

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an Application by Guelph Hydro Electric Systems Inc. for an Order or Orders approving or fixing just and reasonable distribution rates and other charges, effective May 1, 2011.

**Guelph Hydro Electric Systems Inc.
Responses to Interrogatories**

School Energy Coalition (SEC)

Filed: November 26, 2010

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INTERROGATORIES OF THE SCHOOL ENERGY COALITION:

1. [App. 5.1, p. 2] Please reconcile the figure of \$10,856,993 for Guelph MTS#1, before contributed capital, with the figure of \$10,856,993 for the same station after the contributed capital on the last page of Appendix 5.2.

Guelph Hydro's response:

[App. 5.1, p. 2] Table 1- 2011 Capital Budget Summary- contains an error (i.e. the Contributed Capital was subtracted twice); the correct Guelph MTS#1 amount is \$11,256,993 and the Total (without Contributed Capital) is \$10,856,993.

Guelph Hydro corrected Table 1:

Table 1 - 2011 CAPITAL BUDGET SUMMARY		
Non-Discretionary Investments		
	2011	
	BUDGET	TOTAL
Land		
Guelph MTS#1 Property	-	
		-
Substations		
Rockwood MS#2	-	
Guelph MTS#1	11,256,993	
Less Contributed Capital	-400,000	
		10,856,993
Other Rockwood Capital		
Substations, Rehab, etc.		
Less Contributed Capital		
Feeders		
CFDR	2,833,000	
CMOD	288,000	
CREL	487,000	
CSW	172,000	
CCB	81,900	
Less Contributed Capital	-330,000	
		3,531,900
Rehabilitation		
CRE	2,891,000	
		2,891,000
Subdivisions		
CSUB	2,853,000	
Less Contributed Capital	-1,880,000	
		973,000
Commercial / Industrial		
CACI	836,000	
Less Contributed Capital	-437,000	
		399,000
Other		
Metering	400,000	
SCADA	250,000	
IT CAPITAL	420,000	
BUILDING/FIXTURES	85,000	
OFFICE EQUIP / GRAPHICS	50,000	
ROLLING STOCK	450,000	
MAJOR TOOLS	60,000	
		1,715,000
Total	3	20,366,893

2. [App. 5.2, p. 4] Please provide a spreadsheet that shows the rate contribution of incremental load to the cost of the TS, relative to the annual impact on rates, by providing, for each year commencing in 2011:
- a. The expected annual costs included in rates from the new Guelph MTS #1, including amortization, cost of capital, PILs, O&M, and any other cost impacts. A breakdown of costs is not necessary, as long as all are included.
 - b. The portion allocated to TS of the expected annual incremental revenues from rates in the area served by the new Guelph MTS#1, under the high-CDM growth assumption of 1.1% annually. Please describe any simplifying assumptions used.
 - c. The net amount of the shortfall in incremental annual cost borne by today's customers, identifying the crossover year.

Guelph Hydro's response:

Guelph Hydro has developed an Economic Evaluation model for Guelph MTS#1 (New MTS).

Assumption used:

1. The transfer of the existing loads from Hanlon station to the New MTS are not considered new connections in 2011
2. The transferred loads from Hanlon station to the New MTS are considered new connections in years beyond 2011
3. The estimated connection date for the new GS 1000 to 4999 kW customer is October 2010
4. The rates used to calculate the revenue are the approved 2010 distribution rates
5. There are no expected capital costs associated with the New MTS beyond 2011
6. The estimated OM&A cost is a weighted average of Guelph Hydro's OM&A cost
7. The 2010 Cost of Capital Parameters are the last approved parameters
8. The Cost of Capital Parameters beyond 2011 are the parameters (for 2011 cost of service applications) announced by the Board in its letter dated November 15, 2010
9. The Income Tax rates are the forecast rates published by KPMG – substantively enacted Income Tax for Controlled private Corporations as at June 30, 2010
10. The 2011 and beyond Municipal Tax Rate is the 2010 rate of 3.63% increased by 5% each year
11. The monthly average consumption per customer class is calculated based on the actual 2009 annual consumption per customer class divided by the actual corresponding number of customers

The PV (Present Value) of Accumulated Incremental Revenue is estimated to exceed the PV of Accumulated Incremental Cost in 2022, crossover year. The annual PV Revenue is estimated to exceed the annual PV Incremental Cost in 2014.

The Economic Evaluation calculation is presented in Appendix 1 - Guelph_IRR_SEC_Q2.

3. [App. 5.2, p. 19] With respect to the comparison between the expansion of Hanlon option and the Clair option:

- a. Please describe any differences in the expected lifetime of the Hanlon expansion and the new Guelph MTS#1.

Guelph Hydro's response:

The expected lifetimes of both alternatives are similar as the equipment to be installed is essentially the same. The nameplate capacity rating of the Guelph Hydro's transformers is approximately 10% higher than proposed by Hydro One which could provide additional operating margin and lifespan.

- b. Please estimate the percentage of the capital cost of each of the Hanlon expansion and the new Guelph MTS #1 that is expected to be expended on:
 - i. Labour costs (all compensation, without any overheads) of employees of the Applicant, or

Guelph Hydro's response:

There is expected to be minimal labour cost contribution by Guelph Hydro's employees – less than 1% of the total capital cost since most of the construction work will be completed by contractors selected by a competitive bidding process administered by Guelph Hydro's Engineering consultant.

- ii. Labour costs (all compensation, without any overheads) of employees of Hydro One.

Guelph Hydro's response:

No estimate containing this detail has been provided by Hydro One.

- c. Please estimate the average total compensation per union employee of the Applicant in the Test Year. Please include in the total the averages of base wages, overtime, incentives, and benefits as set forth in Appendix 2-K of the Filing Guidelines for cost of service applications. If the Applicant has any comparisons of the average total compensation per union employee of the Applicant relative to Hydro One, please provide those comparisons.

Guelph Hydro's response:

The average total compensation per union (line construction, maintenance and metering) employee is \$95,120. Guelph Hydro does not have any information of the Hydro One's average total compensation per union employee.

Breakdown:

Total average yearly compensation per union employee (Incl. benefits)	\$95,120
Total average yearly base wages per union employee	\$78,384
Total average yearly benefits per union employee	\$16,736

Notes:

Figures based on averages of line construction, maintenance and metering employees.

Overtime is not included in budgets used to calculate these figures.

Incentive pay is not applicable to these positions.

- d. Please confirm that the figure of \$2.92 monthly bill increase is for 2011 only, and confirm that it includes all increased O&M. If it is an ongoing impact, or it does not include O&M, please provide details. Please confirm that the monthly bill increase for a GS>50KW customer with demand of 100 KW is expected to be approximately \$30.00, or provide an alternative estimate.

Guelph Hydro's response:

This was the calculation used as a bill impact estimate in 2009 year rate.

Estimated Transmission Connection Charge savings represented the estimated avoided Hydro One's charges for transformer connection.

Operating costs were expected to be \$200K additional per year.

The yearly additional revenue requirement was estimated to be \$1.75M.

Guelph Hydro took this amount and assumed it would be an even impact across all estimated customers, including GS>50 kW customer with demand of 100 kW.

This was only a rough estimate to get an idea for comparison of alternatives (please see the comparison below).

If Guelph Hydro would build the New MTS					After Tax Impact	Before Tax Impact
	X1000,000					X1000,000
			33%	Tax Rate		
Trans Rate Savings						(\$0.18)
Operating Cost						\$0.20
Depreciation Base	\$12.60		25	Years		\$0.50
Rate Base	\$14.60	60%	6.10%	Debt		\$0.53
		40%	8.00%	Equity	0.47	\$0.70
			Estimated Incremental Rev. Req.			\$1.75
Est. Monthly Rate Impact	Estimated Number of Customers			50,000		\$2.92
If Hydro One would build the New MTS					After Tax Revenue Requirement	Before Tax Rev Requirement
	X1000,000		33%	Tax Rate		X1000,000
Operating Cost						\$0.00
Additional Feder Costs (NPV Basis)	\$1.52		20	Years		\$0.08
Depreciation Base	\$15		25	Years		\$0.60
Rate Base	\$15	60%	6.10%	Debt		\$0.55
		40%	8.00%	Equity	\$0.48	\$0.72
			Estimated Incremental Rev. Req.			\$1.94
Est. Monthly Rate Impact	Estimated Number of Customers			50,000		\$3.24

Appendix 1 - Guelph_IRR_SEC_Q2_Economic Evaluation

(please see more details in the electronic file- Excel version)

