



**Street Light
Replacement Program**
Risk Assessment

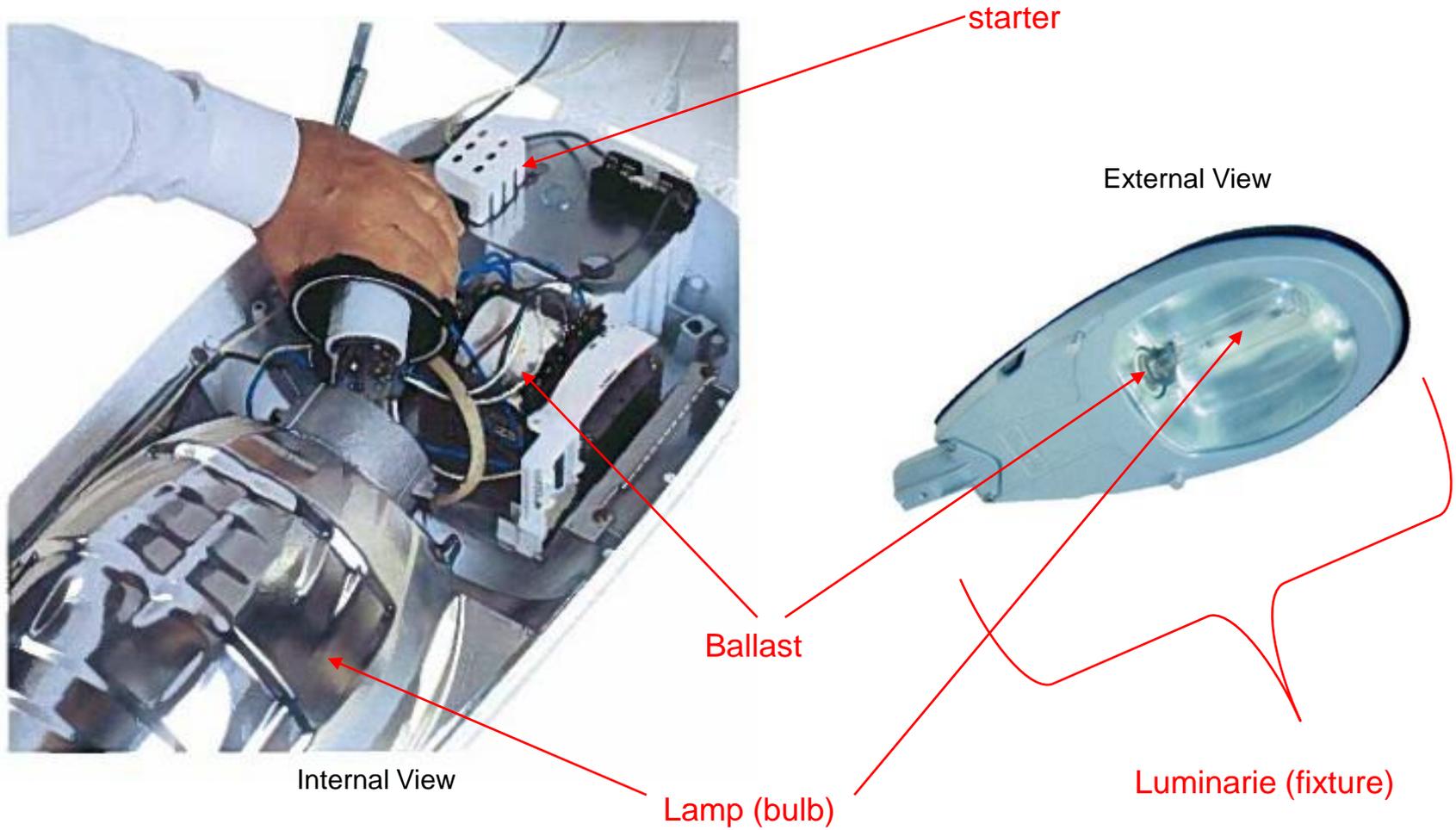
October 10, 2008



Street Light Replacement Theory

- Objective:
 - Acquire Cost-Effective energy conservation by upgrading identified street light fixtures (Mercury Vapor and Incandescent) to more energy efficient models (High Pressure Sodium) and/or technology
- Target:
 - All customers (primarily communities) having Company owned Mercury Vapor and/or Incandescent light fixtures
- How:
 - Effective Outreach
 - Incentive fulfillment
 - Offering an incentive for replacement (\$50)

Anatomy of a Street Light Fixture



Program Level Analysis

	ICF Model*	AIU Street Lighting Stock - All Lights (5.57 year useful life)	AIU Street Lighting Stock - Lights w/positive Energy Savings Only (5.57 year useful life)	AIU Street Lighting Stock - Cost Effective Lights Only (5.57 year useful life)	AIU Street Lighting Stock - Cost Effective Lights (10 year useful life)	AIU Street Lighting Stock - Cost Effective Lights (20 year useful life)
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Number of Eligible Street Lights	150,000	58,730	53,020	303	4,603	11,270
Annual Units for Replacement	8,000	19,577	17,673	101	1,534	3,757
Net Annual kWh savings	4,248,704	4,810,577	4,810,577	205,414	1,026,305	1,987,331
Gross Annual kWh savings	5,590,400	6,329,706	6,329,706	270,281	1,350,402	2,614,909
Annual Program Costs (Total)	\$520,000	\$1,272,483	\$1,148,767	\$6565 ^{^^}	\$99,732	\$244,183
Measure life (yr)	20	5.57	5.57	5.57	10	20
Annual Hours of Operation	4,100	4,306 ⁺	4,306 ⁺	4,306 ⁺	4,306 ⁺	4,306 ⁺
Incentive cost/Unit	\$50	\$50	\$50	\$50	\$50	\$50
Equipment Cost/Unit	\$25	\$69 ^{**}	\$77 ^{**}	\$91 ^{**}	\$84 ^{**}	\$84 ^{**}
Installation cost/Unit	\$125	\$155	\$155	\$155	\$155	\$155
Admin. Program cost/Unit	\$15	\$15	\$15	\$15	\$15	\$15
Total Program Cost/Unit	\$215	\$289	\$297	\$311	\$304	\$304
PV of avoided capacity costs	\$0	\$0	\$0	\$0	\$0	\$0
PV of avoided energy costs	\$398 [^]	\$75.64 [^]	\$84 [^]	\$626 [^]	\$206 [^]	\$163 [^]
PV utility avoided costs	\$398	\$76	\$84	\$626	\$206	\$163
NTG	0.80	0.80	0.80	0.80	0.80	0.80
Realization Rate	0.95	0.95	0.95	0.95	0.95	0.95
Program TRC	1.93	0.26	0.58	1.39	1.31	1.39

* Efficient & Base Technology street lighting combinations are not representative of AIU street lighting stock

** Simple Average (range \$54 to \$128 depending on efficient equipment light size)

⁺ Annual Hours of Operation as defined by AIU Energy Delivery

[^] Weighted Average

^{^^} Projected cost likely **understated** since per/unit cost will increase with smaller volume



Proposed Adjustments

- Defer commencement of the Street Light Program until the AIU EM&V Prime Contractor has the opportunity to advise AIU on the cost effectiveness on the proposed program
- Reanalyze cost effectiveness of Street Light Program in 1Q09 based on input from Evaluator
- Reallocate 1st year investment in Street Light Program to other C&I Programs (approx \$520K)