Ex Ante Review Findings

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

IOU	Pacific Gas And Electric
Application ID	118736
Application Date	9/1/2011
Program ID	Not Available
Program Name	Non Residential New Construction Program
Program Year	2011
Itron Project ID	TBD
IOU Ex Ante Savings Date	TBD
ED Measure Name	Installation of new high efficiency steam generator
Project Description	This customized new construction project at an oil production facility involves the installation of a high efficiency steam generator.
Date of ED Review(s)	03/21/2012
Primary Reviewer and Firm	C.D. Nayak/DNV KEMA
Review Supervisor and Firm	Joseph Ball/Itron
Type of Review (Desk, On-site, Full M&V, Tool)	Desk review
ED Recommendation	Not Approved, pending requested additional data to verify the energy saving measures, and energy savings estimate.

Measure Description

This project at an oil field has installed a new high efficiency steam generator. The claimed gas savings are due the high efficiency of the new steam generator in place of the two old steam generators with combined capacity matching the new steam generator. The steam generator produces steam to the oil field for enhanced oil recovery application.

Summary of Review

The documents provided for the review include the following: NRNC project application form, project overview, and energy saving calculation for the new high efficiency steam generator.

The project claims 646,488 therm/yr gas savings for the proposed installation of high efficiency steam generator. The project claims an incentive of $646,488 for gas savings calculated at the incentive rate of $1.00/therm.

The available energy saving calculations has very limited information. The parameters used in the energy saving calculation require additional documentation to support them. The following additional information are required for the project savings approval:

i) The project scope for the proposed gas savings is unclear regarding the initial consideration of the inefficient single pass steam generator, efficiencies of the old steam generators, and how the anticipated gas savings will be realized with the new steam generator. The energy savings calculation provided for the proposed new steam generator energy savings is not legible to review.

ii) Baseline documentations are required for the old steam generators.

Additional documentation will be needed to evaluate the appropriateness of the methodology used to calculate energy savings and complete the ex-ante review for this project.

Review Conclusion

Not approved, pending fulfillment of requested data and subsequent opportunity for ED to re-evaluate the project and the savings analyses.

Summary of ED Requested Action by the IOU

The supporting documents provided were insufficient to substantiate the energy savings estimate of this project. So, ED requests that the IOU submit the following additional data for the completion of the ex-ante review of this project due on 4/5/2012 (14 days from the submittal date):

1. Provide detail scope of the proposed project

2. Provide the "live" fully functioning (unlocked and hard-coded) and legible energy savings calculation for the proposed new steam generator energy savings
3. Provide industry standard practice baseline control strategy of the steam generator.
4. Provide the design baseline performance of the steam generator and other supporting data for assumptions and consideration used in the preparation of energy savings estimation
5. Provide nameplate information of the proposed steam generators included in this application
6. Provide the any metered/monitored data for the baseline condition
7. Provide all project cost quotes/cost estimates/invoices
8. Describe the age, condition, operability, and RUL of relevant existing (old) steam generators. Provide information such as recent maintenance records that supports conclusions surrounding equipment condition.
9. Provide EUL of the measure and source of the EUL

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)	New construction	TBD; Further documentation needed to establish the baseline
Project Cost Basis (Full Cost, Incremental Cost)	Full cost - $1,950,000	TBD; If this is a new construction project, then incremental cost should be applied as the basis of the project cost
RUL (Early retirement projects only, otherwise N/A (not applicable))	N/A	N/A
EUL	Not provided	Review of CA Energy Efficiency Manual documentation indicates: EUL for high efficiency engine is 15 years
First Year kWh Savings	N/A	N/A
First Year Peak kW Savings	N/A	N/A
First Year Therms Savings	646,488	TBD
kWh Savings (RUL Period)	N/A	N/A
Peak kW Savings (RUL Period)	N/A	N/A
Therms Impact (RUL Period)	N/A	N/A
kWh Savings (EUL thru RUL Period)	N/A	N/A
Peak kW Savings (EUL thru RUL Period)	N/A	N/A
Therms Savings (EUL thru RUL Period)	N/A	N/A
Annual Non-IOU Fuel Impact (RUL Period)	N/A	N/A

Description	IOU Proposed Ex Ante Data	ED Recommendations
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: New construction
	ED Assessment: Couldn't be assessed
	ED Recommendation: Further documentation needed to establish the baseline
Project Cost Basis (for early retirement projects only, include RUL through EUL cost basis treatment)	IOU Proposal: Appear to be incremental cost
	ED Assessment: Could not be assessed because application documents and itemized invoices/quotes were not provided
	ED recommendation: Provide itemized invoices and project cost estimates or vendor proposals
RUL (required for early retirement projects only, otherwise n/a)	IOU Proposal: N/A
	ED Assessment: N/A
	ED recommendation: N/A
EUL	IOU Proposal: Not provided
	ED Assessment: Review of California Energy Efficiency Policy Manual documentation indicates an EUL of 15 years for high efficiency engine.
	ED Recommendation: 15 years for VFD. Need to provide EUL of steam generator.
Savings Assumptions	IOU Proposal: Energy saving calculation for the proposed high efficiency steam generator is not legible for the review.
	ED Assessment: Assessment couldn't be performed. Energy savings calculation along with baseline operating conditions, baseline assumptions, and proposed operating condition information are required
	ED Recommendation: Provide the energy savings calculation for the proposed high efficiency steam generator along with baseline operating conditions, baseline assumptions, and proposed operating condition information are required
Calculation Methods/Tool review	IOU Proposal: Energy saving calculation for the proposed high efficiency steam generator not available
	ED Assessment: Assessment couldn't be performed. Energy saving

Reviewed Parameter	Analysis
	calculation for the proposed high efficiency steam generator not available
	ED Recommendation: Provide the energy saving calculation for the steam generator
Pre- or Post-Installation M&V Plan	IOU Proposal: No M&V plan was provided
	ED Assessment: No assessment could be performed
	ED Recommendation: ED suggests that pending the data request described above, the energy savings calculation will be reviewed to determine the applicability of the energy savings of the installed measures. If, after the desk review, particular assumptions are considered invalid or unreliable, then ED will recommend any necessary changes to the energy savings analysis and submit a phase 2 EAR report.
Net-to-Gross Review	IOU Proposal: Not provided
	ED Assessment: An assessment was not performed
	ED Recommendation: A NTG assessment may be warranted