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Ms. Nancy Marconi
Registrar
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

December 6, 2023

**EB-2023-0201 – Eganville Community Expansion Project Leave to Construct
Pollution Probe Interrogatories to Applicant**

Dear Ms. Marconi:

In accordance with Procedural Order No. 1, please find attached Pollution Probe's Interrogatories to the Applicant.

Respectfully submitted on behalf of Pollution Probe.

A handwritten signature in black ink, appearing to read "Michael Brophy", written over a horizontal line.

Michael Brophy, P.Eng., M.Eng., MBA
Michael Brophy Consulting Inc.
Consultant to Pollution Probe
Phone: 647-330-1217
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Cc: Eric VanRuymbeke, Enbridge Regulatory (via email)
Guri Pannu, Enbridge Legal (via email)
All Parties (via email)
Richard Carlson, Pollution Probe (via email)

ONTARIO ENERGY BOARD

**Enbridge Gas Inc.
Eganville Community Expansion Project
Leave to Construct**

POLLUTION PROBE INTERROGATORIES

December 6, 2023

**Submitted by: Michael Brophy
Michael Brophy Consulting Inc.
Michael.brophy@rogers.com
Phone: 647-330-1217
28 Macnaughton Road
Toronto, Ontario M4G 3H4**

Consultant for Pollution Probe

1-PP-1

Enbridge has requested several changes/exemptions under Municipal Franchises Act [A/2/1]

- a) Please explain what the impacts will be if the OEB does not approve each of the changes/exemptions requested by Enbridge.
- b) Please explain why the OEB should approve an exemption of required assent from the municipal electors of the Township of Bonnechere Valley, rather than require municipal assent.
- c) Please confirm that the municipal electors of the Township of Bonnechere Valley have been notified that Enbridge is requesting an exemption, i.e. that their assent is not necessary for the proposed franchise agreement by-law under the circumstances. Please provide a copy of the notification provided.
- d) Please explain why the OEB should approve an exemption of required assent from the municipal electors of the Township of North Algona Wilberforce, rather than require municipal assent.
- e) Please confirm that the municipal electors of the Township of North Algona Wilberforce have been notified that Enbridge is requesting an exemption, i.e. that their assent is not necessary for the proposed franchise agreement by-law under the circumstances. Please provide a copy of the notification provided.

1-PP-2

- a) Please super-impose the proposed pipeline from Exhibit A, Tab 2, Schedule 1, Attachment 1 onto the Heat Map (per STAFF-2 IR request), or vice versa. This will illustrate how the Heat map correlates to the proposed Project.
- b) Please plot the location of the proposed 656 residential and 67 commercial customers (please use a different colour/market to differentiate between residential and commercial customers) on the proposed pipeline map from Exhibit A, Tab 2, Schedule 1, Attachment 1.

1-PP-3

Reference: Exhibit B, Tab 1, Schedule 1, Attachment 6, Forum Research Survey

The survey response rate was 195/934 or approximately 21%. Please explain why the survey response rate was so low for this project.

1-PP-4

- a) Please explain the difference between the Enbridge in-person surveys of potential commercial/industrial customers and the Forum survey of potential customers. Are they duplicative activities?
- b) Please explain how the results from the commercial/industrial customer surveys compared to the information from the Forum Research Surveys.

1-PP-5

- a) What excess capacity is available from the Project to service additional customers in the future beyond the 723 forecasted, if any?
- b) Are the Ancillary Facilities only for the purpose to serve the 723 customers identified? If not please explain how many of the 723 customers would be served and what other customers would be served from the Ancillary Facilities now or in the future.

1-PP-6

- a) Please confirm how many of the 723 surveys [Forum Research Survey] conducted are customers along the proposed route and how many would not have gas access based on the route proposed in the application.
- b) If 100% of potential customers in the community (e.g. along the proposed Project) attached to it, what number of customers would that represent? (please provide the breakdown by residential, commercial and industrial if available).
- c) How many firm confirmation requests have been received from potential customers (please provide numbers by customer type, e.g. residential, commercial, etc.)?

1-PP-7

Please provide a copy of the information and materials provided to consumers about both the costs and benefits of switching to an air source heat pump, as an alternative to natural gas.

1-PP-8

The proposed Project was reviewed and approved by the Government of Ontario for granting funding under Phase 2 of the NGEF.

