CBCL
CBCL LIMITED
Consulting Engineers

1489 Hollis Street
PO Box 606
Halifax, Nova Scotia
Canada B3J 2R7

Telephone: 902 421 7241
Fax: 902 423 3938
E-mail: info@cbcl.ca
www.cbcl.ca

April 14, 2011

Nova Scotia Utility and Review Board
3rd Floor
1601 Lower Water Street
Halifax, Nova Scotia B3J 3P6

Attention : Nancy McNeil
Regulatory Affairs Officer/Clerk

Dear Ms McNeil:

RE: Renewable Energy Community Feed-in Tariffs – BRD-E-R-10 / Matter No. M03632 Undertaking U-12 : To provide a spreadsheet showing St. F.X. Data using the Synapse Model

As requested by the Board, CBCL has taken the Synapse financial model and used the St. FX data to determine COMFIT rate that would be required to meet the 13% Rate of Return.

We would like to note that we feel the Synapse model does not fit well with the St. FX operating scenario. For this analysis we determined that capital cost of a new biomass fired Heating Plant would be approximately $20.3 million. The cost of an 8 MW (7MW net) Combined Heat and Power (CHP) plant would be $36.8 million. The Synapse model would then take the cost of the Heating Plant and simply subtract this cost from the cost of the CHP Plant. So in our case approximately 55% of the cost of the CHP Plant would be allocated to the steam host and only 45% to the electrical production. With this approach a COMFIT rate of 148.58 $/MWh was determined.

We feel that a better allocation of the cost of the plants would be as a ratio of the fuel consumption. In our case we have a CHP plant where 87 % of the annual fuel consumption is used for electrical power production and only 13% is used for steam production. If we then allocate 87% of the cost of the CHP to electrical production we find that we require a COMFIT rate of 187.35 $/MWh.

The spreadsheets are attached for your review. Again we would like to emphasize that the Synapse model was developed for a typical sawmill operation we feel that using this same model to compare to a University Heating Plant is not entirely correct. To meet peak heat needs in the winter months at the University a large boiler is required. For the balance of the months in the year the boiler has low utilization and in the summer months is hardly used at all. To compare St.F.X. with the sawmillers is to compare apples to oranges. If you were to allocate the appropriate boiler costs to electrical production the COMFIT required would be 187.35 $/MWh.

CBCL LIMITED
Consulting Engineers

Yours very truly,

CBCL Limited

Darren Hartlen

Darren Hartlen P.Eng
Direct: 902 421 7241
E-Mail: darrenh@cbcl.ca

Nova Scotia Utility & Review Board FIT Model **Biomass CHP condensing turbine;**

Assumptions		Notes:
General Inflation Factor (revenue and expenses)	1.92%	From NSPI 2009 IRP Update
Capital Costs (Uses of Funds)		
Development	275,000	Net of steam-only scenario
Equipment & Installation	16,520,000	Net of steam-only scenario
Interconnection	110,000	Net of steam-only scenario
Reserves		
Up-Front Maintenance	24,710	Net of steam-only scenario
Working Capital	2,915,955	Net of steam-only scenario
Debt Service Reserve	1,628,853	Net of steam-only scenario
Financing		
Debt Closing Costs & Fees	836,525	Net of steam-only scenario
Equity Closing Costs & Fees	368,071	Net of steam-only scenario
Interest During Construction	557,683	Net of steam-only scenario
Total Project Cost	23,236,796	Net of steam-only scenario
Total Project Cost ($/kW)	3,320	Net of steam-only scenario
Initial Reserve Account Sizing		
Upfront Maintenance (months of Year 1 O&M)	6	
Working Capital (months of Year 1 OPEX)	6	
Debt Service Reserve (months of P&I)	6	
Capital Structure (Sources of Funds)		
Amount ($)		
Grants (net value)	0	
Debt	13,942,078	
Equity	9,294,718	
Total Sources of Funds	23,236,796	
Amount (%)		
Grants	0.0%	
Debt	60%	
Equity	40%	
Total Sources of Funds	100.0%	
Grants:		
State and Federal Incentives	0	
State/Provincial Tax 1	0	
State/Provincial Tax 2	0	
Federal tax	0	
Net Value of Grants	0	
Debt Terms		
Amount	13,942,078	(Based on target debt/equity ratio)
Loan Life	15	
Interest Rate	9.50%	
Up-Front Fee (%)	1.00%	
Up-Front Fee ($)	139,421	
Closing Costs	697,104	(5% of loan value)
Tax Depreciation Allocation		
% of Total Project Cost		
30% Double Declining	0.0%	
50% Double Declining	64.4%	Assume 90% of hard costs.
20-yr SL	7.2%	Assume 10% of hard costs.
40-yr SL	0.0%	
Other	0.0%	
Non-Depreciable	28.43%	Development costs, reserves and financing fee
Total	100.0%	
Amount Allocated		
30% Double Declining	0	
50% Double Declining	14,967,000	
20-yr SL	1,663,000	
40-yr SL	0	
Other	0	
Non-Depreciable	6,606,796	
Total	23,236,796	
Year One Depreciation		
Year One Percent	25.0%	(Based on the "half year rule")
Year One Amount	3,741,750	

Assumptions:		Notes:
Operating Inputs		
Net Generator Capacity (MW)	7.00	
Energy Production:		
Net Capacity Factor		
Net Output in MWhs	52,554	
Annual Operating Expenses		
Annual Fuel Cost		
Fuel Required per Year (mmBtu)	845,875	Net of steam-only scenario
Initial year Fuel Price ($/mmBtu)	$4.25	75% of fuel costs are pegged to CPI and 25% to diesel fuel index.
Annual O&M (expensed)	83,588	Escalates at inflation.
Site Maintenance	0	Escalates at inflation.
General & Administrative	5,000	Escalates at inflation.
Insurance	498,900	Escalates at inflation.
Land Lease	0	Escalates at inflation.
Other	0	Escalates at inflation.
Property Tax		
Project Hard Costs	16,630,000	Includes hard costs only (equipment and interconnection)
Assessed Value (%)	30.00%	Machinery and equipment is not assessed.
Assessed Value ($)	4,989,000	
Annual Decline in Assessed Value	1.00%	
Assessed Value Minimum %	0.00%	
Property Tax Rate	3.50%	Based on the range of commercial tax rates in Nova Scotia
Revenue Assumptions		
Base Year Energy Price ($/MWh)	148.58	
% of Base Price Escalating @ Infl.	0.0%	
Other Revenues (increases with inflation)	0	
Return Metrics		
20-year Equity IRR		
Pre-Tax	14.39%	
After-Tax	13.00%	
Average Debt Service Coverage Ratio	1.63	
Minimum Debt Service Coverage Ratio	1.26	
Minimum Annual After-Tax Equity Net Benefits	-13,159	Includes tax benefit/(liability)
Tax Rates:		
Federal Income Tax	15.0%	
State/Provincial Income Tax		
Tax Rate 1		
Applicable Income (less than X)	400,000	
Tax Rate 1	4.5%	
Tax Rate 2 (for income greater than X)	16.0%	
Major Maintenance		Major Maintenance is funded through operations.
Replacement Occurs Every X Years	10	Major Maintenance can not occur more frequently than every five years
Cost of Replacement (Year 0 Dollars)	350,000	Escalates at inflation.
Tax Depreciation Classification of Spending	50% Double Declining	
Book Depreciation Classification of Spending	30-yr SL	
Residual Value		
Residual Value (Net Book Value)	251,372	
Book Depreciation Classifications		
20-yr SL	100.0%	
30-yr SL	0.0%	
37-yr SL	0.0%	
40-yr SL	0.0%	
Non-Depreciable	0.00%	
Total	100.0%	
Amount Allocated		
20-yr SL	23,236,796	
30-yr SL	0	
37-yr SL	0	
40-yr SL	0	
Non-Depreciable	0	
Total	23,236,796	

