

## ECONOMIC FEASIBILITY

### METHODOLOGY

1. The economic feasibility of the project has been determined using the methodology that adheres to the *“Ontario Energy Board Guidelines for Assessing and Reporting on Natural Gas System Expansion in Ontario”* and the EBO 188 *“Report of the Board”* dated January 30, 1998.
2. The economic feasibility evidence for the Bathurst Reinforcement project has been prepared based on the feasibility parameters of Enbridge Gas Distribution Inc. (“Enbridge” and/or the “Company”), pursuant to the Ontario Energy Board’s (the “Board”) Decision with Reasons in the Company’s EB-2017-0086 Rate application. The economic feasibility of the project has been calculated by discounting the incremental cash flows forecasted over the customer revenue horizon from the forecasted customer additions in years 2020 to 2029. The resulting Net Present Value (“NPV”) represents the economic feasibility of the project.

### KEY ASSUMPTIONS

#### Feasibility Parameters

3. The feasibility for the project has been prepared based on Enbridge’s latest feasibility parameters as detailed at page 4 of this exhibit.

#### Project Revenue Horizon

4. The project revenue horizon is 40 years.

#### Capital Costs

5. The project’s upfront reinforcement capital cost is estimated to be \$ 9,147,651 and includes the costs for mains, station, land rights, contingencies, and overheads. The detailed capital cost estimate is provided at Exhibit D, Tab 2, Schedule 1. The construction period is assumed to be nine months.

6. The estimated capital cost associated with attaching 1,868 customers is \$5,172,422. Included in this figure are the forecasted costs for distribution mains, services, meters and sales stations. The Company is not seeking approval for these costs in this application; they have been included in the feasibility analysis for completeness.

#### Summary

7. The project has a Profitability Index ("PI") of 0.857, as outlined in the DCF schedule on pages 5 to 8 of this exhibit.
8. The project meets the minimum project acceptance threshold as prescribed in EBO 188, and thus qualifies for approval by the Ontario Energy Board on the basis of this analysis.
9. A summary of the inputs and results of the feasibility is provided on page 3 of this exhibit, while pages 4 to 8 of this exhibit show detailed feasibility parameters and results.

SUMMARY OF INPUTS

Capital Investment

<u>2019</u>	
Reinforcement Main Station	\$9,055,284
Land Rights	\$79,367
	<u>\$13,000</u>
	\$9,147,651
<u>2020 - 2029</u>	
Future Service Cost	<u>\$5,172,422</u>
Total Capital	*\$14,320,073

*Note\*Values may not add up due to rounding*

Annual Volumes (m<sup>3</sup>)

Rate 1	3,949,650
Rate 6	<u>9,143,137</u>
Total	13,092,787

Customer Additions

Residential	1,675
Commercial	<u>193</u>
Total Customers	1,868

SUMMARY OF RESULTS

Net Present Value (NPV*)	(\$1,854,145)
Profitability Index (PI*)	0.86

\* NPV and PI calculations are carried out over 40 years

Bathurst Reinforcement  
 Economic Feasibility  
 Parameters and Results

<u>Col. 1</u>	<u>Col. 2</u>
Line No.	Description
<b>FEASIBILITY PARAMETERS</b>	
1.	Discount Rate 5.43%
2.	CCA Rate 6.00%
3.	Tax Rate 26.50%
4.	Customer Revenue Horizon (Years) 40
5.	Annual Volumes (m <sup>3</sup> ) 13,092,787
6.	Annual Distribution Revenues (Dollars) 1,418,211
7.	Annual O&M (Dollars) 148,447
8.	Capital Investment (Dollars) 14,320,073
Working Capital	
9.	O&M (Lead days) (10.90)
10.	Commodity (Lag days) 2.28
<b>FEASIBILITY RESULTS</b>	
11.	Net Present Value (Dollars) (1,854,145)
12.	Profitability Index 0.857

