NOVA SCOTIA POWER
An Emera Company

June 22, 2010

Nancy McNeil
Regulatory Affairs Officer/Clerk
Nova Scotia Utility and Review Board
1601 Lower Water Street, 3rd Floor
Halifax, NS B3J 3S3

Dear Ms. McNeil:

Re: <u>CI# 33942 - Coon Pond Pipeline Replacement</u>
<u>NSPI - Responses to Information Requests (IRs) – P – 510</u>

Enclosed are the IR responses pertaining to the capital item referenced above.

These IRs were received on June 4, 2010.

The contract costs provided in IR-4 are confidential. They have been redacted in this response.

Contract costs are considered confidential. NSPI strives to keep the suppliers' pricing confidential from their other customers or potential competitors. This prevents competitors from using their information to gain a competitive advantage. This is equally true for NSPI, which desires to protect its ability to acquire capital services and equipment on the most competitive terms. Those "best" prices may not be available if there is a risk that they will be disclosed to the customers or competitors of the supplier.

Since NSPI customer rates are cost-based, the maintenance of confidentiality for this item is to the direct benefit of customers.

Regards,

Lee Thomson-Lutz MBA, CMA
Manager Capital,

Encl.

cc: File

NON-CONFIDENTIAL

Request IR-1:

On November 30, 2007 the Board approved NSPI's request to replace the lower 700 feet of this pipeline at the cost of $927,670 (U&U Work Order CI# 28863). Please provide an update on the completed scope of work and actual spending.

Response IR-1:

This project is now complete. 185 feet of the pre-existing steel pipeline was replaced and 550 feet of the pre-existing woodstave pipeline was replaced with High Density Polyethylene (HDPE) pipe.

The actual spending on this project was $971,003.

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Request IR-2:

Please provide a description of the completed work related to CI #33942, as it relates to the amount of $110,742, spent "to date".

Response IR-2:

Table 1 – Breakdown of the Spent "to Date" amount of $110,742:

Description of Work	Spent to Date
Contract work associated with the removal of the existing pipe. This amount also includes the processing of materials for pipe bedding and backfill.	$100,558
Engineering design labour.	$6,597
Interest and administrative overhead charged to this project.	$3,587
Total	**$110,742**

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Request IR-3:

In the justification for CI# 28863 it was stated:

> **Tests indicated that the upper portion of the pipe is in relatively good condition ....**
>
> **Replace the lower 700 feet section in 2007, and replace the remainder of the pipe in 2012 or 2017.**

It is the Board staff understanding that this approval request covers replacement of the remaining 2750 feet of the Coon Pond woodstave pipeline. Summary of Alternatives states that Alternative A, "Pipe replacement Vs. Do nothing", includes "an estimated capital cost of $2,075,549 in 2010 to replace 100% of the existing pipe". Please explain.

Response IR-3:

The “existing pipe” refers to the 2750 feet of the remaining woodstave pipe. All of the other woodstave piping was replaced under CI #28863. When CI#28863 was originally filed in 2007, the tests completed by an external consultant indicated the upper portion of the pipe was in relatively good condition. Since this time, the upper section of the woodstave piping has experienced a number of blowouts .

The current condition of the pipe and bands has deteriorated to the point where replacement is now required.

REDACTED

Request IR-4:

According to the information submitted with the approval request, the revised cost estimate of $2,075,549 includes contingency amounts of $289,500 and $121,694. Please compare and explain the difference between the actual unit cost to replace the lower 700 feet of the pipeline with the estimate unit cost to replace the remaining portion of the pipeline.

Response IR-4:

The contract cost to replace the lower 735 feet of pipeline under CI# 28863 was $914,418. Of this amount, [redacted] was associated with the 550 feet of High Density Polyethylene (HDPE) pipe at a cost of [redacted]/ft .

The remaining amount of [redacted] was associated with 185 feet of steel pipe at a cost of [redacted]/ft.
The unit cost for the total project was $1,321. (Total project cost $971,013/735 ft of pipe)

The estimated contract and material costs (including contingencies) in this capital item to replace the remaining 2750 feet of pipe is [redacted] at a cost of [redacted]/ft.

This unit price is lower than the unit price for the 550 feet of HDPE replaced under CI# 28863 due to the following factors:

- lower unit prices for gravel and common fill
- lower unit cost to supply and install the HDPE pipe (This decrease is due to easier access to the area in which the pipe is being replaced. Also, connecting to the current HDPE pipe is an easier process than past connections to the woodstave pipe.

REDACTED

Response IR-4: (cont'd)

The unit cost for the total project is estimated to be $755/ft (Total estimate of the project $2,075,549/ 2750ft of pipe).

