

Ex Ante Review Findings – Phase II

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

IOU	PGE
Application ID	2K12079475
Application Date	1/20/12
Program ID	TBD
Program Name	Customized Retrofit - Demand Response
Program Year	2012
Itron Project ID	X074
IOU Ex Ante Savings Date	2/6/12
ED Measure Name	Outdoor Lighting Retrofits: MH to T5HO
Project Description	Retrofit Exterior MH w/ T5HO Fluorescent Fixtures
Date of ED Review(s)	Phase I: 3/19/12 Phase II: 8/15/12
Primary Reviewer and Firm	Phani Pagadala/Itron
Review Supervisor and Firm	Leonel Campoy/Itron
Type of Review (Desk, On-site, Full M&V, Tool)	Desk Review
ED Recommendation	Energy savings estimates are approved.

Measure Description

The proposed project consists of replacing existing metal halide (MH) fixtures on the exterior of a theater building and throughout the parking lot with new high output T5 (T5HO) fixtures. The existing exterior lighting consists of twelve (12) pole-mounted parking lot fixtures with 750W MH lamps that will be replaced with the same quantity of 234W F54 4-lamp T5HO fixtures. In addition, nine (9) wall-mounted fixtures with 250W MH lamps will be replaced with the same quantity of 52W F24 2-lamp T5HO fixtures. The wall-mounted fixtures are controlled with astronomical time clocks and operate close to 4,100 hours annually. The parking lot's fixtures are photocell controlled and are estimated to operate 3,800 hours per year.

The Investor Owned Utility (IOU) representative completed the post-installation inspection on June 5, 2012. The energy savings estimates were reduced slightly compared to the original submittal based on the post-installation inspection findings. The IOU reviewer re-calculated the energy savings estimates using the fixture wattages from the Table of Standard Fixture Wattages (Appendix B) found in the 2011 Statewide Customized Offering Procedures Manual.

The IOU post-installation true-up calculation spreadsheet claims an annual energy savings of 37,056.3 kWh. There is no peak demand reduction claim due to the dusk-to-dawn operation of the lighting fixtures. The customer incentive amount was estimated at \$1,852.82.

Summary of Review

The application documentation received and reviewed as part of the post-installation true-up included the installation review spreadsheet, the RUL thru EUL period calculations, project application, project invoices, and measure photographs. The project installation review documentation presents the post-installation inspection findings and the final estimate of the measure impacts. The Energy Division (ED) received further clarifications from the IOU reviewer regarding the final savings estimates. Based upon this review, the ED approves the final gross measure impacts and recommends freezing of the ex ante savings estimates.

Review Conclusion

The IOU savings estimates are approved.

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)	In-situ fixtures. Possible early retirement.	Early retirement with in-situ fixtures as RUL baseline and as-installed (post case) fixtures as the RUL thru EUL period baseline.
Project Cost Basis (Full Cost, Incremental Cost)	Full measure costs of \$14,372.87	No change recommended.
RUL (Early retirement projects only, otherwise N/A (not applicable))	5 years	No change recommended
EUL	15	15 years based on DEER estimates.
First Year kWh Savings	37,056.3 kWh	37,056.3 kWh
First Year Peak kW Savings	0.0 kW	0.0 kW
First Year Therms Savings	NA	NA
kWh Savings (RUL Period)	37,056.3 kWh	37,056.3 kWh
Peak kW Savings (RUL Period)	NA	NA
Therms Impact (RUL Period)	NA	NA
kWh Savings (RUL thru EUL Period)	0.0 kWh	0.0 kWh
Peak kW Savings (RUL thru EUL Period)	NA	NA
Therms Savings (RUL thru EUL Period)	NA	NA
Annual Non-IOU Fuel Impact (RUL Period)	NA	NA
Annual Non-IOU Fuel Impact (RUL thru EUL Period)	NA	NA
Net-to-Gross Ratio	Not provided	Assessment not completed

Table 1-3: Detailed Review Findings

Reviewed Parameter	Analysis
<p>Project Gross Savings Baseline (for early retirement projects only, include RUL through EUL baseline)</p>	<p>IOU Proposal: In-situ fixtures</p>
	<p>ED Assessment: Early replacement of existing fixtures. The post-installation documentation indicates an RUL of 5 years, which is one-third of the measure EUL. For the RUL thru EUL period, the IOU claimed an alternative, hypothetical baseline of PSMH fixtures. The ED communicated to the IOU that the as-installed (post case) T5HO fixtures would be the technical baseline at the end of the RUL period, thereby negating the gross impacts after the 5 year RUL period.</p>
	<p>ED Recommendation: RUL period: in-situ MH fixtures RUL thru EUL period: as-installed (post case) T5HO fixtures</p>
<p>Project Cost Basis (for early retirement projects only, include RUL through EUL cost basis treatment)</p>	<p>IOU Proposal: Total cost with a simple breakdown of costs from the IOU reviewer</p>
	<p>ED Assessment: The cost breakdown provided appears to be reasonable.</p>
	<p>ED recommendation: The total cost data provided is sufficient.</p>
<p>RUL (required for early retirement projects only, otherwise n/a)</p>	<p>IOU Proposal: 5 years</p>
	<p>ED Assessment: Early retirement of the existing fixtures was verified; RUL of the existing equipment, calculated as one-third of the measure EUL, is acceptable.</p>
	<p>ED Recommendation: No change recommended.</p>
<p>EUL</p>	<p>IOU Proposal: 15 years</p>
	<p>ED Assessment: IOU provided EUL information is valid.</p>
	<p>ED Recommendation: 15 years per DEER</p>
<p>Savings Assumptions</p>	<p>IOU Proposal: The IOU used 4,100 hours per year as the hours of operation for the wall-pack lighting fixtures and 3,800 hours per year for the parking lot lighting. Fixture wattages from the standard fixture wattage tables were utilized for the baseline and post-installation conditions.</p>

Ex Ante Review Findings Report

Reviewed Parameter	Analysis
	<p>ED Assessment: The IOU hours of operation assumptions and fixture wattages are acceptable.</p> <p>ED Recommendation: No change recommended.</p>
Calculation Methods/Tool review	<p>IOU Proposal: Spreadsheet analysis</p>
	<p>ED Assessment: Calculations provided for installation of new T5HO fixtures are appropriate.</p>
	<p>ED Recommendation: None</p>
Pre- or Post-Installation M&V Plan	<p>IOU Proposal: Not described</p>
	<p>ED Assessment: The IOU did not intend to carry out any M&V for this site. There was a post-installation inspection as part of the Project Installation Review process.</p>
	<p>ED Recommendation: None</p>
Net-to-Gross Review	<p>IOU Proposal: None</p>
	<p>ED Assessment: Not addressed</p>
	<p>ED Recommendation: None</p>