associated with several measures don't match the project files. For example, the BMU address for EEM-1, EEM-2, EEM-4, EEE-6, EEM-9, EEE-12 is listed as [redacted] but the measures are associated with [redacted] Please make sure correct addresses are included in the next quarterly submission.	Other 1		
2	The current version of the HVAC Tool (v1.4.1) does not calculate DEER peak demand properly when the equipment operating schedule only partially overlaps the peak demand hours and when the overlapping peak hours change between the baseline and proposed cases. This issue was caught by PG&E review of the project. PG&E is working with the developer of the HVAC Tool to update the calculation methodology to correctly handle the peak demand savings calculation. This project does not receive incentive based on peak demand savings and these errors will have no impact on the incentive values. PG&E and the Technical Reviewer are conditionally approving the pre-install kW savings with the caveat that the HVAC Tool will be updated for post-install and the peak demand will be recalculated	Calculation tool		

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	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 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. 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. The following areas will not be reviewed again by CPUC Staff: • Calculation Tool • Calculation Methodology • M&V Plan • Baseline • Eligibility • EUL/RUL • Measure Type • Program Influence
Application rejected.	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. 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)
Advisory.	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.