Fortress Thurso Feasibility
Economic Feasibility - 15 year Horizon
Parameters and Results

Line No.	Col. 1 Description	Col. 2	Col. 3 Year 0	Col. 4 Year 1	Col. 5 Year 2	Col. 6 Year 3	Col. 7 Year 4	Col. 8 Year 5	Col. 9 Year 6
	FEASIBILITY PARAMETERS								
1.	Discount Rate	5.55%							
2.	CCA Rate	6.00%							
3.	Tax Rate	26.90%							
4.	Municipal Tax rate	0.75%							
5.	Capital Tax Rate	0.00%							
6.	Customer Revenue Horizon (Years)	15							
7.	Annual Volumes (m^3)			12,000,000	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000
8.	Annual Revenues (Dollars)			3,548,031	3,548,031	3,548,031	3,548,031	3,548,031	3,548,031
9.	Annual O&M (Dollars)			25,258	25,258	25,258	25,258	25,258	25,258
	Capital Investment (Dollars)								
10.	Mains (Dollars)		4,728,755	0	0	0	0	0	0
11.	Services (Dollars)		251,955	0	0	0	0	0	0
12.	Meters (Dollars)		113,000	0	0	0	0	0	0
	Working Capital								
13.	O&M (Lead days)	17.6							
14.	Commodity (Lag days)	7.7							
	FEASIBILITY RESULTS								
15.	Net Present Value (Dollars)	1,213,471							
16.	Profitability Index	1.238							
17.	IRR	9.95%							
18.	Levelized Rate Impact (55 years)	-0.676%							
19.	Cross-Over Year	Year 1							

Original : 2013-04-08

Fortress Thurso Feasibility
Economic Feasibility - 15 year Horizon
Parameters and Results

Line No.	Col. 1 Description	Col. 10 Year 7	Col. 11 Year 8	Col. 12 Year 9	Col. 13 Year 10	Col. 14 Year 11	Col. 15 Year 12	Col. 16 Year 13	Col. 17 Year 14	Col. 18 Year 15
	FEASIBILITY PARAMETERS									
1.	Discount Rate									
2.	CCA Rate									
3.	Tax Rate									
4.	Municipal Tax rate									
5.	Capital Tax Rate									
6.	Customer Revenue Horizon (Years)									
7.	Annual Volumes (m^3)	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000
8.	Annual Revenues (Dollars)	3,548,031	3,548,031	2,771,869	2,513,149	2,513,149	2,513,149	2,513,149	2,513,149	2,513,149
9.	Annual O&M (Dollars)	25,258	25,258	25,258	25,258	25,258	25,258	25,258	25,258	25,258
	Capital Investment (Dollars)									
10.	Mains (Dollars)	0	0	0	0	0	0	0	0	0
11.	Services (Dollars)	0	0	0	0	0	0	0	0	0
12.	Meters (Dollars)	0	0	0	0	0	0	0	0	0
	Working Capital									
13.	O&M (Lead days)									
14.	Commodity (Lag days)									
	FEASIBILITY RESULTS									
15.	Net Present Value (Dollars)									
16.	Profitability Index									
17.	IRR									
18.	Levelized Rate Impact (55 years)									
19.	Cross-Over Year									