Nova Scotia Utility & Review Board FIT Model

Operating Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Generation (MWh)			52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554
Partial Income Statement																						
Revenue																						
Standard Offer Price ($/MWh)																						
Fixed Price Component		100%	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58
Escalating Price Component		0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Offer Price			148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58	148.58
Revenues From Energy Production			7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454	7,808,454
Other Revenues			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Revenue			87,735	88,532	89,330	90,127	90,925	91,722	92,519	93,317	94,114	94,912	87,735	88,699	89,664	90,628	91,593	61,283	62,248	63,212	64,177	65,141
Total Revenue			7,896,188	7,896,986	7,897,783	7,898,581	7,899,378	7,900,176	7,900,973	7,901,771	7,902,568	7,903,366	7,896,188	7,897,153	7,898,117	7,899,082	7,900,046	7,869,737	7,870,701	7,871,666	7,872,630	7,873,595
Expenses																						
Fuel Cost			-3,594,969	-3,663,992	-3,734,341	-3,806,040	-3,879,116	-3,953,595	-4,029,504	-4,106,871	-4,185,723	-4,266,088	-4,347,997	-4,431,479	-4,516,563	-4,603,281	-4,691,664	-4,781,744	-4,873,554	-4,967,126	-5,062,495	-5,159,695
O&M			-83,588	-85,193	-86,828	-88,496	-90,195	-91,926	-93,691	-95,490	-97,324	-99,192	-101,097	-103,038	-105,016	-107,032	-109,087	-111,182	-113,317	-115,492	-117,710	-119,970
Site Maintenance			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G&A			-5,000	-5,096	-5,194	-5,294	-5,395	-5,499	-5,604	-5,712	-5,822	-5,933	-6,047	-6,163	-6,282	-6,402	-6,525	-6,651	-6,778	-6,908	-7,041	-7,176
Insurance			-498,900	-508,479	-518,242	-528,192	-538,333	-548,669	-559,204	-569,940	-580,883	-592,036	-603,403	-614,989	-626,796	-638,831	-651,096	-663,597	-676,339	-689,324	-702,559	-716,048
Land Lease			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Property tax			-174,615	-172,869	-171,123	-169,377	-167,630	-165,884	-164,138	-162,392	-160,646	-158,900	-157,154	-155,407	-153,661	-151,915	-150,169	-148,423	-146,677	-144,930	-143,184	-141,438
Total			-4,357,072	-4,435,629	-4,515,727	-4,597,398	-4,680,670	-4,765,574	-4,852,142	-4,940,405	-5,030,397	-5,122,150	-5,215,698	-5,311,076	-5,408,319	-5,507,462	-5,608,542	-5,711,597	-5,816,664	-5,923,781	-6,032,989	-6,144,327
EBITDA			3,539,117	3,461,357	3,382,056	3,301,183	3,218,709	3,134,602	3,048,832	2,961,365	2,872,171	2,781,216	2,680,490	2,586,077	2,489,799	2,391,620	2,291,504	2,158,140	2,054,038	1,947,884	1,839,641	1,729,268
Equity Return																						
Cash																						
EBITDA			3,539,117	3,461,357	3,382,056	3,301,183	3,218,709	3,134,602	3,048,832	2,961,365	2,872,171	2,781,216	2,680,490	2,586,077	2,489,799	2,391,620	2,291,504	2,158,140	2,054,038	1,947,884	1,839,641	1,729,268
Plus: Release of Debt Service Reserve			0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,628,853	0	0	0	0	0
Plus: Release of WC & Up-Front Maint Reserves			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,940,664
Plus: Release of Major Maintenance Reserves			0	0	0	0	0	0	0	0	0	415,339	0	0	0	0	0	0	0	0	0	502,339
Plus: Residual Value			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251,372
Less: Major Maintenance Spending			0	0	0	0	0	0	0	0	0	-415,339	0	0	0	0	0	0	0	0	0	-502,339
Less: Major Maintenance Reserve Funding			-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234
Less: Principal			-456,515	-499,884	-547,373	-599,374	-656,314	-718,664	-786,937	-861,696	-943,557	-1,033,195	-1,131,348	-1,238,827	-1,356,515	-1,485,384	-1,626,495	-0	-0	-0	-0	-0
Less: Interest			-1,324,497	-1,281,128	-1,233,639	-1,181,639	-1,124,699	-1,062,349	-994,076	-919,317	-837,456	-747,818	-649,664	-542,186	-424,497	-295,629	-154,517	0	0	0	0	0
Total Cash			1,716,570	1,638,811	1,559,509	1,478,637	1,396,162	1,312,056	1,226,285	1,138,819	1,049,625	958,669	849,244	754,830	658,552	560,373	2,089,111	2,107,906	2,003,804	1,897,651	1,789,407	4,871,070
Equity Investment		-9,294,718																				
Total Pre-Tax Equity Return		-9,294,718	1,716,570	1,638,811	1,559,509	1,478,637	1,396,162	1,312,056	1,226,285	1,138,819	1,049,625	958,669	849,244	754,830	658,552	560,373	2,089,111	2,107,906	2,003,804	1,897,651	1,789,407	4,871,070
Pre-Tax Internal Rate of Return	14.39%																					
Taxable Income Benefit/(Liability)																						
EBITDA			3,539,117	3,461,357	3,382,056	3,301,183	3,218,709	3,134,602	3,048,832	2,961,365	2,872,171	2,781,216	2,680,490	2,586,077	2,489,799	2,391,620	2,291,504	2,158,140	2,054,038	1,947,884	1,839,641	1,729,268
Less: Interest			-1,324,497	-1,281,128	-1,233,639	-1,181,639	-1,124,699	-1,062,349	-994,076	-919,317	-837,456	-747,818	-649,664	-542,186	-424,497	-295,629	-154,517	0	0	0	0	0
Less: Tax Depreciation			-3,783,325	-5,695,775	-2,889,463	-1,486,306	-784,728	-433,939	-258,545	-170,847	-126,999	-312,744	-197,947	-140,548	-111,849	-97,500	-90,325	-86,737	-84,944	-84,047	-83,598	-334,544
Taxable Income/(Loss)			-1,568,706	-3,515,546	-741,046	633,238	1,309,282	1,638,314	1,796,211	1,871,202	1,907,717	1,720,654	1,832,879	1,903,342	1,953,452	1,998,492	2,046,662	2,071,402	1,969,094	1,863,838	1,756,043	1,394,724
Tax Benefit/(Liability)																						
State/Provincial 1			18,000	18,000	18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000
State/Provincial 2			186,993	498,487	54,567	-37,318	-145,485	-198,130	-223,394	-235,392	-241,235	-211,305	-229,261	-240,535	-248,552	-255,759	-263,466	-267,424	-251,055	-234,214	-216,967	-159,156
Federal			235,306	527,332	111,157	-94,986	-196,392	-245,747	-269,432	-280,680	-286,158	-258,098	-274,932	-285,501	-293,018	-299,774	-306,999	-310,710	-295,364	-279,576	-263,406	-209,209
Total Tax Benefit/(Liability)			440,299	1,043,819	183,724	-150,304	-359,877	-461,877	-510,826	-534,072	-545,392	-487,403	-522,193	-544,036	-559,570	-573,532	-588,465	-596,135	-564,419	-531,790	-498,373	-386,364
Equity Investment		-9,294,718																				
Total After-Tax Equity Return		-9,294,718	2,156,869	2,682,630	1,743,234	1,328,333	1,036,285	850,178	715,460	604,747	504,232	471,266	327,051	210,794	98,982	-13,159	1,500,645	1,511,771	1,439,385	1,365,861	1,291,034	4,484,706
After-Tax Internal Rate of Return	13.00%																					
Debt																						
Loan Balance		13,942,078	13,485,563	12,985,678	12,438,305	11,838,932	11,182,618	10,463,954	9,677,017	8,815,321	7,871,764	6,838,569	5,707,221	4,468,394	3,111,879	1,626,495	-0	-0	-0	-0	-0	-0
Interest	9.50%	-12,773,110	-1,324,497	-1,281,128	-1,233,639	-1,181,639	-1,124,699	-1,062,349	-994,076	-919,317	-837,456	-747,818	-649,664	-542,186	-424,497	-295,629	-154,517	0	0	0	0	0
Principal		-13,942,078	-456,515	-499,884	-547,373	-599,374	-656,314	-718,664	-786,937	-861,696	-943,557	-1,033,195	-1,131,348	-1,238,827	-1,356,515	-1,485,384	-1,626,495	-0	-0	-0	-0	-0
Annual payment			-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	-1,781,013	0	0	0	0	0
Debt Service Coverage Ratio																						
EBITDA			3,539,117	3,461,357	3,382,056	3,301,183	3,218,709	3,134,602	3,048,832	2,961,365	2,872,171	2,781,216	2,680,490	2,586,077	2,489,799	2,391,620	2,291,504	0	0	0	0	0
Less: Major Maintenance Reserve Funding			-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-50,234	-50,234	-50,234	-50,234	-50,234	0	0	0	0	0
Cash Available for Debt Service			3,497,583	3,419,823	3,340,522	3,259,649	3,177,175	3,093,068	3,007,298	2,919,832	2,830,637	2,739,682	2,630,256	2,535,843	2,439,565	2,341,386	2,241,270	0	0	0	0	0
P&I			1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	1,781,013	0	0	0	0	0

