

**GTA Project
Economic Feasibility - 40 year Horizon
DCF Analysis**

Line No.	Description	Col. 1 10/10 - 09/13	Col. 2 09/13 - 12/13	Col. 3 01/14 - 12/14	Col. 4 Year 1	Col. 5 Year 2	Col. 6 Year 3	Col. 7 Year 4	Col. 8 Year 5	Col. 9 Year 6	Col. 10 Year 7	Col. 11 Year 8	Col. 12 Year 9	Col. 13 Year 9	Col. 14 Year 10
	Discount factors to project outset	1.000	0.991	0.985	0.902	0.852	0.805	0.760	0.718	0.678	0.640	0.605	0.571	0.540	0.540
	INCREMENTAL CAPITAL INVESTMENT														
1.	Investment in Mains														
2.	Investment in Services														
3.	Investment in Stations														
4.	Investment in Land														
5.	Investment in Land Rights														
6.	Annual Capital Maintenance Costs														
7.	Contribution In Aid Of Construction														
8.	Net Investment Capital														
9.	Working Capital														
10.	Total Investment														
11.	PV Of Total Investment At Project Outset														
12.	ACCUMULATED PV OF TOTAL INVESTMENT														
13.	CCA TAX SHIELD														
14.	CCA Tax Shield														
15.	PV Of CCA Tax Shield At Project Outset														
16.	ACCUMULATED PV OF CCA TAX SHIELD														
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)														
16.	Gas Distribution Revenue														
17.	Transportation Services Charge														
18.	Transportation Savings														
19.	Gas Costs														
20.	O&M Expenses														
21.	Net Operating Cash (Before Taxes)														
22.	PV Of Net Operating Cash (Before Taxes) At Project Outset														
23.	ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)														
	TAXES														
24.	Income Tax (Before Interest Tax Shield)														
25.	Municipal Tax														
26.	Capital Tax														
27.	Total Taxes														
28.	PV of Total Taxes At Project Outset														
29.	ACCUMULATED PV OF TOTAL TAXES														
30.	ACCUMULATED NPV AND PI														
31.	Net Present Value														
	Profitability Index														

Notes:

- (1) September 12 2013 is project outset as time 0.
- (2) Oct 1 2010 to Sep 12 2013 - Project planning and engineering.
- (3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.15
- (4) Jan 1 to Dec 31 2014, mid-term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.80
- (5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid-term discounting. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
- (6) 50% efficacy considered for the first year of customer additions revenue.
- (7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
- (8) Transportation savings and Transportation Services Chrgs start Oct 15, 2015, mid-term discounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

