Elson
Advocacy

October 1, 2020

BY EMAIL AND RESS

Ms. Christine Long
Board Secretary
Ontario Energy Board
2300 Yonge Street, Suite 2700, P.O. Box 2319
Toronto, Ontario M4P 1E4

Dear Ms. Long:

Re: EB-2020-0136 – Enbridge Gas Inc. – Toronto Lakeshore Pipeline

Please see the enclosed interrogatories of Environmental Defence in the above proceeding.

Yours truly,

Kent Elson

cc: Parties in the above proceeding

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EB-2020-0136
Enbridge – Toronto Lakeshore Pipeline – Leave to Construct

Interrogatories of Environmental Defence

Need

Interrogatory 1

Reference: Exhibit B, Schedule 1, Page 1

> "In 2016 and 2018, Inline Inspections (ILI) using a robotic crawler tool were performed on approximately 1.9 km of the 4.5 km section of pipeline being replaced by the Project."

Questions:

(a) Please provide the inspection reports prepared as a result of these 2016 and 2018 inline inspections.

(b) Has Enbridge conducted other inline inspections of the Cherry to Bathurst segment in the past 20 years? If yes, please describe each inspection, summarize the results, and file any inspection reports prepared therefrom.

(c) Has Enbridge conducted other inline inspections of the Kipling Oshawa Loop other than the Cherry to Bathurst segment in the past 20 years? If yes, please describe each inspection, summarize the results, and file any inspection reports prepared therefrom.

(d) Has Enbridge conducted other inspections of the Cherry to Bathurst segment in the past 20 years other than "inline" inspections? If yes, please describe each inspection, summarize the results, and file any inspection reports prepared therefrom.

Pipe Size and IRP

Interrogatory 2

Reference: Exhibit B, Schedule 1, Pages 17-25

Preamble:

> Exhibit B, Schedule 1, Page 19 states: "Enbridge Gas ran scenarios to determine if the C2B segment could be downsized and therefore lower the overall cost of the Project. Three scenarios were examined. The scenarios were selected as they represent situations where gas supply from a particular source is cut to the KOL. Each scenario examined the performance of the KOL assuming a smaller pipe size, NPS 16, is constructed for the C2B segment, in order to determine if the KOL could maintain gas supply under

conditions that the KOL has either experienced in the past or to simulate a major supply disruption."

Questions:

(a) Please list and describe each instance in which the three scenarios occurred. Please include the date and temperature for each instance.

(b) An NPS 20 pipe would ensure redundancy in the event of a failure of one of the pipelines feeding it. What percentage of Enbridge's pipeline system has this level of redundancy built in? Please explain. Please provide a map illustrating the answer.

(c) An NPS 20 pipe would ensure redundancy in the event of a failure of one of the pipelines feeding it. What percentage of Enbridge's pipeline system has this level of redundancy built in? Please explain. Please provide a map illustrating the answer.

(d) Please summarize the results of the scenario analysis in the following table:

Summary of Pipe Downsizing (NPS 16) Scenario Analysis		
	Pressure required	Pressure with NPS 16
Scenario 1: No Feed From MSL Line		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 2: No Feed From West Mall Feeder Station		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 3: Isolation of DV Line		
NPS 20 P_{low} at Station B		

(e) Please redo the scenario analysis on the assumption that all cost-effective DSM had been implemented in the area served by the pipeline since 2015. Please make and state assumptions as necessary. Please state caveats as necessary. Please estimate the cost-effective DSM potential based on the 2016 or 2019 DSM potential studies. Please provide the estimated reduction in peak demand. Please summarize the results of the updated scenario analysis in the following table:

Summary of Pipe Downsizing (NPS 16) Scenario Analysis Assuming all Cost-Effective DSM Since 2015 (Per Potential Study)		
	Pressure required	Pressure with NPS 16
Scenario 1: No Feed From MSL Line		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 2: No Feed From West Mall Feeder Station		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 3: Isolation of DV Line		
NPS 20 P_{low} at Station B		

By answering this question, Enbridge is not acknowledging that the assumptions are reasonable. The analysis is intended to be illustrative.