Nova Scotia Utility & Review Board FIT Model

Operating Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Debt Service Coverage Ratio		1.96	1.92	1.88	1.83	1.78	1.74	1.69	1.64	1.59	1.54	1.48	1.42	1.37	1.31	1.26					
Average	1.63																				
Minimum	1.26																				
Reserve Accounts																					
Reserves Funded As Part of Capital Cost																					
Beginning Balance	0	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	2,940,664	2,940,664	2,940,664	2,940,664	2,940,664
Up-Front Maintenance Reserve	24,710	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-24,710
Working Capital	2,915,955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2,915,955
Debt Service Reserve	1,628,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1,628,853	0	0	0	0	0
Total	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	2,940,664	2,940,664	2,940,664	2,940,664	2,940,664	-0
Major Maintenance Reserve Funded Through Operations																					
Beginning Balance		0	41,534	83,068	124,602	166,136	207,670	249,203	290,737	332,271	373,805	0	50,234	100,468	150,702	200,936	251,170	301,403	351,637	401,871	452,105
Funding		41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234
Release of Funds		0	0	0	0	0	0	0	0	0	-415,339	0	0	0	0	0	0	0	0	0	-502,339
Ending Balance		41,534	83,068	124,602	166,136	207,670	249,203	290,737	332,271	373,805	0	50,234	100,468	150,702	200,936	251,170	301,403	351,637	401,871	452,105	0
Major Maintenance Costs																					
Occurrence 1	415,339	0	0	0	0	0	0	0	0	0	415,339	0	0	0	0	0	0	0	0	0	0
Occurrence 2	502,339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	502,339
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major Maintenance Funding																					
Occurrence 1	415,339	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	0	0	0	0	0	0	0	0	0	0
Occurrence 2	502,339	0	0	0	0	0	0	0	0	0	0	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest on Reserves		87,735	88,532	89,330	90,127	90,925	91,722	92,519	93,317	94,114	94,912	87,735	88,699	89,664	90,628	91,593	61,283	62,248	63,212	64,177	65,141
Property Tax Calculation																					
Original Assessed Value		4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000	4,989,000
Annual Decline in Assessed Value		100.0%	99.0%	98.0%	97.0%	96.0%	95.0%	94.0%	93.0%	92.0%	91.0%	90.0%	89.0%	88.0%	87.0%	86.0%	85.0%	84.0%	83.0%	82.0%	81.0%
Annual Assessed Value		4,989,000	4,939,110	4,889,220	4,839,330	4,789,440	4,739,550	4,689,660	4,639,770	4,589,880	4,539,990	4,490,100	4,440,210	4,390,320	4,340,430	4,290,540	4,240,650	4,190,760	4,140,870	4,090,980	4,041,090
Property Tax Rate		3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Property Tax Expense		174,615	172,869	171,123	169,377	167,630	165,884	164,138	162,392	160,646	158,900	157,154	155,407	153,661	151,915	150,169	148,423	146,677	144,930	143,184	141,438