Economic Evaluation Model

Revenue and Cost Analysis

Year	Revenue	O&M	Municipal Tax	Capital Tax	Income Taxes	Depreciation	Deemed Interest	Deemed Equity Return	Total Costs	Revenue minus Costs	Accumulated Revenue minus Costs	PV Factor utilizing mid year discounting	PV of Revenue	PV of Costs	PV Revenue minus Costs	PV Accumulated Revenue minus Costs
2011	\$12,632	\$43	\$0	\$0	(\$25,447)	\$337,332	\$335,167	\$421,017	\$1,068,113	(\$1,055,481)	(\$1,055,481)	1.033155	\$12,227	\$1,033,836	(\$1,021,609)	(\$1,021,609)
2012	\$390,298	\$152,917	\$0	\$0	\$13,100	\$337,332	\$284,987	\$459,348	\$1,247,684	(\$857,385)	(\$1,912,866)	1.105081	\$353,185	\$1,129,043	(\$775,857)	(\$1,797,467)
2013	\$1,395,163	\$458,838	\$0	\$0	\$27,316	\$337,332	\$275,546	\$444,130	\$1,543,162	(\$147,999)	(\$2,060,865)	1.182246	\$1,180,095	\$1,305,280	(\$125,185)	(\$1,922,651)
2014	\$2,777,693	\$917,632	\$0	\$0	\$39,434	\$337,332	\$266,104	\$428,912	\$1,989,416	\$788,278	(\$1,272,587)	1.264965	\$2,195,866	\$1,572,704	\$623,162	(\$1,299,490)
2015	\$4,537,890	\$1,529,301	\$0	\$0	\$50,883	\$337,332	\$256,663	\$413,694	\$2,587,873	\$1,950,017	\$677,429	1.353471	\$3,352,779	\$1,912,027	\$1,440,752	\$141,263
2016	\$4,537,890	\$1,529,301	\$0	\$0	\$61,056	\$337,332	\$247,222	\$398,476	\$2,573,387	\$1,964,503	\$2,641,933	1.448170	\$3,133,533	\$1,776,992	\$1,356,542	\$1,497,804
2017	\$4,537,890	\$1,529,301	\$0	\$0	\$70,051	\$337,332	\$237,780	\$383,259	\$2,557,723	\$1,980,167	\$4,622,100	1.549495	\$2,928,625	\$1,650,681	\$1,277,943	\$2,775,748
2018	\$4,537,890	\$1,529,301	\$0	\$0	\$77,961	\$337,332	\$228,339	\$368,041	\$2,540,974	\$1,996,916	\$6,619,016	1.657909	\$2,737,116	\$1,532,637	\$1,204,478	\$3,980,226
2019	\$4,537,890	\$1,529,301	\$0	\$0	\$84,871	\$337,332	\$218,898	\$352,823	\$2,523,224	\$2,014,666	\$8,633,682	1.773909	\$2,558,130	\$1,422,409	\$1,135,721	\$5,115,947
2020	\$4,537,890	\$1,529,301	\$0	\$0	\$90,857	\$337,332	\$209,456	\$337,605	\$2,504,551	\$2,033,339	\$10,667,021	1.898025	\$2,390,848	\$1,319,556	\$1,071,292	\$6,187,239
2021	\$4,537,890	\$1,529,301	\$0	\$0	\$95,992	\$337,332	\$200,015	\$322,387	\$2,485,027	\$2,052,863	\$12,719,884	2.030825	\$2,234,505	\$1,223,654	\$1,010,852	\$7,198,091
2022	\$4,537,890	\$1,529,301	\$0	\$0	\$100,341	\$337,332	\$190,573	\$307,169	\$2,464,717	\$2,073,173	\$14,793,057	2.172917	\$2,088,386	\$1,134,290	\$954,097	\$8,152,188
2023	\$4,537,890	\$1,529,301	\$0	\$0	\$103,966	\$337,332	\$181,132	\$291,952	\$2,443,683	\$2,094,207	\$16,887,264	2.324951	\$1,951,822	\$1,051,069	\$900,753	\$9,052,941
2024	\$4,537,890	\$1,529,301	\$0	\$0	\$106,924	\$337,332	\$171,691	\$276,734	\$2,421,981	\$2,115,909	\$19,003,173	2.487622	\$1,824,188	\$973,613	\$850,575	\$9,903,516
2025	\$4,537,890	\$1,529,301	\$0	\$0	\$109,264	\$337,332	\$162,249	\$261,516	\$2,399,663	\$2,138,227	\$21,141,400	2.661674	\$1,704,901	\$901,561	\$803,339	\$10,706,855
2026	\$4,537,890	\$1,529,301	\$0	\$0	\$112,343	\$337,332	\$155,239	\$250,217	\$2,384,432	\$2,153,458	\$23,294,858	2.847905	\$1,593,413	\$837,258	\$756,155	\$11,463,010
2027	\$4,537,890	\$1,529,301	\$0	\$0	\$114,897	\$337,332	\$148,229	\$238,918	\$2,368,676	\$2,169,213	\$25,464,071	3.047166	\$1,489,217	\$777,338	\$711,879	\$12,174,890
2028	\$4,537,890	\$1,529,301	\$0	\$0	\$116,967	\$337,332	\$141,219	\$227,619	\$2,352,437	\$2,185,453	\$27,649,524	3.260368	\$1,391,834	\$721,525	\$670,309	\$12,845,198
2029	\$4,537,890	\$1,529,301	\$0	\$0	\$118,590	\$337,332	\$134,209	\$216,320	\$2,335,751	\$2,202,139	\$29,851,663	3.488488	\$1,300,819	\$669,560	\$631,259	\$13,476,457
2030	\$4,537,890	\$1,529,301	\$0	\$0	\$119,801	\$337,332	\$127,198	\$205,021	\$2,318,653	\$2,219,237	\$32,070,899	3.732569	\$1,215,755	\$621,195	\$594,560	\$14,071,017
2031	\$4,537,890	\$1,529,301	\$0	\$0	\$120,632	\$337,332	\$120,188	\$193,722	\$2,301,175	\$2,236,715	\$34,307,614	3.993727	\$1,136,254	\$576,197	\$560,057	\$14,631,074
2032	\$4,537,890	\$1,529,301	\$0	\$0	\$121,112	\$337,332	\$113,178	\$182,423	\$2,283,346	\$2,254,544	\$36,562,158	4.273158	\$1,061,952	\$534,346	\$527,606	\$15,158,680
2033	\$4,537,890	\$1,529,301	\$0	\$0	\$121,268	\$337,332	\$106,168	\$171,124	\$2,265,193	\$2,272,697	\$38,834,855	4.572141	\$992,509	\$495,434	\$497,075	\$15,655,755
2034	\$4,537,890	\$1,529,301	\$0	\$0	\$121,126	\$337,332	\$99,158	\$159,825	\$2,246,741	\$2,291,149	\$41,126,004	4.892042	\$927,607	\$459,264	\$468,342	\$16,124,097
2035	\$4,537,890	\$1,529,301	\$0	\$0	\$120,707	\$337,332	\$92,148	\$148,525	\$2,228,013	\$2,309,877	\$43,435,881	5.234326	\$866,948	\$425,654	\$441,294	\$16,565,391

Economic Evaluation Model

GUELPH HYDRO ELECTRIC SYSTEMS INC.

EB-2010-0130

Inputs For Project

Guelph Transformer Station

Year Construction Completed / Energized

2011

Naming Conventions

Capital Classes

Capital Class 1	Building
Capital Class 2	Equipment - 15 year
Capital Class 3	Equipment - 25 year
Capital Class 4	Equipment - 35 year
Capital Class 5	Equipment - 40 year
Capital Class 6	
Capital Class 7	
Capital Class 8	
Capital Class 9	
Capital Class 10	

Please Note: As outlined below Land is a 'hard coded' capital category because it is the only capital cost to attract municipal tax.

