

Ex Ante Review Findings

Table 1-1: Project Information

IOU	PG&E
Application ID	2K12114190
Application Date	9/10/12
Program ID	PGE21021
Program Name	Industrial/Ag Calculated Incentives
Program Year	2012
Itron Project ID	X206
IOU Ex Ante Savings Date	9/14/12
ED Measure Name	Biogas recovery
Project Description	Install a multi-stage anaerobic reactor and recover biogas
Date of ED Review(s)	10/16/2012
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 describe the proposed project as the installation of a multi-stage anaerobic reactor system (MARS) and the recovery of biogas. The biogas will be used to offset IOU supplied natural gas that is consumed by boilers at the facility. The new system will require the installation of a 50 HP compressor which will increase electrical energy consumption.

The IOU has estimated net annual savings of 747,755 therms and an increase of 284,129 kWh, associated with this project.

Summary of Review

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

- 2K12114190 Application Package.pdf
- CR Application Acknowledgement
- Usage History_Gas.pdf
- Email correspondence

ED reviewed the above files, which included an IOU internal memorandum detailing the proposed measure and describing the savings calculations. The savings calculations are summarized in Tables in the IOU internal memorandum. Live calculations were not provided.

ED requires additional information to verify the estimated energy savings for this measure.

ED was not able to determine if this project has already been constructed or is currently under construction and how this project relates to other projects described in the documentation provided by the IOU. The IOU internal Memorandum dated September 14, 2012 states that biogas production is expected to begin in December 2012.

It is not clear to ED if this is a new construction project or a retrofit project and what the scope of the project proposed for this application is. ED requests more information regarding any regulatory requirements associated with this project or other associated projects such as the new containment vessel that was under construction at the time of the IOU site visit in March 2012.

An EUL for the measure has not been provided.

ED requests additional information on any proposed post installation M&V for this project.

Review Conclusion

The ex ante energy savings could not be validated and are therefore 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 **11/2/2012** (14 days from submittal date to IOU):

1. Describe the pre-project biogas production at the facility. Explain why the customer was constructing an effluent containment vessel in March 2012. Is the effluent containment vessel related to a new construction project, a facility expansion project, or a retrofit project (please explain). Describe code or other regulatory agency compliance issues associated with the effluent containment vessel and/or the proposed biogas recovery project, etc. Is any aspect of the effluent containment vessel project and/or associated systems documented in a financial incentive application that either has been or will be claimed by the IOU? If so provide the documentation related to that project. Describe how the effluent containment vessel is related to the MARS and biogas recovery.
2. The documentation states that although the construction of the effluent containment vessel was underway in March 2012, the customer was at that time investigating options to destroy or utilize the biogas. What options were considered by the customer to destroy or utilize the biogas? Provide a summary of the costs and benefits of each option evaluated by the customer. Describe any regulatory considerations associated with each option. Describe what the customer was/is doing with the biogas being produced before the effluent containment project was constructed, and since the effluent containment project has been constructed (if it is complete).
3. The IOU Internal Memorandum dated September 14, 2012 states that biogas production is expected to begin in December 2012. Describe what has already been constructed and what remains to be constructed as part of this project. Describe if the proposed project is considered by the IOU to be a new construction project or a retrofit project.
4. Email correspondence from the customer dated June 2011 indicates that the customer was producing biogas prior to commencing this project. IOU site visit notes from March 2012 describe the construction of an effluent vessel underway at the facility at that time. Provide additional background on the evolution of this project:
5. Provide a single line diagram or other drawing showing how this project integrates into the customer's existing operations. Show all energy consuming and generating equipment on the diagram- effluent containment vessel, anaerobic reactor, compressors, pumps, boilers, CHP units, etc. Clearly delineate the boundaries of the proposed project.
6. Describe any proposed M&V for the project, such as verification of biogas recovery rate, electrical power consumed, etc. Describe if the biogas production from the proposed project will be metered by the customer.

7. The documentation states that a three prong test is required for the project. Provide the three prong test analysis.
8. Only one year of gas usage data was provided. Provide the most recent three (3) years of monthly natural gas therms, electrical kWh and peak kW data for the facility.
9. Provide the live spread sheet calculations and also describe the source of the assumptions used in the calculations for constants such as 0.35 m³/kg COD and 10,000 btu gas/kWh electricity.
10. Submit a statement regarding whether or not the ex ante claims for this project will be frozen following any proposed post installation M&V, or based on the ex ante calculations alone.
11. If post installation M&V is proposed, provide a description of the M&V plan for the project.
12. Provide the proposed EUL for the measure.
13. Provide any IOU application reviews for this project.
14. ED is likely to request additional information as the details of this project become more clearly defined.
15. ED requests that PG&E continue to keep ED informed of progress and next steps on this project.
16. 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.
17. ED requests the opportunity to review the requested data, analysis and calculations prior to the freezing of ex ante savings impacts for this project.