NON-CONFIDENTIAL

Request IR-5:

Calculation of the Net Present Value CNPV") of the most economical option for the CI # 28863 project was based on the assumption that the remainder of the pipeline would be replaced in 2017. This replacement is now planned for 2010. The updated economic analysis completed for CI #33942 shows that NPV of $605,634, which does not include the already spent amount of $927,670 for the first 700 feet. Based on the above, please elaborate on the Net Present Value of the project to replace the Coon Pond Pipeline.

Response IR-5:

The economic analysis for CI# 33942 did not take into account the sunk costs of $971,003 for the first 735 feet of pipe replaced under CI #28863. It is not possible to include sunk costs for items that have occurred in the past in a forward looking economic analysis that begins in 2010.

The original economic analysis completed for CI#28863 in 2007 has been adjusted to factor in the current assumptions used for CI#33942. The revised economic analysis includes the $971,003 spent under CI#28868, the estimated capital cost of $2,075,549 to replace the remaining pipe in 2010 and incremental capital spending in years 2012, 2014 and 2015.

The results indicate that replacing the lower section of pipe in 2007 followed by replacement of the remaining 2,750 feet of pipe in 2010 is the most cost effective option. The Net Present Value of this option is $481,421.

Please refer to Attachment 1.

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COON POND PIPELINE REPLACEMENT
Summary of Alternatives

Budget Year :	2010	Date :	21-Jun-10
Division :	POWER PRODUCTION	CI Number:	33942
Department :	HYDRO PRODUCTION	Project No. :	
Originator :	POWER PRODUCTION		

	Alternative	After Tax WACC	PV of EVA / NPV	Rank	IRR	Disc Pay
A	REPLACE LOWER 700 FEET IN 2007, REMAINDER 2010	6.66%	481,421	1	8.42%	25.6 years
B	REPLACE ENTIRE PIPELINE IN 2008	6.66%	14,580	2	6.70%	25.9 years
C	REMOVE PIPELINE IN 2008	6.66%	-4,710,528	3	#DIV/0!	0.0 years
D						

Recommendation :

Notes/Comments :

Replace Lower Section in 2007 and Remainder in 2010

This option includes the actual cost of $971,003 for replacement of the lower section of pipe in 2007 and estimated capital cost of $2,075,548 for replacement of the upper section of pipe in 2010. The remaining assumptions are consistent with those filed under CI 33942.

Replace Entire Pipe in 2008

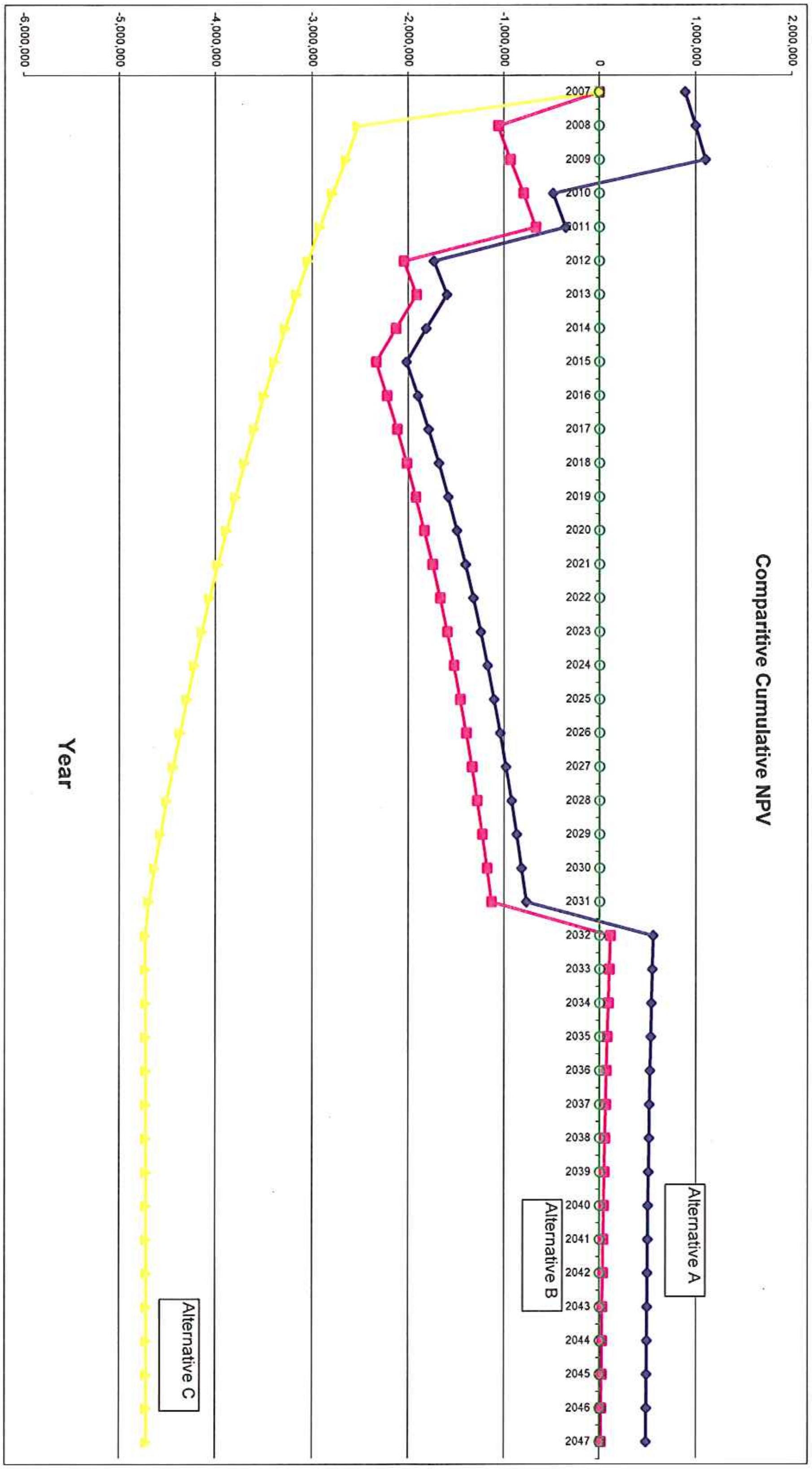
This option includes the a cost of $971,003 for replacement of the lower section of pipe in 2008, and estimated capital cost of $2,075,548 for replacement of the upper section of pipe in 2008 as well. The remaining assumptions are consistent with those filed under CI 33942.