Rate Classes

Rate Class 1	Residential
Rate Class 2	General Service Less Than 50 kW
Rate Class 3	General Service 50 to 999 kW
Rate Class 4	General Service 1,000 to 4,999 kW
Rate Class 5	Large Use
Rate Class 6	Unmetered Scattered Load
Rate Class 7	Sentinel Lighting
Rate Class 8	Street Lighting
Rate Class 9	
Rate Class 10	

Revenue Forecasting Inputs

Current Distribution Rates without any adders or riders (i.e. pure distribution)

<u>2010 actual distribution rates</u>	Monthly Service	<u>Volumetric Charge</u>	
	<u>Charge</u> (\$/Customer)	(\$/kWh)	(\$/kW)
Residential	\$13.39	\$0.0164	
General Service Less Than 50 kW	\$12.24	\$0.0156	
General Service 50 to 999 kW	\$230.28		\$2.7615
General Service 1,000 to 4,999 kW	\$618.96		\$1.9777
Large Use	\$905.99		\$2.1725
Unmetered Scattered Load	\$5.47	\$0.0250	
Sentinel Lighting	\$6.52		\$7.2063
Street Lighting	\$0.23		\$5.5465
0			
0			

Monthly Consumption

2010 actual distribution rates

	Average		
	<u>Monthly Consumption</u> (kWh)	(kW)	
Residential	750		as requested by the OEB
General Service Less Than 50 kW	2,000		as requested by the OEB
General Service 50 to 999 kW	57,178	155	2009 data from load forecast
General Service 1,000 to 4,999 kW	759,152	1,816	2009 data from load forecast
Large Use	4,941,333	9,155	2009 data from load forecast
Unmetered Scattered Load	347		2009 data from load forecast
Sentinel Lighting	301	0.82	2009 data from load forecast
Street Lighting	60	0.03	2009 data from load forecast
0			
0			

New Customer/Connections (or Estimated Connections)

	<u>New customers additions</u>				
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Residential	0	858	858	858	858
General Service Less Than 50 kW	0	14	14	14	14
General Service 50 to 999 kW	0	7	7	7	7
General Service 1,000 to 4,999 kW	0.25	1	1	1	1
Large Use			1		
Unmetered Scattered Load					
Sentinel Lighting					
Street Lighting					
0					
0					
Total New Customers	0.25	880	881	880	880

Capital Cost Inputs

Actual Capital Costs

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Building	\$2,279,000				
Equipment - 15 year	\$1,303,000				
Equipment - 25 year	\$750,000				
Equipment - 35 year	\$3,293,000				
Equipment - 40 year	\$3,232,000				
0					
0					
0					
0					
0					
Land					
Total	\$10,857,000	\$0	\$0	\$0	\$0

Please Note: Land is a fixed capital category because it is the only capital cost to attract municipal tax
In addition, Land does not depreciation for accounting or income tax purposes. If you do not have Land in
the project then leave the input field blank.

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Annual OM&A Cost per Customer	\$173.72	\$173.72	\$173.72	\$173.72	\$173.72
Annual OM&A Cost per kWh					
Annual OM&A Cost per kW					

Financial Assumptions

	Depreciation Rates	Capital Cost Allowance Rates
	<u>%</u>	<u>%</u>
Building	2	6
Equipment - 15 year	7	8
Equipment - 25 year	4	8
Equipment - 35 year	3	8
Equipment - 40 year	3	8
0		
0		
0		
0		
0		
Land		

Please Note: Land will not have a depreciation or CCA rate applied to it because it is a non depreciating asset.
However, provision for a capital overhead rate on Land has been provided if required for evaluation purposes

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
LDC Short Term Debt Ratio (%)	56	56	56	56	56
LDC Long Term Debt Ratio (%)	4	4	4	4	4
Long Term Debt Rate (%)	6.10	5.48	5.48	5.48	5.48
Short Term Debt Rate (%)	4.47	2.43	2.43	2.43	2.43
Equity Rate (%)	8.57	9.66	9.66	9.66	9.66
Municipal Tax Rate (%)	3.8115%	4.0021%	4.2022%	4.4123%	4.6329%
Capital Tax Rate (%)	0.0000	0.0000	0.0000	0.0000	0.0000
Income Tax Rate (%)	28.25	26.25	25.50	25.00	25.00

Economic Evaluation Model

Distribution Revenue Model

Rate Class: Residential

	Monthly Service Charge		Volumetric Charge	
	(\$/Customer)	(\$/kWh)	(\$/kWh)	(\$/kW)
2011	\$13.39	\$0.0164	\$0.0000	\$0.0000
2012	\$13.39	\$0.0164	\$0.0000	\$0.0000
2013	\$13.39	\$0.0164	\$0.0000	\$0.0000
2014	\$13.39	\$0.0164	\$0.0000	\$0.0000
2015	\$13.39	\$0.0164	\$0.0000	\$0.0000

	Average Monthly Consumption	
	(kWh)	(kW)
2011	750	0
2012	750	0
2013	750	0
2014	750	0
2015	750	0

	Annual Connections	Accum. Connections	Monthly Energy (kWh)	Monthly Demand (kW)	Annual Service Charge Revenue	Annual Energy Charge Revenue	Annual Demand Charge Revenue	Total Revenue	Total Revenue
2011	0	0	0	0	\$0	\$0	\$0	\$0	\$0
2012	858	858	643,500	0	\$137,863	\$126,641	\$0	\$264,504	\$264,504
2013	858	1,716	1,287,000	0	\$275,727	\$253,282	\$0	\$529,008	\$529,008
2014	858	2,574	1,930,500	0	\$413,590	\$379,922	\$0	\$793,513	\$793,513
2015	858	3,432	2,574,000	0	\$551,454	\$506,563	\$0	\$1,058,017	\$1,058,017

Economic Evaluation Model

Distribution Revenue Model

Rate Class: General Service Less Than 50 kW

	Monthly Service Charge (\$/Customer)	Volumetric Charge (\$/kWh)
2011	\$12.24	\$0.0156
2012	\$12.24	\$0.0156
2013	\$12.24	\$0.0156
2014	\$12.24	\$0.0156
2015	\$12.24	\$0.0156

	Average Monthly Consumption (kWh)	Average Monthly Consumption (kW)
2011	2,000	0
2012	2,000	0
2013	2,000	0
2014	2,000	0
2015	2,000	0

Year	Energy			Monthly Demand (kW)	Annual Service Charge Revenue	Annual Energy Charge Revenue	Annual Demand Charge Revenue	Total Revenue
	Annual Connections	Accum. Connections	Monthly Energy (kWh)					
2011	0	0	0	0	\$0	\$0	\$0	\$0
2012	14	14	28,000	0	\$2,056	\$5,242	\$0	\$7,298
2013	14	28	56,000	0	\$4,113	\$10,483	\$0	\$14,596
2014	14	42	84,000	0	\$6,169	\$15,725	\$0	\$21,894
2015	14	56	112,000	0	\$8,225	\$20,966	\$0	\$29,192

Economic Evaluation Model

Distribution Revenue Model

Rate Class: General Service 50 to 999 kW

	Monthly Service Charge		Volumetric Charge	
	(\$/Customer)	(\$/kW)	(\$/kWh)	(\$/kW)
2011	\$230.28	\$0.0000	\$2.7615	\$2.7615
2012	\$230.28	\$0.0000	\$2.7615	\$2.7615
2013	\$230.28	\$0.0000	\$2.7615	\$2.7615
2014	\$230.28	\$0.0000	\$2.7615	\$2.7615
2015	\$230.28	\$0.0000	\$2.7615	\$2.7615

	Average Monthly Consumption	
	(kWh)	(kW)
2011	57,178	155
2012	57,178	155
2013	57,178	155
2014	57,178	155
2015	57,178	155

	Annual Connections	Accum. Connections	Monthly Energy (kWh)	Monthly Demand (kW)	Annual Service Charge Revenue	Annual Energy Charge Revenue	Annual Demand Charge Revenue	Total Revenue
2011	0	0	0	0	\$0	\$0	\$0	\$0
2012	7	7	400,243	1086.089955	\$19,344	\$0	\$35,991	\$55,334
2013	7	14	800,486	2172.179911	\$38,687	\$0	\$71,982	\$110,669
2014	7	21	1,200,729	3258.269866	\$58,031	\$0	\$107,973	\$166,003
2015	7	28	1,600,972	4344.359821	\$77,374	\$0	\$143,963	\$221,337

Economic Evaluation Model

Distribution Revenue Model

Rate Class: General Service 1,000 to 4,999 kW

	Monthly Service Charge		Volumetric Charge	
	(\$/Customer)	(\$/kWh)	(\$/kWh)	(\$/kW)
2011	\$618.96	\$0.0000	\$1.9777	
2012	\$618.96	\$0.0000	\$1.9777	
2013	\$618.96	\$0.0000	\$1.9777	
2014	\$618.96	\$0.0000	\$1.9777	
2015	\$618.96	\$0.0000	\$1.9777	

	Average Monthly Consumption	
	(kWh)	(kW)
2011	759,152	1,816
2012	759,152	1,816
2013	759,152	1,816
2014	759,152	1,816
2015	759,152	1,816

