

Phase 3 Ex Ante Review Findings

Table 1-1: Project Information

IOU	PG&E
Application ID	NC0120306
Application Date	9/6/11
Program ID	PGE21031
Program Name	Customized New Construction
Program Year	2011
Itron Project ID	X172
IOU Ex Ante Savings Date	July 2012
ED Measure Name	Winery Expansion
Project Description	<p>Winery Expansion, twelve (12) new construction measures:</p> <p>EEM 1 Low Approach Temperature Evaporator</p> <p>EEM 2 Double Stack Flootation Solid Separation Device</p> <p>EEM 3 Install a Desuperheater</p> <p>EEM 4 Variable Frequency Drives on Hot Glycol Pumps</p> <p>EEM 5 Variable Frequency Drive on Must Pump</p> <p>OEEM 1 Insulate Wine Storage Tanks</p> <p>OEEM 2 High Flow VFD Controlled Destemmers</p> <p>OEEM 3 Elevated Fermentation Tanks</p> <p>OEEM 4 High Efficiency Centrifuge</p> <p>OEEM 5 High Efficiency Pumps</p> <p>OEEM 6 Two Additional Must Heaters</p> <p>OEEM 7 Rotovac Vacuum Solids Removal System</p>
Date of ED Review(s)	8/20/2012, 3/14/2013, 5/13/2013
Primary Reviewer and Firm	Keith Rothenberg/Energy Metrics
Review Supervisor and Firm	Amit Kanungo/DNV KEMA & Joseph Ball/Itron
ED Project Manager	

ED Policy Authorization (as needed)	
Type of Review (Desk, On-site, Full M&V, Tool)	On-site
ED Recommendation	Final ex ante savings estimates are approved at 693,853 kWh, 260.6 kW of peak demand reduction, and 0 therms.

Measure Description

The application documents twelve (12) energy efficiency measures as part of a capacity expansion at a large winery. The measures are:

- EEM 1 Low Approach Temperature Evaporator
- EEM 2 Double Stack Floatation Solid Separation Device
- EEM 3 Install a Desuperheater for Recovering Heat from Superheated Ammonia to Preheat Boiler Makeup Water
- EEM 4 Variable Frequency Drives on Hot Glycol Pumps
- EEM 5 Variable Frequency Drive on Must Pump
- OEEM 1 Insulate Wine Storage Tanks
- OEEM 2 High Flow VFD Controlled Destemmers
- OEEM 3 Elevated Fermentation Tanks
- OEEM 4 High Efficiency Centrifuge
- OEEM 5 High Efficiency Pumps
- OEEM 6 Two Additional Must Heaters
- OEEM 7 Rotovac Vacuum Solids Removal System

Measure EEM 3 is shown as not being implemented. Measure OEEM 1 is shown to not be eligible for incentives. Measures OEEM 3, 6, and 7 are described as not having any energy savings associated with them.

The IOU has revised the estimated annual savings as recommended in ED's previous review (please refer to X172 PGE NC0120306 Phase 2 EAR 2013_0318.docx) for this project from a savings of 0 therms, 1,056,218 kWh, and 459 kW of peak demand reduction to a savings of 0 therms, 693,853 kWh, and 260.6 kW of peak demand reduction. The incremental cost is estimated to be \$196,025 and the incentive is capped at \$98,012, which is 50% of the incremental cost.

Summary of Review

This is Energy Division's third and final review for this project. In the previous review, ED elected to review EEM 1 – Low Approach Temperature Evaporator and EEM 2 – Double Stack Floatation Solid Separation Device. These measures accounted for 76% of the annual kWh savings and 51% of the electric demand reduction in the IOU's savings analysis. The IOU's

documentation and analysis for the other measures were considered by ED, but not selected for a detailed review.

In the previous ex ante review, ED found that the IOU savings estimates reported for EEM-1 were less than those estimated by ED. ED also questioned why the IOU was reporting zero incremental cost for EEM-2 in the project summary when in fact EEM-2 has a negative incremental cost impact in excess of 3.9 million dollars. ED requested that the IOU remove this measure from the project.

