

EB-2022-0157
Enbridge Panhandle Expansion Project

Interrogatories of Environmental Defence

September 1, 2022

Interrogatory # 1-ED-1

Reference: Ex. B, Tab 1, Schedule 1.

Question(s):

- (a) Please provide a copy of table 1 on page 11 with the figures converted to m³/d.
- (b) Please provide conversion factors for TJ to m³.
- (c) On page 14, Enbridge states: “The greenhouse sector does not currently have a viable economic alternative to replace natural gas for heat and CO₂ production.” Please provide an analysis comparing the cost of heating a greenhouse with gas versus a high-efficiency heat pump. Please provide this analysis over a 15 year time horizon, including the federal government’s planned increases to the carbon price.

Interrogatory # 1-ED-2

Reference: Ex. B, Tab 1, Schedule 1.

Preamble: Enbridge states as follows on page 9: “Approximately 45% of the firm demand served by the Panhandle System is for general service customers. Enbridge Gas forecasts that general service customer demand in the Panhandle Market will increase by approximately 3.7% between winter 2021/2022 and 2030/2031. Incremental demands from general service customers make up approximately 2.5% of the incremental capacity of the proposed Project.”

Questions(s):

- (a) Please provide a table listing the forecast number of general service customers, broken down by customer type, and showing the per-customer average demand for each customer type, for 2021/2022 and 2030/2031, for the relevant area.
- (b) Please provide the customer attachment forecast for the 2021/2022 and 2030/2031, including a breakdown by customer type and a breakdown by new construction versus conversion of existing building.

Interrogatory # 1-ED-3

Reference: Ex. B, Tab 1, Schedule 1.

Preamble: On page 15, Enbridge states: “As noted in the IESO’s December 2021 Annual Planning Outlook, the Brighton Beach Generating Station (“BBGS”) will play a particularly critical role in meeting localized power generation needs between 2024 and 2028.¹¹ With demand for electricity continuing to grow, it is expected that the BBGS will continue to play a significant role in meeting the region’s electricity supply needs beyond 2028. It is Enbridge Gas’s understanding that these near-term and longer-term needs have driven the request for incremental firm service from this customer.”

Question(s):

- (a) Please reproduce the table 1 on page 11 with an additional row to indicate the historical and forecast design day demand attributable to power generation.
- (b) Seeing as Ontario is a summer peaking jurisdiction, please explain how Enbridge determines the design day demand associated with power generation.
- (c) Please provide the actual demand from power generation on the three highest demand days in each of the last ten years for the project area.
- (d) Please provide the design day demand from power generation for the last ten years as assumed in Enbridge’s gas supply planning processes.

Interrogatory # 1-ED-4

Reference: Exhibit B, Tab 2

Question(s):

- (a) Please provide excerpts from Enbridge most recent gas supply plan that are relevant to this proceeding.
- (b) Please explain how the demand described in this application is reflected in the gas supply plan.

Interrogatory # 2-ED-5

Reference: Exhibit C, Tab 1, Schedule 1

Question(s):

- (a) Please provide list of all references to this project in previous AMPs and other capital planning documents.
- (b) Please indicate when Enbridge first anticipated the need for this project.
- (c) Please indicate when Enbridge first considered potential IRPAs.
- (d) Please describe the steps taken by Enbridge prior to the IRP proceeding decision to comply with previous directives of the OEB regarding IRP.

Interrogatory # 2-ED-6

Reference: Exhibit C, Tab 1, Schedule 1

Question(s):

- (a) Please reproduce table 1 on page 11 of Ex. B, Tab 1, Schedule 1, adding rows with the following additional information:
 - i. The potential capacity that could be feasibly sourced from Ojibway, in terms of the TJ/d at Ojibway and the TJ/d at the Leamington-Kingsville area;
 - ii. The potential capacity that could be cost-effectively sourced from Ojibway, in terms of the TJ/d at Ojibway and the TJ/d at the Leamington-Kingsville area;
 - iii. The potential capacity that could be obtained through targeted cost-effective energy efficiency programming;
 - iv. The potential capacity that could be obtained via demand response contracts (i.e. incenting customers to switch to interruptible service); and
 - v. The forecast demand from power generation.
- (b) Please provide a table showing the annual cost for items (i) to (iv) above.

