

January 12, 2018

**BY COURIER (2 COPIES) AND RESS**

**Ms. Kirsten Walli**

Board Secretary

Ontario Energy Board

2300 Yonge Street, Suite 2700, P.O. Box 2319

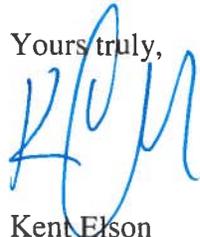
Toronto, Ontario M4P 1E4

Dear Ms. Walli:

**Re: EB-2017-0224 – Enbridge Gas Distribution Inc. (“Enbridge”)  
EB-2017-0255 – Union Gas Limited (“Union”)  
2018 Cap and Trade Compliance Plans**

Enclosed please find the interrogatories of Environmental Defence on issue 1.10.1.

Yours truly,



Kent Elson

Encl.

cc: Parties in this proceeding

Environmental Defence Interrogatories for Enbridge with respect to Issue 1.10.1

1. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Should the OEB use the Total Resource Cost (TRC) Test to evaluate the cost-effectiveness of Enbridge's proposed Renewable Natural Gas Procurement Program? If no, please fully explain why not.

2. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please provide Enbridge's forecast of the TRC Test net benefits and benefit/cost ratios of its proposed Renewable Natural Gas Procurement Program for each of the next ten years. Please state your assumptions and show your calculations. Please use best efforts to develop a response to this interrogatory and make assumptions as needed.

3. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please provide Enbridge's forecast of the annual bill impact of its proposed Renewable Natural Gas Procurement Program for a typical residential customer for each of the next ten years. Please state your assumptions and show your calculations.

4. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

How much RNG does Enbridge wish to contract for under the proposed procurement program in 2018? Please provide the response in a table showing the expected RNG to be provided in each year covered by the expected 2018 contracts and a grand total for the entire period. If there is uncertainty about the amount, please provide a best efforts response, including an explanation of the response, and a range of potential amounts (if necessary). Please provide the information in both m<sup>3</sup> and GJ and indicate the appropriate conversion factor.

5. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please estimate the cost per tonne of the greenhouse gas (GHG) emissions reductions (co<sub>2</sub>e) that the proposed procurement program is expected to achieve via the contracts to be entered into in 2018. Please provide the estimate based on the costs and emission reductions for the lifetime of the contracts (or if that is not possible, please use an illustrative contract year that would be representative of the average costs).

GHG emissions reductions may arise from (a) the displacement of conventional natural gas and (b) the capture of methane that would have been vented to the atmosphere as fugitive emissions. If the \$/tonne estimate includes GHG emissions reductions arising from avoided fugitive

methane emissions, please (a) provide the underlying calculations and (b) also provide an estimate that does not include the GHG emissions reductions from avoided fugitive methane emissions.

Presumably the cost per tonne would roughly equal the amount of the proposed subsidy divided by the tonnes of carbon emissions avoided by the RNG in question – if Enbridge uses a different calculation, please explain why, and indicate the magnitude of difference between the two calculation methods.

6. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please provide a forecast of the total gross cost of the provincial subsidy that will be needed for the contracts that Enbridge wishes to enter into in 2018. Please provide this as a table showing the forecast total cost for each year covered by the relevant contracts and a grand total for the entire period. Please make assumptions as needed and state them in the response. Please include caveats as needed.

7. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

- (a) How many customers does Enbridge have?
- (b) How many residential customers does Enbridge have?
- (c) Please calculate the cost of the proposed subsidy on a per customer basis (i.e. the grand total calculated in the previous interrogatory divided by the number of customers).

8. Reference: Ex. C, Tab 5, Sch. 2, page 11

Enbridge's evidence refers to "the expected level of provincial funding" at Ex. C-5-2 p. 11.

- (a) What is the expected level of provincial funding?
- (b) Is that level for all utilities or just Enbridge? If the former, what is the level for all utilities?
- (c) How much RNG does Enbridge expect to be able to contract for with the expected level of funding?

9. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

- (a) Is the RNG procurement program predicated on an expectation that it will spur market change and result in lowering of the price of RNG and improved cost effectiveness over time? Please explain in detail.
- (b) If Enbridge's proposed program is approved and implemented as planned, what will the forecast impact be on the price and cost-effectiveness of RNG going forward? Please provide a qualitative and narrative response. Please also provide a best efforts

quantitative response, including the impact on price and cost-effectiveness going forward to 2030, noting necessary uncertainties and caveats.

- (c) Please provide an estimate of the investments that would be needed to make RNG cost effective by 2030, noting any uncertainties and caveats.
- (d) Please estimate the time and investments required to make RNG cost effective.

10. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Is Enbridge amendable to provide annual reporting to the Board on the effectiveness of its RNG program in achieving its objective of achieving market change and improving cost effectiveness, including the tracking of cost-effectiveness metrics such as the differential between the cost of RNG versus the combined price of gas and carbon?

11. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

- (a) Please provide a concise list of the high-level objectives of the RNG program.
- (b) Is Enbridge amendable to providing annual reporting, with concrete metrics, on the success of the proposed procurement project in meeting those objectives?

12. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please provide Enbridge's best efforts estimate of the RNG potential available for development in Ontario in the medium term (in m<sup>3</sup>/yr). Please also provide a copy of any reports or studies that include an estimate the available RNG potential, including any reports or studies completed by ICF.

13. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

- (a) Please list all facilities (and organizations) that Enbridge has identified as potentially being in a position to enter into an RNG supply contract with Enbridge.
- (b) Of those, please provide a list of those which are currently venting methane to the atmosphere without capture or flaring.
- (c) Of those, please provide a list of those which would be required by government regulations to capture and/or flare their methane emissions within the next five years regardless of whether they enter into an RNG supply contract.
- (d) Please provide an estimate of the percent of the RNG supplies (i.e. % of m<sup>3</sup>/yr) that could be contracted for over the next 10 years that will result in the capture of methane emissions that would otherwise be released to the atmosphere without flaring. If a single estimate is not possible, please provide a range of potential, including any caveats and a discussion.

14. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Is Enbridge seeking approval to enter into these procurement contracts going forward, or only for 2018? In other words, if approval is granted, would Enbridge need to seek approval again in 2019 or 2020 to enter into this kind of procurement contract?

15. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

How much RNG does Enbridge estimate that it will contract for under the proposed program in 2018 to 2020 (inclusive)? Please provide the response in a table showing the expected RNG to be provided in each year covered by the contracts that would be entered into in those years and a grand total for the entire period. If there is uncertainty about the amount, please provide a best efforts response, including an explanation of the response, and a range of potential amounts if necessary. Please provide the information in both m<sup>3</sup> and GJ and indicate the appropriate conversion factor.

16. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please estimate the cost per tonne of the greenhouse gas (GHG) emissions reductions (co2e) that the proposed procurement program is expected to achieve via the contracts Enbridge would anticipate entering into in 2018 to 2020 (inclusive). Please provide the estimate based on the costs and emission reductions for the lifetime of the contracts (or if that is not possible, please use an illustrative contract year that would be representative of the average costs).

GHG emissions reductions may arise from (a) the displacement of conventional natural gas and (b) the capture of methane that would have been vented to the atmosphere as fugitive emissions. If the \$/tonne estimate includes GHG emissions reductions arising from avoided fugitive methane emissions, please (a) provide the underlying calculations and (b) also provide an estimate that does not include the GHG emissions reductions from avoided fugitive methane emissions.

Presumably the cost per tonne would roughly equal the amount of the proposed subsidy divided by the tonnes of carbon emissions avoided by the RNG in question – if Enbridge uses a different calculation, please explain why, and indicate the magnitude of difference between the two calculation methods.

17. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please provide a forecast of the total gross cost of the provincial subsidy that will be needed for the contracts that Enbridge wishes to enter into in 2018 to 2020 (inclusive). Please provide this as a table showing the forecast total cost for each year covered by the relevant contracts and a grand total for the entire period. Please make assumptions as needed and state them in the response. Please include caveats as needed.

18. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

- (a) Under the proposed model, would the cost allocation between the provincial government and ratepayers be recalculated each year (or another period of time) based on updated forecasts of the carbon price and gas price?
- (b) Why does Enbridge propose to use forecasts of carbon and gas prices for calculating the cost allocation between the provincial government and ratepayers instead of the actual current carbon and gas prices (e.g. for each quarter of delivery)?
- (c) Is any mechanism being proposed to true up deviations between forecasts used to calculate the allocation of costs between the provincial government and ratepayers and the actual amounts?

19. Reference: Ex. C, Tab 5, Sch. 2, pages 4 – 14

Please compare the proposed RNG procurement program with the RNG procurement program in place in California, including an itemized list of the differences and an explanation for why those differences are being proposed.

Environmental Defence Interrogatories for Union with respect to Issue 1.10.1

1. Reference: Ex. 3, Tab 4, pages 17 - 24

Should the OEB use the Total Resource Cost (TRC) Test to evaluate the cost-effectiveness of Union's proposed Renewable Natural Gas Procurement Program? If no, please fully explain why not.

2. Reference: Ex. 3, Tab 4, pages 17 - 24

Please provide Union's forecast of the TRC Test net benefits and benefit/cost ratios of its proposed Renewable Natural Gas Procurement Program for each of the next ten years. Please state your assumptions and show your calculations. Please use best efforts to develop a response to this interrogatory and make assumptions as needed.

3. Reference: Ex. 3, Tab 4, pages 17 - 24

Please provide Union's forecast of the annual bill impact of its proposed Renewable Natural Gas Procurement Program for a typical residential customer for each of the next ten years. Please state your assumptions and show your calculations.

4. Reference: Ex. 3, Tab 4, pages 17 - 24

How much RNG does Union wish to contract for under the proposed procurement program in 2018? Please provide the response in a table showing the expected RNG to be provided in each year covered by the expected 2018 contracts and a grand total for the entire period. If there is uncertainty about the amount, please provide a best efforts response, including an explanation of the response, and a range of potential amounts (if necessary). Please provide the information in both m<sup>3</sup> and GJ and indicate the appropriate conversion factor.

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8. Reference: Ex. 3, Tab 4, pages 17 - 24

Enbridge's evidence refers to "the expected level of provincial funding" at Ex. C-5-2 p. 11.

- (a) Does Union also have an expectation about the level of provincial funding, and if yes, what is it?
- (b) How much RNG does Union expect to be able to contract for with the expected level of funding?

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