Fortress Thurso feasibility
Financial Feasibility - 15 year Horizon
DCF Analysis

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Line No.	Description	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	Discount factors to project outset	0.99	0.95	0.90	0.86	0.81	0.77	0.73	0.69
	INCREMENTAL CAPITAL INVESTMENT								
1.	Investment In Mains	4,728,755							
2.	Investment in Services	251,955							
3.	Investment in Stations	-							
4.	Investment in Meters	113,000							
5.	Contribution In Aid Of Construction	-							
6.	Net Investment Capital	5,093,710	-	-	-	-	-	-	-
7.	Working Capital	-	53,975	-	-	-	-	-	-
8.	Total Investments	5,093,710	53,975	-	-	-	-	-	-
9.	PV Of Net Investment At Project Outset	5,088,699							
10.	**ACCUMULATED PV OF TOTAL INVESTMENT**	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699
	CCA TAX SHIELD								
11.	CCA Tax Shield		41,106	79,746	74,961	70,464	66,236	62,262	58,526
12.	PV Of CCA Tax Shield At Project Outset		39,209	72,065	64,179	57,156	50,902	45,332	40,371
13.	**ACCUMULATED PV OF CCA TAX SHIELD**		39,209	111,274	175,453	232,610	283,512	328,843	369,215
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)								
14.	Gas Distribution Revenue		3,548,031	3,548,031	3,548,031	3,548,031	3,548,031	3,548,031	3,548,031
15.	Gas Costs		(2,500,800)	(2,500,800)	(2,500,800)	(2,500,800)	(2,500,800)	(2,500,800)	(2,500,800)
16.	O&M		(25,258)	(25,258)	(25,258)	(25,258)	(25,258)	(25,258)	(25,258)
17.	Net Operating Cash (Before Taxes)		1,021,972	1,021,972	1,021,972	1,021,972	1,021,972	1,021,972	1,021,972
18.	PV of Net Operating Cash (Before Taxes) At Project Outset		974,795	923,539	874,978	828,970	785,382	744,085	704,960
19.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**		974,795	1,898,334	2,773,311	3,602,281	4,387,663	5,131,748	5,836,708
	TAXES								
20.	Income Tax (Before Interest Tax Shield)		(263,482)	(263,722)	(263,962)	(264,201)	(264,441)	(264,680)	(264,920)
21.	Municipal Tax		(42,484)	(41,593)	(40,703)	(39,812)	(38,921)	(38,031)	(37,140)
22.	Capital Tax		-	-	-	-	-	-	-
23.	Federal Tax		-	-	-	-	-	-	-
24.	Total Taxes		(305,966)	(305,315)	(304,664)	(304,013)	(303,362)	(302,711)	(302,060)
25.	PV of Total Taxes At Project Outset		(291,842)	(275,908)	(260,843)	(246,599)	(233,132)	(220,400)	(208,362)
26.	**ACCUMULATED PV OF TOTAL TAXES**		(291,842)	(567,750)	(828,593)	(1,075,193)	(1,308,325)	(1,528,725)	(1,737,087)
	ACCUMULATED NPV AND PI								
27.	Net Present Value		(4,366,538)	(3,646,842)	(2,968,528)	(2,329,001)	(1,725,850)	(1,156,833)	(619,863)
28.	Profitability Index		0.142	0.283	0.417	0.542	0.661	0.773	0.878

Note a) Construction period from August 1 to December 15 2013 considered mid-term discounting, 0.5* 4.5/12 = 0.188. August 1 2013 is project outset as time 0.

Note b) Year 1 Revenues start from December 15 2013 to December 15 2014. Year 2 Revenues start from December 15 2014 to December 15 2015, and so on.

Original : 2013-04-08

Fortress Thurso feasibility
Financial Feasibility - 15 year Horizon
DCF Analysis

	Col. 1	Col. 10	Col. 11	Col. 12	Col. 13	Col. 14	Col. 15	Col. 16	Col. 17
Line No.	Description	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	Discount factors to project outset	0.65	0.62	0.59	0.56	0.53	0.50	0.47	0.45
	INCREMENTAL CAPITAL INVESTMENT								
1.	Investment In Mains								
2.	Investment in Services								
3.	Investment in Stations								
4.	Investment in Meters								
5.	Contribution In Aid Of Construction								
6.	Net Investment Capital	-	-	-	-	-	-	-	-
7.	Working Capital	-	(6,341)	(2,114)	-	-	-	-	-
8.	Total Investments	-	(6,341)	(2,114)	-	-	-	-	-
9.	PV Of Net Investment At Project Outset								
10.	**ACCUMULATED PV OF TOTAL INVESTMENT**	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699	5,088,699	**5,088,699**
	CCA TAX SHIELD								
11.	CCA Tax Shield	55,014	51,714	48,611	45,694	42,952	40,375	37,953	326,023
12.	PV Of CCA Tax Shield At Project Outset	35,954	32,019	28,516	25,395	22,616	20,142	17,938	145,985
13.	**ACCUMULATED PV OF CCA TAX SHIELD**	405,169	437,188	465,704	491,099	513,715	533,857	551,794	**697,780**
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)								
14.	Gas Distribution Revenue	3,548,031	2,771,869	2,513,149	2,513,149	2,513,149	2,513,149	2,513,149	2,513,149
15.	Gas Costs	(2,500,800)	(2,200,200)	(2,100,000)	(2,100,000)	(2,100,000)	(2,100,000)	(2,100,000)	(2,100,000)
16.	O&M	(25,258)	(25,258)	(25,258)	(25,258)	(25,258)	(25,258)	(25,258)	(25,258)
17.	Net Operating Cash (Before Taxes)	1,021,972	546,411	387,890	387,890	387,890	387,890	387,890	387,890
18.	PV of Net Operating Cash (Before Taxes) At Project Outset	667,892	338,321	227,541	215,577	204,241	193,502	183,327	173,688
19.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	6,504,600	6,842,921	7,070,462	7,286,038	7,490,280	7,683,782	7,867,109	**8,040,797**
	TAXES								
20.	Income Tax (Before Interest Tax Shield)	(265,160)	(137,473)	(95,071)	(95,310)	(95,550)	(95,790)	(96,029)	(96,269)
21.	Municipal Tax	(36,249)	(35,358)	(34,468)	(33,577)	(32,686)	(31,795)	(30,905)	(30,014)
22.	Capital Tax	-	-	-	-	-	-	-	-
23.	Federal Tax	-	-	-	-	-	-	-	-
24.	Total Taxes	(301,409)	(172,831)	(129,538)	(128,887)	(128,236)	(127,585)	(126,934)	(126,283)
25.	PV of Total Taxes At Project Outset	(196,980)	(107,012)	(75,989)	(71,631)	(67,522)	(63,647)	(59,992)	(56,546)
26.	**ACCUMULATED PV OF TOTAL TAXES**	(1,934,067)	(2,041,079)	(2,117,068)	(2,188,699)	(2,256,221)	(2,319,868)	(2,379,860)	**(2,436,406)**
	ACCUMULATED NPV AND PI								
27.	Net Present Value	(112,998)	150,330	330,398	499,739	659,075	809,071	950,344	**1,213,471**
28.	Profitability Index	0.9778	1.030	1.065	1.098	1.130	1.159	1.187	**1.238**