- a) Please provide a copy of the approvals from the Government of Ontario and the OEB for this Project, and please highlight the specific approvals and scope related to this Project.
- b) If the number of customers proposed or Project costs vary from what was submitted to the NGEF, please explain the difference.
- c) Please provide what cost estimate was in Enbridge's NGEF application related to Ancillary Facilities and what elements those included.
- d) Please confirm that NGEF approval for access to grant funding does not automatically provide Leave to Construct (or other required regulatory) approvals related to this Project.

1-PP-9

Reference: PollutionProbe_IR_AppendixA_EnbridgeIncentives_20231031

- a) Please confirm that an OEB approved incentive is available in this community of \$6500 for installation a complete new or replacement variable capacity cold climate air source heat pump (ccASHP) system, intended to service the entire home. If incorrect, please indicate the incentive and reference.
- b) Please indicate how many consumers in the proposed expansion project community were provided with information on the incentives available per noted above. Please provide a copy of the materials provided.
- c) Please confirm that the DSM & Greener Homes Incentives are available to current or new natural gas customers. If not correct, please clarify.

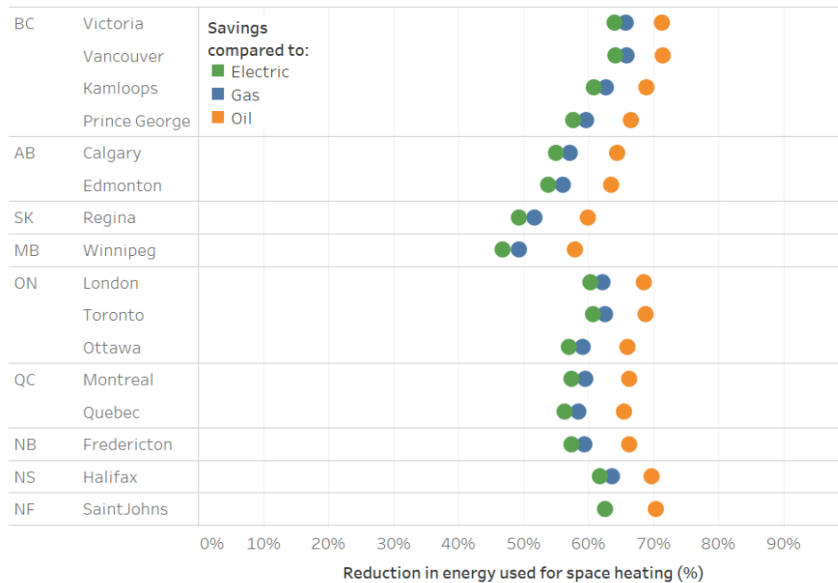
1-PP-10

Please confirm that Enbridge uses an average gas furnace life of 18 years as the best available assumption for its DSM Program. If a more recent (OEB approved) average life value is available, please provide the source.

1-PP-11

Reference: PollutionProbe_IR_AppendixB_CanmetReport [per EB-2022-0200 Exhibit J11.5]

Figure 1: Energy Savings (percentage) for a ccASHP compared to natural gas, oil and baseboard electric.



The CanmetENERGY cold-climate air source heat pump (ccASHP) Report shows a ccASHP is 50% to 70% more efficient than natural gas, oil or resistance (i.e. baseboard) electric.

- a) Please indicate whether this information for ccASHPs was shared with potential customers as part of the information related to heat pumps. If it was, please provide a copy of the information/materials provided to consumers.
- b) This information was provide in EB-2022-0200 based on a 2022 Study. If Enbridge has a more recent/relevant study/information that provides a different savings rate for ccASHPs vs. natural gas, oil or electric resistance heating, please provide a copy.

1-PP-12

Reference: PollutionProbe_IR_AppendixC_ASHPCalculator.

The EB-2022-0200 online air source heat pump calculator compares annual heating costs compared to natural gas. If Enbridge has a better source and values it believes is more accurate, please provide a copy.

1-PP-13

Reference: PollutionProbe_IR_AppendixD_HeatPumpConversionGuidehouse per EB-2022-0200. Enbridge's Guidehouse Pathways to Net Zero Emissions for Ontario Study (P2NZ).

Guidehouse indicated that 40% to 85% of Ontario households are expected to switch to a heat pump by 2050. If Enbridge has more current information or reports, please provide a copy.

