

**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	
	<b>INCREMENTAL CAPITAL INVESTMENT</b>														
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.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>														
13.	<b>CCA TAX SHIELD</b>														
14.	CCA Tax Shield														
15.	PV Of CCA Tax Shield At Project Outset														
16.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>														
	<b>INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)</b>														
17.	Gas Distribution Revenue														
18.	Transportation Services Charge														
19.	Transportation Savings														
20.	Gas Costs														
21.	O&M Expenses														
22.	Net Operating Cash (Before Taxes)														
23.	PV Of Net Operating Cash (Before Taxes) At Project Outset														
24.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>														
	<b>TAXES</b>														
25.	Income Tax (Before Interest Tax Shield)														
26.	Municipal Tax														
27.	Capital Tax														
28.	Total Taxes														
29.	PV of Total Taxes At Project Outset														
30.	<b>ACCUMULATED PV OF TOTAL TAXES</b>														
31.	<b>ACCUMULATED NPV AND PI</b>														
	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. 1 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
	<b>INCREMENTAL CAPITAL INVESTMENT</b>												
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)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
8.	Net Investment Capital	-	-	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
9.	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-
10.	Total Investment	(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)
11.	PV Of Total Investment At Project Outset	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
12.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>												
13.	<b>CCA TAX SHIELD</b>												
14.	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	4,866,305
15.	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
	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>	68,804,057	73,157,175	77,019,535	80,449,973	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.	<b>INCREMENTAL OPERATING CASH FLOWS (BEFORE TAXES)</b>												
17.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
18.	Transportation Services Charge	10,237,680	10,031,051	9,819,672	10,249,931	9,414,241	9,189,995	8,962,036	8,730,582	8,495,877	8,258,082	8,063,521	7,804,480
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	70,613,487	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718	70,441,718
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	56,138,833	54,393,783	52,388,474	50,867,209	49,277,187	47,948,981	46,822,280	45,869,538	45,053,003	44,343,888	43,727,320	43,188,718
23.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>	560,486,552	594,890,345	627,278,496	657,175,705	685,902,892	712,949,253	736,411,533	752,381,069	764,944,072	766,181,902	765,769,021	764,590,736
	<b>TAXES</b>												
24.	Income Tax (Before Interest Tax Shield)	(28,401,095)	(18,150,969)	(18,094,951)	(17,666,601)	(17,986,695)	(17,927,267)	(17,866,856)	(17,805,521)	(17,743,320)	(17,680,304)	(17,245,374)	(17,559,280)
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)	(2,963,642)	(2,963,651)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(31,358,523)	(21,108,405)	(21,052,395)	(20,627,119)	(20,947,222)	(20,887,802)	(20,827,399)	(20,766,073)	(20,703,880)	(20,640,873)	(20,209,017)	(20,522,931)
28.	PV of Total Taxes At Project Outset	(15,981,979)	(10,160,689)	(9,571,105)	(8,857,081)	(8,495,180)	(8,000,768)	(7,534,714)	(7,095,433)	(6,681,424)	(6,291,268)	(5,817,657)	(5,580,011)
29.	<b>ACCUMULATED PV OF TOTAL TAXES</b>	(160,902,103)	(171,062,792)	(180,633,897)	(189,491,005)	(197,986,194)	(205,986,952)	(213,521,667)	(220,617,100)	(227,298,524)	(233,689,792)	(239,407,448)	(244,987,460)
30.	<b>ACCUMULATED NPV AND PI</b>												
	Net Present Value	(352,931,656)	(324,345,435)	(297,666,029)	(273,195,490)	(249,916,446)	(228,167,275)	(207,840,859)	(188,838,275)	(171,068,098)	(154,445,775)	(139,187,054)	(124,621,699)
31.	Profitability Index	0.570	0.605	0.638	0.667	0.696	0.722	0.747	0.770	0.792	0.812	0.831	0.848