(f) Please redo the scenario analysis on the assumption that all cost-effective DSM per EB-2012-0451, EB-2012-0433, EB-2013-0074, Exhibit L.EGD.ED.1 had been achieved between 2015 and 2020.[1] Please make and state assumptions as necessary. Please state caveats as necessary. Please estimate the cost-effective DSM potential based on the 2016 or 2019 DSM potential studies. Please summarize the results of the updated scenario analysis in the following table:

Summary of Pipe Downsizing (NPS 16) Scenario Analysis Assuming all Cost-Effective DSM (Toronto Specific, per EB-2012-0451 Evidence)		
	Pressure required	Pressure with NPS 16
Scenario 1: No Feed From MSL Line		
NPS 20 P_{low} at West Mall Tie-In (psig)		

[1] Enerlife Consulting, *Enbridge Gas Pipeline Hearing EB-2012-0451 Evidence concerning Demand Side Management Potential in GTA* (Note: the potential is summarized in Table 1)

NPS 20 P_{low} in Downtown (psig)		
Scenario 2: No Feed From West Mall Feeder Station		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 3: Isolation of DV Line		
NPS 20 P_{low} at Station B		

By answering this question, Enbridge is not acknowledging that the assumptions are reasonable. The analysis is intended to be illustrative.

If the area covered by Exhibit L.EGD.ED.1 differs from the area served by the proposed project, please assume the DSM potential is proportional between the two areas.

(g) Please redo the scenario analysis on the assumption that Redpath Sugar and the Portlands Energy Centre have no demand during the period of upstream interruption. Please make and state assumptions as necessary. Please state caveats as necessary. Please estimate the cost-effective DSM potential based on the 2016 or 2019 DSM potential studies. Please summarize the results of the updated scenario analysis in the following table:

Summary of Pipe Downsizing (NPS 16) Scenario Analysis Excluding Redpath and Portlands		
	Pressure required	Pressure with NPS 16
Scenario 1: No Feed From MSL Line		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 2: No Feed From West Mall Feeder Station		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 3: Isolation of DV Line		

NPS 20 P_{low} at Station B		

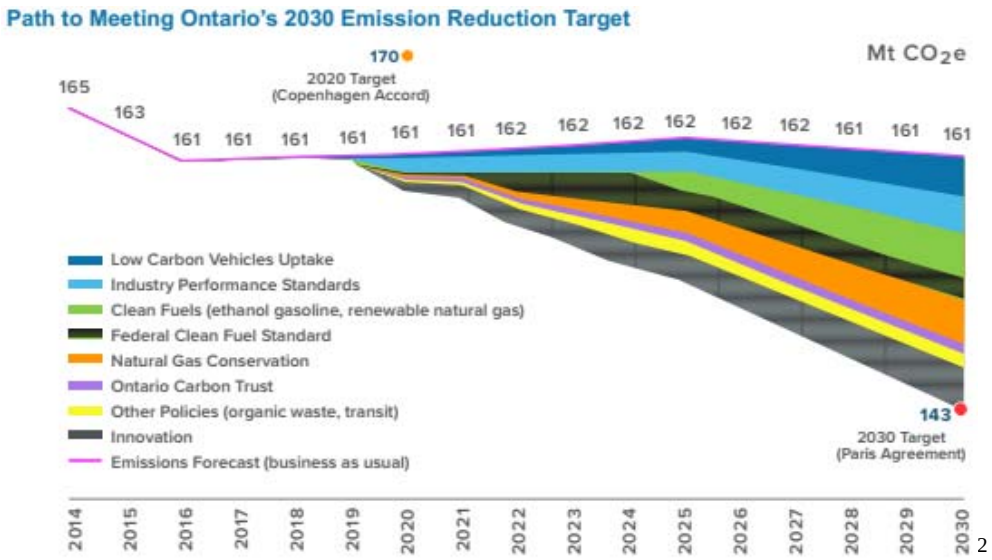
By answering this question, Enbridge is not acknowledging that the assumptions are reasonable. The analysis is intended to be illustrative.

(h) Please provide comparison of the cost of completing the project with an NPS 16 vs NPS 20 pipe.

Interrogatory 3

Reference: Exhibit B, Schedule 1, Pages 17-25

Preamble: Ontario's Environment Plan includes targets for carbon emissions to decline from natural gas use over the coming decade and by 3.2 MT by 2030. The decline is illustrated in orange in the below excerpt from the Environment Plan:



[2]

Questions:

(a) Please redo the scenario analysis (Exhibit B, Schedule 1, Pages 17-25) on the assumption that it is 2030 and the reductions in natural gas use via energy efficiency set out in Ontario's Environment Plan have been achieved. Please make and state assumptions as necessary. Please state caveats as necessary. Please assume the percent reduction in gas use for the project area is same as the percent reduction targeted province-wide in the Environment Plan. Please summarize the results of the updated scenario analysis in the following table:

[2] Government of Ontario, *A Made-in-Ontario Environment Plan*, November, 2018, p. 23.