	Annual Connections	Accum. Connections	Monthly Energy (kWh)	Monthly Demand (kW)	Annual Service Charge Revenue	Annual Energy Charge Revenue	Annual Demand Charge Revenue	Total Revenue
2011	0	0	189,788	454.0421798	\$1,857	\$0	\$10,776	\$12,632
2012	1	1	948,940	2270.210899	\$9,284	\$0	\$53,878	\$63,162
2013	1	2	1,708,093	4086.379618	\$16,712	\$0	\$96,980	\$113,692
2014	1	3	2,467,245	5902.548337	\$24,139	\$0	\$140,082	\$164,221
2015	1	4	3,226,398	7718.717056	\$31,567	\$0	\$183,184	\$214,751

Economic Evaluation Model

Distribution Revenue Model

Rate Class: Large Use

	Monthly Service Charge		Volumetric Charge						
	(\$/Customer)	(\$/kWh)	(\$/kWh)	(\$/kW)					
2011	\$905.99	\$0.0000	\$2.1725	\$2.1725					
2012	\$905.99	\$0.0000	\$2.1725	\$2.1725					
2013	\$905.99	\$0.0000	\$2.1725	\$2.1725					
2014	\$905.99	\$0.0000	\$2.1725	\$2.1725					
2015	\$905.99	\$0.0000	\$2.1725	\$2.1725					

	Average Monthly Consumption								
	(kWh)	(kW)							
2011	4,941,333	9,155							
2012	4,941,333	9,155							
2013	4,941,333	9,155							
2014	4,941,333	9,155							
2015	4,941,333	9,155							

	Annual Connections	Accum. Connections	Monthly Energy (kWh)	Monthly Demand (kW)	Annual Service Charge Revenue	Annual Energy Charge Revenue	Annual Demand Charge Revenue	Total Revenue	Total Revenue
2011	0	0	0	0	\$0	\$0	\$0	\$0	\$0
2012	0	0	0	0	\$0	\$0	\$0	\$0	\$0
2013	1	1	4,941,333	9154.595844	\$10,872	\$238,660	\$238,660	\$488,193	\$488,193
2014	0	1	4,941,333	9154.595844	\$10,872	\$238,660	\$238,660	\$488,193	\$488,193
2015	0	1	4,941,333	9154.595844	\$10,872	\$238,660	\$238,660	\$488,193	\$488,193

Economic Evaluation Model

Distribution Revenue Model

Summary

Revenue	Residential	ral Service Less Than fernal Service 50 to 999	ral Service 1,000 to 4,999	Large Use	tered Scattered	Sentinel Lighting	Street Lighting	0	Total	Annual
2011	\$0	\$0	\$12,632	\$0	\$0	\$0	\$0	\$0	\$12,632	
2012	\$264,504	\$7,298	\$63,162	\$0	\$0	\$0	\$0	\$0	\$390,298	
2013	\$529,008	\$14,596	\$113,692	\$488,193	\$0	\$0	\$0	\$0	\$1,256,157	
2014	\$793,513	\$21,894	\$164,221	\$488,193	\$0	\$0	\$0	\$0	\$1,633,823	
2015	\$1,058,017	\$29,192	\$214,751	\$488,193	\$0	\$0	\$0	\$0	\$2,011,489	
Accumulated Connections										
2011	0	0	0	0	0	0	0	0	0	
2012	858	14	1	0	0	0	0	0	880	
2013	1,716	28	2	1	0	0	0	0	1,761	
2014	2,574	42	3	1	0	0	0	0	2,641	
2015	3,432	56	4	1	0	0	0	0	3,521	
Accumulated kWh										
2011	0	0	189,788	0	0	0	0	0	189,788	2,277,457
2012	643,500	28,000	948,940	0	0	0	0	0	2,020,684	24,248,202
2013	1,287,000	56,000	1,708,093	4,941,333	0	0	0	0	8,792,912	105,514,943
2014	1,930,500	84,000	2,467,245	4,941,333	0	0	0	0	10,623,807	127,485,688
2015	2,574,000	112,000	3,226,398	4,941,333	0	0	0	0	12,454,703	149,456,433
Accumulated kW										
2011	0	0	454	0	0	0	0	0	454	5,449
2012	0	0	2,270	0	0	0	0	0	3,356	40,276
2013	0	0	4,086	9,155	0	0	0	0	15,413	184,958
2014	0	0	5,903	9,155	0	0	0	0	18,315	219,785
2015	0	0	7,719	9,155	0	0	0	0	21,218	254,612

Economic Evaluation Model

O & M Calculation

Year	O&M per Customer	New Customers	Accum Cust Connection s	Accum O&M on per Customer Basis	O&M per kWh	New Annual kWhs	Accum O&M on per kWh Basis	O&M per kW	New Annual kW	Accum O&M on per kW Basis	Total O&M
2011	\$173.72	0	0	\$43	\$0.00	2,277,457	\$0	\$0.00	5,449	\$0	\$43
2012	\$173.72	880	880	\$152,917	\$0.00	21,970,745	\$0	\$0.00	34,827	\$0	\$152,917
2013	\$173.72	881	1,761	\$305,964	\$0.00	81,266,741	\$0	\$0.00	144,682	\$0	\$305,964
2014	\$173.72	880	2,641	\$458,838	\$0.00	21,970,745	\$0	\$0.00	34,827	\$0	\$458,838
2015	\$173.72	880	3,521	\$611,712	\$0.00	21,970,745	\$0	\$0.00	34,827	\$0	\$611,712

Economic Evaluation Model

Municipal Tax Calculations

	Land Capital	Accum	Municipal	
	Costs	Land Costs	Tax Rate	Municipal Taxes
2011	\$0	\$0	0%	\$0
2012	\$0	\$0	0%	\$0
2013	\$0	\$0	0%	\$0
2014	\$0	\$0	0%	\$0
2015	\$0	\$0	0%	\$0

Economic Evaluation Model

Capital Cost Allowance and Capital Tax Calculation

Total Capital Costs

	Building	Equipment - 15 year	Equipment - 25 year	Equipment - 35 year	Equipment - 40 year
2011	\$2,279,000	\$1,303,000	\$750,000	\$3,293,000	\$3,232,000
2012	\$0	\$0	\$0	\$0	\$0
2013	\$0	\$0	\$0	\$0	\$0
2014	\$0	\$0	\$0	\$0	\$0
2015	\$0	\$0	\$0	\$0	\$0

