EB-2022-0157

Enbridge Gas Inc. Application for Leave to Construct the Panhandle Regional Expansion Project

COMPENDIUM OF MATERIALS

ONTARIO GREENHOUSE VEGETABLE GROWERS

EXHIBIT K._____

Calculation of Revenue (Transmission Margins)

PREP - Panhandle Regional Expansion Project
InService Date: Nov-01-2024

Line	Project Year ($000's)		1	2	3	4	5	6	7	8	9	10 +
	Transmission costs are recovered from Contract rate classes based on Firm Contract Demand (CD)											
	The deemed incremental revenue is based on the capacity created by the Project											
	Contract Methodology: Total CD * 12 *Transmission Margin											
1	Transmission Margin $/M3 / month	0.180895										
2	Contract Demand 10^3m^3/month		1,623	2,762	3,087	3,412	3,737	4,003	4,003	4,003	4,003	4,003
3	Transmission Margin		$3,522	$5,997	$6,701	$7,406	$8,111	$8,690	$8,690	$8,690	$8,690	$8,690
	General Service Transmission Margin = Volumes * Transmission Margin											
4	Transmission Margin $ / M3 consumed	0.022334										
5	Volume 10 ^3 M^3		2,218	6,610	10,912	15,092	19,120	23,000	24,906	24,906	24,906	24,906
6	Transmission Margin		$50	$148	$244	$337	$427	$514	$556	$556	$556	$556
7	Total Transmission Margin		$3,572	$6,144	$6,945	$7,743	$8,538	$9,204	$9,246	$9,246	$9,246	$9,246

The transmissions margins are Jan 2023 rates

Panhandle Regional Expansion Project
DCF Analysis
InService Date: Nov-01-2024

Project Year ($000's)	**Project Total**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Operating Cash Flow											
Revenue	356,524	3,572	6,144	6,945	7,743	8,538	9,204	9,246	9,246	9,246	9,246
Expenses:											
O & M Expense	(5,060)	(127)	(127)	(127)	(127)	(127)	(127)	(127)	(127)	(127)	(127)
Municipal Tax	(34,200)	(855)	(855)	(855)	(855)	(855)	(855)	(855)	(855)	(855)	(855)
Income Tax	(80,857)	1,856	(692)	(1,580)	(1,792)	(2,003)	(2,179)	(2,190)	(2,190)	(2,190)	(2,190)
Net Operating Cash Flow	(120,117)	4,446	4,471	4,383	4,970	5,554	6,043	6,075	6,075	6,075	6,075
Capital											
Incremental Capital	(289,224)	(243,662)	(44,894)	(669)	-	-	-	-	-	-	-
Change in Working Capital	(6)	(6)	-	-	-	-	-	-	-	-	-
Total Capital	(289,230)	(243,668)	(44,894)	(669)	-	-	-	-	-	-	-
CCA Tax Shield											
CCA Tax Shield	71,580	4,321	8,024	6,902	5,934	5,127	4,451	3,884	3,404	2,997	2,650
Net Present Value											
PV of Operating Cash Flow	89,954	4,321	4,105	3,803	4,074	4,300	4,420	4,198	3,966	3,746	3,539
PV of Capital	(286,677)	(243,668)	(42,413)	(597)	-	-	-	-	-	-	-
PV of CCA Tax Shield	46,796	4,201	7,368	5,988	4,863	3,969	3,256	2,684	2,222	1,848	1,544
Total NPV by Year	(149,927)	(235,146)	(30,939)	9,194	8,937	8,269	7,676	6,881	6,188	5,594	5,083

Project NPV	**(149,927)**
Project PI	**0.48**

ENBRIDGE GAS INC.

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers (OGVG)

INTERROGATORY

Reference:

EB-2022-0157 Exhibit E Tab 1 Schedule 2 Page 1 of 1
EB-2022-0157 Exhibit E Tab 1 Schedule 3 Page 1 of 1
EB-2022-0157 Exhibit E Tab 1 Schedule 4 Page 1 of 1
Exhibit E Tab 1 Schedule 5

Preamble:

EGI provides an estimate of the costs for the proposed Panhandle Regional Expansion Project (the "Project") and the transmission related revenue stream in relation to the new capacity provided by the proposed Project to provide a stage 1 discounted cash flow analysis for the Project. OGVG is interested in whether, as a part of the stage 2 and/or 3 analyses of the impacts of the project, there is a net benefit of the Project from any net incremental storage and transmission revenue resulting from the Project.