Summary of Pipe Downsizing (NPS 16) Scenario Analysis As of 2030 Assuming Environment Plan Targets are Met		
	Pressure required	Pressure with NPS 16
Scenario 1: No Feed From MSL Line		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 2: No Feed From West Mall Feeder Station		
NPS 20 P_{low} at West Mall Tie-In (psig)		
NPS 20 P_{low} in Downtown (psig)		
Scenario 3: Isolation of DV Line		
NPS 20 P_{low} at Station B		

(b) If the natural-gas-related emission reduction targets in the Environment Plan are met, what proportion, if any, of the capacity of the proposed pipeline will be needed: (i) five years after it comes in service and (ii) ten years after it comes in service? Please explain in detail. Please provide underlying assumptions and calculations. Please provide an answer on best-efforts basis with any necessary caveats.

By answering these question, Enbridge is not acknowledging that the assumptions are reasonable. The analysis is intended to be illustrative.

Interrogatory 4

Reference: Exhibit B, Schedule 1, Pages 17-25

Questions:

(a) Please complete the following table. When estimating the gas demand for the scenario consistent with Environment Plan targets, please do so on a best-efforts basis, state any necessary caveats, and make and state all assumptions as necessary.[3] We suggest the following assumptions for the Environment Plan scenario: (i) a CO2e to m3 conversion rate of 0.001966 tonnes CO2e/m3 natural gas; and (ii) a straight-line increase in gas savings leading to the 2030 3.2 Mt target (note that the figures on page 23 of the Environment Plan and 142 of the Auditor General report appear to show a straight-line

[3] Government of Ontario, *A Made-in-Ontario Environment Plan*, November, 2018

increase). Please use different assumptions if Enbridge believes those to be more appropriate, but explain the choice. Please explain in particular detail the assumptions used to generate the average and design day demands from the forecast DSM savings.

Forecast Project Area Demand – Status Quo vs. Meeting Environment Plan Targets				
	2020	2021	…	2035
Status Quo Demand (consistent with figures in pipeline application)				
Annual Demand (TJ)				
Average Day Demand (TJ/d)				
Design Day Demand (TJ/d)				
Environment Plan Demand (consistent with 3.2 Mt CO2e reduction by 2030)				
Annual Demand (TJ)				
Average Day Demand (TJ/d)				
Design Day Demand (TJ/d)				

(b) The Environment Plan targets require declining carbon emissions from gas and thus declining gas use:

(i) If this comes to pass, would an NPS 16 pipe be sufficient? Please explain.

(ii) If gas usage declines in accordance with the Environment Plan, at what point will the proposed NPS 20 be unnecessary to meet customers' needs? Please explain.

(c) For ease of reference via an exhibit number, please file a copy of the Ontario Government's Environment Plan[4] and the Auditor General's recent review of the plan (2019 Annual Report, volume 2, chapter 3), which provides further details regarding the calculations underlying the natural gas DSM portions of the Environment Plan. Filing these materials will ensure that these important policy documents are on the record and can be referred to efficiently.

Interrogatory 5

Reference: Exhibit B, Schedule 1, Pages 17-25

Question:

(a) What is the threshold demand level at which an NPS 16 pipeline would be sufficient? Alternatively, if a single threshold demand level cannot be provided, please provide a number of scenarios wherein reduced demand would allow for an NPS 16 pipe. Please compare those demand levels with the current demand levels.

Alternatives

Interrogatory 6

Reference: Exhibit B, Schedule 1, Pages 8 & 25-30

[4] Government of Ontario, *A Made-in-Ontario Environment Plan*, November, 2018

Questions:

(a) Please provide the underlying calculations used to arrive at the figures in Table 11, including the DCF tables.

(b) Please provide the total cost and NPV of the repair work that would be necessary over years 1 through 10 consistent with the assumption in Table 3 that this would require 30 integrity digs.

(c) Please provide the total cost and NPV of the repair work that would be necessary over years 1 through 10 consistent with the assumption in Table 3 that this would require 120 integrity digs.

(d) If the Board directs Enbridge to undertake the repair option, please estimate the number of repair digs that would be required until January 1, 2025.

(e) Please provide a breakdown of the 30 digs estimated for years 1 through 10 in Table 3, including the date required and estimated cost. Please do so on a best efforts basis with caveats as necessary.