	Opening UCC	CCA	Closing UCC	Opening UCC	CCA	Closing UCC	Opening UCC	CCA	Closing UCC	Opening UCC	CCA	Closing UCC	Opening UCC	CCA	Closing UCC	Total CCA	Total Closing UCC	Capital Cost of Land	Total Tax Base For Capital Tax	Capital Tax Rate	Capital Tax
2011	\$2,279,000	\$68,370	\$2,210,630	\$1,303,000	\$52,120	\$1,250,880	\$750,000	\$30,000	\$720,000	\$3,293,000	\$131,720	\$3,161,280	\$3,232,000	\$129,280	\$3,102,720	\$411,490	\$10,445,510	\$0	\$10,445,510	0.0000%	\$0
2012	\$2,210,630	\$132,638	\$2,077,992	\$1,250,880	\$100,070	\$1,150,810	\$720,000	\$57,600	\$662,400	\$3,161,280	\$252,902	\$2,908,378	\$3,102,720	\$248,218	\$2,854,502	\$791,428	\$9,654,082	\$0	\$9,654,082	0.0000%	\$0
2013	\$2,077,992	\$124,680	\$1,953,313	\$1,150,810	\$92,065	\$1,058,745	\$662,400	\$52,992	\$609,408	\$2,908,378	\$232,670	\$2,675,707	\$2,854,502	\$228,360	\$2,626,142	\$730,767	\$8,923,315	\$0	\$8,923,315	0.0000%	\$0
2014	\$1,953,313	\$117,199	\$1,836,114	\$1,058,745	\$84,700	\$974,045	\$609,408	\$48,753	\$560,655	\$2,675,707	\$214,057	\$2,461,651	\$2,626,142	\$210,091	\$2,416,051	\$674,799	\$8,248,516	\$0	\$8,248,516	0.0000%	\$0
2015	\$1,836,114	\$110,167	\$1,725,947	\$974,045	\$77,924	\$896,122	\$560,655	\$44,852	\$515,803	\$2,461,651	\$196,932	\$2,264,719	\$2,416,051	\$193,284	\$2,222,767	\$623,159	\$7,625,357	\$0	\$7,625,357	0.0000%	\$0
2016	\$1,725,947	\$103,557	\$1,622,390	\$896,122	\$71,690	\$824,432	\$515,803	\$41,264	\$474,539	\$2,264,719	\$181,177	\$2,083,541	\$2,222,767	\$177,821	\$2,044,945	\$575,510	\$7,049,848	\$0	\$7,049,848	0.0000%	\$0
2017	\$1,622,390	\$97,343	\$1,525,047	\$824,432	\$65,955	\$758,477	\$474,539	\$37,963	\$436,576	\$2,083,541	\$166,683	\$1,916,858	\$2,044,945	\$163,596	\$1,881,350	\$531,540	\$6,518,308	\$0	\$6,518,308	0.0000%	\$0
2018	\$1,525,047	\$91,503	\$1,433,544	\$758,477	\$60,678	\$697,799	\$436,576	\$34,926	\$401,650	\$1,916,858	\$153,349	\$1,763,509	\$1,881,350	\$150,508	\$1,730,842	\$490,964	\$6,027,344	\$0	\$6,027,344	0.0000%	\$0
2019	\$1,433,544	\$86,013	\$1,347,531	\$697,799	\$55,824	\$641,975	\$401,650	\$32,132	\$369,518	\$1,763,509	\$141,081	\$1,622,429	\$1,730,842	\$138,467	\$1,592,374	\$453,517	\$5,573,827	\$0	\$5,573,827	0.0000%	\$0
2020	\$1,347,531	\$80,852	\$1,266,679	\$641,975	\$51,358	\$590,617	\$369,518	\$29,561	\$339,956	\$1,622,429	\$129,794	\$1,492,634	\$1,592,374	\$127,390	\$1,464,985	\$418,956	\$5,154,872	\$0	\$5,154,872	0.0000%	\$0
2021	\$1,266,679	\$76,001	\$1,190,679	\$590,617	\$47,249	\$543,368	\$339,956	\$27,196	\$312,760	\$1,492,634	\$119,411	\$1,373,224	\$1,464,985	\$117,199	\$1,347,786	\$387,056	\$4,767,816	\$0	\$4,767,816	0.0000%	\$0
2022	\$1,190,679	\$71,441	\$1,119,238	\$543,368	\$43,469	\$499,898	\$312,760	\$25,021	\$287,739	\$1,373,224	\$109,858	\$1,263,366	\$1,347,786	\$107,823	\$1,239,963	\$357,612	\$4,410,204	\$0	\$4,410,204	0.0000%	\$0
2023	\$1,119,238	\$67,154	\$1,052,084	\$499,898	\$39,992	\$459,907	\$287,739	\$23,019	\$264,720	\$1,263,366	\$101,069	\$1,162,296	\$1,239,963	\$99,197	\$1,140,766	\$330,432	\$4,079,772	\$0	\$4,079,772	0.0000%	\$0
2024	\$1,052,084	\$63,125	\$988,959	\$459,907	\$36,793	\$423,114	\$264,720	\$21,178	\$243,542	\$1,162,296	\$92,984	\$1,069,313	\$1,140,766	\$91,261	\$1,049,505	\$305,340	\$3,774,432	\$0	\$3,774,432	0.0000%	\$0
2025	\$988,959	\$59,338	\$929,621	\$423,114	\$33,849	\$389,265	\$243,542	\$19,483	\$224,059	\$1,069,313	\$85,545	\$983,768	\$1,049,505	\$83,960	\$965,544	\$282,175	\$3,492,257	\$0	\$3,492,257	0.0000%	\$0
2026	\$929,621	\$55,777	\$873,844	\$389,265	\$31,141	\$358,124	\$224,059	\$17,925	\$206,134	\$983,768	\$78,701	\$905,066	\$965,544	\$77,244	\$888,301	\$260,788	\$3,231,469	\$0	\$3,231,469	0.0000%	\$0
2027	\$873,844	\$52,431	\$821,413	\$358,124	\$28,650	\$329,474	\$206,134	\$16,491	\$189,643	\$905,066	\$72,405	\$832,661	\$888,301	\$71,064	\$817,237	\$241,041	\$2,990,428	\$0	\$2,990,428	0.0000%	\$0
2028	\$821,413	\$49,285	\$772,128	\$329,474	\$26,358	\$303,116	\$189,643	\$15,171	\$174,472	\$832,661	\$66,613	\$766,048	\$817,237	\$65,379	\$751,858	\$222,806	\$2,767,622	\$0	\$2,767,622	0.0000%	\$0
2029	\$772,128	\$46,328	\$725,801	\$303,116	\$24,249	\$278,867	\$174,472	\$13,958	\$160,514	\$766,048	\$61,284	\$704,764	\$751,858	\$60,149	\$691,709	\$205,967	\$2,561,655	\$0	\$2,561,655	0.0000%	\$0
2030	\$725,801	\$43,548	\$682,253	\$278,867	\$22,309	\$256,557	\$160,514	\$12,841	\$147,673	\$704,764	\$56,381	\$648,383	\$691,709	\$55,337	\$636,372	\$190,416	\$2,371,239	\$0	\$2,371,239	0.0000%	\$0
2031	\$682,253	\$40,935	\$641,318	\$256,557	\$20,525	\$236,033	\$147,673	\$11,814	\$135,859	\$648,383	\$51,871	\$596,512	\$636,372	\$50,910	\$585,463	\$176,054	\$2,195,184	\$0	\$2,195,184	0.0000%	\$0
2032	\$641,318	\$38,479	\$602,839	\$236,033	\$18,883	\$217,150	\$135,859	\$10,869	\$124,990	\$596,512	\$47,721	\$548,791	\$585,463	\$46,837	\$538,626	\$162,788	\$2,032,396	\$0	\$2,032,396	0.0000%	\$0
2033	\$602,839	\$36,170	\$566,668	\$217,150	\$17,372	\$199,778	\$124,990	\$9,999	\$114,991	\$548,791	\$43,903	\$504,888	\$538,626	\$43,090	\$495,536	\$150,535	\$1,881,861	\$0	\$1,881,861	0.0000%	\$0
2034	\$566,668	\$34,000	\$532,668	\$199,778	\$15,982	\$183,796	\$114,991	\$9,199	\$105,792	\$504,888	\$40,391	\$464,497	\$495,536	\$39,643	\$455,893	\$139,216	\$1,742,646	\$0	\$1,742,646	0.0000%	\$0
2035	\$532,668	\$31,960	\$500,708	\$183,796	\$14,704	\$169,092	\$105,792	\$8,463	\$97,329	\$464,497	\$37,160	\$427,337	\$455,893	\$36,471	\$419,421	\$128,758	\$1,613,887	\$0	\$1,613,887	0.0000%	\$0