Interrogatory # 2-ED-7

Reference: Exhibit C, Tab 1, Schedule 1, Attachment 2

Question(s):

- (a) Please provide all data sheets, assumptions, and calculations underlying the Posterity Group analysis, including live spreadsheets where possible.
- (b) How did the Posterity Group generate peak hour savings figures based on the 2019 Achievable Potential Study, which focused on annual savings?
- (c) Posterity Group found that the “[p]eak hour reduction from demand side management is approximately 6,900 m³/hr by winter 2029/2030.” Please provide an annual breakdown up to 2029/2030.
- (d) Posterity Group found that the “[p]eak hour reduction from demand side management is approximately 6,900 m³/hr by winter 2029/2030.” Please ask the Posterity Group to provide the corresponding annual savings (m³) and peak day (m³/d) savings.
- (e) For the energy efficiency programming described by the Posterity Group, please provide (i) the lifetime gas savings (m³), (ii) the lifetime avoided tonnes of GHGs (t CO₂e), (iii) the approximate value of the avoided gas, and (iv) the approximate value of the avoided carbon emissions (accounting for carbon price escalation).
- (f) Please compare the Posterity “mirror model” with the 2019 Achievable Potential Study. Does one find that there are greater potential savings than the other? If yes, by how much (%) and why?
- (g) Please ask the Posterity Group to estimate the potential based on double the incentives, including an appropriate adjustment to the free ridership rate.
- (h) Why does the Posterity Group provide figures in based on the peak hour whereas the rest of the application uses design day figures?
- (i) Please provide all communications between Enbridge and Posterity Group regarding this matter.

Interrogatory # 3.3-ED-8

Reference: Exhibit E, Tab 1, Schedule 5

Question(s):

- (a) Please provide the DCF analysis in a live excel format.
- (b) Please re-calculate the project NPV and PI based on there being zero revenue attributable to the expansion project (i) from 2035 onward, (ii) from 2040 onward, and (iii) from 2050 onward. We are not asking Enbridge to opine on these figures as if they are likely scenarios.
- (c) If the project is built but demand does not increase above the current capacity of 713 TJ/d, does Enbridge agree that there would be no incremental revenue attributable to the project? If Enbridge disagrees, please explain.
- (d) If the project is built, demand initially increases beyond 713 TJ/d, but then declines to below 713 TJ/d from 2035 onward, does Enbridge agree that there would be no incremental revenue attributable to the project from 2035? If Enbridge disagrees, please explain.
- (e) In light of federal decarbonization mandates, what is the probability that the design day demand of the panhandle system is at or below 713 TJ/d in (i) 2035, (ii) 2040, or (iii) 2050. Please provide an answer on a best estimate basis.

Interrogatory # 3.3-ED-9

Reference: Exhibit E, Tab 1, Schedule 1

Question(s):

- (a) Please confirm that Canada's 2030 Emissions Reduction Plan includes a target for carbon emissions associated with buildings to decline by 41% by 2030 from 2019 levels (to 53 CO₂e from 91 CO₂e) and that it targets a 22% reduction by 2026 from 2019 levels (to 71 CO₂e from 91 CO₂e).¹ If not, please explain.
- (b) Please confirm that Canada's 2030 Emissions Reduction Plan has formal legal status under s. 9 of the *Canadian Net-Zero Emissions Accountability Act* in relation to the legally binding targets under that *Act*.² If not, please explain.
- (c) Please complete the following table:

Demand Reduction Scenarios					
	2019 Levels	Reduced by 5%	Reduced by 10%	Reduced by 22%	Reduced by 41%
Annual demand for the relevant area (TJ)					

¹ <https://www.canada.ca/en/environment-climate-change/news/2022/03/2030-emissions-reduction-plan--canadas-next-steps-for-clean-air-and-a-strong-economy.html>

² *Canadian Net-Zero Emissions Accountability Act*, s. 9.

Design day demand for the relevant area (TJ/d)					
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- (d) Please complete the table above but in m3 figures instead of joules.
- (e) Approximately what percent of Enbridge customer demand is used for buildings?
- (f) Please confirm that Canada has committed to net-zero emissions from electricity generation by 2035. If not, please explain.
- (g) Please confirm that Canada's 2030 Emissions Reduction Plan includes its commitment to net-zero emissions from electricity generation by 2035. If not, please explain.

Interrogatory # 3.3-ED-10

Reference: Exhibit E, Tab 1, Schedule 1

Preamble:

For the below questions, please make and state assumptions as needed. Please also include any necessary caveats.

Question(s):

- (a) On a best efforts basis, please estimate the impact on the gas demand in the project area if Canada achieves (or at least comes close to achieving) its 2030 Emissions Reduction Plan, including its a target for carbon emissions associated with buildings to decline by 41% by 2030 from 2019 levels.
- (b) Please reflect the answer to (a) in a reproduction of table 1 on page 11 of Ex. B, Tab 1, Schedule 1.
- (c) Please estimate how the answer to (a) would impact the project economics, including the NPV and PI.
- (d) On a best efforts basis, please estimate the impact on the gas demand in the project area if Canada achieves its legislated mandate 2050 net zero target.
- (e) Please reflect the answer to (c) in a reproduction of table 1 on page 11 of Ex. B, Tab 1, Schedule 1.
- (f) Please estimate how the answer to (c) would impact the project economics, including the NPV and PI.