Interrogatory 7

Reference: Exhibit B, Schedule 1, Pages 8 & 25-30

Questions:

(a) Please confirm the percentage of Ontario's annual greenhouse gas emissions that are attributable to natural gas combustion.

(b) Please estimate the probability (%) that electric heat pumps will be a significantly less expensive method to heat most buildings compared to natural gas (e.g. due to carbon pricing, improved equipment, etc.) in: (i) 2030, (ii) 2040, and (iii) 2050. Please provide a specific percentage with any caveats as necessary.

Interrogatory 8

Reference: Exhibit B, Schedule 1, Pages 8 & 25-30

Questions:

(a) Please estimate the probability (%) that an NPS 20 pipe will be required between Cherry to Bathurst versus an NPS 16 pipe in: (i) 2030, (ii) 2040, and (iii) 2050? Please provide a specific percentage with any caveats as necessary.

(b) Please estimate the probability (%) that any gas pipeline will be required between Cherry to Bathurst in: (i) 2030, (ii) 2040, and (iii) 2050. Please provide a specific percentage with any caveats as necessary.

(c) Is Enbridge willing to bear any of the risk that the proposed infrastructure will be underutilized or stranded in: (i) 2030, (ii) 2040, or (iii) 2050?

Project Cost

Interrogatory 9

Reference: Exhibit B, Schedule 1, Page 29; Exhibit D, Tab 1, Schedule 1, Page 5

Questions:

(a) Please explain why the cost of the project is indicated as $107 million in Exhibit B, Schedule 1, Page 29 and $133 million in Exhibit D, Tab 1, Schedule 1, Page 5? Please provide a table showing a detailed line-by-line reconciliation of the difference.

(b) If the $107 million cost described in Exhibit B, Schedule 1, Page 29, includes only part of the project, please explain which parts are excluded and why. Please include a map clearly indicating this.

Abandonment

Interrogatory 10

Reference: Exhibit F, Tab 1, Schedule 1, Attachment 1, Page 2

Preamble:

> "Approximately 4.5 km of the existing NPS 20 HP steel natural gas main along the same route will be abandoned."

Questions:

(a) Will the 4.5 km of existing pipeline by abandoned in place or removed?

(b) How much will the abandonment cost? Please provide a breakdown of the abandonment costs.

(c) In what application will Enbridge seek approval for abandonment costs?

(d) Are the abandonment costs included in the project cost outlined in Exhibit D, Tab 1, Schedule 1, Page 5, Table 3? If yes, please indicate which line item they are included under.

(e) Are the abandonment costs included in the project cost outlined in Exhibit B, Tab 1, Schedule 1, Page 29, Table 11? If yes, please indicate which line item they are included under. If no, please reproduce the table including the costs for abandoning the 4.5 km segment.

(f) Please file a high resolution map showing the pipeline to be abandoned, the proposed new facilities, and any upstream or parallel pipelines.

(g) Please describe the specific steps that will be taken to abandon the pipeline (e.g. filling with grout). Please describe the impacts of this work on the street (e.g. noise, partitioning off part of the street, traffic impacts, duration of those impacts, etc.). Please provide a map summarizing where those impacts will be felt.

(h) Has Enbridge received agreement and approval from the City of Toronto regarding its proposed method of abandonment? Please list and describe the approvals that are required in this regard.

(i) Please file all permits and agreements potentially relevant to the method of abandonment in this case.

(j) If Enbridge abandons all or part of the 4.5 km of the pipeline in place, would Enbridge be liable/responsible for removing it in the future should it be necessary (e.g. to make room for other utilities)? If not, who would be liable/responsible for this removal?

Routing

Interrogatory 11

Reference: Exhibit C, Tab 1, Schedule 1

Questions:

(a) Please provide a high-resolution map showing all lane closures and public land use (e.g. sidewalk closures, park access agreements, etc.) required for the proposed project including the abandonment of the old pipe.

(b) Please provide a list of all: (i) lane closures, (ii) sidewalk closures, and (iii) any other public land use required for the proposed project, including the abandonment of the old pipe. For each item in the list, please include the estimated length of time associated with the item.

(c) Please list all impacts on TTC, Metrolinx, and other public transit routes (on a route-by-route basis). For each item in the list, please include the estimated length of time associated with the item.

(d) What is the least expensive route considered for the proposed project? Please compare the cost of that route to the $133 million cost outlined in Exhibit D, Tab 1, Schedule 1, Page 5.