Economic Evaluation Model

Depreciation and Rate of Return

Total Capital Costs

	Building	Equipment - 15 year				Equipment - 25 year				Equipment - 35 year				Equipment - 40 year						
2011	\$2,279,000	\$1,303,000				\$750,000				\$3,293,000				\$3,232,000						
2012	\$0	\$0				\$0				\$0				\$0						
2013	\$0	\$0				\$0				\$0				\$0						
2014	\$0	\$0				\$0				\$0				\$0						
2015	\$0	\$0				\$0				\$0				\$0						
			Accumulated				Accumulated				Accumulated				Accumulated				Accumulated	
	Gross Plant	Depreciation	Depreciation	Net Plant	Gross Plant	Depreciation	Depreciation	Net Plant	Gross Plant	Depreciation	Depreciation	Net Plant	Gross Plant	Depreciation	Depreciation	Net Plant	Gross Plant	Depreciation	Depreciation	Net Plant
2011	\$2,279,000	\$45,580	\$45,580	\$2,233,420	\$1,303,000	\$86,867	\$86,867	\$1,216,133	\$750,000	\$30,000	\$30,000	\$720,000	\$3,293,000	\$94,086	\$94,086	\$3,198,914	\$3,232,000	\$80,800	\$80,800	\$3,151,200
2012	\$2,279,000	\$45,580	\$91,160	\$2,187,840	\$1,303,000	\$86,867	\$173,733	\$1,129,267	\$750,000	\$30,000	\$60,000	\$690,000	\$3,293,000	\$94,086	\$188,171	\$3,104,829	\$3,232,000	\$80,800	\$161,600	\$3,070,400
2013	\$2,279,000	\$45,580	\$136,740	\$2,142,260	\$1,303,000	\$86,867	\$260,600	\$1,042,400	\$750,000	\$30,000	\$90,000	\$660,000	\$3,293,000	\$94,086	\$282,257	\$3,010,743	\$3,232,000	\$80,800	\$242,400	\$2,989,600
2014	\$2,279,000	\$45,580	\$182,320	\$2,096,680	\$1,303,000	\$86,867	\$347,467	\$955,533	\$750,000	\$30,000	\$120,000	\$630,000	\$3,293,000	\$94,086	\$376,343	\$2,916,657	\$3,232,000	\$80,800	\$323,200	\$2,908,800
2015	\$2,279,000	\$45,580	\$227,900	\$2,051,100	\$1,303,000	\$86,867	\$434,333	\$868,667	\$750,000	\$30,000	\$150,000	\$600,000	\$3,293,000	\$94,086	\$470,429	\$2,822,571	\$3,232,000	\$80,800	\$404,000	\$2,828,000
2016	\$2,279,000	\$45,580	\$273,480	\$2,005,520	\$1,303,000	\$86,867	\$521,200	\$781,800	\$750,000	\$30,000	\$180,000	\$570,000	\$3,293,000	\$94,086	\$564,514	\$2,728,486	\$3,232,000	\$80,800	\$484,800	\$2,747,200
2017	\$2,279,000	\$45,580	\$319,060	\$1,959,940	\$1,303,000	\$86,867	\$608,067	\$694,933	\$750,000	\$30,000	\$210,000	\$540,000	\$3,293,000	\$94,086	\$658,600	\$2,634,400	\$3,232,000	\$80,800	\$565,600	\$2,666,400
2018	\$2,279,000	\$45,580	\$364,640	\$1,914,360	\$1,303,000	\$86,867	\$694,933	\$608,067	\$750,000	\$30,000	\$240,000	\$510,000	\$3,293,000	\$94,086	\$752,686	\$2,540,314	\$3,232,000	\$80,800	\$646,400	\$2,585,600
2019	\$2,279,000	\$45,580	\$410,220	\$1,868,780	\$1,303,000	\$86,867	\$781,800	\$521,200	\$750,000	\$30,000	\$270,000	\$480,000	\$3,293,000	\$94,086	\$846,771	\$2,446,229	\$3,232,000	\$80,800	\$727,200	\$2,504,800
2020	\$2,279,000	\$45,580	\$455,800	\$1,823,200	\$1,303,000	\$86,867	\$868,667	\$434,333	\$750,000	\$30,000	\$300,000	\$450,000	\$3,293,000	\$94,086	\$940,857	\$2,352,143	\$3,232,000	\$80,800	\$808,000	\$2,424,000
2021	\$2,279,000	\$45,580	\$501,380	\$1,777,620	\$1,303,000	\$86,867	\$955,533	\$347,467	\$750,000	\$30,000	\$330,000	\$420,000	\$3,293,000	\$94,086	\$1,034,943	\$2,258,057	\$3,232,000	\$80,800	\$888,800	\$2,343,200
2022	\$2,279,000	\$45,580	\$546,960	\$1,732,040	\$1,303,000	\$86,867	\$1,042,400	\$260,600	\$750,000	\$30,000	\$360,000	\$390,000	\$3,293,000	\$94,086	\$1,129,029	\$2,163,971	\$3,232,000	\$80,800	\$969,600	\$2,262,400
2023	\$2,279,000	\$45,580	\$592,540	\$1,686,460	\$1,303,000	\$86,867	\$1,129,267	\$173,733	\$750,000	\$30,000	\$390,000	\$360,000	\$3,293,000	\$94,086	\$1,223,114	\$2,069,886	\$3,232,000	\$80,800	\$1,050,400	\$2,181,600
2024	\$2,279,000	\$45,580	\$638,120	\$1,640,880	\$1,303,000	\$86,867	\$1,216,133	\$86,867	\$750,000	\$30,000	\$420,000	\$330,000	\$3,293,000	\$94,086	\$1,317,200	\$1,975,800	\$3,232,000	\$80,800	\$1,131,200	\$2,100,800
2025	\$2,279,000	\$45,580	\$683,700	\$1,595,300	\$1,303,000	\$86,867	\$1,303,000	\$0	\$750,000	\$30,000	\$450,000	\$300,000	\$3,293,000	\$94,086	\$1,411,286	\$1,881,714	\$3,232,000	\$80,800	\$1,212,000	\$2,020,000
2026	\$2,279,000	\$45,580	\$729,280	\$1,549,720	\$1,303,000	\$86,867	\$1,389,867	\$0	\$750,000	\$30,000	\$480,000	\$270,000	\$3,293,000	\$94,086	\$1,505,371	\$1,787,629	\$3,232,000	\$80,800	\$1,292,800	\$1,939,200
2027	\$2,279,000	\$45,580	\$774,860	\$1,504,140	\$1,303,000	\$86,867	\$1,476,733	\$0	\$750,000	\$30,000	\$510,000	\$240,000	\$3,293,000	\$94,086	\$1,599,457	\$1,693,543	\$3,232,000	\$80,800	\$1,373,600	\$1,858,400
2028	\$2,279,000	\$45,580	\$820,440	\$1,458,560	\$1,303,000	\$86,867	\$1,563,600	\$0	\$750,000	\$30,000	\$540,000	\$210,000	\$3,293,000	\$94,086	\$1,693,543	\$1,599,457	\$3,232,000	\$80,800	\$1,454,400	\$1,777,600
2029	\$2,279,000	\$45,580	\$866,020	\$1,412,980	\$1,303,000	\$86,867	\$1,650,467	\$0	\$750,000	\$30,000	\$570,000	\$180,000	\$3,293,000	\$94,086	\$1,787,629	\$1,505,371	\$3,232,000	\$80,800	\$1,535,200	\$1,696,800
2030	\$2,279,000	\$45,580	\$911,600	\$1,367,400	\$1,303,000	\$86,867	\$1,737,333	\$0	\$750,000	\$30,000	\$600,000	\$150,000	\$3,293,000	\$94,086	\$1,881,714	\$1,411,286	\$3,232,000	\$80,800	\$1,616,000	\$1,616,000
2031	\$2,279,000	\$45,580	\$957,180	\$1,321,820	\$1,303,000	\$86,867	\$1,824,200	\$0	\$750,000	\$30,000	\$630,000	\$120,000	\$3,293,000	\$94,086	\$1,975,800	\$1,317,200	\$3,232,000	\$80,800	\$1,696,800	\$1,535,200
2032	\$2,279,000	\$45,580	\$1,002,760	\$1,276,240	\$1,303,000	\$86,867	\$1,911,067	\$0	\$750,000	\$30,000	\$660,000	\$90,000	\$3,293,000	\$94,086	\$2,069,886	\$1,223,114	\$3,232,000	\$80,800	\$1,777,600	\$1,454,400
2033	\$2,279,000	\$45,580	\$1,048,340	\$1,230,660	\$1,303,000	\$86,867	\$1,997,933	\$0	\$750,000	\$30,000	\$690,000	\$60,000	\$3,293,000	\$94,086	\$2,163,971	\$1,129,029	\$3,232,000	\$80,800	\$1,858,400	\$1,373,600
2034	\$2,279,000	\$45,580	\$1,093,920	\$1,185,080	\$1,303,000	\$86,867	\$2,084,800	\$0	\$750,000	\$30,000	\$720,000	\$30,000	\$3,293,000	\$94,086	\$2,258,057	\$1,034,943	\$3,232,000	\$80,800	\$1,939,200	\$1,292,800
2035	\$2,279,000	\$45,580	\$1,139,500	\$1,139,500	\$1,303,000	\$86,867	\$2,171,667	\$0	\$750,000	\$30,000	\$750,000	\$0	\$3,293,000	\$94,086	\$2,352,143	\$940,857	\$3,232,000	\$80,800	\$2,020,000	\$1,212,000

