

Final Ex Ante Review Findings

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

IOU	PGE
Application ID	1466-06
Application Date	11/14/2012
Program ID	
Program Name	Heavy Industry Energy Efficiency Program
Program Year	2013
Itron Project ID	X248
IOU Ex Ante Savings Date	
ED Measure Name	Rapid Close Doors
Project Description	In this project, three manually operated freezer warehouse doors are to be retrofitted with automatic rapid close doors.
Date of ED Review(s)	1/4/13, 1/31/13, 10/1/13
Primary Reviewer / Firm	Doug Maddox, J. J. Hirsch & Associates
Review Supervisor / Firm	Nikhil Gandhi/ Strategic Energy Technologies, Inc.
ED Project Manager	████████████████████ ████████████████████
ED Policy Authorization (as needed)	
Type of Review (Desk, On-site, Full M&V, Tool)	Desk Review
ED Recommendation	Approved.

Measure Description

The measure involves the replacement of three manually operated exterior freezer doors with automatic rapid close doors. The freezers are operated at -10°F, and the doors range in size from 7 ft by 9 ft to 9 ft by 10 ft. The doorways have no secondary protective devices such as curtains to reduce infiltration when the doors are open.

Summary of Review

The following documents submitted by the Investor Owned Utility (IOU) were used in this review:

- 1466-06 XXXX Speed Doors PIIP 9.16.13.doc – summary report
- 1466-06 Pre and Post M&V summary 9.16.13.xlsx – M&V data analysis

Dataloggers were installed on all doors to collect “open” and “close” event data both before and after the retrofit. It was found that the pre-existing doors were open 18 to 26 minutes per hour, as compared with the original assumption of 15 minutes per hour. Review of the data shows that building use was fairly consistent throughout the test period, regardless of time of day and that “open” times were correctly calculated. The “open” time of doors for the post retrofit condition increased slightly from the original estimates from about 1.7 minutes per hour to about 3 minutes per hour. There was also a correction in the size of the larger doors from 10 ft x 10 ft to 9 ft x 10 ft. Overall, the consequence of these adjustments was to reduce kWh savings from 1,303,682 to 1,186,570 and to reduce kW savings from 180 to 155 as compared with the original ex ante analysis.

Review Conclusion

The ex ante savings estimates are approved.

Table 1-2 Review Findings

Reviewed Parameter	Analysis
Project Baseline Type Note: For early retirement projects only, include RUL through EUL baseline)	IOU Proposal: Early Replacement
	ED Assessment: Reasonable
	ED Recommendation: Accept
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 equipment
	ED Assessment: Reasonable
	ED Recommendation: Accept
Project Cost Basis (Full Incremental, or Both. Note: For early retirement projects, include RUL through EUL cost basis treatment)	IOU Proposal: Full cost
	ED Assessment: Documented with invoice.
	ED recommendation: Accept
RUL (required for early retirement projects only, otherwise N/A)	IOU Proposal: With an EUL of 15 years and an early retirement measure category, the RUL is EUL/3 or 5 years.
	ED Assessment: Photos provided show existing doors in fair condition.
	ED recommendation: Accept
EUL (for each measure)	IOU Proposal: Through conversations with industry personnel, 15 years is a typical EUL for industrial automatic doors.
	ED Assessment: Reasonable
	ED Recommendation: Accept
Savings Assumptions	IOU Proposal: Savings have been updated based on pre- and post-installation measurements of door openings and closings
	ED Assessment: Analysis of measured data appears reasonable.
	ED Recommendation: Accept
Calculation Methods/Tool review	IOU Proposal: Input and output from Customized Calculation Tools were submitted
	ED Assessment: Values appear to be entered accurately into the tool.
	ED Recommendation: Accept
Pre- or Post-Installation M&V Plan	IOU Proposal: Monitor door openings per hour and average open time for each door for one week pre-retrofit and one week post-retrofit. Measurements to be done using open/close state data loggers.

Reviewed Parameter	Analysis
	ED Assessment: Reasonable
	ED Recommendation: Accept
Net-to-Gross Review	IOU Proposal: None
	ED Assessment: None
	ED Recommendation: NTG interview may be conducted.

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

Description	IOU Ex Ante Claim	ED Recommendations
First Year kWh Savings	1,186,570	Accept
First Year Peak kW Savings	155	Accept
First Year Therms Savings	n/a	n/a
kWh Savings (RUL Period)	5,932,850	Accept
Peak kW Savings (RUL Period)	155	Accept
Therms Impact (RUL Period)	n/a	n/a
kWh Savings (RUL thru EUL Period)	Not provided	11,865,700
Peak kW Savings (RUL thru EUL Period)	Not provided	155
Therms Savings (RUL thru EUL Period)	n/a	n/a
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)	Full costs - \$81,593.10	Accept
Project Costs for Baseline #2 (EUL minus RUL period)		
Project Incentive Amount	\$40,797 (capped at 50% of the full project cost)	Accept