Nova Scotia Utility & Review Board FIT Model

Operating Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Calendar Year		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Tax Depreciation																						
Calendar Year Depreciation per Classification (%)																						
30% Double Declining			30.00%	21.00%	14.70%	10.29%	7.20%	5.04%	3.53%	2.47%	1.73%	1.21%	0.85%	0.59%	0.42%	0.29%	0.20%	0.14%	0.10%	0.07%	0.05%	0.03%
50% Double Declining			50.00%	25.00%	12.50%	6.25%	3.13%	1.56%	0.78%	0.39%	0.20%	0.10%	0.05%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
20-yr SL			2.50%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
40-yr SL			1.25%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Other			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Calendar Year Depreciation per Classification ($)																						
Year One Capital Cost Allocation	3,741,750		3,741,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30% Double Declining	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50% Double Declining	11,225,250		0	5,612,625	2,806,313	1,403,156	701,578	350,789	175,395	87,697	43,849	21,924	10,962	5,481	2,741	1,370	685	343	171	86	43	21
20-yr SL	1,663,000		41,575	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150	83,150
40-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major Maintenance			0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	251,372
Annual Depreciation	17,254,709		3,783,325	5,695,775	2,889,463	1,486,306	784,728	433,939	258,545	170,847	126,999	312,744	197,947	140,548	111,849	97,500	90,325	86,737	84,944	84,047	83,598	334,544
Major Maintenance																						
Timing of Spending																						
Occurrence 1			0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
Occurrence 2			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Occurrence 3			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Depreciation Classification	50% Double Declining																					
Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Depreciation Schedule		0.00%	50.00%	25.00%	12.50%	6.25%	3.13%	1.56%	0.78%	0.39%	0.20%	0.10%	0.05%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciation Expense																						
	Expense	Depreciation Amount																				
Occurrence 1	415,339	415,136	0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	203
Occurrence 2	502,339	251,170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251,170
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Book Depreciation																						
Calendar Year Depreciation per Classification (%)																						
20-yr SL			5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
30-yr SL			3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%
37-yr SL			2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
40-yr SL			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Calendar Year Depreciation per Classification ($)																						
20-yr SL	23,236,796		1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840
30-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major Maintenance			0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	251,372
Annual Depreciation	23,903,102		1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,161,840	1,369,509	1,265,675	1,213,757	1,187,798	1,174,819	1,168,329	1,165,085	1,163,462	1,162,651	1,162,245	1,413,212
Major Maintenance																						
Timing of Spending																						
Occurrence 1			0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
Occurrence 2			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Occurrence 3			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Depreciation Classification	30-yr SL																					
Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Depreciation Schedule		0.00%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%
Depreciation Expense																						
	Expense	Depreciation Amount																				
Occurrence 1	415,339	415,136	0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	203
Occurrence 2	502,339	251,170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251,170
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Net Book Value

Beginning Balance	0	22,074,956	20,913,117	19,751,277	18,589,437	17,427,597	16,265,757	15,103,917	13,942,078	12,780,238
Original Book Value	23,236,796	0	0	0	0	0	0	0	0	0
Plus: Major Maintenance	0	0	0	0	0	0	0	0	0	415,339
Less: Depreciation	-1,161,840	-1,161,840	-1,161,840	-1,161,840	-1,161,840	-1,161,840	-1,161,840	-1,161,840	-1,161,840	-1,369,509
Net Book Value	22,074,956	20,913,117	19,751,277	18,589,437	17,427,597	16,265,757	15,103,917	13,942,078	12,780,238	11,826,068

Beginning Balance	11,826,068	10,560,393	9,346,636	8,158,837	6,984,018	5,815,689	4,650,604	3,487,142	2,324,491	1,162,245
Original Book Value	0	0	0	0	0	0	0	0	0	0
Plus: Major Maintenance	0	0	0	0	0	0	0	0	0	502,339
Less: Depreciation	-1,265,675	-1,213,757	-1,187,798	-1,174,819	-1,168,329	-1,165,085	-1,163,462	-1,162,651	-1,162,245	-1,413,212
Net Book Value	10,560,393	9,346,636	8,158,837	6,984,018	5,815,689	4,650,604	3,487,142	2,324,491	1,162,245	251,372

Component	Value for Steam-Only Scenario	Gross Value for CHP Scenario	Net Value for CHP Scenario
Project development	$0	$275,000	$275,000
Boiler installed cost ($)	$20,298,000	$36,818,000	$16,520,000
Turbine installed cost ($)	$0	$0	$0
Emission controls	$0	$0	$0
Condenser/Cooling Tower	$0	$0	$0
Equipment and Installation ($)	$20,298,000	$36,818,000	$16,520,000
Interconnection ($)	$0	$110,000	$110,000
Maintenance reserve ($)	$37,790	$62,500	$24,710
Working capital reserve ($)	$0	$2,915,955	$2,915,955
Debt service reserve ($)	$1,669,080	$3,297,933	$1,628,853
Debt Closing Costs & Fees	$857,184	$1,693,709	$836,525
Equity Closing Costs & Fees	$377,161	$745,232	$368,071
Interest During Construction	$571,456	$1,129,139	$557,683
Routine O&M ($/yr)	$91,412	$125,000	$33,588
New Labor for CHP	$0	$50,000	$50,000
General & Admin.	$10,000	$15,000	$5,000
Insurance	$608,940	$1,107,840	$498,900
Property taxes	$213,129	$387,744	
Year-10 Turbine overhaul ($)	$0	$150,000	$150,000
Year-10 Boiler overhaul ($)	$0	$200,000	$200,000
Annual Fuel Use (mmBtu/yr)	129,731	975,606	845,875
Annual Fuel Cost ($/yr)	$551,357	$4,146,326	$3,594,969
Plant capacity factor (%) - extract	85%	85%	85%
Plant capacity factor (%) - full condensing			0%
NPV of new boiler($2M) in yr 10			
Steam Load (mmBtu/hr)	12.943	89.56	
Boiler size (lb/hr)	50,000	100,000	
Boiler rating (psi)	150	600	
Turbine type	N/A	Condensing	
Turbine size (MW)	N/A	7.00	

Loan value for calculations:	$14,286,403	$28,228,481	
Equity amount for calculations:	$9,429,026	$18,630,797	
Actual Loan Value:	$14,286,403	$28,228,481	$13,942,078
Actual Equity Amount:	$9,524,269	$18,818,987	