								Long Term			Short Term					
							Long Term	Debt		Short Term	Debt				Equity	
		Accumulated	Net Plant		Net Plant	Long Term	Debt	Interest	Short Term	Debt	Interest	Equity	Equity		Return	Equity
Gross Plant	Depreciation	Depreciation	Excl Land	Land	Incl Land	Debt Ratio	Component	Rate	Debt Ratio	Component	Rate	Cost	Ratio	Component	Rate	Return
\$10,857,000	\$337,332	\$337,332	\$10,519,668	\$0	\$10,519,668	56%	\$5,891,014	6.10%	4%	\$420,787	4.47%	\$378,161	40%	\$4,207,867	8.57%	\$360,614
\$10,857,000	\$337,332	\$674,665	\$10,182,335	\$0	\$10,182,335	56%	\$5,702,108	5.48%	4%	\$407,293	2.43%	\$322,373	4%	\$407,293	9.66%	\$39,345
\$10,857,000	\$337,332	\$1,011,997	\$9,845,003	\$0	\$9,845,003	56%	\$5,513,202	5.48%	4%	\$393,800	2.43%	\$311,693	4%	\$393,800	9.66%	\$38,041
\$10,857,000	\$337,332	\$1,349,330	\$9,507,670	\$0	\$9,507,670	56%	\$5,324,295	5.48%	4%	\$380,307	2.43%	\$301,013	4%	\$380,307	9.66%	\$36,738
\$10,857,000	\$337,332	\$1,686,662	\$9,170,338	\$0	\$9,170,338	56%	\$5,135,389	5.48%	4%	\$366,814	2.43%	\$290,333	4%	\$366,814	9.66%	\$35,434
\$10,857,000	\$337,332	\$2,023,994	\$8,833,006	\$0	\$8,833,006	56%	\$4,946,483	5.48%	4%	\$353,320	2.43%	\$279,653	4%	\$353,320	9.66%	\$34,131
\$10,857,000	\$337,332	\$2,361,327	\$8,495,673	\$0	\$8,495,673	56%	\$4,757,577	5.48%	4%	\$339,827	2.43%	\$268,973	4%	\$339,827	9.66%	\$32,827
\$10,857,000	\$337,332	\$2,698,659	\$8,158,341	\$0	\$8,158,341	56%	\$4,568,671	5.48%	4%	\$326,334	2.43%	\$258,293	4%	\$326,334	9.66%	\$31,524
\$10,857,000	\$337,332	\$3,035,991	\$7,821,009	\$0	\$7,821,009	56%	\$4,379,765	5.48%	4%	\$312,840	2.43%	\$247,613	4%	\$312,840	9.66%	\$30,220
\$10,857,000	\$337,332	\$3,373,324	\$7,483,676	\$0	\$7,483,676	56%	\$4,190,859	5.48%	4%	\$299,347	2.43%	\$236,933	4%	\$299,347	9.66%	\$28,917
\$10,857,000	\$337,332	\$3,710,656	\$7,146,344	\$0	\$7,146,344	56%	\$4,001,953	5.48%	4%	\$285,854	2.43%	\$226,253	4%	\$285,854	9.66%	\$27,613
\$10,857,000	\$337,332	\$4,047,989	\$6,809,011	\$0	\$6,809,011	56%	\$3,813,046	5.48%	4%	\$272,360	2.43%	\$215,573	4%	\$272,360	9.66%	\$26,310
\$10,857,000	\$337,332	\$4,385,321	\$6,471,679	\$0	\$6,471,679	56%	\$3,624,140	5.48%	4%	\$258,867	2.43%	\$204,893	4%	\$258,867	9.66%	\$25,007
\$10,857,000	\$337,332	\$4,722,653	\$6,134,347	\$0	\$6,134,347	56%	\$3,435,234	5.48%	4%	\$245,374	2.43%	\$194,213	4%	\$245,374	9.66%	\$23,703
\$10,857,000	\$337,332	\$5,059,986	\$5,797,014	\$0	\$5,797,014	56%	\$3,246,328	5.48%	4%	\$231,881	2.43%	\$183,533	4%	\$231,881	9.66%	\$22,400
\$10,857,000	\$337,332	\$5,397,318	\$5,546,549	\$0	\$5,546,549	56%	\$3,106,067	5.48%	4%	\$221,862	2.43%	\$175,604	4%	\$221,862	9.66%	\$21,432
\$10,857,000	\$337,332	\$5,734,650	\$5,296,083	\$0	\$5,296,083	56%	\$2,965,806	5.48%	4%	\$211,843	2.43%	\$167,674	4%	\$211,843	9.66%	\$20,464
\$10,857,000	\$337,332	\$6,071,983	\$5,045,617	\$0	\$5,045,617	56%	\$2,825,546	5.48%	4%	\$201,825	2.43%	\$159,744	4%	\$201,825	9.66%	\$19,496
\$10,857,000	\$337,332	\$6,409,315	\$4,795,151	\$0	\$4,795,151	56%	\$2,685,285	5.48%	4%	\$191,806	2.43%	\$151,814	4%	\$191,806	9.66%	\$18,528
\$10,857,000	\$337,332	\$6,746,648	\$4,544,686	\$0	\$4,544,686	56%	\$2,545,024	5.48%	4%	\$181,787	2.43%	\$143,885	4%	\$181,787	9.66%	\$17,561
\$10,857,000	\$337,332	\$7,083,980	\$4,294,220	\$0	\$4,294,220	56%	\$2,404,763	5.48%	4%	\$171,769	2.43%	\$135,955	4%	\$171,769	9.66%	\$16,593
\$10,857,000	\$337,332	\$7,421,312	\$4,043,754	\$0	\$4,043,754	56%	\$2,264,502	5.48%	4%	\$161,750	2.43%	\$128,025	4%	\$161,750	9.66%	\$15,625
\$10,857,000	\$337,332	\$7,758,645	\$3,793,289	\$0	\$3,793,289	56%	\$2,124,242	5.48%	4%	\$151,732	2.43%	\$120,096	4%	\$151,732	9.66%	\$14,657
\$10,857,000	\$337,332	\$8,095,977	\$3,542,823	\$0	\$3,542,823	56%	\$1,983,981	5.48%	4%	\$141,713	2.43%	\$112,166	4%	\$141,713	9.66%	\$13,689
\$10,857,000	\$337,332	\$8,433,310	\$3,292,357	\$0	\$3,292,357	56%	\$1,843,720	5.48%	4%	\$131,694	2.43%	\$104,236	4%	\$131,694	9.66%	\$12,722

Economic Evaluation Model

Income Tax Calculations

Year	Revenue	O&M	Municipal Tax	Capital Tax	Interest	CCA	Taxable Income	Tax Rate	Taxes Payable
2011	\$12,632	\$43	\$0	\$0	\$378,161	\$411,490	(\$777,062)	28.25%	(\$219,520)
2012	\$390,298	\$152,917	\$0	\$0	\$322,373	\$791,428	(\$876,419)	26.25%	(\$230,060)
2013	\$1,256,157	\$305,964	\$0	\$0	\$311,693	\$730,767	(\$92,267)	25.50%	(\$23,528)
2014	\$1,633,823	\$458,838	\$0	\$0	\$301,013	\$674,799	\$199,173	25.00%	\$49,793
2015	\$2,011,489	\$611,712	\$0	\$0	\$290,333	\$623,159	\$486,286	25.00%	\$121,571
2016	\$2,011,489	\$611,712	\$0	\$0	\$279,653	\$575,510	\$544,615	25.00%	\$136,154
2017	\$2,011,489	\$611,712	\$0	\$0	\$268,973	\$531,540	\$599,265	25.00%	\$149,816
2018	\$2,011,489	\$611,712	\$0	\$0	\$258,293	\$490,964	\$650,521	25.00%	\$162,630
2019	\$2,011,489	\$611,712	\$0	\$0	\$247,613	\$453,517	\$698,648	25.00%	\$174,662
2020	\$2,011,489	\$611,712	\$0	\$0	\$236,933	\$418,956	\$743,889	25.00%	\$185,972
2021	\$2,011,489	\$611,712	\$0	\$0	\$226,253	\$387,056	\$786,468	25.00%	\$196,617
2022	\$2,011,489	\$611,712	\$0	\$0	\$215,573	\$357,612	\$826,593	25.00%	\$206,648
2023	\$2,011,489	\$611,712	\$0	\$0	\$204,893	\$330,432	\$864,453	25.00%	\$216,113
2024	\$2,011,489	\$611,712	\$0	\$0	\$194,213	\$305,340	\$900,224	25.00%	\$225,056
2025	\$2,011,489	\$611,712	\$0	\$0	\$183,533	\$282,175	\$934,069	25.00%	\$233,517
2026	\$2,011,489	\$611,712	\$0	\$0	\$175,604	\$260,788	\$963,386	25.00%	\$240,846
2027	\$2,011,489	\$611,712	\$0	\$0	\$167,674	\$241,041	\$991,063	25.00%	\$247,766
2028	\$2,011,489	\$611,712	\$0	\$0	\$159,744	\$222,806	\$1,017,227	25.00%	\$254,307
2029	\$2,011,489	\$611,712	\$0	\$0	\$151,814	\$205,967	\$1,041,996	25.00%	\$260,499
2030	\$2,011,489	\$611,712	\$0	\$0	\$143,885	\$190,416	\$1,065,477	25.00%	\$266,369
2031	\$2,011,489	\$611,712	\$0	\$0	\$135,955	\$176,054	\$1,087,769	25.00%	\$271,942
2032	\$2,011,489	\$611,712	\$0	\$0	\$128,025	\$162,788	\$1,108,964	25.00%	\$277,241
2033	\$2,011,489	\$611,712	\$0	\$0	\$120,096	\$150,535	\$1,129,147	25.00%	\$282,287
2034	\$2,011,489	\$611,712	\$0	\$0	\$112,166	\$139,216	\$1,148,396	25.00%	\$287,099
2035	\$2,011,489	\$611,712	\$0	\$0	\$104,236	\$128,758	\$1,166,783	25.00%	\$291,696