**Bathurst Reinforcement  
 Economic Feasibility - 40 year Horizon  
 DCF Analysis**

Line No.	Description	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
	<b>INCREMENTAL CAPITAL INVESTMENT</b>												
1.	Investment in Mains	(9,055,284)											
2.	Investment in Station	(79,367)											
3.	Investment in Land Rights	(13,000)											
4.	Investment in Future Services	(9,147,651)	(642,903)	(622,443)	(626,638)	(567,623)	(540,063)	(517,236)	(459,210)	(444,322)	(380,725)	(371,258)	(371,258)
5.	Net Investment Capital		(642,903)	(622,443)	(626,638)	(567,623)	(540,063)	(517,236)	(459,210)	(444,322)	(380,725)	(371,258)	(371,258)
6.	Working Capital		345	331	342	327	308	292	272	289	276	268	268
7.	Total Investment	(9,147,651)	(642,558)	(622,112)	(626,297)	(567,296)	(539,755)	(516,943)	(468,939)	(444,033)	(380,449)	(370,990)	(370,990)
8.	PV Of Total Investment At Project Outset	(12,932,412)											
9.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)
	<b>CCA TAX SHIELD</b>												
10.	CCA Tax Shield		76,567	153,489	154,212	154,455	153,995	153,163	151,737	149,817	147,388	144,525	144,525
11.	PV Of CCA Tax Shield At Project Outset		71,673	136,283	129,877	123,386	116,867	110,083	103,445	96,879	90,403	84,064	84,064
12.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>		71,673	207,956	337,633	461,220	577,907	687,990	791,435	886,314	978,717	1,062,600	1,062,600
	<b>INCREMENTAL OPERATING CASH FLOWS (BEFORE TAXES)</b>												
13.	Gas Distribution Revenue		97,564	290,260	478,352	651,229	807,971	956,965	1,095,289	1,211,207	1,303,724	1,380,344	1,380,344
14.	Gas Costs		(16,352)	(48,765)	(80,437)	(108,765)	(133,843)	(158,249)	(180,087)	(197,292)	(208,889)	(217,167)	(217,167)
15.	O&M Expenses		(9,201)	(27,311)	(45,203)	(62,327)	(78,211)	(93,372)	(107,388)	(120,378)	(132,256)	(143,096)	(143,096)
16.	Net Operating Cash (Before Taxes)		72,010	214,185	352,712	480,136	595,917	707,343	807,815	893,538	962,579	1,020,081	1,020,081
17.	PV of Net Operating Cash (Before Taxes) At Project Outset		67,408	190,174	297,054	383,557	451,546	508,390	550,718	577,805	590,412	593,478	593,478
18.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>		67,408	257,582	554,636	938,193	1,389,738	1,898,128	2,448,846	3,026,651	3,617,063	4,210,540	4,210,540
	<b>TAXES</b>												
19.	Income Tax (Before Interest Tax Shield)		(13,090)	(50,423)	(86,773)	(120,214)	(150,585)	(179,815)	(206,163)	(228,607)	(246,659)	(261,659)	(261,659)
20.	Municipal Tax		(22,614)	(23,909)	(25,266)	(26,500)	(27,673)	(28,797)	(29,842)	(30,869)	(31,791)	(32,689)	(32,689)
21.	Total Taxes		(35,704)	(74,332)	(112,039)	(146,714)	(178,258)	(208,612)	(236,005)	(259,476)	(278,450)	(294,348)	(294,348)
22.	PV of Total Taxes At Project Outset		(33,422)	(66,000)	(94,359)	(117,202)	(135,072)	(149,936)	(160,893)	(167,790)	(170,791)	(171,250)	(171,250)
23.	<b>ACCUMULATED PV OF TOTAL TAXES</b>		(33,422)	(99,422)	(183,781)	(310,983)	(446,055)	(595,991)	(756,884)	(924,674)	(1,095,465)	(1,266,716)	(1,266,716)
	<b>ACCUMULATED NPV AND PI</b>												
24.	Net Present Value	(12,932,412)	(12,826,753)	(12,566,296)	(12,233,724)	(11,843,983)	(11,410,822)	(10,942,285)	(10,449,016)	(9,942,122)	(9,432,098)	(8,925,787)	(8,925,787)
25.	Profitability Index		0.008	0.028	0.054	0.084	0.118	0.154	0.192	0.231	0.271	0.310	0.310

Note a) Construction period from April 1 2019 to December 31 2019 considered mid-term discounting. 0.5/9/12 = 0.375. April 1 2019 is project outset as time 0.  
 Note b) Year 1 Revenues start from January 1 2020 to December 31 2020. Year 2 Revenues start from January 1 2021 to December 31 2021, and so on.