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Line No.	Description	Col. 15 Year 11	Col. 16 Year 12	Col. 17 Year 13	Col. 18 Year 14	Col. 19 Year 15	Col. 20 Year 16	Col. 21 Year 17	Col. 22 Year 18	Col. 23 Year 19	Col. 24 Year 20	Col. 25 Year 21	Col. 26 Year 22
	Discount factors to project outset	0.510	0.481	0.455	0.429	0.406	0.383	0.362	0.342	0.323	0.305	0.288	0.272
	INCREMENTAL CAPITAL INVESTMENT												
1.	Investment in Mains	-	-	-	-	-	-	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights	-	-	-	-	-	-	-	-	-	-	-	-
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
7.	Contribution In Aid Of Construction	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
8.	Net Investment Capital	2,700	2,686	2,673	2,660	2,646	2,633	2,620	2,607	2,594	2,581	2,568	2,555
9.	Working Capital	(86)	(86)	(113)	(102,926)	(140)	(153)	(166)	(179)	(192)	(205)	(218)	(231)
10.	PV Of Total Investment At Project Outset	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)
11.	ACCUMULATED PV OF TOTAL INVESTMENT												
12.	CCA TAX SHIELD												
13.	CCA Tax Shield	9,626,672	9,043,420	8,495,563	7,989,070	7,513,313	7,058,298	6,630,882	6,229,388	5,852,243	5,497,985	5,173,291	4,868,305
14.	PV Of CCA Tax Shield At Project Outset	4,906,266	4,353,118	3,862,360	3,430,438	3,047,036	2,703,578	2,398,860	2,128,482	1,888,598	1,675,761	1,489,258	1,323,651
15.	ACCUMULATED PV OF CCA TAX SHIELD	68,804,057	73,157,175	77,019,535	80,449,573	83,487,009	86,200,587	88,598,437	90,727,919	92,616,517	94,292,278	95,781,536	97,105,187
16.	INCREMENTAL OPERATING CASH FLOWS (BEFORE TAXES)												
16.	Gas Distribution Revenue	123,724,155	123,105,534	122,490,006	121,877,556	121,268,169	120,661,828	120,058,519	119,458,226	118,860,935	118,266,630	117,675,297	117,086,921
17.	Transportation Services Charge	10,237,680	10,031,051	9,819,672	9,614,241	9,414,241	9,218,995	9,029,036	8,843,582	8,662,027	8,484,572	8,311,117	8,141,662
18.	Transportation Savings	161,084,879	158,884,879	156,684,879	154,484,879	152,284,879	150,084,879	147,884,879	145,684,879	143,484,879	141,284,879	139,084,879	136,884,879
19.	Gas Costs	(53,003,064)	(52,738,049)	(52,473,034)	(52,208,019)	(51,943,004)	(51,678,019)	(51,413,034)	(51,148,049)	(50,883,064)	(50,618,079)	(50,353,094)	(50,088,109)
20.	O&M Expenses	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)	(23,935,797)
21.	Net Operating Cash (Before Taxes)	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724	148,770,724
22.	PV Of Net Operating Cash (Before Taxes) At Project Outset	1,383,197,366	1,415,671,082	1,448,145,798	1,480,620,514	1,513,095,230	1,545,569,946	1,578,044,662	1,610,519,378	1,642,994,094	1,675,468,810	1,707,943,526	1,740,418,242
23.	ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)												
24.	TAXES												
24.	Income Tax (Before Interest Tax Shield)	(59,932,523)	(17,093,916)	(16,944,661)	(16,423,541)	(16,651,328)	(16,500,055)	(16,348,257)	(16,195,993)	(16,043,317)	(15,890,280)	(15,736,778)	(15,582,559)
25.	Municipal Tax	(2,957,428)	(2,957,428)	(2,957,445)	(2,960,518)	(2,960,527)	(2,960,535)	(2,960,543)	(2,960,552)	(2,960,560)	(2,960,568)	(2,960,576)	(2,960,584)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(62,889,951)	(20,051,352)	(19,902,106)	(19,384,059)	(19,611,854)	(19,460,590)	(19,309,332)	(19,158,075)	(19,006,819)	(18,855,562)	(18,704,305)	(18,553,048)
28.	PV of Total Taxes At Project Outset	(32,052,080)	(9,651,869)	(9,048,146)	(8,323,948)	(7,953,619)	(7,454,095)	(6,954,571)	(6,455,047)	(5,955,523)	(5,456,000)	(4,956,476)	(4,456,952)
29.	ACCUMULATED PV OF TOTAL TAXES	(378,917,818)	(388,569,687)	(397,617,833)	(405,941,181)	(413,894,801)	(421,348,896)	(428,334,227)	(434,879,711)	(441,012,521)	(446,758,195)	(452,034,764)	(457,079,487)
30.	ACCUMULATED NPV AND PI												
30.	Net Present Value	251,783,080	278,958,045	304,186,980	327,177,092	348,954,072	369,186,999	387,989,656	405,466,908	421,715,457	436,824,531	450,582,489	463,663,213
31.	Profitability Index	1.307	1.340	1.370	1.398	1.425	1.450	1.472	1.494	1.513	1.532	1.549	1.565

Notes:
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 (3) Sep 12, 2013 to Dec 31, 2013, mid-term discounting. Discount period equals 3.61/2*0.5 = 0.15
 (4) Jan 1 to Dec 31, 2014, mid-term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.80
 (5) Year 1 - capital spending Jan 1 to Dec 31, 2015, mid-term discounting. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
 (6) 50% efficacy considered for the first year of customer additions revenue.
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 (8) Transportation savings and Transportation Services Charges start Oct 15, 2015, mid-term discounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

