

Final Ex Ante Review Findings

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

IOU	Pacific Gas and Electric
Application ID	NC0119568
Application Date	4/4/2011
Program ID	
Program Name	Non-Residential Customized New Construction
Program Year	2012
Itron Project ID	X096
IOU Ex Ante Savings Date	
ED Measure Name	Whole Building
Project Description	Supermarket with several measures
Date of ED Review(s)	8/20/12, 8/26/13, 9/13/13
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

Twelve measures were evaluated for a 138,000 sq. ft department store that will include a grocery component. Details of the measures and modeling methods are described in the project files: “XXXX ██████████ – Final Report.docx” and “XXXX ██████████ – Simulation Assumption Summary.docx”.

Summary of Review

Verification of measures by inspection is satisfactorily documented in the document “██████████ verification pictures.doc”.

For EEM 11, ED had previously found that the measure should become part of the baseline model. The 2008 Nonresidential ACM Manual has the following requirement on page 2-81, in the section for SYSTEM: FAN-CONTROL: Modeling Rules for Standard Design (New): ‘For systems 1, 2, and 5, Compliance software shall assume the same fan volume control as the proposed design.’ Additionally, as stated in the Phase I EAR, the override of the variable fan operation during heating should be modeled in DOE2.2 by setting the HMIN-FLOW-RATIO to 1.0 for each zone. PG&E should revise savings estimates for EEM11 per the above guidance and resubmit savings for ED’s review.

To resolve this issue, ED has used the previously submitted file “██████████ - Results Spreadsheet Final.xlsx” to subtract the impacts of EEM 11 from the proposed building results. The resulting energy savings values are approved in this final review.

Calculation of project effective useful life (EUL) as a savings-weighted composite is still needed based on the final savings results.

Review Conclusion

The ED Recommended ex-ante savings presented in this review are approved.

Summary of ED Requested Action by the IOU

ED requests that the savings-weighted composite EUL be calculated and submitted.

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: New Construction
	ED Assessment: Correct
	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: Title 24, 2008
	ED Assessment: Correct
	ED Recommendation: Accept
Project Cost Basis (Full Incremental, or Both. Note: For early retirement projects, include RUL through EUL cost basis treatment)	IOU Proposal: Incremental
	ED Assessment: Reasonable
	ED recommendation: Accept
RUL (required for early retirement projects only, otherwise N/A)	IOU Proposal:
	ED Assessment:
	ED recommendation:
EUL (for each measure)	IOU Proposal: Not stated
	ED Assessment: Still needed
	ED Recommendation: Please submit
Savings Assumptions	IOU Proposal: Savings assumptions are summarized in the following files: “XXXX ██████ – Final Report.docx” “XXXX ██████ – Simulation Assumption Summary.docx”
	ED Assessment: Assumptions are reasonable. EEM 11 is not allowed by T24-2008.
	ED Recommendation: Accept without EEM 11.
Calculation	IOU Proposal: DOE2.2 analysis summarized in “XXXX ██████ – Simulation

Reviewed Parameter	Analysis
Methods/Tool review	Assumption Summary.docx”
	ED Assessment: Analysis is reasonable.
	ED Recommendation: Accept
Pre- or Post-Installation M&V Plan	IOU Proposal: “XXXX [REDACTED] – Inspection Criteria.doc”. Post-installation verification has been conducted via inspection.
	ED Assessment: Verification documentation is complete.
	ED Recommendation: Accept
Net-to-Gross Review	IOU Proposal: Not stated
	ED Assessment: NTG interview may be warranted.
	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	720,334	654,716
First Year Peak kW Savings	148.8	134
First Year Therms Savings	53	-364
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)	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)	EEM1: \$10,000 EEM2: \$0 EEM3: \$16,700 EEM4: \$13,200 EEM5: \$3,000	Accept

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Description	IOU Ex Ante Claim	ED Recommendations
	EEM6: \$28,100 EEM7: \$5,300 EEM8: \$0 EEM9: \$25,000 EEM10: \$5,000 EEM12: \$35,600 EEM13: \$2,800	
Project Costs for Baseline #2 (EUL minus RUL period)	n/a	n/a
Project Incentive Amount	Example: \$69,472	\$58,097