

Ex Ante Review Findings

Table Error! No text of specified style in document.-1: Project Information

	Complete table; use TBD when unknown
IOU	PGE
Application ID	2K12079499-X045
Application Date	6/14/2011
Program ID	TBD
Program Name	Customized Retrofit Demand Response
Program Year	2011
Itron Project ID	TBD
IOU Ex Ante Savings Date	TBD
ED Measure Name	TBD
Project Description	Pump optimization of steam generator site
Date of ED Review(s)	03/16/2012
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	Not approved; pending IOU submission of items described in this Ex Ante Review.

Measure Description

Pump optimization of steam generator site. The project application states that the project is to be implemented in two phases. Phase 1 would consist of changing the control logic on existing pumps, installing flow meters and providing means for closing the recirculation valves. The second phase would include installing VFDs and or de-staging of pumps with additional control logic

Summary of Review

ED reviewed the following: IOU provided documentation: Project application and calculation pdf.

Details of the measure description were not clearly described in the paperwork. As might be expected from an early stage project, the documentation provided is inadequate. ED is not able to comprehend the scope of the proposed project. Savings calculations should be submitted for review, including all key inputs and underlying assumptions, such that the claimed savings can be verified, reproduced and carefully examined in the context of the appropriateness of those calculations for the particular application. Documentation should include a thorough description of the measure baseline, a thorough description of the proposed project, how the proposed measure reduces energy consumption, savings calculations, and address baseline claims (RUL, EUL, incremental and full costs, existing equipment/controls-based baseline, code-based or standard practice baseline, etc.).

Preliminary estimates of kWh and kW savings are 11,134,228 and 1,297 respectively. The estimated incentive for this project is 1,131,777. The range for estimated project cost is between \$300,000-400,000. It is likely that the project will be capped at 50% of capital cost. Breakdown of cost, kW and kWh savings is not shown by phase.

Review Conclusion

Not approved, pending fulfillment of requested data and subsequent opportunity for ED to re-evaluate the project and the savings analyses following the completion of post-implementation M&V for the 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 **4/4/2012** (or within 14 days of submittal of DR)..

1. A thorough description of the measure, the existing and proposed system characteristics. Describe how the proposed measure will reduce energy consumption.

2. Provide a statement supporting baseline claims (early retirement, normal replacement, in situ equipment, code or industry standard practice ISP determination)
3. Acceleration period including vintage, condition, and RUL of pre-existing equipment (pumps), the EUL of the proposed measure (VFD and controls)
4. When available, provide any pre-retrofit inspection or M&V results that have been conducted for the project.
5. Provide savings calculations, including a description of the calculation methodology proposed, **“live” fully functioning spread sheets**, a description of all key inputs, and the source of the inputs and underlying assumptions. Provide manufacturer’s performance data if applicable, and pre-existing equipment nameplate information.
6. For all measured data (pump kW, kWh & operating hours), provide an analysis of the data and interpretation of the analysis.
7. Provide pre production data (pressure and flow) for the pumps and steam generator. Provide post production data when available.
8. Provide any post-retrofit M&V plan and inspection results, when either becomes available.
9. Provide the EUL information of the proposed measure and source of the EUL. Provide savings calculations for both the RUL period and RUL thru EUL periods, if applicable.
10. Provide incremental and full costs (if early accelerated retirement is claimed), such as cost estimates, quotes, or vendor proposals, when they become available

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)	Not provided	TBD
Project Cost Basis (Full Cost, Incremental Cost)	Full cost	TBD: if early replacement claim is applicable, then full and incremental costs should be provided
RUL (Early retirement projects only, otherwise N/A (not applicable))	TBD	TBD
EUL	TBD	TBD
First Year kWh Savings	11,134,228	TBD; provide calculation spreadsheets
First Year Peak kW Savings	1,297	TBD; provide calculation spreadsheets
First Year Therms Savings	N/A	N/A
kWh Savings (RUL Period)	Not provided	TBD
Peak kW Savings (RUL Period)	Not provided	TBD
Therms Impact (RUL Period)	N/A	N/A
kWh Savings (EUL thru RUL Period)	Not provided	TBD
Peak kW Savings (EUL thru RUL Period)	Not provided	TBD
Therms Savings (EUL thru RUL Period)	N/A	N/A

Description	IOU Proposed Ex Ante Data	ED Recommendations
Annual Non-IOU Fuel Impact (RUL Period)	N/A	N/A
Annual Non-IOU Fuel Impact (EUL thru RUL Period)	N/A	N/A
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: Not clearly described
	ED Assessment: Not enough information to complete evaluation at this time
	ED Recommendation: Clearly identify energy savings baseline and information to support the claim.
Project Cost Basis (for early retirement projects only, include RUL through EUL cost basis treatment)	IOU Proposal: Full Cost provided
	ED Assessment: If early replacement claim is applicable, then full and incremental costs should be provided
	ED recommendation: Provide Full and Incremental costs. Provide cost proposals or any other relevant documentation to verify cost estimates
RUL (required for early retirement projects only, otherwise n/a)	IOU Proposal: Not provided
	ED Assessment: TBD
	ED recommendation: TBD
EUL	IOU Proposal: Not provided
	ED Assessment: TBD
	ED Recommendation: TBD
Savings Assumptions	IOU Proposal: Not provided
	ED Assessment: No savings calculations provided, and no discussion of assumptions used
	ED Recommendation: Provide “live” fully functioning calculations, describing all assumptions made and sources used
Calculation	IOU Proposal: None

Ex Ante Review Report Template

Reviewed Parameter	Analysis
Methods/Tool review	ED Assessment: Not Provided
	ED Recommendation: Provide “live” fully functioning calculations
Pre- or Post- Installation M&V Plan	IOU Proposal: Not provided
	ED Assessment: M&V is recommended for this project.
	ED Recommendation: Provide all pre- and post-install M&V data collected when available
Net-to-Gross Review	IOU Proposal: Not provided
	ED Assessment: Assessment not completed
	ED Recommendation: An ex ante NTG interview may be warranted