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Line No.	Description	Col. 27 Year 23	Col. 28 Year 24	Col. 29 Year 25	Col. 30 Year 26	Col. 31 Year 27	Col. 32 Year 28	Col. 33 Year 29	Col. 34 Year 30	Col. 35 Year 31	Col. 36 Year 32	Col. 37 Year 33	Col. 38 Year 34
	Discount factors to project outset	0.257	0.243	0.229	0.216	0.204	0.193	0.182	0.172	0.163	0.154	0.145	0.137
	INCREMENTAL CAPITAL INVESTMENT												
1.	Investment in Mains	-	-	-	-	-	-	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights	-	-	-	-	-	-	-	-	-	-	-	-
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
8.	Net Investment Capital	2,542	2,530	2,517	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)	(269)
9.	Working Capital	(244)	(244)	(244)	(244)	(244)	(244)	(244)	(244)	(244)	(244)	(244)	(244)
10.	Total Investment	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
11.	PV Of Total Investment At Project Outset	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
12.	ACCUMULATED PV OF TOTAL INVESTMENT	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)
13.	CCA TAX SHIELD												
14.	CCA Tax Shield	4,573,687	4,296,926	4,036,938	3,792,704	3,563,268	3,355,856	3,161,014	2,989,855	2,790,273	2,621,567	2,463,077	2,314,183
15.	PV Of CCA Tax Shield At Project Outset	1,174,505	1,042,171	924,754	820,570	728,129	647,673	576,198	511,297	453,709	402,610	357,268	317,035
16.	ACCUMULATED PV OF CCA TAX SHIELD	98,279,692	99,321,963	100,246,617	101,067,187	101,795,316	102,442,989	103,019,187	103,530,484	103,984,193	104,386,803	104,744,071	105,061,106
17.	Gas Distribution Revenue	116,501,466	115,918,979	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384
18.	Transportation Services Charge	7,558,277	7,309,665	7,058,790	6,805,792	6,550,799	6,340,032	6,068,733	4,626,925	1,159,207	1,165,370	1,170,148	1,173,625
19.	Gas Costs	(49,908,894)	(49,658,350)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)
20.	O&M Expenses	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)	(12,935,797)
21.	Net Operating Cash (Before Taxes)	116,115,141	115,625,587	115,136,387	114,647,332	114,158,277	113,669,222	113,180,167	112,691,112	112,202,057	111,713,002	111,223,947	110,734,892
22.	PV Of Net Operating Cash (Before Taxes) At Project Outset	1,660,657,852	1,675,363,939	1,689,191,991	1,702,057,865	1,714,224,933	1,725,397,387	1,736,163,236	1,746,083,142	1,754,888,430	1,763,205,786	1,771,062,075	1,778,462,650
23.	ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)	(15,436,635)	(15,282,515)	(15,128,237)	(15,061,190)	(14,993,615)	(14,554,393)	(14,865,051)	(14,482,970)	(13,564,022)	(13,565,653)	(13,566,917)	(13,567,836)
24.	Income Tax (Before Interest Tax Shield)	(2,963,659)	(2,963,659)	(2,963,676)	(2,963,684)	(2,963,692)	(2,966,766)	(2,968,774)	(2,966,763)	(2,966,781)	(2,966,800)	(2,966,808)	(2,966,816)
25.	Municipal Tax	-	-	-	-	-	-	-	-	-	-	-	-
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(2,963,659)	(2,963,659)	(2,963,676)	(2,963,684)	(2,963,692)	(2,966,766)	(2,968,774)	(2,966,763)	(2,966,781)	(2,966,800)	(2,966,808)	(2,966,816)
28.	PV Of Total Taxes At Project Outset	(4,725,124)	(4,425,408)	(4,144,370)	(3,899,771)	(3,669,449)	(3,381,546)	(3,250,432)	(3,004,189)	(2,687,974)	(2,538,990)	(2,398,210)	(2,265,188)
29.	ACCUMULATED PV OF TOTAL TAXES	(461,804,622)	(466,230,030)	(470,374,400)	(474,274,171)	(477,943,621)	(481,325,167)	(484,576,588)	(487,579,788)	(490,267,762)	(492,806,752)	(495,204,961)	(497,470,149)
30.	ACCUMULATED NPV AND PI	475,832,398	487,155,149	497,691,684	507,550,156	516,776,104	525,214,685	533,306,300	540,733,313	547,304,337	553,485,323	559,300,661	564,773,083
31.	Net Present Value	1,579	1,593	1,606	1,618	1,629	1,639	1,649	1,658	1,666	1,674	1,681	1,688
	Profitability Index												