Remove Pipeline in 2008

Assumptions include site remediation costs and replacement energy costs to replace 3,720 MWh/year.

COON POND PIPELINE REPLACEMENT
REPLACE LOWER 700' IN 2007, REMAINDER IN 2010

Year	Total Revenue	Operating Costs	Capital	CCA	UCC	CFBT	Applicable Taxes	CFAT	Discount Factor	PV of CF	CNPV
2007	3,085,000.0	(90,000.0)	(971,003.0)	19,420.1	951,582.9	2,023,997.0	(1,135,242.2)	888,754.8	1.000	888,754.8	888,754.8
2008	260,474.0	(95,000.0)	-	38,063.3	913,519.6	165,474.0	(47,882.6)	117,591.4	0.938	110,248.8	999,003.7
2009	262,557.8	(96,900.0)	-	36,540.8	876,978.8	165,657.8	(47,674.8)	117,983.0	0.879	103,708.9	1,102,712.6
2010	295,000.0	(98,838.0)	(2,075,548.0)	76,590.1	2,875,936.7	(1,879,386.0)	(45,588.9)	(1,924,974.9)	0.824	(1,586,427.9)	(483,715.3)
2011	305,412.0	(100,814.8)	-	115,037.5	2,760,899.3	204,597.2	(36,615.8)	167,981.4	0.773	129,794.1	(353,921.2)
2012	311,520.2	(102,831.1)	(2,080,800.0)	152,052.0	4,689,647.3	(1,872,110.8)	(26,864.7)	(1,898,975.5)	0.724	(1,375,661.2)	(1,729,582.3)
2013	317,750.6	(104,887.7)	-	187,585.9	4,502,061.4	212,863.0	(15,025.1)	197,837.9	0.679	134,369.3	(1,595,213.1)
2014	324,105.7	(106,985.4)	(541,216.1)	190,906.8	4,852,370.7	(324,095.9)	(15,813.0)	(339,908.8)	0.637	(216,446.9)	(1,811,660.0)
2015	330,587.8	(109,125.1)	(552,040.4)	205,135.6	5,199,275.5	(330,577.8)	(12,592.1)	(343,169.8)	0.597	(204,878.5)	(2,016,538.5)
2016	337,199.5	(111,307.6)	-	207,971.0	4,991,304.4	225,891.9	(12,919.8)	212,972.1	0.560	119,208.9	(1,897,329.7)
2017	343,943.5	(113,533.8)	-	199,652.2	4,791,652.3	230,409.7	(17,417.8)	212,991.9	0.525	111,775.7	(1,785,554.0)
2018	350,822.4	(115,804.5)	-	191,666.1	4,599,986.2	235,017.9	(21,836.2)	213,181.8	0.492	104,889.7	(1,680,664.3)
2019	357,838.8	(118,120.6)	-	183,999.4	4,415,986.7	239,718.3	(26,180.1)	213,538.2	0.461	98,504.6	(1,582,159.7)
2020	364,995.6	(120,483.0)	-	176,639.5	4,239,347.3	244,512.6	(30,454.7)	214,058.0	0.432	92,578.7	(1,489,581.0)
2021	372,295.5	(122,892.6)	-	169,573.9	4,069,773.4	249,402.9	(34,664.6)	214,738.2	0.405	87,073.8	(1,402,507.3)
2022	379,741.4	(125,350.5)	-	162,790.9	3,906,982.4	254,391.0	(41,276.2)	213,114.7	0.380	81,019.5	(1,321,487.7)
2023	387,336.3	(127,857.5)	-	156,279.3	3,750,703.1	259,478.8	(45,272.6)	214,206.1	0.356	76,349.6	(1,245,138.1)
2024	395,083.0	(130,414.6)	-	150,028.1	3,600,675.0	264,668.3	(49,222.2)	215,446.2	0.334	71,996.6	(1,173,141.6)
