

Phase I Ex Ante Findings

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

IOU	PG&E
Application ID	IRCx-055
Application Date	4/28/2012
Program ID	PGE2228
Program Name	Industrial Recommissioning Program - IRCx (3P Nexant)
Program Year	2012
Itron Project ID	X398
IOU Ex Ante Savings Date	8/27/2013
CPUC Staff Measure Name	Tube Seals on Crude Oil Furnaces
Project Description	Replace degraded tube seals on three (3) crude oil furnaces
Date of CPUC Staff Review	11/26/2013
Primary Reviewer / Firm	Joseph Ball / Itron
Review Supervisor / Firm	Nikhil Gandhi / Strategic Energy Technologies, Inc.
CPUC Staff Project Manager	██████████ / California Public Utilities Commission, Energy Division
CPUC Staff Policy Authorization (as needed)	
Type of Review (Desk, On-site, Full M&V, Tool)	Desk
CPUC Staff Recommendation	Project is not approved because replacing the existing degraded tube seals is a maintenance measure, replaces a degraded part with a like part and does not constitute a higher energy efficient action.

Measure Description

Install tube seals on three (3) crude unit furnace convection sections to seal furnace tube penetrations. The annual energy savings claim for this project is 279,555 therms per year. The incremental project cost is currently estimated at \$23,925 for the proposed seals. The cost is capped at 50% or \$11,962.50 with a payback of less than one month.

Summary of Review

The Investor-Owned-Utility (IOU) submitted the following documents on... for this Phase I review:

- IRCx Project Participant Application Agreement; and
- IRCx 055 - XXXX Tube Seals on Crude Unit Furnaces PPA Analysis.xlsx.

The CPUC review staff noted the following statement from the IRCx Project Application Agreement from the third party implementer, Nexant:

On February 8, 2013... Nexant's inspector confirmed the existence of the air gaps around the feed piping at the three furnaces F1100A, 1100B, and F1160. The process feed lines had visible gaps around the piping circumference where they enter the furnaces. The furnaces were designed to have the feed piping sealed; however, most of the seals have degraded over time allowing air to enter the furnace.

Pictures confirmed the degraded tube seal condition. It was not explained whether or not the new tube seals were made from better thermally insulating material than the previous seals, and therefore CPUC staff assumed that the material was of equivalent thermal efficiency to the baseline (non-degraded) seal since this is normal replacement (ROB) claim.

CPUC policy clearly states that a measure must constitute a higher energy efficiency action.¹

There does not appear to be any incremental costs differences of the new seal over the installation of a fully functioning tube seal. Lastly, no EUL was provided.

Review Conclusion

¹ D.12-05-015 at 340

“Independent of the baseline selection criteria, we would not expect that new equipment proposed for program incentive support would be simply a like-replacement of the existing equipment in efficiency level, as this would imply either a repair or normal replacement that would not qualify as an energy efficiency upgrade, unless: (1) the proposed equipment exceeds standard practice or code, and (2) there is clear evidence that without support, the efficiency level would fall to the standard practice or code minimum.”

The ex ante savings are not approved since the measure to replace tube seals is a maintenance measure that does not constitute a higher energy efficiency action. Project rejected on the grounds of being an ineligible measure.

Table 1-2 Review Findings

Reviewed Parameter	Analysis
Project Baseline Type (Early Replacement, Normal Replacement, Capacity Expansion, New Construction, System Optimization, Add-on Measures, Major Renovation) Note: For early retirement projects only, include RUL through EUL baseline)	IOU Proposal: Normal Replacement
	CPUC Staff Assessment: Accept
	CPUC Staff Recommendation: None
Project Baseline Technology (in situ equipment, Title 24 (specify year), other code or other efficiency level (specify), industry standard practice - ISP)	IOU Proposal: In situ, degraded or removed tube seals
	CPUC Staff Assessment: As a ROB measure the in situ baseline cannot be used, rather a fully functioning seal.
	CPUC Staff Recommendation: Fully functioning tube seals.
Project Cost Basis (Full Incremental, or Both. Note: For early retirement projects, include RUL through EUL cost basis treatment)	IOU Proposal: Incremental costs
	CPUC Staff Assessment: Correct cost basis, however there does not appear to be any incremental costs for this measure.
	CPUC Staff Recommendation: None
RUL (required for early retirement projects only, otherwise N/A)	IOU Proposal: N/A
	CPUC Staff Assessment: N/A
	CPUC Staff Recommendation: N/A
EUL (for each measure)	IOU Proposal: Not provided
	CPUC Staff Assessment: Not assessed
	CPUC Staff Recommendation: None
Savings Assumptions	IOU Proposal: Spreadsheet calculations with detailed operating conditions and parameters
	CPUC Staff Assessment: Not assessed
	CPUC Staff Recommendation: Wrong in situ baseline assumption.

Phase I Ex Ante Review Findings

Reviewed Parameter	Analysis
Calculation Methods/Tool review	IOU Proposal: Calculation spreadsheet
	CPUC Staff Assessment: Accept
	CPUC Staff Recommendation: None
Pre- or Post-Installation M&V Plan	IOU Proposal: Submitted plan
	CPUC Staff Assessment: Not assessed
	CPUC Staff Recommendation: None
Net-to-Gross Review	IOU Proposal: Not provided
	CPUC Staff Assessment: Not assessed
	CPUC Staff Recommendation: An ex ante NTG interview may be conducted if IOU challenges this disposition.

Table 1-3 Energy Savings Summary, Project Costs & Incentive

Description	IOU Ex Ante Claim	CPUC Staff Recommendations
First Year kWh Savings	N/A	N/A
First Year Peak kW Savings	N/A	N/A
First Year Therms Savings	279,555	0
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 (RUL thru EUL Period)	N/A	N/A
Peak kW Savings (RUL thru EUL Period)	N/A	N/A
Therms Savings (RUL thru EUL Period)	279,555	0
Annual Non-IOU Fuel Impact (RUL Period)	N/A	N/A
Annual Non-IOU Fuel Impact (RUL thru EUL Period)	N/A	N/A
Project Costs for Baseline #1 (RUL or EUL)	\$23,925	Appears to be \$0
Project Costs for Baseline #2 (EUL minus RUL period)	N/A	N/A
Project Incentive Amount	\$11,962.5	\$0