Notes:

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- (5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid-term discounting. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
- (6) 50% efficacy considered for the first year of customer additions revenue.
- (7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
- (8) Transportation savings and Transportation Services Change start Oct 15, 2015, mid-term discounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

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Line No.	Description	Col. 39 Year 35	Col. 40 Year 36	Col. 41 Year 37	Col. 42 Year 38	Col. 43 Year 39	Col. 44 Year 40
	Discount factors to project outset	0.129	0.122	0.115	0.109	0.103	0.097
	INCREMENTAL CAPITAL INVESTMENT						
1.	Investment in Mains	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-
5.	Investment in Land Rights	-	-	-	-	-	-
6.	Annual Capital Maintenance Costs	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
8.	Net Investment Capital	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
9.	Working Capital	-	-	-	-	-	-
10.	Total Investment	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
11.	PV Of Total Investment At Project Outset	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)	(821,300,524)
12.	ACCUMULATED PV OF TOTAL INVESTMENT						
	CCA TAX SHIELD						
13.	CCA Tax Shield	2,182,426	2,058,650	1,934,247	1,817,374	1,707,573	14,253,178
14.	PV Of CCA Tax Shield At Project Outset	282,385	251,581	223,254	198,118	175,814	1,386,046
15.	ACCUMULATED PV OF CCA TAX SHIELD	105,343,491	105,595,072	105,818,326	106,016,444	106,192,258	107,578,304
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)						
16.	Gas Distribution Revenue	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384	115,339,384
17.	Transportation Services Charge	1,621,979	1,201,617	1,196,125	1,195,536	1,193,988	1,191,525
18.	Transportation Savings	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)	(49,411,053)
19.	Gas Costs	(14,979,387)	(12,935,737)	(12,935,737)	(12,935,737)	(12,935,737)	(12,935,737)
20.	Other Operating Cash (Before Taxes)	34,828,052	54,629,315	54,688,388	54,766,368	54,856,368	54,958,419
21.	PV Of Operating Cash (Before Taxes) At Project Outset	1,785,310,705	1,791,933,919	1,798,188,173	1,804,095,410	1,809,874,518	1,814,943,633
22.	ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)						
	TAXES						
24.	Income Tax (Before Interest Tax Shield)	(13,197,281)	(13,574,400)	(13,572,980)	(13,572,822)	(13,572,409)	(13,571,754)
25.	Municipal Tax	(2,969,890)	(2,969,898)	(2,969,907)	(2,969,915)	(2,969,923)	(2,969,932)
26.	Capital Tax	-	-	-	-	-	-
27.	Total Taxes	(16,167,171)	(16,544,389)	(16,542,886)	(16,542,737)	(16,542,332)	(16,541,686)
28.	PV of Total Taxes At Project Outset	(2,091,877)	(2,021,834)	(1,909,409)	(1,803,382)	(1,703,217)	(1,608,591)
29.	ACCUMULATED PV OF TOTAL TAXES	(499,562,026)	(501,583,860)	(503,493,269)	(505,236,651)	(506,999,868)	(508,608,459)
30.	ACCUMULATED NPV AND PI						
	Net Present Value	569,791,645	574,644,306	579,212,706	583,514,679	587,566,384	592,612,955
31.	Profitability Index	1.694	1.700	1.705	1.710	1.715	1.7216

Notes:

- (1) September 12 2013 is project outset as time 0.
- (2) Oct 1 2010 to Sep 12 2013 - Project planning and engineering.
- (3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.15
- (4) Jan 1 to Dec 31 2014, mid-term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.80
- (5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid-term discounting. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
- (6) 50% efficacy considered for the first year of customer additions revenue.
- (7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
- (8) Transportation savings and Transportation Services Chrgs start Oct 15, 2015, mid-term discounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196