

Phase I Ex Ante Review Findings

Table 1-1: Project Information

IOU	PGE
Application ID	1106-06
Application Date	11/14/2012
Program ID	PGE2223
Program Name	Heavy Industry Energy Efficiency Program
Program Year	2012
Itron Project ID	X240
IOU Ex Ante Savings Date	TBD
ED Measure Name	Bio Filter Bypass
Project Description	Install a new Bio Filter Bypass
Date of ED Review(s)	1/17/2013
Primary Reviewer and Firm	Kunal Desai/Itron
Review Supervisor and Firm	Joseph Ball/Itron
Type of Review (Desk, On-site, Full M&V, Tool)	Desk Review
ED Recommendation	Unable to verify the ex ante impact estimates, and therefore savings are not approved pending fulfillment of requested data and the subsequent opportunity for ED to re-evaluate the project savings.

Measure Description

The facility is changing its resin which was UREA-based and proposing to use a benzene-based resin. The proposed resin will not have any emission problems that were associated with the UREA resin. The result of using this new resin is that the plant will be able to bypass the bio filter that was installed in 2008.

Summary of Review

ED reviewed the following IOU provided documentation: Project application, Measure description, PCIP Report, Pre Installation Monitoring screenshots (in a PDF file), and live energy saving calculations summary sheet.

This medium density particle board manufacturing facility used a UREA based resin to bind the wood particles in the particle board. The UREA based resin generated formaldehyde, methanol and acetaldehyde gases during the heated curing process. The bio filter was installed in 2008 to treat those harmful gases. The facility proposed to use benzene based resin which will eliminate the emission of those gases and bypass the Bio Filter. Shutting down the Bio Filter plant will save energy used by a 300 HP exhaust blower for the bio filter and two 30HP wet scrubber pumps.

The PCIP report does not talk about any production level changes. ED is unclear about the product changes that could potentially be caused by using the new benzene based resin. The PCIP report also recommended that emission test be conducted to verify the exhaust gases caused by benzene based resin are within acceptable limits. No Emission Tests have been submitted for ED review. ED would also like to know if there are any process/product changes implanted to accommodate the benzene based resin.

Preliminary estimates of electrical savings are 871,033 kWh/yr. The estimated incentive is \$47,500. The estimated project cost to implement the bypass for the Bio Filter is \$95,000. There are no peak demand savings associated with this project as the plant runs outside of peak electrical periods.

Review Conclusion

Unable to verify the ex ante impact estimates, pending fulfillment of requested data and the subsequent opportunity for ED to re-evaluate the project savings.

Summary of ED Requested Action by the IOU

In order to complete an ex ante review the ED recommends that the following documents be provided no later than **February 6, 2013**.

1. Describe the current CARB requirements pertaining to controlling emissions from manufacturing of particle board and allowable residual harmful substances in the particle board.
2. Describe the upcoming CARB requirements that have to be complied with over the next five years.
3. Describe changes in the specifications of particle board requested by customers of the applicant and how current process meets those specifications.
4. Provide estimated cost per ton of the current bonding agent and the proposed bonding agent.
5. Submit evidence that the proposed bonding agent is approved by CARB.
6. Describe alternative CARB-accepted bonding agents that will require the use of bio filters and meet the residual VOC content requirements – federal, state, or industry.
7. Provide curing time per ton of particle board for the existing and proposed process, and submit current and estimated annual production before and after retrofit.
8. Submit confirmation that the applicant has not been required to comply with product or emission regulations, applicable currently or over the next five years.
9. Demonstrate that the change in bonding agent is above and beyond current industry standard practice, and will be above and beyond industry standard practices that may emerge if any applicable upcoming CARB compliance requirements have to be met.
10. List the existing and post retrofit particle board density.

Table 1-2: 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)	System Optimization	TBD
Project Cost Basis (Full Cost, Incremental Cost)	Full cost	TBD
RUL (Early retirement projects only, otherwise N/A (not applicable))	Not Provided	TBD
EUL	TBD	TBD
First Year kWh Savings	871,033	TBD
First Year Peak kW Savings	0	TBD
First Year Therms Savings	N/A	N/A
kWh Savings (RUL Period)	TBD	TBD
Peak kW Savings (RUL Period)	TBD	TBD
Therms Impact (RUL Period)	N/A	N/A
kWh Savings (EUL thru RUL Period)	871,033	TBD
Peak kW Savings (EUL thru RUL Period)	TBD	TBD
Therms Savings (EUL thru RUL Period)	N/A	TBD
Annual Non-IOU Fuel Impact (RUL Period)	N/A	TBD
Annual Non-IOU Fuel Impact (EUL thru RUL Period)	N/A	TBD

Description	IOU Proposed Ex Ante Data	ED Recommendations
Net-to-Gross Ratio	Not provided	Assessment not completed

Table 1-3: Detailed Review Findings

Reviewed Parameter	Analysis
Project Gross Savings Baseline (for early retirement projects only, include RUL through EUL baseline)	IOU Proposal: System Optimization
	ED Assessment: TBD
	ED Recommendation: None
Project Cost Basis (for early retirement projects only, include RUL through EUL cost basis treatment)	IOU Proposal: Full Cost provided
	ED Assessment: TBD
	ED recommendation: Provide a breakdown of the project costs
RUL (required for early retirement projects only, otherwise n/a)	IOU Proposal: Not provided, however the Bio-filter itself is slightly > 4 years old.
	ED Assessment: Not assessed
	ED recommendation: Provide RUL and condition of the manufacturing equipment.
EUL	IOU Proposal: Not provided
	ED Assessment: TBD
	ED Recommendation: TBD
Savings Assumptions	IOU Proposal: Plant was currently operating for 80 hours per week and for 52 weeks per year.
	ED Assessment: TBD
	ED Recommendation: TBD
Calculation Methods/Tool review	IOU Proposal: A live energy-savings spreadsheet was provide for ED review
	ED Assessment: TBD

Reviewed Parameter	Analysis
	ED Recommendation: Pending IOU response to action items listed above
Pre- or Post-Installation M&V Plan	IOU Proposal: Not provided
	ED Assessment: M&V is recommended for this project.
	ED Recommendation: Submit a M&V plan for ED review
Net-to-Gross Review	IOU Proposal: Not provided
	ED Assessment: Assessment not completed
	ED Recommendation: An ex ante NTG interview may be warranted