Nova Scotia Utility & Review Board FIT Model **Biomass CHP condensing turbine;**

Assumptions		Notes:
General Inflation Factor (revenue and expenses)	1.92%	From NSPI 2009 IRP Update
Capital Costs (Uses of Funds)		
Development	275,000	Net of steam-only scenario
Equipment & Installation	32,031,660	Net of steam-only scenario
Interconnection	110,000	Net of steam-only scenario
Reserves		
Up-Front Maintenance	24,710	Net of steam-only scenario
Working Capital	2,915,955	Net of steam-only scenario
Debt Service Reserve	1,628,853	Net of steam-only scenario
Financing		
Debt Closing Costs & Fees	836,525	Net of steam-only scenario
Equity Closing Costs & Fees	368,071	Net of steam-only scenario
Interest During Construction	557,683	Net of steam-only scenario
Total Project Cost	38,748,456	Net of steam-only scenario
Total Project Cost ($/kW)	5,535	Net of steam-only scenario
Initial Reserve Account Sizing		
Upfront Maintenance (months of Year 1 O&M)	6	
Working Capital (months of Year 1 OPEX)	6	
Debt Service Reserve (months of P&I)	6	
Capital Structure (Sources of Funds)		
Amount ($)		
Grants (net value)	0	
Debt	23,249,074	
Equity	15,499,382	
Total Sources of Funds	38,748,456	
Amount (%)		
Grants	0.0%	
Debt	60%	
Equity	40%	
Total Sources of Funds	100.0%	
Grants:		
State and Federal Incentives	0	
State/Provincial Tax 1	0	
State/Provincial Tax 2	0	
Federal tax	0	
Net Value of Grants	0	
Debt Terms		
Amount	23,249,074	(Based on target debt/equity ratio)
Loan Life	15	
Interest Rate	9.50%	
Up-Front Fee (%)	1.00%	
Up-Front Fee ($)	232,491	
Closing Costs	1,162,454	(5% of loan value)
Tax Depreciation Allocation		
% of Total Project Cost		
30% Double Declining	0.0%	
50% Double Declining	74.7%	Assume 90% of hard costs.
20-yr SL	8.3%	Assume 10% of hard costs.
40-yr SL	0.0%	
Other	0.0%	
Non-Depreciable	17.05%	Development costs, reserves and financing fee
Total	100.0%	
Amount Allocated		
30% Double Declining	0	
50% Double Declining	28,927,494	
20-yr SL	3,214,166	
40-yr SL	0	
Other	0	
Non-Depreciable	6,606,796	
Total	38,748,456	
Year One Depreciation		
Year One Percent	25.0%	(Based on the "half year rule")
Year One Amount	7,231,874	

Assumptions:		Notes:
Operating Inputs		
Net Generator Capacity (MW)	7.00	1.55 MW at full extraction, 2.05 MW at full condensing
Energy Production:		
Net Capacity Factor		60% of time at full extraction, another 25% at full condensing
Net Output in MWhs	52,554	
Annual Operating Expenses		
Annual Fuel Cost		
Fuel Required per Year (mmBtu)	845,875	Net of steam-only scenario
Initial year Fuel Price ($/mmBtu)	$4.25	75% of fuel costs are pegged to CPI and 25% to diesel fuel index.
Annual O&M (expensed)	83,588	Escalates at inflation.
Site Maintenance	0	Escalates at inflation.
General & Administrative	5,000	Escalates at inflation.
Insurance	498,900	Escalates at inflation.
Land Lease	0	Escalates at inflation.
Other	0	Escalates at inflation.
Property Tax		
Project Hard Costs	32,141,660	Includes hard costs only (equipment and interconnection)
Assessed Value (%)	30.00%	Machinery and equipment is not assessed.
Assessed Value ($)	9,642,498	
Annual Decline in Assessed Value	1.00%	
Assessed Value Minimum %	0.00%	
Property Tax Rate	3.50%	Based on the range of commercial tax rates in Nova Scotia
Revenue Assumptions		
Base Year Energy Price ($/MWh)	187.35	
% of Base Price Escalating @ Infl.	0.0%	
Other Revenues (increases with inflation)	0	
Return Metrics		
20-year Equity IRR		
Pre-Tax	13.13%	
After-Tax	13.00%	
Average Debt Service Coverage Ratio	1.61	
Minimum Debt Service Coverage Ratio	1.39	
Minimum Annual After-Tax Equity Net Benefits	191,659	Includes tax benefit/(liability)
Tax Rates:		
Federal Income Tax	15.0%	
State/Provincial Income Tax		
Tax Rate 1		
Applicable Income (less than X)	400,000	
Tax Rate 1	4.5%	
Tax Rate 2 (for income greater than X)	16.0%	
Major Maintenance		Major Maintenance is funded through operations.
Replacement Occurs Every X Years	10	Major Maintenance can not occur more frequently than every five years
Cost of Replacement (Year 0 Dollars)	350,000	Escalates at inflation.
Tax Depreciation Classification of Spending	50% Double Declining	
Book Depreciation Classification of Spending	30-yr SL	
Residual Value		
Residual Value (Net Book Value)	251,372	
Book Depreciation Classifications		
20-yr SL	100.0%	
30-yr SL	0.0%	
37-yr SL	0.0%	
40-yr SL	0.0%	
Non-Depreciable	0.00%	
Total	100.0%	
Amount Allocated		
20-yr SL	38,748,456	
30-yr SL	0	
37-yr SL	0	
40-yr SL	0	
Non-Depreciable	0	
Total	38,748,456	

