

**City of Poughkeepsie Street Lighting - Phase I Current Rate**  
**TOTAL PROJECT SUMMARY**  
**10/28/2014**

(Y)es (N)o (O)ption	ECM No.	Energy Conservation Measure	Total Measure Cost <sup>1</sup> (\$)	Annual Electric Savings (kWh)	Annual O&M Savings (\$)	Annual Electric Savings (\$)	Annual Fuel Savings (\$)	Total Annual Savings (\$)	Simple Payback Period <sup>2</sup>	Estimated Total Incentive <sup>3</sup>
Y	1	Street Lighting Rate C	\$2,382,261	1,400,483	\$249,969	\$119,041	\$0	\$369,010	6.5	\$168,058
Y	2	Traffic Signals	\$481,765	183,670	\$9,273	\$36,376	\$0	\$45,650	10.6	\$22,040
Y	3	Street Light Purchase from CHGE	\$314,797	0	\$0	\$0	\$0	\$0	0.0	\$0
		<b>PROGRAM TOTALS - Recommended Measures</b>	<b>\$3,178,823</b>	<b>1,584,153</b>	<b>\$259,242</b>	<b>\$155,417</b>	<b>\$0</b>	<b>\$414,660</b>	<b>7.7</b>	<b>\$190,098</b>

**NOTES:**

- TOTAL MEASURE COST includes direct construction costs (subcontractor material and labor) and DOES include fees for the following services: Energy, Electrical and Mechanical engineering, Construction documents, Financing assistance, Subcontractor coordination and administration
- SIMPLE PAYBACK periods DO NOT include incentives. Payback is given by the total measure cost divided by total annual savings.
- ESTIMATED TOTAL INCENTIVE is based on NYSERDA's Existing Facilities Program Performance Based Incentive at a rate of \$0.12/kWh and is subject to First Energy approval, program rules and modifications, and eligibility. This incentive account for customer-secured third party firms or their costs to provide program deliverables, such as calculations.



## City of Poughkeepsie Cashflow Analysis - Phase I Current Rate 10/28/2014

Project Financing	
Project Cost <sup>1</sup>	\$3,178,823
Costs After NYSEDA Rebate	\$2,988,724
Financed Amount	\$3,178,823
Upfront Funding Percent	
BAN Interest Rate	1.50%
Long Term Interest Rate	3.75%
Term of Financing	20
Payment Frequency	Annually
Net Present Value (NPV)	\$3,571,632
Return on Investment (ROI)	119.50%