1-PP-14

- a) Schedule A, Tab 2, Schedule 1, Page 2 indicates that Enbridge is only requesting approval for the Phase 1 and Phase 2 pipelines, but Schedule B, Tab 1, Schedule 1 Page 1 defines the "Project" as including Phase 1 and Phase 2 pipelines, plus Ancillary Facilities. Please explain why Enbridge is not requesting OEB approval for the full "Project", including Ancillary Facilities.
- b) Please explain why the NPS 6, 4 & 2 distribution pipelines are considered Ancillary Facilities for this Project, when similar distribution mains have been included as primary pipeline assets for other NGEF projects (i.e. similar NGEF Leave to Construct applications).

2-PP-15

Please confirm that the residential fixed bill estimate for customers is approximately \$45 per month or \$564 per year. If incorrect, please provide an updated estimate and reference.

2-PP-16

Reference: Exhibit B, Tab 1, Schedule 1 - Figure 1: Annual Energy Costs & Savings Versus Natural Gas, Including SES

- a) Please confirm that the options provided in Figure 1 are meant to represent common fuels used historically in comparison to natural gas and not the current options for consumers in the community. If not correct, please explain.
- b) Please confirm that the values in Figure 1 relate to fuel only and do not include incremental equipment costs to retrofit a home or business with natural gas.
- c) Please confirm that the values in Figure 1 only include costs and savings related to heat and exclude costs/savings for cooling.
- d) Please confirm that the values in Figure 1 related to electricity are for electric resistance (e.g. baseboard) heating only. If that is not correct, please state the assumptions and provide the calculation.

2-PP-17

Reference: Exhibit B, Tab 1, Schedule 1, Page 5, including Figure 1.

- a) Please explain what effort, research and/or analysis Enbridge undertook (if any) to identify the annual costs related to heat pumps or wood, for Table 1.
- b) Please recalculate Table 1 including best available information for wood and using best available information for a cold-climate air source heat pump as a proxy for heat pumps. Please provide reference sources for the information used.
- c) Please confirm that the information in Table 1 does not include any benefit calculations related to cooling (i.e. heating only)

2-PP-18

Please provide a copy of the all materials used for public consultation including those used for the Open House.

2-PP-19

- a) Please provide a copy of all marketing and communication material provided by Enbridge or partners to consumers/businesses in the community to promote DSM or other energy efficiency opportunities when considering replacement of (water/space) heating systems or related energy efficiency measures.
- b) Please provide a copy of all communication material provided by Enbridge or partners to educate consumers/businesses on options and incentives under the Greener Homes program (delivered by Enbridge in Ontario).
- c) Please provide a table (or marketing material if a table is already included) of potential Greener Homes Grant Program incentives for residential homes, including those for air source heat pumps.
- d) Please confirm that Enbridge Gas is delivering the Greener Homes Grant program in the area impacted by the proposed project.
- e) Has Enbridge conducted analysis on consumers along the proposed pipeline that can or have (currently or recently) participated in the Greener Homes Grant Program. If yes, please provide a copy of the information and analysis.

3-PP-20

Is this proposed Project included in the most current Enbridge Asset Management Plan (AMP) or Utility System Plan (USP)? If not, why not. If yes, please provide the references and documents (or links).

3-PP-21

Has Enbridge conducted a risk assessment on the probability that the proposed pipeline will become a stranded asset before being fully depreciated? If yes, please provide a copy of the assessment and all related materials. If no, what evidence exists to support that the pipeline will remain used and useful for the full amortization period.

3-PP-22

Please confirm that Enbridge has not received approval (from the OEB, TSSA or other relevant regulators) for use of 100% hydrogen for the Project assets proposed. If approval has been received for 100% hydrogen, please provide a copy of such approval.

3-PP-23

- a) Please confirm the amortization period Enbridge intends to apply to the Pipeline and Ancillary Facilities.
- b) Please explain how any residual (unamortized) costs would be recovered from rate payers if the proposed pipeline becomes stranded (i.e. not used and useful) before it is fully depreciated.
- c) Enbridge is aware that the OEB could decrease the amortization period for new capital assets starting in 2024 and Enbridge has proposed a 30 year value (per Enbridge EB-2022-0200 Reply Argument). Please indicate what the impact would be to this project if the OEB applies:
 - A 30 year amortization period
 - A 15 year amortization period.
- d) Please provide the impact (net NPV and Portfolio Index) if a Revenue Horizon of 30 years was used instead of 40 years.