Nova Scotia Utility & Review Board FIT Model

Operating Year		0	1	2	3	4	5	6	7	8	9	10
Generation (MWh)			52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554
Partial Income Statement												
Revenue												
Standard Offer Price ($/MWh)												
Fixed Price Component	100%		187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35
Escalating Price Component	0%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Offer Price			187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35
Revenues From Energy Production			9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967
Other Revenues			0	0	0	0	0	0	0	0	0	0
Interest Revenue			87,735	88,532	89,330	90,127	90,925	91,722	92,519	93,317	94,114	94,912
Total Revenue			9,933,702	9,934,499	9,935,297	9,936,094	9,936,892	9,937,689	9,938,487	9,939,284	9,940,082	9,940,879
Expenses												
Fuel Cost			-3,594,969	-3,663,992	-3,734,341	-3,806,040	-3,879,116	-3,953,595	-4,029,504	-4,106,871	-4,185,723	-4,266,088
O&M			-83,588	-85,193	-86,828	-88,496	-90,195	-91,926	-93,691	-95,490	-97,324	-99,192
Site Maintenance			0	0	0	0	0	0	0	0	0	0
G&A			-5,000	-5,096	-5,194	-5,294	-5,395	-5,499	-5,604	-5,712	-5,822	-5,933
Insurance			-498,900	-508,479	-518,242	-528,192	-538,333	-548,669	-559,204	-569,940	-580,883	-592,036
Land Lease			0	0	0	0	0	0	0	0	0	0
Other			0	0	0	0	0	0	0	0	0	0
Property tax			-337,487	-334,113	-330,738	-327,363	-323,988	-320,613	-317,238	-313,863	-310,488	-307,114
Total			-4,519,944	-4,596,872	-4,675,342	-4,755,384	-4,837,027	-4,920,303	-5,005,242	-5,091,877	-5,180,239	-5,270,364
EBITDA			5,413,758	5,337,627	5,259,954	5,180,710	5,099,865	5,017,387	4,933,245	4,847,408	4,759,842	4,670,515
Equity Return												
Cash												
EBITDA			5,413,758	5,337,627	5,259,954	5,180,710	5,099,865	5,017,387	4,933,245	4,847,408	4,759,842	4,670,515
Plus: Release of Debt Service Reserve			0	0	0	0	0	0	0	0	0	0
Plus: Release of WC & Up-Front Maint Reserves			0	0	0	0	0	0	0	0	0	0
Plus: Release of Major Maintenance Reserves			0	0	0	0	0	0	0	0	0	415,339
Plus: Residual Value			0	0	0	0	0	0	0	0	0	0
Less: Major Maintenance Spending			0	0	0	0	0	0	0	0	0	-415,339
Less: Major Maintenance Reserve Funding			-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534
Less: Principal			-761,261	-833,580	-912,770	-999,484	-1,094,435	-1,198,406	-1,312,254	-1,436,919	-1,573,426	-1,722,901
Less: Interest			-2,208,662	-2,136,342	-2,057,152	-1,970,439	-1,875,488	-1,771,517	-1,657,668	-1,533,004	-1,396,497	-1,247,021
Total Cash			2,402,301	2,326,171	2,248,498	2,169,254	2,088,408	2,005,930	1,921,788	1,835,951	1,748,386	1,659,059
Equity Investment		-15,499,382										
Total Pre-Tax Equity Return		-15,499,382	2,402,301	2,326,171	2,248,498	2,169,254	2,088,408	2,005,930	1,921,788	1,835,951	1,748,386	1,659,059
Pre-Tax Internal Rate of Return	13.13%											
Taxable Income Benefit/(Liability)												
EBITDA			5,413,758	5,337,627	5,259,954	5,180,710	5,099,865	5,017,387	4,933,245	4,847,408	4,759,842	4,670,515
Less: Interest			-2,208,662	-2,136,342	-2,057,152	-1,970,439	-1,875,488	-1,771,517	-1,657,668	-1,533,004	-1,396,497	-1,247,021
Less: Tax Depreciation			-7,312,228	-11,008,519	-5,584,613	-2,872,661	-1,516,685	-838,696	-499,702	-330,205	-245,457	-410,752
Taxable Income/(Loss)			-4,107,132	-7,807,234	-2,381,811	337,611	1,707,692	2,407,173	2,775,874	2,984,198	3,117,889	3,012,742
Tax Benefit/(Liability)												
State/Provincial 1			18,000	18,000	18,000	-15,192	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000
State/Provincial 2			593,141	1,185,157	317,090	0	-209,231	-321,148	-380,140	-413,472	-434,862	-418,039
Federal			616,070	1,171,085	357,272	-50,642	-256,154	-361,076	-416,381	-447,630	-467,683	-451,911
Total Tax Benefit/(Liability)			1,227,211	2,374,242	692,361	-65,834	-483,385	-700,224	-814,521	-879,101	-920,545	-887,950
Equity Investment		-15,499,382										
Total After-Tax Equity Return		-15,499,382	3,629,512	4,700,413	2,940,859	2,103,420	1,605,024	1,305,706	1,107,267	956,850	827,840	771,109
After-Tax Internal Rate of Return	13.00%											
Debt												
Loan Balance		23,249,074	22,487,813	21,654,233	20,741,462	19,741,979	18,647,544	17,449,138	16,136,884	14,699,965	13,126,539	11,403,638
Interest	9.50%	-21,299,765	-2,208,662	-2,136,342	-2,057,152	-1,970,439	-1,875,488	-1,771,517	-1,657,668	-1,533,004	-1,396,497	-1,247,021
Principal		-23,249,074	-761,261	-833,580	-912,770	-999,484	-1,094,435	-1,198,406	-1,312,254	-1,436,919	-1,573,426	-1,722,901
Annual payment			-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923
Debt Service Coverage Ratio												
EBITDA			5,413,758	5,337,627	5,259,954	5,180,710	5,099,865	5,017,387	4,933,245	4,847,408	4,759,842	4,670,515
Less: Major Maintenance Reserve Funding			-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534	-41,534
Cash Available for Debt Service			5,372,224	5,296,093	5,218,420	5,139,176	5,058,331	4,975,853	4,891,711	4,805,874	4,718,308	4,628,981
P&I			2,969,923	2,969,923	2,969,923	2,969,923	2,969,923	2,969,923	2,969,923	2,969,923	2,969,923	2,969,923