Question(s):

a) Please provide, on a best-efforts basis, the incremental storage related costs, if any, made necessary because of the new load associated with the new capacity created by the proposed Project.

b) Please provide, on a best-efforts basis, the incremental distribution related costs made necessary because of the need to connect the new load associated with the new capacity created by the Project.

c) Please provide a calculation of the incremental storage revenue associated with the new capacity created by the Project in the same format as the transmission revenue calculated in Exhibit E Tab 1 Schedule 4 Page 1 of 1.

d) Please provide a calculation of the incremental distribution revenue associated with the new capacity created by the Project in the same format at the transmission revenue calculated in Exhibit E Tab 1 Schedule 4 Page 1 of 1.

e) Please provide a discounted cash flow analysis for the Project in the format provided in Exhibit E Tab 1 Schedule 5 that includes the storage and distribution related costs and revenues provided in answers a) to d). In providing the analysis please:

i) provide the contract customer revenue and general service revenue on separate lines, and
ii) provide the analysis in excel format.

Response:

a) Since the customers associated with the Project are all located in Union South, the Union rate zone Gas Supply Plan will incur no additional storage service costs resulting from the load associated with the Project.

b) Enbridge Gas is not able to provide incremental distribution facilities costs as distribution facilities have not yet been designed or constructed for the Project.

c) Please see Attachment 1 to this response.

d) Please see Attachment 2 to this response.

e) Enbridge Gas is unable to provide the requested analysis as the information required to complete the analysis (i.e., distribution facilities costs) is not available. Please see part b) above.

Calculation of Revenue (Storage Margins)

PREP - Panhandle Regional Expansion Project
InService Date: Nov-01-2024

Line	Project Year ($000's)		1	2	3	4	5	6	7	8	9	10
	Storage costs are recovered from Contract rate classes based on Firm Contract Demand (CD)											
	The deemed incremental revenue is based on the capacity created by the Project											
	Contract Methodology: Total CD * 12 * Storage Margin											
1	Storage Margin $/M3 / month	0.039654										
2	Contract Demand 10^3m^3/month		1,623	2,762	3,087	3,412	3,737	4,003	4,003	4,003	4,003	4,003
3	Storage Margin		$772	$1,314	$1,469	$1,624	$1,778	$1,905	$1,905	$1,905	$1,905	$1,905
	General Service Storage Margin = Volumes * Storage Margin											
4	Storage Margin $ / M3 consumed	0.008285										
5	Volume 10 ^3 M^3		2,218	6,610	10,912	15,092	19,120	23,000	24,906	24,906	24,906	24,906
6	Storage Margin		$18	$55	$90	$125	$158	$191	$206	$206	$206	$206
7	Total Storage Margin		$790	$1,369	$1,559	$1,749	$1,936	$2,096	$2,111	$2,111	$2,111	$2,111

The Storage margins are Jan 2023 rates

Calculation of Revenue (Distribution Margins)

PREP - Panhandle Regional Expansion Project
InService Date: Nov-01-2024

Line	Project Year ($000's)		1	2	3	4	5	6	7	8	9	10
	Distribution costs are recovered from Contract rate classes based on Firm Contract Demand (CD)											
	The deemed incremental revenue is based on the capacity created by the Project											
	Contract Methodology: Total CD * 12 * Distribution Margin											
1	Distribution Margin $/M3 / month	0.097333										
2	Contract Demand 10^3m^3/month		1,623	2,762	3,087	3,412	3,737	4,003	4,003	4,003	4,003	4,003
3	Distribution Margin		$1,895	$3,227	$3,606	$3,985	$4,364	$4,676	$4,676	$4,676	$4,676	$4,676
	General Service Distribution Margin = Volumes * Distribution Margin											
4	Distribution Margin $ / M3 consumed	0.118892										
5	Volume 10 ^3 M^3		2,218	6,610	10,912	15,092	19,120	23,000	24,906	24,906	24,906	24,906
6	Distribution Margin		$264	$786	$1,297	$1,794	$2,273	$2,735	$2,961	$2,961	$2,961	$2,961
7	Total Distribution Margin		$2,159	$4,012	$4,903	$5,779	$6,638	$7,410	$7,637	$7,637	$7,637	$7,637

The Distributions margins are Jan 2023 rates

ENBRIDGE GAS INC.