**Bathurst Reinforcement  
 Economic Feasibility - 40 year Horizon  
 DCF Analysis**

Line No.	Description	Col. 1 Year 11	Col. 14 Year 12	Col. 15 Year 13	Col. 16 Year 14	Col. 17 Year 15	Col. 18 Year 16	Col. 19 Year 17	Col. 20 Year 18	Col. 21 Year 19	Col. 22 Year 20
	<b>INCREMENTAL CAPITAL INVESTMENT</b>										
1.	Investment in Mains	-	-	-	-	-	-	-	-	-	-
2.	Investment in Station	-	-	-	-	-	-	-	-	-	-
3.	Investment in Land Rights	-	-	-	-	-	-	-	-	-	-
4.	Investment in Future Services	-	-	-	-	-	-	-	-	-	-
5.	Net Investment Capital	-	-	-	-	-	-	-	-	-	-
6.	Working Capital	-	-	-	-	-	-	-	-	-	-
7.	Total Investment	-	-	-	-	-	-	-	-	-	-
8.	PV Of Total Investment At Project Outset	-	-	-	-	-	-	-	-	-	-
9.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)
	<b>CCA TAX SHIELD</b>										
10.	CCA Tax Shield	138,806	130,478	122,651	115,293	108,376	101,874	95,763	90,018	84,617	79,541
11.	PV Of CCA Tax Shield At Project Outset	76,600	68,298	60,886	54,297	48,412	43,166	38,488	34,316	30,597	27,281
12.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>	1,139,400	1,207,698	1,268,595	1,322,891	1,371,304	1,414,469	1,452,957	1,487,274	1,517,671	1,545,162
	<b>INCREMENTAL OPERATING CASH FLOWS (BEFORE TAXES)</b>										
13.	Gas Distribution Revenue	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211
14.	Gas Costs	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)
15.	O&M Expenses	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)
16.	Net Operating Cash (Before Taxes)	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502
17.	PV of Net Operating Cash (Before Taxes) At Project Outset	578,615	548,833	520,564	493,789	468,374	444,266	421,399	399,709	379,136	359,622
18.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>	4,789,155	5,337,988	5,859,573	6,352,362	6,820,736	7,265,002	7,686,401	8,086,110	8,465,246	8,824,868
	<b>TAXES</b>										
19.	Income Tax (Before Interest Tax Shield)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)
20.	Municipal Tax	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)
21.	Total Taxes	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)
22.	PV of Total Taxes At Project Outset	(166,592)	(158,017)	(149,884)	(142,170)	(134,852)	(127,911)	(121,327)	(115,082)	(109,159)	(103,541)
23.	<b>ACCUMULATED PV OF TOTAL TAXES</b>	(1,433,308)	(1,591,325)	(1,741,209)	(1,883,379)	(2,018,231)	(2,146,142)	(2,267,469)	(2,382,552)	(2,491,711)	(2,595,251)
24.	<b>ACCUMULATED NPV AND PI</b>	(8,437,164)	(7,978,051)	(7,546,454)	(7,140,537)	(6,758,603)	(6,399,083)	(6,060,523)	(5,741,580)	(5,441,005)	(5,157,643)
25.	Profitability Index	0.348	0.383	0.416	0.448	0.477	0.505	0.531	0.556	0.579	0.601

Note a) Construction period from April 1 2019 to December 31 2019, consider  
 Note b) Year 1 Revenues start from January 1 2020 to December 31 2020. Y

**Bathurst Reinforcement  
 Economic Feasibility - 40 year Horizon  
 DCF Analysis**

Line No.	Col. 1 Description	Col. 23 Year 21	Col. 24 Year 22	Col. 25 Year 23	Col. 26 Year 24	Col. 27 Year 25	Col. 28 Year 26	Col. 29 Year 27	Col. 30 Year 28	Col. 31 Year 29	Col. 32 Year 30
	<b>INCREMENTAL CAPITAL INVESTMENT</b>										
1.	Investment in Mains										
2.	Investment in Station										
3.	Investment in Land Rights										
4.	Investment in Future Services										
5.	Net Investment Capital										
6.	Working Capital										
7.	Total Investment										
8.	PV Of Total Investment At Project Outset										
9.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)
	<b>CCA TAX SHIELD</b>										
10.	CCA Tax Shield	74,769	70,284	66,067	62,104	58,378	54,876	51,584	48,489	45,580	42,846
11.	PV Of CCA Tax Shield At Project Outset	24,325	21,689	19,338	17,242	15,374	13,708	12,222	10,898	9,777	8,664
12.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>	1,569,477	1,591,166	1,610,504	1,627,746	1,643,120	1,656,828	1,669,050	1,679,947	1,689,664	1,698,327
	<b>INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)</b>										
13.	Gas Distribution Revenue	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211
14.	Gas Costs	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)
15.	O&M Expenses	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)
16.	Net Operating Cash (Before Taxes)	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502
17.	PV of Net Operating Cash (Before Taxes) At Project Outset	341,112	323,554	306,901	291,104	276,121	261,909	248,428	235,641	223,513	212,008
18.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>	9,165,980	9,489,534	9,796,435	10,087,539	10,363,660	10,625,568	10,873,996	11,109,638	11,333,150	11,546,158
	<b>TAXES</b>										
19.	Income Tax (Before Interest Tax Shield)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)
20.	Municipal Tax	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)
21.	Total Taxes	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)
22.	PV of Total Taxes At Project Outset	(88,211)	(83,156)	(79,499)	(75,408)	(71,526)	(67,845)	(64,353)	(61,040)	(57,984)	(55,140)
23.	<b>ACCUMULATED PV OF TOTAL TAXES</b>	(2,693,463)	(2,796,619)	(2,874,980)	(2,958,794)	(3,038,293)	(3,113,700)	(3,185,227)	(3,253,071)	(3,317,424)	(3,378,465)
	<b>ACCUMULATED NPV AND PI</b>										
24.	Net Present Value	(4,890,418)	(4,638,331)	(4,400,454)	(4,175,920)	(3,963,925)	(3,763,716)	(3,574,592)	(3,395,898)	(3,227,022)	(3,067,391)
25.	Profitability Index	0.622	0.641	0.660	0.677	0.693	0.709	0.724	0.737	0.750	0.763