Operating Year	11	12	13	14	15	16	17	18	19	20
Generation (MWh)	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554	52,554
Partial Income Statement										
Revenue										
Standard Offer Price ($/MWh)										
Fixed Price Component	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35
Escalating Price Component	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Offer Price	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35	187.35
Revenues From Energy Production	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967	9,845,967
Other Revenues	0	0	0	0	0	0	0	0	0	0
Interest Revenue	87,735	88,699	89,664	90,628	91,593	61,283	62,248	63,212	64,177	65,141
Total Revenue	9,933,702	9,934,666	9,935,631	9,936,595	9,937,560	9,907,250	9,908,215	9,909,179	9,910,144	9,911,108
Expenses										
Fuel Cost	-4,347,997	-4,431,479	-4,516,563	-4,603,281	-4,691,664	-4,781,744	-4,873,554	-4,967,126	-5,062,495	-5,159,695
O&M	-101,097	-103,038	-105,016	-107,032	-109,087	-111,182	-113,317	-115,492	-117,710	-119,970
Site Maintenance	0	0	0	0	0	0	0	0	0	0
G&A	-6,047	-6,163	-6,282	-6,402	-6,525	-6,651	-6,778	-6,908	-7,041	-7,176
Insurance	-603,403	-614,989	-626,796	-638,831	-651,096	-663,597	-676,339	-689,324	-702,559	-716,048
Land Lease	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Property tax	-303,739	-300,364	-296,989	-293,614	-290,239	-286,864	-283,489	-280,115	-276,740	-273,365
Total	-5,362,283	-5,456,033	-5,551,647	-5,649,161	-5,748,613	-5,850,039	-5,953,477	-6,058,966	-6,166,545	-6,276,254
EBITDA	4,571,419	4,478,634	4,383,984	4,287,434	4,188,947	4,057,212	3,954,738	3,850,214	3,743,599	3,634,854
Equity Return										
Cash										
EBITDA	4,571,419	4,478,634	4,383,984	4,287,434	4,188,947	4,057,212	3,954,738	3,850,214	3,743,599	3,634,854
Plus: Release of Debt Service Reserve	0	0	0	0	1,628,853	0	0	0	0	0
Plus: Release of WC & Up-Front Maint Reserves	0	0	0	0	0	0	0	0	0	2,940,664
Plus: Release of Major Maintenance Reserves	0	0	0	0	0	0	0	0	0	502,339
Plus: Residual Value	0	0	0	0	0	0	0	0	0	251,372
Less: Major Maintenance Spending	0	0	0	0	0	0	0	0	0	-502,339
Less: Major Maintenance Reserve Funding	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234	-50,234
Less: Principal	-1,886,577	-2,065,802	-2,262,053	-2,476,948	-2,712,258	-0	-0	-0	-0	-0
Less: Interest	-1,083,346	-904,121	-707,870	-492,975	-257,665	0	0	0	0	0
Total Cash	1,551,262	1,458,477	1,363,828	1,267,278	2,797,644	4,006,978	3,904,504	3,799,980	3,693,365	6,776,657
Equity Investment										
Total Pre-Tax Equity Return	1,551,262	1,458,477	1,363,828	1,267,278	2,797,644	4,006,978	3,904,504	3,799,980	3,693,365	6,776,657
Pre-Tax Internal Rate of Return										
Taxable Income Benefit/(Liability)										
EBITDA	4,571,419	4,478,634	4,383,984	4,287,434	4,188,947	4,057,212	3,954,738	3,850,214	3,743,599	3,634,854
Less: Interest	-1,083,346	-904,121	-707,870	-492,975	-257,665	0	0	0	0	0
Less: Tax Depreciation	-285,730	-223,219	-191,964	-176,336	-168,522	-164,615	-162,662	-161,685	-161,197	-412,122
Taxable Income/(Loss)	3,202,343	3,351,294	3,484,151	3,618,124	3,762,760	3,892,597	3,792,076	3,688,529	3,582,403	3,222,732
Tax Benefit/(Liability)										
State/Provincial 1	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000	-18,000
State/Provincial 2	-448,375	-472,207	-493,464	-514,900	-538,042	-558,815	-542,732	-526,165	-509,184	-451,637
Federal	-480,351	-502,694	-522,623	-542,719	-564,414	-583,889	-568,811	-553,279	-537,360	-483,410
Total Tax Benefit/(Liability)	-946,726	-992,901	-1,034,087	-1,075,618	-1,120,456	-1,160,705	-1,129,544	-1,097,444	-1,064,545	-953,047
Equity Investment										
Total After-Tax Equity Return	604,536	465,576	329,741	191,659	1,677,188	2,846,273	2,774,961	2,702,536	2,628,821	5,823,610
After-Tax Internal Rate of Return										
Debt										
Loan Balance	9,517,061	7,451,259	5,189,206	2,712,258	-0	-0	-0	-0	-0	-0
Interest	-1,083,346	-904,121	-707,870	-492,975	-257,665	0	0	0	0	0
Principal	-1,886,577	-2,065,802	-2,262,053	-2,476,948	-2,712,258	-0	-0	-0	-0	-0
Annual payment	-2,969,923	-2,969,923	-2,969,923	-2,969,923	-2,969,923	0	0	0	0	0
Debt Service Coverage Ratio										
EBITDA	4,571,419	4,478,634	4,383,984	4,287,434	4,188,947	0	0	0	0	0
Less: Major Maintenance Reserve Funding	-50,234	-50,234	-50,234	-50,234	-50,234	0	0	0	0	0
Cash Available for Debt Service	4,521,185	4,428,400	4,333,750	4,237,200	4,138,713	0	0	0	0	0
P&I	2,969,923	2,969,923	2,969,923	2,969,923	2,969,923	0	0	0	0	0

Nova Scotia Utility & Review Board FIT Model

Operating Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Debt Service Coverage Ratio		1.81	1.78	1.76	1.73	1.70	1.68	1.65	1.62	1.59	1.56	1.52	1.49	1.46	1.43	1.39					
Average	1.61																				
Minimum	1.39																				
Reserve Accounts																					
Reserves Funded As Part of Capital Cost																					
Beginning Balance	0	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	2,940,664	2,940,664	2,940,664	2,940,664	2,940,664
Up-Front Maintenance Reserve	24,710	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-24,710
Working Capital	2,915,955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2,915,955
Debt Service Reserve	1,628,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1,628,853	0	0	0	0	0
Total	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	4,569,517	2,940,664	2,940,664	2,940,664	2,940,664	2,940,664	0
Major Maintenance Reserve Funded Through Operations																					
Beginning Balance		0	41,534	83,068	124,602	166,136	207,670	249,203	290,737	332,271	373,805	0	50,234	100,468	150,702	200,936	251,170	301,403	351,637	401,871	452,105
Funding		41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234
Release of Funds		0	0	0	0	0	0	0	0	0	-415,339	0	0	0	0	0	0	0	0	0	-502,339
Ending Balance		41,534	83,068	124,602	166,136	207,670	249,203	290,737	332,271	373,805	0	50,234	100,468	150,702	200,936	251,170	301,403	351,637	401,871	452,105	0
Major Maintenance Costs																					
Occurrence 1	415,339	0	0	0	0	0	0	0	0	0	415,339	0	0	0	0	0	0	0	0	0	0
Occurrence 2	502,339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	502,339
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major Maintenance Funding																					
Occurrence 1	415,339	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	41,534	0	0	0	0	0	0	0	0	0	0
Occurrence 2	502,339	0	0	0	0	0	0	0	0	0	0	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234	50,234
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest on Reserves		87,735	88,532	89,330	90,127	90,925	91,722	92,519	93,317	94,114	94,912	87,735	88,699	89,664	90,628	91,593	61,283	62,248	63,212	64,177	65,141
Property Tax Calculation																					
Original Assessed Value		9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498	9,642,498
Annual Decline in Assessed Value		100.0%	99.0%	98.0%	97.0%	96.0%	95.0%	94.0%	93.0%	92.0%	91.0%	90.0%	89.0%	88.0%	87.0%	86.0%	85.0%	84.0%	83.0%	82.0%	81.0%
Annual Assessed Value		9,642,498	9,546,073	9,449,648	9,353,223	9,256,798	9,160,373	9,063,948	8,967,523	8,871,098	8,774,673	8,678,248	8,581,823	8,485,398	8,388,973	8,292,548	8,196,123	8,099,698	8,003,273	7,906,848	7,810,423
Property Tax Rate		3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Property Tax Expense		337,487	334,113	330,738	327,363	323,988	320,613	317,238	313,863	310,488	307,114	303,739	300,364	296,989	293,614	290,239	286,864	283,489	280,115	276,740	273,365

