

Ex Ante Review Findings

Table 1-1: Project Information

IOU	PG&E
Application ID	NC0120306
Application Date	9/6/11
Program ID	TBD
Program Name	Customized New Construction
Program Year	2011
Itron Project ID	X172
IOU Ex Ante Savings Date	July 2012
ED Measure Name	TBD
Project Description	<p>Winery Expansion, nine (9) new construction measures:</p> <p>EEM No. 1 – Low Approach Temperature Evaporator EEM No. 2 – Floating Head Pressure Control on the Ammonia Refrigeration System EEM No. 3 – Variable Frequency Drives on Glycol Pumps EEM No. 4 – Double Stack Floatation Solid Separation Device EEM No. 5 – High Efficiency Refrigeration Screw Compressors EEM No. 6 – Variable Frequency Drive Refrigeration Screw Compressor as the Trim Unit EEM No. 7 – Install a Desuperheater for Recovering Heat from Superheated Ammonia to Preheat Boiler Makeup EEM No. 8 – Variable Frequency Drives on Evaporative Condenser Fans EEM No. 9 – Variable Frequency Drive on Must Pump</p>
Date of ED Review(s)	8/20/2012
Primary Reviewer and Firm	Keith Rothenberg/Energy Metrics
Review Supervisor and Firm	Amit Kanungo/DNV KEMA
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.
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Measure Description

The application documents the implementation of nine (9) energy efficiency measures as part of a capacity expansion at a large winery. The measures are:

EEM 1 – Low Approach Temperature Evaporator

EEM 2 – Floating Head Pressure Control on the Ammonia Refrigeration System

EEM 3 – Variable Frequency Drives on Glycol Pumps

EEM 4 – Double Stack Floatation Solid Separation Device

EEM 5 – High Efficiency Refrigeration Screw Compressors

EEM 6 – Variable Frequency Drive Refrigeration Screw Compressor as the Trim Unit

EEM 7 – Install a Desuperheater for Recovering Heat from Superheated Ammonia to Preheat Boiler Makeup

EEM 8 – Variable Frequency Drives on Evaporative Condenser Fans

EEM 9 – Variable Frequency Drive on Must Pump

The documentation also describes eight (8) additional measures that have been removed from consideration for various reasons.

The IOU has estimated annual savings of 24,946 therms, 4,493,764 kWh, and 861 kW of peak demand reduction for this project.

Summary of Review

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

- ██████████ Winery Capacity Expansion Applica.pdf
- BASE Calculations - ██████████ Winery Expansion.xls
- Draft Review Comments_██████████.pdf
- ██████████ FINAL.pdf

ED reviewed the above files, which included a PDF report detailing the proposed measures and describing the savings calculations. The savings calculations are also included.

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

ED was not able to determine if this project has already been constructed or is currently under construction. The Customized New Construction (CNC) Report dated July 2012 states that construction is expected to be completed in July 2012.

The IOU documentation (CNC Report) provides a list of major equipment expected to be installed as part of the expansion project. It is not clear to ED if equipment such as the new ammonia screw compressors, evaporative condensers, glycol pumps, must pump, etc. will be installed as a standalone plant or integrated into the existing plant.

The CNC report references the “Industrial Cooling and Refrigeration Baseline Study” dated September 2006. This study and any other relevant baseline documents have not been provided.

ED requests that the IOU provide demonstration and documentation for the selected baseline of each measure, which includes consideration of customer policies and normal practices at this facility and other facilities operated by this customer.

An EUL for each measure has not been provided.

ED also requests additional information on how the post project load profiles will be established for this project. The IOU verification process states that average loads will be verified for the crush and non-crush seasons.

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 **9/7/2012** (14 days from submittal date to IOU):

1. The Customized New Construction (CNC) Report dated July 2012 states that construction is expected to be completed in July 2012. Has construction been completed? If so, when was it completed? If not, when is it expected to be completed?
2. What is/was the expected/actual start date of construction?
3. The IOU documentation (CNC Report) provides a list of major equipment expected to be installed as part of the expansion project. Will equipment such as the new ammonia screw compressors, evaporative condensers, glycol pumps, must pump, etc. be installed as a standalone plant or integrated into the existing plant?
4. Please advise if any additional energy savings analysis documents were prepared for this project during earlier phases of the design that list the proposed measures and their expected impacts. Provide these documents if any exist.
5. Provide demonstration and documentation for selected baseline of each measure, including consideration of customer policies and normal practices at this facility and other facilities operated by this customer. The CNC report references the “Industrial Cooling and Refrigeration Baseline Study” dated September 2006. Please provide this study and any other relevant documents such as baseline studies for large wineries.

Provide justification regarding using the Industrial Cooling and Refrigeration Baseline Study for some of the measures for this project.

6. Please provide design drawings (.pdf format) for the proposed measures including equipment schedules and single line drawings (or P&ID's) showing the relationship between pieces of equipment documented in this application and existing equipment located at the facility.
7. Provide additional information on how the post project load profiles will be established for this project. The IOU verification process states that average loads will be verified for the crush and non-crush seasons.
8. 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.
9. ED would like to send a representative to visit the customer's facility and possibly other nearby facilities operated by the same customer to gain a better understanding of this project. Please provide customer contact information to facilitate this request.
10. Provide the proposed EUL for the each measure.
11. ED is likely to request additional information as the details of this project become more clearly defined.
12. ED requests that PG&E continue to keep ED informed of progress and next steps on this project.
13. 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.
14. ED requests the opportunity to review the requested data, analysis and calculations prior to the freezing of ex ante savings impacts for this project.