

CPUC Staff Ex Ante Review

CPUC Staff Project ID Number	PGE_24_T_I_945_PRJ - 04489550_DHW
CMPA Directory Link	https://deeresources.info/cmpa/projects/21300
PA	PGE
PA Application ID	PRJ - 04489550
PA Application Executed Date	
PA Program ID	PGE_Ind_002
PA Program Name	CLEAResult - Business Energy Performance Ind - Customized Retrofit
PA Program Year	
Date of CPUC Staff Review:	6/24/2024
PA CMPA Upload Dates Included in this review:	
First PA Upload	4/23/2024
Second PA Upload	6/3/2024
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-DIST SYSTEM-INSULATION
Measure 2	
Measure 3	
Measure 4	
Measure 5	
Measure 6	
Measure 7	
Measure 8	
Measure 9	
Measure 10	
PA Project Description:	This project will install insulation to the approximately 11000 ft of existing pipelines within the oil refinery to maintain an acceptable temperature without having to continuously circulate and heat the lines to reduce the risk of clogging the lines supplying waste oils fats greases and vegetable oils to this facility
Bi-Monthly Upload kW Demand Reduction	63.8
Bi-Monthly Upload Annual kWh Impacts	531,233.0
Bi-Monthly Upload Therm Impacts	650,854.0
PA Proposed Incentive \$ (to Customer)	\$886,866.17
Project Documentation kW Demand Reduction	63.8
Project Documentation Annual kWh Impacts	531,232.7
Project Documentation Annual Therm Impacts	650,834.4
Project Documentation Incentive \$ (to Customer)	886,866.0
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
1	<p>The project's pipe insulation measure is classified as add-on equipment (AOE). The refinery facility is in the process of "switching from refining traditional crude oil to using waste oils (tallow) like fats, greases and vegetable oils from cooking and other processes" (PFS page 5) with the project expected to be completed in Q3 2024. The proposed pipe insulation will save gas, from reduced load of the steam heat exchanger and heat recovery steam generator, and electricity from the reduced load of the circulator pump and boiler feedwater pump.</p> <p>Resolution E-4818 requires for AOE that "The existing host system must be operational without the AOE, continue to operate as the primary service equipment for the existing load, and is able to fully meet the existing load at all times without the add-on component... The actual energy reduction occurs at the host equipment." Since the plant overhaul is currently in progress, the customer is unable to demonstrate that the "existing" host systems (steam heat exchanger, HRSG, and pumps) are able to fully meet the load of the reconfigured refinery without the AOE. The implementer clarified through supplemental data request that the reconfigured refinery will operate for approximately one year before the pipe insulation is installed, thereby providing an opportunity to demonstrate the viability of existing conditions.</p> <p>The review team requests that the project is resubmitted during the post-installation phase to confirm the basic requirements of AOE measure designation.</p>	Measure type		
2	<p>The refinery will process a feedstock of "waste oils (tallow) like fats, greases and vegetable oils from cooking and other processes" (PFS page 5). According to online research on the project, the tallow will be shipped by multiple transport means such as trucks, pipelines, barges, and tankers. It is therefore unclear if the tallow composition will vary during pre- or post-project periods, thereby affecting the energy required to prevent clogging. For this reason and due to the significant incentive associated with this project, the review team requests that the pre- and post-installation M&V periods are extended to 8 weeks to more comprehensively characterize typical plant operation. M&V data should be supplemented with any relevant SCADA data (e.g., heat exchanger inlet and outlet temperatures and flowrates). M&V should also include characterization of tallow composition and, if variation in composition over pre- or post-project periods is observed, normalization to typical operation.</p>	M&V plan		

Note or Instruction Number:	CPUC Staff Notes or Instructions:	Instruction Category	PA Response	ED Resolution
1	The review team requests that the non-IOU electric and gas analyses are rerun during the post-installation phase, as the share of usable refinery fuel gas (RFG) will likely change as a result of the plant conversion.	Self generation		
2	PFS page 9 states that "The pipeline is within OSHA limits as far as maximum allowed temperatures as well as being either elevated or beyond working level limits." Photos included in the submitted inspection report show pipe runs within working areas. The developer should also reference California Title 8 Section 3308 which applies to hot pipes and hot surfaces to confirm compliance. The post-installation submittal should leverage M&V data to identify pipe runs that exceed the temperature limits dictated by OSHA and CA Title 8; the savings claim should be correspondingly derated if the pipe surface temperature warranted protective wrap for safety compliance.	Analysis assumptions		
3	The pre-installation savings estimate relied on 3E Plus software to estimate savings from insulation based on assumed pipe temperatures and insulating material. While this is an acceptable method for estimating pre-installation savings without any M&V data, the review team recommends that the post-installation gas savings should be derived from the pre- and post-installation M&V data on inlet and outlet temperatures and flowrates through the steam heat exchanger.	Calculation method		

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. 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.