Note a) Construction period from August 1 to December 15 2013 considered mid-term discounting, 0.5* 4.5/12 = 0.188. August 1 2013 is project outset as time 0.

Note b) Year 1 Revenues start from December 15 2013 to December 15 2014. Year 2 Revenues start from December 15 2014 to December 15 2015, and so on.

Fortress Thurso feasibility
Financial Feasibility - 15 year Horizon
Rate Impact Analysis

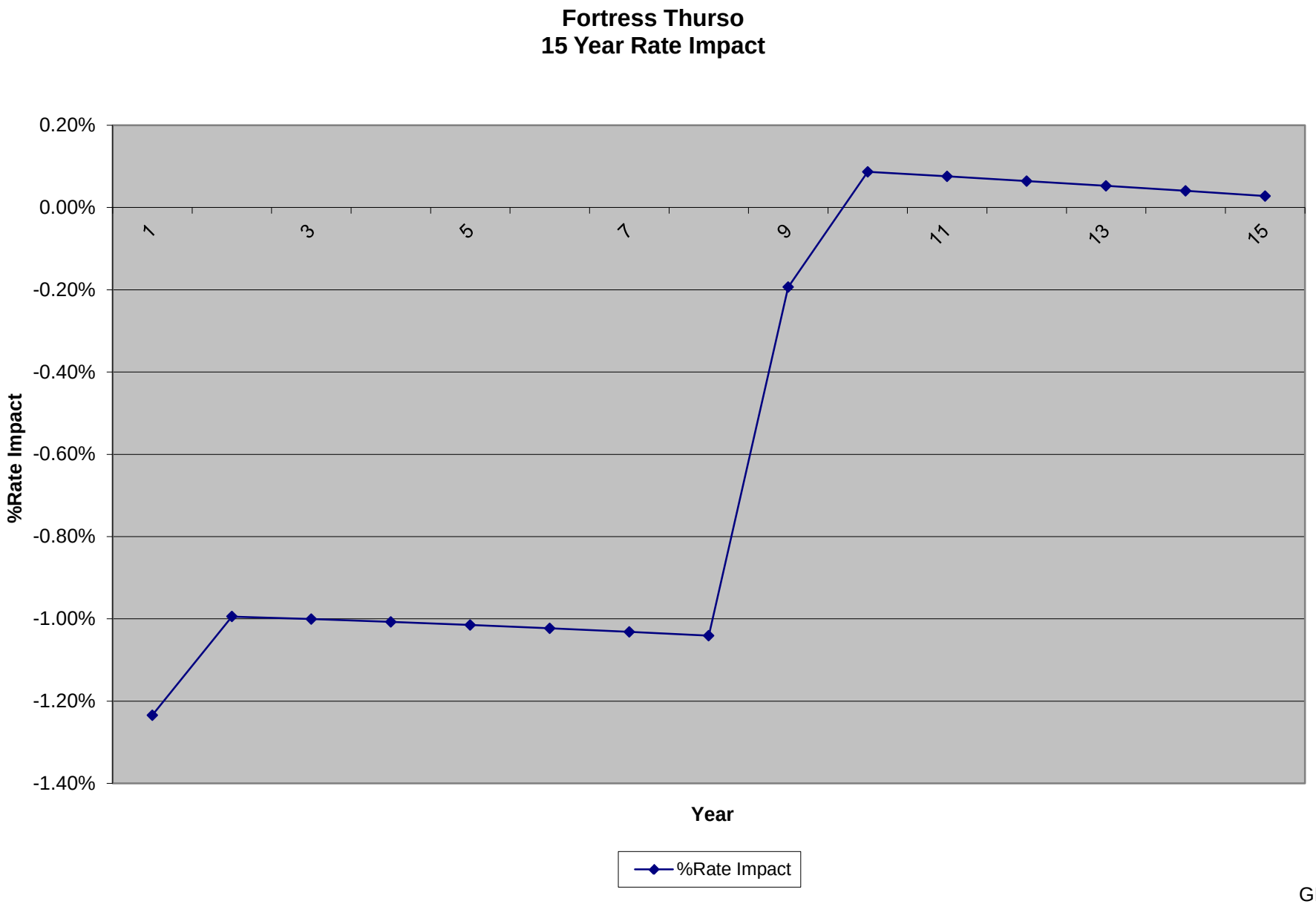
Dollars		Year 1 **1**	Year 2 **2**	Year 3 **3**	Year 4 **4**	Year 5 **5**	Year 6 **6**	Year 7 **7**
REVENUE								
A. Effective Project Revenue		3,548,031	3,548,031	3,548,031	3,548,031	3,548,031	3,548,031	3,548,031
B. Year "0" Revenue Rate Case)	51,733,100							
C. Total Revenue (year "0" + projected revenue)	51,733,100	55,281,131	55,281,131	55,281,131	55,281,131	55,281,131	55,281,131	55,281,131
REVENUE REQUIREMENT								
D. Effective Project Revenue Requirement		2,865,612	2,998,192	2,994,833	2,991,082	2,986,961	2,982,494	2,977,700
E. Year "0" Revenue Requirement	51,733,100							
F. Total Revenue Requirement (year "0" + project rev.req.)	51,733,100	54,598,712	54,731,292	54,727,933	54,724,182	54,720,061	54,715,594	54,710,800
(D - A) DEFICIENCY or RATE IMPACT		(682,419)	(549,838)	(553,197)	(556,949)	(561,069)	(565,537)	(570,331)
(D - A)/ C % Rate Impact vs Yr 0		-1.23%	-0.99%	-1.00%	-1.01%	-1.01%	-1.02%	-1.03%
LEVELIZED RATE IMPACT CALCULATION								
L. Rate Impact (D -A)		(682,419)	(549,838)	(553,197)	(556,949)	(561,069)	(565,537)	(570,331)
M. $ Levelized Impact (55 yrs.)	(371,467)							
N. Levelized Revenue	54,930,988							
O. % Levelized Impact	-0.676%	(373,835)	(373,835)	(373,835)	(373,835)	(373,835)	(373,835)	(373,835)