Note a) Construction period from April 1 2019 to December 31 2019 consider  
 Note b) Year 1 Revenues start from January 1 2020 to December 31 2020. Y

**Bathurst Reinforcement  
 Economic Feasibility - 40 year Horizon  
 DCF Analysis**

Line No.	Description	Col. 1	Col. 33	Col. 34	Col. 35	Col. 36	Col. 37	Col. 38	Col. 39	Col. 40	Col. 41	Col. 43
		Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	
	<b>INCREMENTAL CAPITAL INVESTMENT</b>											
1.	Investment in Mains											-
2.	Investment in Station											-
3.	Investment in Land Rights											-
4.	Investment in Future Services											-
5.	Net Investment Capital											-
6.	Working Capital											-
7.	Total Investment											-
8.	PV Of Total Investment At Project Outset											-
9.	<b>ACCUMULATED PV OF TOTAL INVESTMENT</b>	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	(12,932,412)	<b>(12,932,412)</b>
	<b>CCA TAX SHIELD</b>											
10.	CCA Tax Shield	40,276	37,859	35,688	33,463	31,446	29,560	27,787	26,120	24,563	23,086	212,870
11.	PV Of CCA Tax Shield At Project Outset	7,725	6,887	6,141	5,476	4,882	4,353	3,881	3,461	3,086	2,744	25,387
12.	<b>ACCUMULATED PV OF CCA TAX SHIELD</b>	1,706,052	1,712,940	1,719,081	1,724,556	1,729,438	1,733,791	1,737,673	1,741,133	1,744,219	1,746,906	<b>1,769,606</b>
	<b>INCREMENTAL OPERATING CASH FLOWS (BEFORE TAXES)</b>											
13.	Gas Distribution Revenue	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211	1,418,211
14.	Gas Costs	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)	(221,261)
15.	O&M Expenses	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)	(148,447)
16.	Net Operating Cash (Before Taxes)	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502	1,048,502
17.	PV of Net Operating Cash (Before Taxes) At Project Outset	201,096	190,745	180,928	171,615	162,782	154,403	146,456	138,918	131,768	124,985	1,248,985
18.	<b>ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)</b>	11,746,254	11,937,000	12,117,927	12,289,542	12,452,324	12,606,727	12,753,183	12,892,101	13,023,869	13,148,854	<b>13,148,854</b>
	<b>TAXES</b>											
19.	Income Tax (Before Interest Tax Shield)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)	(269,190)
20.	Municipal Tax	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)	(32,689)
21.	Total Taxes	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)	(301,880)
22.	PV of Total Taxes At Project Outset	(57,899)	(54,919)	(52,092)	(49,411)	(46,867)	(44,455)	(42,167)	(39,997)	(37,938)	(35,985)	(3,840,193)
23.	<b>ACCUMULATED PV OF TOTAL TAXES</b>	(3,436,363)	(3,491,282)	(3,543,373)	(3,592,784)	(3,639,651)	(3,684,107)	(3,726,273)	(3,766,270)	(3,804,208)	(3,840,193)	<b>(3,840,193)</b>
24.	<b>ACCUMULATED NPV AND PI</b>	(2,916,469)	(2,773,754)	(2,638,778)	(2,511,089)	(2,390,301)	(2,276,000)	(2,167,829)	(2,065,447)	(1,966,532)	(1,854,145)	<b>(1,854,145)</b>
25.	Profitability Index	0.774	0.786	0.796	0.806	0.815	0.824	0.832	0.840	0.848	0.857	

Note a) Construction period from April 1 2019 to December 31 2019, consider  
 Note b) Year 1 Revenues start from January 1 2020 to December 31 2020. Y