

Ex Ante Review Findings

Table 1-1: Project Information

IOU	PGE
Application ID	2K12078508- X061
Application Date	10/18/2011
Program ID	TBD
Program Name	2011 Customized Retrofit and Demand Response
Program Year	2011
Itron Project ID	TBD
IOU Ex Ante Savings Date	TBD
ED Measure Name	Carbon monoxide controls on garage exhaust fans
Project Description	Install 35 carbon monoxide sensors and VFD controls on garage exhaust fan with on/off controls
Date of ED Review(s)	03/19/2012
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	Energy savings and peak demand reduction estimates are not approved; pending IOU submission of items

	described in this ex ante review.
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Measure Description

This project is to install carbon monoxide sensors on 35 garage exhaust fan motors with on-off controls. This will enable the fans to run on demand basis versus on schedule. Energy savings will result from reduced fan runtime.

Summary of Review

ED reviewed the following: IOU provided documentation: Project description, Project application, supporting documentation, Calculation pdf, site inspection pictures, inspection review forms, vendor proposal for installation, monthly usage data and email communications.

Initial project application claimed to retrofit 38 garage fan motors with Carbon monoxide sensors which had a pre-installation run time of 16 hours a day 7 days a week. IOU’s inspection determined that both the actual count of fans and run time hours were incorrect. IOU inspection reported a count of 35 garage exhaust fans, which were to be retrofitted with a run time of 12 hours on weekday and 9 hours on the weekend. The energy savings calculation submitted for ED review are based on initial report and revised saving calculation have not been submitted. Therefore, ED was unable to verify the energy savings (kW or kWh) values. The live Excel spreadsheet entitled “review calc” which was mentioned in the documentation is requested for ED to complete this ex ante review.

The energy savings and peak demand reduction for this project are estimated to be 1,006,700 kWh and 250 kW, respectively. The incentive seems to be capped at 50% project cost and is calculated at \$70,875.00.

Review Conclusion

Energy savings and peak demand reduction estimates are 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 4/5/2012 (or within 14 days of submittal of DR).

1. Provide a description of the existing exhaust control system. Clarify if the existing EMS or time clock was used to run the exhaust fan on a schedule.

2. Provide sequence of operation and description of exhaust fan control based on carbon monoxide level with CO sensors. Clarify if the exhaust will run on demand in the existing schedule controlled by EMS or time clock.
3. Provide vintage, condition, and RUL of pre-existing equipment (fans & motors), the EUL of the proposed measure (carbon monoxide sensors)
4. Provide revised savings calculations per IOU inspection, including a description of the calculation methodology proposed, **“live” fully functioning spreadsheets**, a description of all key inputs, and the source of the inputs and underlying assumptions.
5. Provide pre-installation data (EMS trends or logged data) confirming operating hours for the exhaust fans and their rated horse powers.
6. Provide any post-installation M&V plan and inspection results, when either becomes available.
7. Describe local codes, if any, which require the installation of CO sensors.

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	Appears to be an add-on measure.
Project Cost Basis (Full Cost, Incremental Cost)	Full cost	Full cost if code considerations do not apply.
RUL (Early retirement projects only, otherwise N/A (not applicable))	Not provided	NA
EUL	Not Provided	EUL may be limited by the RUL of motors and fans. Savings beyond the RUL of motors and fans would be based on prevailing standard practice.
First Year kWh Savings	1,006,700	TBD; provide revised calculation spreadsheet
First Year Peak kW Savings	250	TBD; provide revised calculation spreadsheet to show peak demand savings during the CPUC-defined periods.
First Year Therms Savings	N/A	N/A
kWh Savings (RUL Period)	Not provided	TBD
Peak kW Savings (RUL Period)	Not provided	TBD

Ex Ante Review Template

Description	IOU Proposed Ex Ante Data	ED Recommendations
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
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 provided
	ED Assessment: None at this time
	ED Recommendation: Additional documentation required to clarify baseline
Project Cost Basis (for early retirement projects only, include RUL through EUL cost basis treatment)	IOU Proposal: Full Cost provided
	ED Assessment: Full cost
	ED recommendation: None at this time
RUL (required for early retirement projects only, otherwise n/a)	IOU Proposal: None
	ED Assessment: Could not be done
	ED recommendation: Provide RUL for existing fans and motors
EUL	IOU Proposal: Not provided
	ED Assessment: Not completed
	ED Recommendation: TBD
Savings Assumptions	IOU Proposal: Energy savings calculation in PDF format provided
	ED Assessment: Energy savings calculations submitted do not match the IOU inspection findings
	ED Recommendation: Provide revised “live” fully functioning calculations, describing all assumptions made and sources used per IOU inspection

Ex Ante Review Template

Reviewed Parameter	Analysis
Calculation Methods/Tool review	IOU Proposal: Energy savings calculation in PDF format provided
	ED Assessment: Spreadsheet not provided
	ED Recommendation: Spreadsheet-based calculations acceptable
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 they become available
Net-to-Gross Review	IOU Proposal: Not provided
	ED Assessment: None at this time
	ED Recommendation: None at this time

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