Economic Evaluation Model

Mid Year Present Value Factor Calculations

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Equity %	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%
Long Term Debt %	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
Short Term Debt %	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Cost of Equity	8.57%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%	9.66%
Cost of Long Term Debt	6.10%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%
Cost of Short Term Debt	4.47%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%	2.43%
Tax Rate	28.25%	26.25%	25.50%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Cost of Capital after tax	3.18%	6.59%	6.61%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%	6.62%
Discount Factor	1.0318	1.0997	1.1724	1.2500	1.3329	1.4212	1.5153	1.6157	1.7227	1.8369	1.9586	2.0883	2.2267	2.3742	2.5315	2.6992	2.8780	3.0686	3.2719	3.4887	3.7198	3.9663	4.2290	4.5092	4.8079

Economic Evaluation Model

Revenue and Cost Analysis

Year	Revenue	O&M	Municipal Tax	Capital Tax	Income Taxes	Depreciation	Deemed Interest	Deemed Equity Return	Total Costs	Revenue minus Costs	Accumulated Revenue minus Costs	PV Factor utilizing mid year discounting	PV of Revenue	PV of Costs	PV Revenue minus Costs	PV Accumulated Revenue minus Costs
2011	\$12,632	\$43	\$0	\$0	(\$25,447)	\$337,332	\$335,167	\$421,017	\$1,068,113	(\$1,055,481)	(\$1,055,481)	1.033155	\$12,227	\$1,033,836	(\$1,021,609)	(\$1,021,609)
2012	\$390,298	\$152,917	\$0	\$0	\$13,100	\$337,332	\$284,987	\$459,348	\$1,247,684	(\$857,385)	(\$1,912,866)	1.105081	\$353,185	\$1,129,043	(\$775,857)	(\$1,797,467)
2013	\$1,256,157	\$305,964	\$0	\$0	\$27,316	\$337,332	\$275,546	\$444,130	\$1,390,288	(\$134,131)	(\$2,046,997)	1.182246	\$1,062,518	\$1,175,972	(\$113,454)	(\$1,910,921)
2014	\$1,633,823	\$458,838	\$0	\$0	\$39,434	\$337,332	\$266,104	\$428,912	\$1,530,621	\$103,202	(\$1,943,795)	1.264965	\$1,291,596	\$1,210,011	\$81,585	(\$1,829,336)
2015	\$2,011,489	\$611,712	\$0	\$0	\$50,883	\$337,332	\$256,663	\$413,694	\$1,670,284	\$341,205	(\$1,602,590)	1.353471	\$1,486,171	\$1,234,074	\$252,096	(\$1,577,240)
2016	\$2,011,489	\$611,712	\$0	\$0	\$61,056	\$337,332	\$247,222	\$398,476	\$1,655,797	\$355,692	(\$1,246,898)	1.448170	\$1,388,987	\$1,143,372	\$245,615	(\$1,331,626)
2017	\$2,011,489	\$611,712	\$0	\$0	\$70,051	\$337,332	\$237,780	\$383,259	\$1,640,134	\$371,355	(\$875,543)	1.549495	\$1,298,158	\$1,058,496	\$239,662	(\$1,091,963)
2018	\$2,011,489	\$611,712	\$0	\$0	\$77,961	\$337,332	\$228,339	\$368,041	\$1,623,385	\$388,105	(\$487,438)	1.657909	\$1,213,269	\$979,176	\$234,093	(\$857,871)
2019	\$2,011,489	\$611,712	\$0	\$0	\$84,871	\$337,332	\$218,898	\$352,823	\$1,605,635	\$405,854	(\$81,584)	1.773909	\$1,133,930	\$905,139	\$228,791	(\$629,080)
2020	\$2,011,489	\$611,712	\$0	\$0	\$90,857	\$337,332	\$209,456	\$337,605	\$1,586,962	\$424,527	\$342,943	1.898025	\$1,059,780	\$836,112	\$223,668	(\$405,412)
2021	\$2,011,489	\$611,712	\$0	\$0	\$95,992	\$337,332	\$200,015	\$322,387	\$1,567,438	\$444,052	\$786,995	2.030825	\$990,479	\$771,823	\$218,656	(\$186,756)
2022	\$2,011,489	\$611,712	\$0	\$0	\$100,341	\$337,332	\$190,573	\$307,169	\$1,547,128	\$464,361	\$1,251,356	2.172917	\$925,709	\$712,005	\$213,704	\$26,948
2023	\$2,011,489	\$611,712	\$0	\$0	\$103,966	\$337,332	\$181,132	\$291,952	\$1,526,094	\$485,395	\$1,736,752	2.324951	\$865,175	\$656,398	\$208,777	\$235,725
2024	\$2,011,489	\$611,712	\$0	\$0	\$106,924	\$337,332	\$171,691	\$276,734	\$1,504,392	\$507,097	\$2,243,849	2.487622	\$808,599	\$604,751	\$203,848	\$439,573
2025	\$2,011,489	\$611,712	\$0	\$0	\$109,264	\$337,332	\$162,249	\$261,516	\$1,482,074	\$529,416	\$2,773,265	2.661674	\$755,723	\$556,820	\$198,903	\$638,476
2026	\$2,011,489	\$611,712	\$0	\$0	\$112,343	\$337,332	\$155,239	\$250,217	\$1,466,843	\$544,646	\$3,317,911	2.847905	\$706,305	\$515,060	\$191,245	\$829,721
2027	\$2,011,489	\$611,712	\$0	\$0	\$114,897	\$337,332	\$148,229	\$238,918	\$1,451,087	\$560,402	\$3,878,313	3.047166	\$660,118	\$476,209	\$183,909	\$1,013,630
2028	\$2,011,489	\$611,712	\$0	\$0	\$116,967	\$337,332	\$141,219	\$227,619	\$1,434,848	\$576,641	\$4,454,954	3.260368	\$616,952	\$440,088	\$176,864	\$1,190,494
2029	\$2,011,489	\$611,712	\$0	\$0	\$118,590	\$337,332	\$134,209	\$216,320	\$1,418,162	\$593,327	\$5,048,281	3.488488	\$576,608	\$406,526	\$170,081	\$1,360,576
2030	\$2,011,489	\$611,712	\$0	\$0	\$119,801	\$337,332	\$127,198	\$205,021	\$1,401,064	\$610,425	\$5,658,706	3.732569	\$538,902	\$375,362	\$163,540	\$1,524,116
2031	\$2,011,489	\$611,712	\$0	\$0	\$120,632	\$337,332	\$120,188	\$193,722	\$1,383,586	\$627,903	\$6,286,610	3.993727	\$503,662	\$346,440	\$157,222	\$1,681,338
2032	\$2,011,489	\$611,712	\$0	\$0	\$121,112	\$337,332	\$113,178	\$182,423	\$1,365,757	\$645,732	\$6,932,342	4.273158	\$470,727	\$319,613	\$151,114	\$1,832,452
2033	\$2,011,489	\$611,712	\$0	\$0	\$121,268	\$337,332	\$106,168	\$171,124	\$1,347,604	\$663,885	\$7,596,227	4.572141	\$439,945	\$294,742	\$145,202	\$1,977,654
2034	\$2,011,489	\$611,712	\$0	\$0	\$121,126	\$337,332	\$99,158	\$159,825	\$1,329,152	\$682,337	\$8,278,565	4.892042	\$411,176	\$271,697	\$139,479	\$2,117,133
2035	\$2,011,489	\$611,712	\$0	\$0	\$120,707	\$337,332	\$92,148	\$148,525	\$1,310,424	\$701,065	\$8,979,630	5.234326	\$384,288	\$250,352	\$133,936	\$2,251,069