Answer to Interrogatory from
Ontario Greenhouse Vegetable Growers (OGVG)

INTERROGATORY

Reference:

EB-2022-0157 Exhibit E Tab 1 Schedule 7 Pages 5 to 7.

Preamble:

EGI provides an analysis showing that the net present value of the economic benefits associated with the $289.2M capital spending associated with the Project is $257M and 1,093 jobs created.

EGI provides evidence that similar economic benefits will be created as a result of the approximately $4.5 Billion in capital spending that will be enabled as a result of the Project, including the creation of approximately 6,900 jobs, but does not attempt to quantify the present value of the benefit.

Question(s):

a) Please comment on the magnitude of the economic benefits to Ontario that are likely to be realized because of the $4.5 Billion in capital spending expected to be enabled by the Project, relative to the $257M in forecast economic benefits associated with the relatively smaller Project cost of $289.2M. For example, does EGI believe it is reasonable to expect that the economic benefits of the $4.5 Billion in capital spending enabled by the Project will be at least equal to if not exceed the $257M in economic benefits resulting from the Project spending?

b) Please confirm that it is EGI's evidence that, in the absence of the Project, the projected capital spending of $4.5 Billion and forecast creation of 6,900 jobs will not occur.

c) To what extent does EGI believe that the 25% of customers that did not provide relevant information in response to the updated 2023 EOI nevertheless represent demand for new capacity.

Response:

a) Yes, Enbridge Gas believes it is reasonable to expect that the economic benefits of the $4.5 billion in capital spending enabled by the Project will be at least equal to if not greater than the $257 million in economic benefits resulting from the construction of the Project.

b) Confirmed.

c) All customers who responded to the 2023 EOI, including those that did not provide economic development information related to their incremental natural gas needs, were included in the assessment of incremental natural gas demand requirements underpinning the need for the Project.

Table 1: Panhandle System Design Day Demand Forecast

	Historical Actuals (TJ/d)			FORECAST (TJ/d)								
	Winter 19/20	Winter 20/21	Winter 21/22	Winter 22/23	Winter 23/24	Winter 24/25	Winter 25/26	Winter 26/27	Winter 27/28	Winter 28/29	Winter 29/30	Winter 30/31
General Service Firm	317	308	310	306	308	310	312	314	315	317	319	320
Greenhouse - Firm Contract Only	159	179	203	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Power Generators - Firm Contract only	105	106	106	106	106	163	195	195	195	195	195	195
Large Commercial/Industrial - Firm Contract only	59	62	52	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total System Demand Forecast	**640**	**656**	**672**	**698**	**730**	**802**	**849**	**863**	**878**	**892**	**906**	**921**
General Service Firm	19	-9	2	-4	2	2	2	2	2	2	2	1
Greenhouse - Firm Contract Only	28	20	24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Power Generators - Firm Contract only	-22	1	0	-1	0	57	32	0	0	0	0	0
Large Commercial/Industrial - Firm Contract only	-3	3	-10	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Incremental Demand Forecast	**21**	**16**	**16**	**26**	**32**	**72**	**47**	**15**	**14**	**14**	**14**	**14**
Total Incremental Demand Forecast (Cumulative)				**26**	**58**	**130**	**177**	**192**	**206**	**220**	**235**	**249**

NextStar.[19] Natural gas plays a critical role in meeting the energy needs of the EV, EV battery and EV battery component manufacturing sector.