Interrogatory # 3.3-ED-11

Reference: Exhibit E, Tab 1, Schedule 1

Question(s):

- (a) Please reproduce table 1 on page 11 of Ex. B, Tab 1, Schedule 1, adding rows showing:

- i. A breakdown of the demand based on customer classes (residential, commercial, and industrial); and
- ii. A breakdown of demand for forecast years based on that from new versus existing customers.

Please also add three columns to the left with three additional years of historical figures.

Interrogatory # 3.3-ED-12

Reference: Exhibit E, Tab 1, Schedule 1

Question(s):

- (a) What is the expected lifetime of the proposed pipeline?
- (b) When would the proposed pipeline be fully depreciated?
- (c) What will the undepreciated balance of the proposed pipeline costs be in (i) 2035, (ii) 2040, and (iii) 2050?
- (d) Has Enbridge conducted an analysis to assess the likelihood, if any, that the proposed pipeline will be stranded or underutilized before the end of its lifetime? If yes, please file said analysis.
- (e) Please estimate the probability (if any) that the proposed pipeline will be stranded or underutilized before the end of its lifetime. Please provide the response as a probability (%) or a range of probabilities. For instance, if there is no chance, please indicate the probability as 0%.

Interrogatory # 3.3-ED-13

Reference: Exhibit E, Tab 1, Schedule 1

Question(s):

- (a) How many cubic metres of gas is associated with the incremental revenue included in the stage 1 DCF calculations?
- (b) How many tonnes of carbon emissions will be emitted due to the combustion of those m3s of gas?
- (c) Does Enbridge believe that carbon emissions are a public interest consideration relevant to stage 3 of the test?

Interrogatory # 3.3-ED-14

Reference: Exhibit E, Tab 1, Schedule 6

Question(s):

- (a) Please provide all spreadsheets and detailed calculations underlying Exhibit E, Tab 1, Schedule 6. Please include live excel spreadsheets.

- (b) Please provide Enbridge's best forecast of gas prices starting at the in-service date for (i) 20 years and (ii) 40 years.
- (c) Please approach the gas supply group and the DSM group and ask them to provide their best forecast of gas prices.
- (d) Please provide ICF's latest annual gas price forecast. As this is proprietary, this can be provided confidentially. Please also provide the forecast as percent increases and apply those values to the prices in the relevant area.
- (e) Please describe how Enbridge generated its electricity price, including underlying calculations.
- (f) Please provide Enbridge's best forecast of electricity prices starting at the in-service date for (i) 20 years and (ii) 40 years.
- (g) Please justify the assumption that the carbon tax will remain at \$170 from 2031 to 2063. How confident is Enbridge in this prediction?
- (h) Please confirm that Enbridge estimated the cost of electric heating on the assumption that resistance heating is used, not a high efficiency heat pump.
- (i) Please describe the methodology used to generate Exhibit E, Tab 1, Schedule 6. Please also how this meets the requirements in E.B.O. 134 with specific references to the relevant sections of E.B.O. 134.
- (j) Please confirm whether Enbridge used customer-facing prices or avoided costs in this analysis. Please provide Enbridge's understanding of what E.B.O. 134 requires in this regard.
- (k) Please confirm that in the stage 2 analysis in EB-2016-0186 (Panhandle Reinforcement Project), which was filed in June of 2016, Union Gas used the following assumption: "Gas and alternative fuel prices are the average posted prices for the 12 month period June 2015 to May 2016."

Interrogatory # 3.3-ED-15

Reference: Exhibit E, Tab 1, Schedule 6

Question(s):

- (a) Please recalculate Exhibit E, Tab 1, Schedule 6 with the following assumptions and provide both the output (i.e. Schedule 6) and the underlying excel spreadsheet:
 - i. Gas and alternative fuel prices are the average posted prices for the most recent 12 month period; and
 - ii. Use of electricity is on average three times as efficient as the use of gas (e.g. cold climate heat pump versus gas furnace).
- (b) Please recalculate Exhibit E, Tab 1, Schedule 6 with the following assumptions and provide both the output (i.e. Schedule 6) and the underlying excel spreadsheet:
 - i. Gas and alternative fuel prices are the average posted prices for the most recent 12 month period;
 - ii. Use of electricity is on average three times as efficient as the use of gas (e.g. cold climate heat pump versus gas furnace); and
 - iii. Carbon prices increase by \$15/tonne to 2035 and increase with inflation thereafter.

Interrogatory # 3.3-ED-16

Reference: Exhibit E, Tab 1, Schedule 1

Question(s):

- (a) Please provide an estimate of the percent of the growth in demand from greenhouses attributable to vegetable growing versus marijuana growing.