3-PP-24

Please confirm that Enbridge will fund this project from its capital envelope for 2025 if approved by the OEB. If that is not correct, please clarify.

3-PP-25

Enbridge indicates that the System Expansion Surcharge (“SES”) to all new customers taking gas distribution service from the Project will be a fixed volumetric rate of \$0.23 per cubic metre of gas to be charged in addition to Enbridge Gas’s base distribution rates as approved by the OEB. The SES is proposed to be charged to all customers taking gas distribution service from the Project for a term of 40 years. Please indicate the SES impact if the Revenue Horizon period the OEB approves is less than 40 years (e.g. 30 years).

3-PP-26

Reference: Exhibit E, Tab 1, Schedule 1, Attachment 1.

Enbridge indicates that the Project only reaches a $PI=0.99$. Please explain how the Project is able to proceed with a PI of less than 1.0.

3-PP-27

Below is a summary of costs due to the Project and consumers attaching to the Project. If any values are not correct or missing, please provide an updated value and reference.

Item	Estimated Cost
Project Initial Capital Cost ¹	
• (1) Proposed Pipeline Phase 1	\$ 7,049,600
• (1) Proposed Pipeline Phase 2	\$ 5,658,561
• (2) Ancillary Facilities	<u>\$ 22,893,157</u>
Total	\$ 35,601,318
NPV of O&M Cost (gas) per customer ²	\$2,254,000
NPV of other expenses per customer ³	\$11,062,000
Average Cost of a Residential Customer ⁴ (service, meter, O/Hs, etc.) ⁵	\$5,991

3-PP-28

Reference: PollutionProbe_IR_AppendixE_ExpansionProjectPI

Recent Enbridge Community Expansion Projects have shown a trend of decreasing Portfolio Index (PI) and a lower actual PI than forecasted in the OEB Leave to Construct proceedings. This has also caused the Project Portfolio to dip below the OEB required PI=1.0.

Please indicate how the proposed Project compares to other recent community expansion projects and what mitigation has been put in place to reduce the risks that this Project to result in an actual PI less than 1.0.

3-PP-29

- a) The Project costs related to the Ancillary Facilities are approximately \$22.9 million. Please provide a breakdown of those costs by major element.
- b) Please provide all benchmark projects actuals that were used to validate the reasonableness of each of the major Ancillary Facility unit cost estimate.

¹ E/1/1 Table 1

² Per Exhibit E, Tab 1, Schedule 1, Attachment 2

³ \$4,365,000 + \$6,697,000 = \$11,062,000 per Exhibit E, Tab 1, Schedule 1, Attachment 2

⁴ EB-2022-0200 Exhibit J13.8

⁵ Cost for industrial/commercial would be higher, but residential used to estimate lower end of the range.

3-PP-30

Reference: Project Schedule (D/2/1)

Phase 2 is proposed to be constructed during the winter 2024/25. Please provide the amount included in the Project estimate related to winter construction (premium) rates.

4-PP-31

Reference: The Environmental Report (F1//1, Attachment 1) identifies areas of bedrock along the proposed route, including areas of bedrock outcrops above-ground.

- a) Please provide details on the assessment of bedrock along the proposed pipeline route.
- b) What portion of the total length of the proposed pipeline does Enbridge expect to encounter bedrock (meters or % of total length). Please provide the basis for this estimation.
- c) Has Enbridge received a contractor cost estimate for the length and method (e.g. blasting) of rock excavation along the proposed route? If yes, please provide a copy. If no, what is the project cost estimate related to rock excavation based on?
- d) There are (10+14) 24 watercourses identified along the proposed project and directional drill is the preferred crossing method. Has Enbridge assessed whether there is bedrock below these watercourses?
- e) If bedrock is encountered at the water course crossings, what alternate crossing method and related approvals will be required?

4-PP-32

Reference: The Environmental Report (F1//1, Attachment 1) identifies 459 water wells with some drilled in exposed bedrock.

- a) How many water well are located within 100 meters of the proposed pipeline?
- b) What is the closest water well located to the proposed pipeline?
- c) Has Enbridge conducted a pre-construction well monitoring program along the proposed pipeline? If yes, please provide a copy.
- d) What cost estimate has Enbridge included in the project for well monitoring during construction?

4-PP-33

Please confirm that Enbridge has not received the required TSSA review sign-off letter. If the letter has been received, please provide a copy.