

CPUC Staff Ex Ante Review

CPUC Staff Project ID Number	PGE 22 T I 829 PRJ - 03101280 Process Heat
CMPA Directory Link	https://deeresources.info/cmpa/projects/20681
PA	PGE
PA Application ID	PRJ - 03101280
PA Application Executed Date	
PA Program ID	PGE Ind 003
PA Program Name	INDUSTRIAL SYSTEMS OPTIMIZATION PROGRAM ISOP -
PA Program Year	
Date of CPUC Staff Review:	1/10/2023
PA CMPA Upload Dates Included in this review:	
First PA Upload	11/29/2022
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	BOILERSHWSTEAM SYSTEMS RETROFITNEW-PROCESS BOILER-STACK
Measure 2	
Measure 3	
Measure 4	
Measure 5	
Measure 6	
Measure 7	
Measure 8	
Measure 9	
Measure 10	
PA Project Description:	Install a condensing economizer on a 150 MMBtuhr steam boiler with MV plan following SWPR007-01
Bi-Monthly Upload kW Demand Reduction	0.0
Bi-Monthly Upload Annual kWh Impacts	0.0
Bi-Monthly Upload Therm Impacts	268,985.9
PA Proposed Incentive \$ (to Customer)	\$192,700.00
Project Documentation kW Demand Reduction	0.0
Project Documentation Annual kWh Impacts	0.0
Project Documentation Annual Therm Impacts	268,985.9
Project Documentation Incentive \$ (to Customer)	192,700.0
CPUC Staff Primary Reviewer Name	
CPUC Staff Primary Reviewer Firm	DNV
CPUC Staff Review Supervisor Name	
CPUC Staff Review Supervisor Firm	DNV
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	Due Date
1	Please submit the project for post-installation review, as the savings estimate is currently based on a single case study from the SWPR007-01 measure package.	Continue Document Upload	Post Tech Review Package Updated, the implementer submitted PIR, "PRJ - 03101280 IR_Submitted - CONF.pdf" was not updated with the approved TR savings. Please see PRJ - 03101280 Review POST_2023.12.26 - CONF.pdf, and PRJ - 03101280 Approved Calculations_POST - CONFIDENTIAL.xlsb for approved savings estimates.	No further action required.	

2	<p>Please revise the measure EUL to 6.7 years, or the RUL of the host equipment (default 1/3 of EUL). The host boiler was refurbished in 2022, but Statewide Guidance Document Version 1.4 (page 12) stipulates that the full EUL of the host equipment can only be claimed when the add-on equipment is installed on "newly installed or replaced" host equipment.</p>	EUL/RUL	<p>The EUL for this measure is determined by Appendix A of Resolution E-5221 DEER2024. Table 1.3 Measure Life for Add-On Equipment by Host and Host Proxy was used to determine the measure life. The boiler is the host where the energy recovered by the condensing economizer is wasted. The stack connects the host boiler to the condensing heat exchanger, which is the measure. This makes the stack the host proxy. The condensing economizer will continue to operate when the boiler is repaired and would not typically be removed from service if the stack were to be replaced. This makes the measure life the measure EUL (HVAC-WtrEcon) of the AOE (15 years). This the measure EUL ID used in SWPR007.1, see https://www.caetrm.com/measure/SWPR007/01/. The measure package was added to the POST Package, "SWPR007-01-steam-boiler-economizer-industrial.pdf"</p> <p>An explanation of the measure EUL has been added to the IR to justify the use of the measure EUL which is in line with CPUC decisions. The CPUC maintained document SW Custom Guidance v1.4 was last updated 6/2/2021 and doesn't reflect CPUC resolution E-5221.</p>	<p>The review team agrees with the interpretation of E-5221, which was released shortly after this project's application date.</p>
3	<p>The PFS indicates that the steam boiler's stage 1 feedwater economizer failed during the pre-installation M&V period. As a result, the pre M&V period does not reflect the operation of a fully functioning stage 1 feedwater economizer. In order to accurately establish the project baseline conditions, please revise the M&V plan to include at least two weeks of data monitoring on the following points:</p> <ol style="list-style-type: none"> 1. Stack temperature before feedwater economizer 2. Stack temperature between feedwater economizer and proposed condensing economizer 3. Stack temperature after condensing economizer 	M&V plan	<p>The boiler currently has a functioning standard feedwater economizer, which initially failed in 2022 after the completion of the PRE baseline data collection period. The feedwater economizer was repaired during the installation period of the condensing economizer measure. The feedwater economizer failed after the PRE baseline period data collection was complete, therefore it did not impact the PRE baseline performance data collected during the PRE review. The POST M&V data includes the EconoTemp Out, EconoTempIn, CondiExTemp and many other monitored points at a 10 second collection interval for a period of 32 days (4.57 weeks) which satisfies the requested disposition M&V plan.</p>	<p>No further action required.</p>

Note or Instruction Number:	CPUC Staff Notes or Instructions:	Instruction Category	PA Response	ED Resolution
1	The vendor's cost quote is valid through 12/31/22 and is now expired.	Measure cost	The vendors quote was valid, the Final Invoice (PRJ - 03101280 Final_Invoice - CONFIDENTIAL.pdf) is used to verify project costs.	Noted.

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 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.</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 • Baseline • Eligibility • EUL/RUL • Measure Type • Program Influence
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>
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.