Nova Scotia Utility & Review Board FIT Model

Operating Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Calendar Year		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Tax Depreciation																						
Calendar Year Depreciation per Classification (%)																						
30% Double Declining			30.00%	21.00%	14.70%	10.29%	7.20%	5.04%	3.53%	2.47%	1.73%	1.21%	0.85%	0.59%	0.42%	0.29%	0.20%	0.14%	0.10%	0.07%	0.05%	0.03%
50% Double Declining			50.00%	25.00%	12.50%	6.25%	3.13%	1.56%	0.78%	0.39%	0.20%	0.10%	0.05%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
20-yr SL			2.50%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
40-yr SL			1.25%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Other			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Calendar Year Depreciation per Classification ($)																						
Year One Capital Cost Allocation	7,231,874		7,231,874	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30% Double Declining	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50% Double Declining	21,695,621		0	10,847,810	5,423,905	2,711,953	1,355,976	677,988	338,994	169,497	84,749	42,374	21,187	10,594	5,297	2,648	1,324	662	331	166	83	41
20-yr SL	3,214,166		80,354	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708	160,708
40-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major Maintenance			0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	251,372
Annual Depreciation	32,727,570		7,312,228	11,008,519	5,584,613	2,872,661	1,516,685	838,696	499,702	330,205	245,457	410,752	285,730	223,219	191,964	176,336	168,522	164,615	162,662	161,685	161,197	412,122
Major Maintenance																						
Timing of Spending																						
Occurrence 1			0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
Occurrence 2			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Occurrence 3			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Depreciation Classification	50% Double Declining																					
Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Depreciation Schedule		0.00%	50.00%	25.00%	12.50%	6.25%	3.13%	1.56%	0.78%	0.39%	0.20%	0.10%	0.05%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciation Expense																						
	Expense	Depreciation Amount																				
Occurrence 1	415,339	415,136	0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	203
Occurrence 2	502,339	251,170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251,170
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Book Depreciation																						
Calendar Year Depreciation per Classification (%)																						
20-yr SL			5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
30-yr SL			3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%
37-yr SL			2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
40-yr SL			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Calendar Year Depreciation per Classification ($)																						
20-yr SL	38,748,456		1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423
30-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40-yr SL	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major Maintenance			0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	251,372
Annual Depreciation	39,414,762		1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	1,937,423	2,145,092	2,041,258	1,989,340	1,963,381	1,950,402	1,943,912	1,940,668	1,939,045	1,938,234	1,937,828	2,188,795
Major Maintenance																						
Timing of Spending																						
Occurrence 1			0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
Occurrence 2			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Occurrence 3			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Depreciation Classification	30-yr SL																					
Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Depreciation Schedule		0.00%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%	3.33%
Depreciation Expense																						
	Expense	Depreciation Amount																				
Occurrence 1	415,339	415,136	0	0	0	0	0	0	0	0	0	207,670	103,835	51,917	25,959	12,979	6,490	3,245	1,622	811	406	203
Occurrence 2	502,339	251,170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251,170
Occurrence 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occurrence 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Net Book Value

Beginning Balance	0	36,811,033	34,873,610	32,936,188	30,998,765	29,061,342	27,123,919	25,186,496	23,249,074	21,311,651	19,581,898	17,540,640	15,551,300	13,587,918	11,637,516	9,693,604	7,752,936	5,813,891	3,875,657	1,937,828
Original Book Value	38,748,456	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plus: Major Maintenance	0	0	0	0	0	0	0	0	0	415,339	0	0	0	0	0	0	0	0	0	502,339
Less: Depreciation	-1,937,423	-1,937,423	-1,937,423	-1,937,423	-1,937,423	-1,937,423	-1,937,423	-1,937,423	-1,937,423	-2,145,092	-2,041,258	-1,989,340	-1,963,381	-1,950,402	-1,943,912	-1,940,668	-1,939,045	-1,938,234	-1,937,828	-2,188,795
Net Book Value	36,811,033	34,873,610	32,936,188	30,998,765	29,061,342	27,123,919	25,186,496	23,249,074	21,311,651	19,581,898	17,540,640	15,551,300	13,587,918	11,637,516	9,693,604	7,752,936	5,813,891	3,875,657	1,937,828	251,372

Component	Value for Steam-Only Scenario	Gross Value for CHP Scenario	Net Value for CHP Scenario
Project development	$0	$275,000	$275,000
Boiler installed cost ($)	$20,298,000	$36,818,000	**$32,031,660**
Turbine installed cost ($)	$0	$0	$0
Emission controls	$0	$0	$0
Condenser/Cooling Tower	$0	$0	$0
Equipment and Installation ($)	$20,298,000	$36,818,000	$32,031,660
Interconnection ($)	$0	$110,000	$110,000
Maintenance reserve ($)	$37,790	$62,500	$24,710
Working capital reserve ($)	$0	$2,915,955	$2,915,955
Debt service reserve ($)	$1,669,080	$3,297,933	$1,628,853
Debt Closing Costs & Fees	$857,184	$1,693,709	$836,525
Equity Closing Costs & Fees	$377,161	$745,232	$368,071
Interest During Construction	$571,456	$1,129,139	$557,683
Routine O&M ($/yr)	$91,412	$125,000	$33,588
New Labor for CHP	$0	$50,000	$50,000
General & Admin.	$10,000	$15,000	$5,000
Insurance	$608,940	$1,107,840	$498,900
Property taxes	$213,129	$387,744	
Year-10 Turbine overhaul ($)	$0	$150,000	$150,000
Year-10 Boiler overhaul ($)	$0	$200,000	$200,000
Annual Fuel Use (mmBtu/yr)	129,731	975,606	845,875
Annual Fuel Cost ($/yr)	$551,357	$4,146,326	$3,594,969
Plant capacity factor (%) - extract	85%	85%	85%
Plant capacity factor (%) - full condensing			0%
NPV of new boiler($2M) in yr 10			
Steam Load (mmBtu/hr)	12.943	89.56	22
Boiler size (lb/hr)	50,000	100,000	
Boiler rating (psi)	150	600	
Turbine type	N/A	Condensing	
Turbine size (MW)	N/A	7.00	

Loan value for calculations:	$14,286,403	$28,228,481	
Equity amount for calculations:	$9,429,026	$18,630,797	
Actual Loan Value:	$14,286,403	$28,228,481	$23,249,074
Actual Equity Amount:	$9,524,269	$18,818,987	$15,499,382