The IOU has revised the savings analysis, increasing the energy savings for measure EEM-1 and removing EEM-2 from the project as requested by ED.

An EUL for each measure has been provided.

Review Conclusion

Final ex ante savings calculations are approved at 693,853 kWh, 260.6 kW of peak demand reduction, and 0 therms. The approved ex ante savings values include the two measures reviewed by ED, while the other measures documented by the IOU were considered by ED, but not selected for a detailed review.

Summary of ED Requested Action by the IOU

None

Table 1-1: Project Overview

Description	IOU Proposed Ex Ante Data	ED Recommendations
Project Baseline Type (Early Replacement, Normal Replacement, Capacity Expansion, New Construction, System Optimization, Add-on Measures)	New Construction	Approved
Project Cost Basis (Full Cost, Incremental Cost)	Incremental cost	Approved
RUL (Early retirement projects only, otherwise N/A (not applicable))	NA	NA
EUL	Varies by measure, 15-20 years	Approved
First Year kWh Savings	693,853	Approved
First Year Peak kW Savings	260.6	Approved
First Year Therms Savings	0	Approved
kWh Savings (RUL Period)	0	Approved
Peak kW Savings (RUL Period)	0	Approved
Therms Impact (RUL Period)	0	Approved
kWh Savings (EUL thru RUL Period)	693,853	Approved
Peak kW Savings (EUL thru RUL Period)	260.6	Approved
Therms Savings (EUL thru RUL Period)	0	Approved
Annual Non-IOU Fuel Impact (RUL Period)	NA	NA
Annual Non-IOU Fuel Impact (EUL thru RUL Period)	NA	NA
Net-to-Gross Ratio	Not provided	TBD

Table 1-2: Detailed Review Findings

Reviewed Parameter	Analysis
Project Gross Savings Baseline (for early retirement projects only, include RUL through EUL baseline)	IOU Proposal: New construction
	ED Assessment: Correct
	ED Recommendation: Approved
Project Cost Basis (for early retirement projects only, include RUL through EUL cost basis treatment)	IOU Proposal: Incremental cost
	ED Assessment: Incremental cost is appropriate.
	ED recommendation: none
RUL (required for early retirement projects only, otherwise n/a)	IOU Proposal: N/A
	ED Assessment: Correct
	ED recommendation: None
EUL	IOU Proposal: Varies by measure, 15-20 years
	ED Assessment: Correct
	ED Recommendation: None
Savings Assumptions	IOU Proposal: EEM-1: one week of data during the crush season and one week of data during the non-crush season were analyzed to estimate the impacts of the measure using a spreadsheet analysis. EEM-2: Spreadsheet analysis using the energy consumption and throughput capacity of the baseline and installed measures with consideration for usage during the crush season only.
	ED Assessment: Reasonable approach, more data could have been used in the analysis
	ED Recommendation: None
Calculation Methods/Tool review	IOU Proposal: The project impacts are estimated using spreadsheet analysis.
	ED Assessment: Reasonable approach.
	ED Recommendation: None
Pre- or Post-	IOU Proposal: EEM-1: one week of data during the crush season and one

Reviewed Parameter	Analysis
<p>Installation M&V Plan</p>	<p>week of data during the non-crush season were analyzed to estimate the impacts of the measure using a spreadsheet analysis. EEM-2: Spreadsheet analysis using the energy consumption and throughput capacity of the baseline and installed measures with consideration for usage during the crush season only.</p>
	<p>ED Assessment: More data could have been used in the analysis. A DOE 2.2R model was created by a third party for other measures related to this project and could have been used in the analysis.</p>
	<p>ED Recommendation: For future projects, obtain more data when it is readily available and utilize the analysis of other parties where appropriate, as the basis for the analysis of related measures.</p>
<p>Net-to-Gross Review</p>	<p>IOU Proposal: Not addressed</p>
	<p>ED Assessment: Interview was halted by ED</p>
	<p>ED Recommendation: None</p>