CPUC Comments on SWPR002-02 VFD Glycol Pump

Lead PA: PGE

Workpaper Submittal Date: 12/21/2020

CPUC Review Date: 2/10/2021

Please note responses to comments in the table below, revise workpaper, and upload the entire package to t he WPA. If needed, please reach out to Deemed Review Team to set up a call to discuss.

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| CPUC Comment | PA Response |
| CPUC reviewers note that the assumed annual operating hours (8,413) is based on 2009 glycol pump data, as shown on page 8 of the workpaper. We can also view the individual project values in the measure specific constants tab of the MeasureDataSpec spreadsheet. Here we can see that the average of 8,413 is based on any values greater than 8,000 hours, with the values for 4 of the pumps being excluded from this mean. Please justify this exclusion.  Furthermore, CPUC reviewers note that this implies the motors run almost constantly throughout the year. Reviewers are unfamiliar with the normal operation of glycol pumps in a winery refrigeration application and request further justification for the workpaper-based annual hours of operation applied. | Commercial wineries used glycol for cooling during the fermentation (this is during crashing season), for wine aging in stainless steel tanks (not all wines go through the classic oak barrel) throughout the whole year, for air conditioning, and for other processes. Therefore, the glycol pump and the cooling equipment (chiller) must run almost 24/7/365. A survey of wine tanks was conducted and is shown on Exhibit A, the results indicate that >50% of the tanks are full/partially full all year long.  As for the four values excluded from the runtime calculations; they are from the same participants as seen in Exhibit B; the lower value seems to be a misread, since it refer to the same pump size, and consequently , was not included in the overall average. |
| CPUC reviewers note that this VFD add-on measure is eligible for installation on existing glycol pumps. For pumps the assumed pump motor EUL is 15 years, based on a DEER-READI source; refer to page 11 of the workpaper. It is notable that for retrofit applications this value governs the EUL of the VFD, based on an assumed RUL of the pump motor, resulting in a 5-year EUL for retrofit VFD installations. However, this value of 15 years is associated with an HVAC pump application; refer again to page 11 of the workpaper. It is unclear if an HVAC pump would be expected to run for annual hours of operation that are similar to the glycol pump assumption, which might have implications for the life of a glycol pump relative to an HVAC pump. Please take this under consideration by checking sources for EULs from more relevant pumping applications. | PG&E following CPUC recommendations reviewed other pump’s EULs in DEER database; a glycol pump operation is similar to those found on buildings HVAC systems, where they are used to recirculate glycol through the chiller and cooling coils.  Other EULs found on DEER for the Ag sector include:   |  | | --- | | Agr-VSDmilkTrnsfr | | Agr-VSDmilkVcm |   These also feature a 15/5 years for EUL/RUL. Well and booster pumps found in Ag irrigation systems are of a different application.  HVAC pumps for certain buildings such as hospitals, data centers, hotels, etc. may actually match the runtime of a glycol pump found in a winery, in fact those facilities may actually use same fluid (glycol + water) in their chilled water circulation systems. |
| CPUC reviewers note this workpaper does not document methods, inputs, and assumptions for estimating peak demand savings. If the utilities intend to claim peak savings, then it should be documented in the workpaper submission. | Glycol pumps typically run during peak hours (Please refer to Page #8 under Peak Electrical Demand Reduction), therefore no peak demand savings will be claim under this measure |

EXHIBIT “A”



EXHIBIT “B”