Original : 2013-04-08

Fortress Thurso feasibility
Financial Feasibility - 15 year Horizon
Rate Impact Analysis

Dollars	Year 8 **8**	Year 9 **9**	Year 10 **10**	Year 11 **11**	Year 12 **12**	Year 13 **13**	Year 14 **14**	Year 15 **15**
REVENUE								
A. Effective Project Revenue	3,548,031	2,771,869	2,513,149	2,513,149	2,513,149	2,513,149	2,513,149	2,513,149
B. Year "0" Revenue Rate Case)								
C. Total Revenue (year "0" + projected revenue)	55,281,131	54,504,969	54,246,249	54,246,249	54,246,249	54,246,249	54,246,249	54,246,249
REVENUE REQUIREMENT								
D. Effective Project Revenue Requirement	2,972,599	2,666,370	2,560,189	2,554,195	2,548,041	2,541,662	2,535,072	2,528,283
E. Year "0" Revenue Requirement								
F. Total Revenue Requirement (year "0" + project rev.r	54,705,699	54,399,470	54,293,289	54,287,295	54,281,141	54,274,762	54,268,172	54,261,383
(D - A) DEFICIENCY or RATE IMPACT	(575,431)	(105,499)	47,041	41,046	34,892	28,514	21,923	15,134
(D - A)/ C % Rate Impact vs Yr 0	-1.04%	-0.19%	0.09%	0.08%	0.06%	0.05%	0.04%	0.03%
LEVELIZED RATE IMPACT CALCULATION								
L. Rate Impact (D -A)	(575,431)	(105,499)	47,041	41,046	34,892	28,514	21,923	15,134
M. $ Levelized Impact (55 yrs.)								
N. Levelized Revenue								
O. % Levelized Impact	(373,835)	(368,586)	(366,837)	(366,837)	(366,837)	(366,837)	(366,837)	(366,837)

Original : 2013-04-08



Original : 2013-04-08