2025	402,984.6	(133,022.9)	-	144,027.0	3,456,648.0	269,961.7	(53,128.9)	216,832.8	0.313	67,935.5	(1,105,206.1)
2026	411,044.3	(135,683.4)	-	138,265.9	3,318,382.1	275,360.9	(56,996.9)	218,364.0	0.294	64,143.3	(1,041,062.8)
2027	419,265.2	(138,397.1)	-	132,735.3	3,185,646.8	280,868.2	(60,830.0)	220,038.1	0.275	60,599.1	(980,463.7)
2028	427,650.5	(141,165.0)	-	127,425.9	3,058,220.9	286,485.5	(64,632.1)	221,853.4	0.258	57,284.0	(923,179.7)
2029	436,203.5	(143,988.3)	-	122,328.8	2,935,892.1	292,215.2	(68,406.8)	223,808.4	0.242	54,180.3	(868,999.4)
2030	444,927.6	(146,868.1)	-	117,435.7	2,818,456.4	298,059.5	(72,157.7)	225,901.8	0.227	51,272.4	(817,727.0)
2031	453,826.2	(149,805.4)	-	112,738.3	2,705,718.2	304,020.7	(75,888.3)	228,132.4	0.213	48,545.5	(769,181.5)
2032	-	-	-	(1,042.2)	2,706,760.3	6,640,567.7	(5,501.4)	6,635,066.3	0.200	1,323,749.4	554,567.9
2033	-	-	-	(110,271.4)	2,817,031.7	-	(46,124.6)	(46,124.6)	0.187	(8,627.6)	545,940.3
2034	-	-	-	(105,860.5)	2,922,892.2	-	(45,780.1)	(45,780.1)	0.175	(8,028.5)	537,911.8
2035	-	-	-	(101,626.1)	3,024,518.3	-	(44,354.6)	(44,354.6)	0.164	(7,292.8)	530,619.0
2036	-	-	-	(97,561.1)	3,122,079.4	-	(42,986.1)	(42,986.1)	0.154	(6,626.5)	523,992.5
2037	-	-	-	(93,658.6)	3,215,738.0	-	(41,672.4)	(41,672.4)	0.145	(6,022.8)	517,969.7
2038	-	-	-	(89,912.3)	3,305,650.3	-	(40,411.2)	(40,411.2)	0.136	(5,475.9)	512,493.8
2039	-	-	-	(86,315.8)	3,391,966.1	-	(39,200.4)	(39,200.4)	0.127	(4,980.1)	507,513.7
2040	-	-	-	(82,863.2)	3,474,829.2	-	(38,038.1)	(38,038.1)	0.119	(4,530.7)	502,983.0
2041	-	-	-	(79,548.6)	3,554,377.9	-	(36,922.3)	(36,922.3)	0.112	(4,123.2)	498,859.8
2042	-	-	-	(76,366.7)	3,630,744.6	-	(34,727.7)	(34,727.7)	0.105	(3,636.0)	495,223.8
2043	-	-	-	(73,312.0)	3,704,056.6	-	(33,676.7)	(33,676.7)	0.098	(3,305.8)	491,918.0
2044	-	-	-	(70,379.5)	3,774,436.1	-	(32,667.7)	(32,667.7)	0.092	(3,006.5)	488,911.5
2045	-	-	-	(67,564.4)	3,842,000.5	-	(31,699.1)	(31,699.1)	0.086	(2,735.2)	486,176.3
2046	-	-	-	(64,861.8)	3,906,862.2	-	(30,769.2)	(30,769.2)	0.081	(2,489.2)	483,687.2
2047	-	-	-	(62,267.3)	3,969,129.5	-	(29,876.5)	(29,876.5)	0.076	(2,266.0)	481,421.1
Total	11,777,566.3	(2,980,076.9)	(6,220,607.5)	2,251,477.9	141,830,720.6	9,217,449.5	(2,688,992.3)	6,528,457.3	14.9	481,421.1	(16,923,353.5)


Comparitive Cumulative NPV
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