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- (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 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. 1 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
	<b>INCREMENTAL CAPITAL INVESTMENT</b>												
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	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
9.	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-
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	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
12.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>												
13.	CCA Tax Shield	4,573,687	4,296,926	4,036,938	3,792,704	3,563,268	3,355,856	3,161,014	2,989,655	2,790,273	2,621,567	2,463,077	2,314,183
14.	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
15.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>	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
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	7,558,277	7,309,665	7,058,790	6,805,792	6,550,799	6,340,032	6,068,733	5,826,925	5,592,207	5,365,370	5,147,146	4,936,625
18.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
19.	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)
20.	Net Operating Cash (Before Taxes)	19,778,845	18,689,711	17,611,468	16,543,467	15,485,466	14,437,465	13,399,464	12,361,463	11,323,462	10,285,461	9,247,460	8,209,459
21.	PV of Net Operating Cash (Before Taxes) At Project Outset	17,713,811	16,689,760	15,665,709	14,641,658	13,617,607	12,593,556	11,569,505	10,545,454	9,521,403	8,497,352	7,473,301	6,449,250
22.	CCA Tax Shield (Before Taxes)	862,304,247	878,974,007	894,660,794	909,421,915	923,311,393	936,110,438	946,414,572	953,783,466	959,959,165	979,570,886	988,649,657	997,224,843
23.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>												
24.	Income Tax (Before Interest Tax Shield)	(17,494,034)	(17,428,150)	(17,361,666)	(17,294,619)	(17,227,044)	(17,159,822)	(17,098,480)	(17,116,398)	(17,129,451)	(17,139,082)	(17,148,346)	(17,157,265)
25.	Municipal Tax	(2,963,659)	(2,963,659)	(2,963,676)	(2,963,684)	(2,963,692)	(2,963,700)	(2,963,708)	(2,963,716)	(2,963,724)	(2,963,732)	(2,963,740)	(2,963,748)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(20,457,693)	(20,391,817)	(20,325,342)	(20,258,303)	(20,190,736)	(20,122,700)	(20,054,664)	(19,986,628)	(19,918,592)	(19,850,556)	(19,782,520)	(19,714,484)
28.	PV of Total Taxes At Project Outset	(5,253,457)	(4,945,808)	(4,638,159)	(4,330,510)	(4,022,861)	(3,715,212)	(3,407,563)	(3,100,000)	(2,792,437)	(2,484,874)	(2,177,311)	(1,869,748)
29.	<b>ACCUMULATED PV OF TOTAL TAXES</b>	(250,240,916)	(255,186,724)	(259,842,713)	(264,225,697)	(268,351,532)	(272,184,125)	(275,821,672)	(279,210,374)	(282,261,512)	(285,143,503)	(287,865,671)	(290,436,831)
30.	<b>ACCUMULATED NPV AND PI</b>	(110,987,140)	(98,221,016)	(86,265,464)	(75,066,758)	(64,574,986)	(54,940,861)	(45,720,077)	(37,226,586)	(29,648,296)	(22,515,967)	(15,802,104)	(9,481,044)
31.	Profitability Index	0.865	0.880	0.895	0.909	0.921	0.933	0.944	0.955	0.964	0.973	0.981	0.988

Notes:

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- (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 Charge 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
	<b>INCREMENTAL CAPITAL INVESTMENT</b>						
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	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
12.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>						
	<b>CCA TAX SHIELD</b>						
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.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>	105,343,491	105,595,072	105,818,326	106,016,444	106,192,258	<b>107,578,304</b>
	<b>INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)</b>						
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	1,621,979	1,201,617	1,196,125	1,195,536	1,193,988	1,191,525
18.	Gas Costs	(55,727,576)	(55,727,576)	(55,727,576)	(55,727,576)	(55,727,576)	(55,727,576)
19.	O&M Expenses	(14,978,387)	(12,955,757)	(12,955,757)	(12,955,757)	(12,955,757)	(12,955,757)
20.	Net Operating Cash (Before Taxes)	61,983,058	66,602,226	66,456,739	66,602,226	66,456,739	66,602,226
21.	PV Of Net Operating Cash (Before Taxes) At Project Outset	7,918,851	7,652,576	7,377,331	7,098,007	6,814,868	6,036,689
22.	Net Operating Cash (Before Taxes)	1,005,143,404	1,012,796,280	1,020,023,612	1,026,849,616	1,033,296,486	<b>1,039,385,185</b>
23.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>						
	<b>TAXES</b>						
24.	Income Tax (Before Interest Tax Shield)	(15,430,710)	(15,807,919)	(15,806,408)	(15,806,250)	(15,805,838)	(15,805,183)
25.	Municipal Tax	(2,969,690)	(2,969,690)	(2,969,907)	(2,969,915)	(2,969,923)	(2,969,932)
26.	Capital Tax	-	-	-	-	-	-
27.	Total Taxes	(18,400,400)	(18,777,609)	(18,776,315)	(18,776,165)	(18,775,761)	(18,775,115)
28.	PV of Total Taxes At Project Outset	(2,380,861)	(2,294,774)	(2,167,195)	(2,046,856)	(1,933,173)	(1,825,781)
29.	<b>ACCUMULATED PV OF TOTAL TAXES</b>	(292,817,691)	(295,112,465)	(297,279,660)	(299,326,516)	(301,259,689)	<b>(303,085,470)</b>
30.	<b>ACCUMULATED NPV AND PI</b>						
	Net Present Value	(3,660,959)	1,948,724	7,232,115	12,209,384	16,898,892	<b>22,547,856</b>
31.	Profitability Index	0.996	1.002	1.009	1.015	1.021	<b>1.0275</b>

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