Simple Pay Back Including Rebates and Maintenance Costs	9.29
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Year	Principal Balance	Energy Cost Savings	CHGE Fee Savings	Guaranteed Cost Savings	Maintenance Costs	Utility Incentives	Anticipated M&V Cost	Financing Costs	Net Annual Costs	Annual Cash Flow	Principal Payment	Cumulative Cash Flow
Installation	\$0	\$51,806	\$86,414	\$138,220	\$0	\$0	\$0	\$0	\$0	\$138,220	\$0	\$138,220
1	\$3,178,823	\$155,417	\$259,242	\$321,574	\$93,086	\$190,098	\$12,863	\$47,682	\$60,545	\$451,127	\$100,000	\$489,347
2	\$3,078,823	\$160,080	\$267,020	\$330,150	\$96,950	\$0	\$13,646	\$46,182	\$59,829	\$270,321	\$100,000	\$659,668
3	\$2,978,823	\$164,882	\$275,030	\$339,453	\$100,459	\$0	\$14,056	\$44,682	\$58,738	\$280,715	\$100,000	\$840,383
4	\$2,878,823	\$169,829	\$283,281	\$349,019	\$104,091	\$0	\$14,477	\$207,166	\$221,643	\$127,375	\$0	\$967,759
5	\$2,779,612	\$174,924	\$291,780	\$358,381	\$108,322	\$0	\$14,912	\$207,166	\$222,078	\$136,304	\$0	\$1,104,062
6	\$2,676,682	\$180,171	\$300,533	\$343,585	\$137,119	\$0	\$0	\$207,166	\$207,166	\$136,419	\$0	\$1,240,481
7	\$2,569,891	\$185,577	\$309,549	\$352,539	\$142,586	\$0	\$0	\$207,166	\$207,166	\$145,373	\$0	\$1,385,855
8	\$2,459,096	\$191,144	\$318,835	\$362,721	\$147,259	\$0	\$0	\$207,166	\$207,166	\$155,555	\$0	\$1,541,409
9	\$2,344,146	\$196,878	\$328,401	\$372,249	\$153,030	\$0	\$0	\$207,166	\$207,166	\$165,082	\$0	\$1,706,492
10	\$2,224,885	\$202,785	\$338,253	\$383,020	\$158,017	\$0	\$0	\$207,166	\$207,166	\$175,854	\$0	\$1,882,345
11	\$2,101,152	\$208,868	\$348,400	\$357,277	\$199,991	\$0	\$0	\$207,166	\$207,166	\$150,111	\$0	\$2,032,456
12	\$1,972,780	\$215,134	\$358,852	\$367,973	\$206,013	\$0	\$0	\$207,166	\$207,166	\$160,807	\$0	\$2,193,263
13	\$1,839,593	\$221,588	\$369,618	\$378,980	\$212,225	\$0	\$0	\$207,166	\$207,166	\$171,814	\$0	\$2,365,077
14	\$1,701,411	\$228,236	\$380,706	\$390,308	\$218,634	\$0	\$0	\$207,166	\$207,166	\$183,142	\$0	\$2,548,219
15	\$1,558,048	\$235,083	\$392,127	\$401,965	\$225,245	\$0	\$0	\$207,166	\$207,166	\$194,799	\$0	\$2,743,018
16	\$1,409,309	\$242,135	\$403,891	\$413,961	\$232,066	\$0	\$0	\$207,166	\$207,166	\$206,795	\$0	\$2,949,813
17	\$1,254,992	\$249,399	\$416,008	\$426,305	\$239,102	\$0	\$0	\$207,166	\$207,166	\$219,139	\$0	\$3,168,952
18	\$1,094,888	\$256,881	\$428,488	\$439,008	\$246,361	\$0	\$0	\$207,166	\$207,166	\$231,842	\$0	\$3,400,794
19	\$928,780	\$264,588	\$441,343	\$452,080	\$253,850	\$0	\$0	\$207,166	\$207,166	\$244,914	\$0	\$3,645,708
20	\$756,443	\$272,525	\$454,583	\$465,531	\$261,577	\$0	\$0	\$207,166	\$207,166	\$258,365	\$0	\$3,904,074
21	\$577,644	\$280,701	\$468,221	\$479,373	\$269,549	\$0	\$0	\$207,166	\$207,166	\$272,207	\$0	\$4,176,280
22	\$392,139	\$289,122	\$482,267	\$493,616	\$277,774	\$0	\$0	\$207,166	\$207,166	\$286,450	\$0	\$4,462,730
23	\$199,678	\$297,796	\$496,735	\$508,271	\$286,260	\$0	\$0	\$207,166	\$207,166	\$301,105	\$0	\$4,763,835
24	\$0	\$306,730	\$511,637	\$523,352	\$295,015	\$0	\$0	\$0	\$0	\$523,352	\$0	\$5,287,187
25	\$0	\$315,932	\$526,986	\$538,869	\$304,049	\$0	\$0	\$0	\$0	\$538,869	\$0	\$5,826,056
<b>Totals</b>	<b>\$42,956,459</b>	<b>\$5,718,212</b>	<b>\$9,538,202</b>	<b>\$10,287,781</b>	<b>\$4,968,632</b>	<b>\$190,098</b>	<b>\$69,954</b>	<b>\$4,281,869</b>	<b>\$4,351,823</b>	<b>\$6,126,056</b>	<b>\$300,000</b>	<b>\$5,826,056</b>

Note:

CHGE Fee Escalation: 3.0%  
Energy Escalation: 3.0%  
M&V Escalation: 3.0%  
Discount Rate: 4.0%

1. Include all costs for Development Phase services and all costs for design and construction of ECMs. Does not include O&M or monitoring and validation (M&V) costs.
2. [(Net Present Value of Annual savings - Financing cost) over average equipment useful life] / [Total project cost]