

Ex Ante Review Findings

Table 1-1: Project Information

IOU	PG&E
Application ID	1433-01
Application Date	TBD
Program ID	PGE2223
Program Name	Heavy Industry Energy Efficiency Program
Program Year	TBD
Itron Project ID	X183
IOU Ex Ante Savings Date	8/16/12
ED Measure Name	Install new bladder tank
Project Description	Install vapor bladder tank to reduce vapor combustion unit cycling
Date of ED Review(s)	8/28/2012
Primary Reviewer and Firm	Keith Rothenberg/Energy Metrics
Review Supervisor and Firm	Joseph Ball/Itron
Type of Review (Desk, On-site, Full M&V, Tool)	Desk
ED Recommendation	Ex ante savings estimates are not approved, pending fulfillment of data request for more information. ED will perform a comprehensive review following receipt of additional information for this project.

Measure Description

The application documents the installation of a 110,000 ft³ vapor bladder tank to reduce vapor combustion unit (VCU) cycling. According to the documentation, vapor is collected from a tank farm and from a shipping dock. This project involves eliminating the combustion of vapor from the tank farm by installing a bladder tank that can contain the tank vapor as the ambient air temperature increases. Vapor in the bladder tank will return to the tanks in the tank farm as the ambient air temperature decreases and vapor pressure decreases. Currently when the vapor system reaches a defined set point, the VCU cycles on and burns the vapor to reduce vapor system pressure. According to the documentation, the VCU consumes natural gas during its start up phase to heat the combustor to 1,400 °F. Vapor collected from the shipping dock will not be connected to the bladder tank.

The application documents 735,715 annual therms savings with an incentive of \$738,715.

Summary of Review

ED reviewed the following documents as part its review of this project:

- 1433-01 [REDACTED] influence emails
- 1433-01 [REDACTED] Calcs--QC KD.xlsx
- 081612 [REDACTED] Bladder Tank 1433-01 PCIP rev1 QC KD.pdf
- SPEC 5231 Vapor Volume Analysis.pdf

ED reviewed the above files, which included two PDF reports detailing the proposed measures and describing the savings calculations. The IOU third party savings calculations are also included.

ED requires additional information to verify the estimated energy savings for these measures.

ED does not fully understand the consumption of natural gas by the VCU. Does the VCU only consume natural gas during the combustor startup cycle-i.e. while heating the combustor?

ED would like to review monthly natural gas billing data for this facility. Billing data has not been provided.

ED would like to verify the input btuh of all of the natural gas consuming equipment at this facility.

ED would like more information regarding whether or not this project is being undertaken as part of air board or other regulatory agency compliance issues. ED notes that this facility has been cited for violations by the US Environmental Protection Agency¹.

An EUL for the measure has not been provided.

¹ . <http://www.epa-echo.gov/cgi-bin/get1cReport.cgi?tool=echo&IDNumber=110002064097>

ED also requests additional information on any proposed post installation measurement and verification for this project.

Review Conclusion

The ex ante energy savings could not be validated and are not approved pending additional information from the IOU. ED will perform a comprehensive review following receipt of additional information for this project. ED also will perform a net to gross review for this project.

Summary of ED Requested Action by the IOU

In order to complete an ex ante review the ED recommends that the IOU submit the following documentation due on **9/14/2012** (14 days from submittal date to IOU):

1. Provide a statement regarding the operation of the vapor combustion unit (VCU). Does the VCU only consume natural gas during the combustor startup cycle-i.e. while heating the combustor or does it consume natural gas continuously during its operating cycle?
2. Confirm that the only natural gas consuming equipment at this site are the VCU, a space heater, and domestic hot water heater (s).
3. Provide the make, model, manufacturer, and nameplate input btuh of all of the natural gas consuming equipment at this facility.
4. Provide the age of the VCU.
5. Describe what archived trended data are available from the customer's control system regarding the vapor collection system and VCU operation, vapor system pressure, VCU start-stop times, VCU natural gas valve position, etc.
6. Provide a statement regarding whether or not this project is being undertaken as part of air board or other regulatory agency compliance issues.
7. Describe the nature of regulatory permit violations in the past 5 years (if any) related to the operation of the vapor system.
8. Describe any regulatory action taken with regard to the operation of the vapor system in the past 5 years.
9. Describe any upcoming deadlines for customer compliance with current or future regulatory agency regulations associated with the operation of the vapor system.
10. Describe how the customer procures natural gas for this site, i.e. directly from the IOU, through a third party, etc.
11. Provide the most recent 3 years of monthly natural gas usage for this site. Provide the current tariff under which the customer purchases natural gas and evidence that the PPP charge is paid for natural gas purchased.
12. Provide any IOU reviews of this project.

13. Describe any post installation measurement and/or verification proposed for this project.
14. Provide a statement regarding whether or not the ex ante claims for this project will be frozen following the proposed post installation M&V, or based on the ex ante calculations alone.
15. Provide an EUL for this measure.
16. ED is likely to request additional information as the details of this project become more clearly defined.
17. ED requests that PG&E continue to keep ED informed of progress and next steps on this project.
18. ED requests to be informed of any future site visits including the post-installation inspection, in case it chooses to send a representative on-site.
19. ED requests the opportunity to review the requested data, analysis and calculations prior to the freezing of ex ante savings impacts for this project.