65. Since the NextStar EV battery plant was announced, Enbridge Gas has been responding to multiple confidential inquiries from EV battery component manufacturers that have expressed interest in the Windsor-Essex region and the availability of natural gas capacity. Demands for incremental natural gas capacity are expected in this region as participants in the EV component supply chain desire to situate themselves in close proximity to the new NextStar production facility. Due to the preliminary nature of these discussions, these demands have not been included in the demand forecast for the Project.

66. A letter of support for the Project from Stellantis can be found at Attachment 6 to this Exhibit. As discussed in paragraph 18 above, Enbridge Gas has since finalized a contract with NextStar for service commencing in September 2023, using a portion of the remaining Panhandle System existing capacity. However, the broader system benefits of the proposed Project outlined by Stellantis in Attachment 6 including access to reliable and affordable natural gas supply to support future investments and developments in the local economy remain relevant. /U

E. Project Timing and Enbridge Gas Growth Plans

67. The Project has previously been identified within Enbridge Gas's Asset Management Plan ("AMP"), as filed with the OEB. More particularly, as part of the Company's 2022 Rates (Phase 2) proceeding, Enbridge Gas filed an AMP Addendum which identified the proposed Project as a requirement to meet the growing Design Day demand of the Panhandle System:

[19] https://www.stellantis.com/en/news/press-releases/2022/march/stellantis-and-lg-energy-solution-to-invest-over-5-billion-cad-in-joint-venture-for-first-large-scale-lithium-Ion-battery-production-plant-in-canada

ENBRIDGE GAS INC.

Answer to Interrogatory from
OEB Staff ("STAFF")

INTERROGATORY

Reference:

Exhibit C, Tab 1, Schedule 1, pages 23-24; Exhibit C, Tab 1, Schedule 1, Attachment 2; Greenhouse Energy Profile Study (IESO website).

Preamble:

Enbridge Gas indicated that an Enhanced Targeted Energy Efficiency IRPA (ETEE) for general service customers was assessed and rejected due to insufficient demand reduction potential.

Question:

a) Why was the scope of the analysis for this energy efficiency IRPA limited to general service customers, as opposed to the contract customers who are driving incremental demand growth?

b) Has Enbridge Gas considered energy efficiency IRPAs for contract customers to avoid or defer the potential second phase of transmission expansion in this region?

c) Given that all but one of the responses to the Expression of Interest for additional natural gas capacity came from greenhouses, what is Enbridge Gas doing (through its DSM programs), to mitigate the growth in natural gas demand from the greenhouse sector? Has Enbridge adjusted its DSM program mix or outreach strategy to focus more on this sector?

d) Please describe how Enbridge Gas has made use of the analysis in the 2019 "Greenhouse Energy Profile Study" that Enbridge Gas supported.

Response

a) The Enhanced Targeted Energy Efficiency IRP alternative focused on the general service customers in the Project area because the potential for incremental energy efficiency programming-related reductions for contract customers (who are already active participants in Enbridge Gas's DSM programming and sophisticated energy consumers) are limited and would not provide enough capacity to reduce, defer or avoid the Project. In addition, the energy efficiencies gained through such conservation activities typically reduce annual consumption but may have limited impact on peak hour needs.

b) Enbridge Gas will consider all IRP alternatives to reduce, avoid or defer the potential second phase of transmission expansion in this region as part of its annual review and assessment of identified system needs/constraints and projects in the Asset Management Plan.

c) Enbridge Gas continuously evolves and adjusts its DSM program design and implementation approaches in response to customer and market needs. Some of the adjustments Enbridge Gas has made in recent years in response to growth in the greenhouse sector includes:

- Increased the number of utility Energy Solutions Advisors focused on the greenhouse sector, from four to six; and
- Introduced new limited-time incentive offers of 20-50% more incentive per greenhouse project.

Enbridge Gas Energy Solutions Advisors provide greenhouse customers with project assistance and are continuously exploring and identifying new ways that greenhouse customers/operators can implement energy efficient process improvements.

d) As discussed in part a) above, the Enhanced Targeted Energy Efficiency IRP alternative assessed focused on general service customers only, served by the Panhandle system. Therefore, the 2019 "Greenhouse Energy Profile Study" was not relevant to the assessment.