

CPUC Staff Ex Ante Review

| | |
|--|---|
| CPUC Staff Project ID Number | PGE_24_T_A_931_PRJ - 03716362_Process |
| CMPA Directory Link | https://deeresources.info/cmpa/projects/21229 |
| PA | PGE |
| PA Application ID | PRJ - 03716362 |
| PA Application Executed Date | |
| PA Program ID | PGE_Ag_001 |
| PA Program Name | █ - Agricultural Energy Savings Action Plan AESAP Ag - Customized Retrofit |
| PA Program Year | |
| Date of CPUC Staff Review: | 3/26/2024 |
| PA CMPA Upload Dates Included in this review: | |
| First PA Upload | 2/9/2024 |
| 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 | REFRIGERATION RETROFITNEW-CONDENSER-EFFICIENT UNIT |
| Measure 2 | |
| Measure 3 | |
| Measure 4 | |
| Measure 5 | |
| Measure 6 | |
| Measure 7 | |
| Measure 8 | |
| Measure 9 | |
| Measure 10 | |
| PA Project Description: | AOE CRA10 - Addition of Evaporative Cooling Tower and Air-Cooled Condensers to dairy milk cooling system. |
| Bi-Monthly Upload kW Demand Reduction | 0.0 |
| Bi-Monthly Upload Annual kWh Impacts | 155,958.0 |
| Bi-Monthly Upload Therm Impacts | 0.0 |
| PA Proposed Incentive \$ (to Customer) | \$28,072.42 |
| Project Documentation kW Demand Reduction | 0.0 |
| Project Documentation Annual kWh Impacts | 155,958.0 |
| Project Documentation Annual Therm Impacts | 0.0 |
| Project Documentation Incentive \$ (to Customer) | 28,072.4 |
| 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 NOT Required |

| Action Number: | Summary of CPUC Staff Required Action by the PA: | Action Category | PA Response | ED Resolution |
|----------------|--|-----------------|-------------|---------------|
| 1 | <p>The measure application type should be revised to Normal Replacement (NR) instead of the originally claimed Add-On Equipment (AOE). The existing well water pre-cooler reduces the energy burden of the host equipment (the second-stage compressors) and can be considered AOE; however, Resolution E-4818 states that "add-on equipment that breaks or performs poorly may result in increased energy consumption" (page 27) and "the replacement of broken or poorly performing add on equipment may qualify as a normal replacement" (page 28).</p> <p>The submitted documentation includes evidence that the existing pre-cooling system is performing poorly. Per PFS page 6, "the customer was unhappy with the current milk refrigeration system and the total well water consumed per year... The customer suspects that the warm well water is not cooling the milk as much as it could before entering the refrigeration system." Suboptimal pre-cooling leads to increased energy consumption from the host compressors. Aside from poor energy performance, the well water pre-cooler produces significant wastewater leading to additional customer burden: "the dairy is then tasked with removing this excess water along with the other manure and wastes, which adds cost to the overall manure management operation" (PFS page 12).</p> <p>NR treatment will require that the energy savings are calculated against a standard practice baseline. The PFS (page 11) states that "well water usage for milk pre-cooling is considered standard practice." However, the well water of a standard practice system is "typically roughly 30 degrees colder than the incoming milk" (per PGE workpaper PGE3PAGR114 R0 Milk Pre-Cooler). As a result, the savings should be modified to reflect a standard-practice well water pre-cooler with 30°F temperature delta instead of the existing pre-cooler which intakes well water 21.8°F cooler on average than the incoming milk.</p> | Measure type | | |
| 2 | <p>The other component of the proposed single-measure project is the addition of 16 air-cooled condensers to reject heat from the refrigeration compressors serving the second stage of cooling. The review team recommends that the project is split into two measures: the first measure as described in the prior disposition item, and the second measure the installation of a heat rejection system for the second stage of milk cooling. Once the well water tank and pump are decommissioned for pre-cooling (measure #1), the existing well water-cooled condensers are no longer viable and must be replaced, warranting NR MAT for measure #2. NR again requires that energy savings are calculated against a standard practice baseline, as addressed in the next disposition item.</p> | Measure type | | |
| 3 | <p>Per PFS page 11 "standard practice (SP) for [redacted] dairies is... water – or- air cooled condensers." If the submittal can demonstrate that the selected air-cooled condensers exhibit an efficiency greater than standard practice baseline efficiency as defined by the applicable code (e.g., Title 24 Section 120.6 or Title 20 Sections 1601 through 1608) the above-code savings should be claimed for the second measure. Otherwise, the second measure is a to-code normal replacement that should not be associated with any savings claims or incentives.</p> | Baseline | | |
| 4 | <p>The post-M&V plan does not include the current/power logging of the proposed air-cooled condenser fans. Since the proposed air-cooled condenser operation is weather dependent, the post-M&V should include either current or power of the new air-cooled condenser fans at 5-minutes intervals for three weeks.</p> | M&V plan | | |

| Note or Instruction Number: | CPUC Staff Notes or Instructions: | Instruction Category | PA Response | ED Resolution |
|-----------------------------|--|----------------------|-------------|---------------|
| 1 | <p>The submitted documentation includes contradictory information about whether the well water pump will be fully eliminated as a result of the project. PFS page 19 states that "Enough well water is already provided to the facility for sanitation that using the fluid cooler will result in no use of well water when the fluid cooler operates except for enough to cover evaporation, drift and blowdown loss. The estimated evaporation, drift and blowdown loss was calculated as 1.5 GPM." However, page 12 states that "The customer doesn't need the well water that is currently used for as single pass free-cooling for any other purpose." The M&V plan should be revised to include verification that any existing well water pump usage is not attributed to either stage of the milk pre-cooling system. If so, the well water pump should be monitored per the M&V plan and incorporated in the post-installation energy calculation.</p> | Analysis assumptions | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| 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. |