

## **Ontario Energy Board**

**IN THE MATTER OF** the *Ontario Energy Board Act, 1998*,  
S.O. 1998, c. 15, Sch. B, as amended;

**AND IN THE MATTER OF** an Application by Enbridge Gas  
Distribution Inc. for an order approving its 2018 Cap and Trade  
Compliance Plan.

**AND IN THE MATTER OF** an Application by Union Gas  
Limited Inc. for an order approving its 2018 Cap and Trade  
Compliance Plan.

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### **Issue 1.10 .1 - Renewable Natural Gas**

#### **Interrogatories**

#### **Energy Probe Research Foundation**

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**January 10, 2018**

## **A. Interrogatories on Pre-filed evidence of Enbridge Gas Distribution Inc. EB-2017-0224.**

### **Energy Probe IR EGD #1 RNG**

**Reference:** General

**Preamble:** Enbridge and Union have Merged and Amalco has applied for a Rate Setting Mechanism for 2019 and beyond.

- a) Please explain why Amalco has not prepared a combined Compliance Plan, including specifically a single RNG Program for approval starting in 2018.
- b) Please provide detailed response addressing matters such as regulatory efficiency, consistency, transparency, duplication and costs.

### **Energy Probe IR EGD #2 RNG**

**Reference:** Exhibit C, Tab 4, Schedule 1, Appendix A, page 5

Has Ontario updated any protocols other than the Landfill Gas Offset Protocol? If so, please provide a list and any changes these protocols are expected to have on Enbridge's application.

### **Energy Probe IR EGD #3 RNG**

**Reference,** Exhibit C, Tab 4, Schedule 1, Appendix A; Exhibit C Tab 6 Schedule 1 Page 24

**Preamble:** On October 4, 2017, the MOECC posted an updated version of the proposed Ontario Offset Credits regulation and the one incorporated protocol – Landfill Gas (LFG).

- a) Please clarify Under O. Reg. 144/16 for each type of RNG procurement whether EGD will be acting as an *Offset Initiative Operator* and/or an *Offset Initiative Sponsor*.
- b) Please discuss the risks and benefits of the planned approach(es).
  - Primary offset sourcing – purchasing directly from project owners or developers, at various stages of project development.
  - Secondary offset purchasing – purchasing from the secondary market
  - Hybrid options including carbon fund participation.
- c) Specifically indicate who pays for the costs of reversals and how will these be dealt with in rates.

### **Energy Probe IR EGD #4 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 1, page 9

Within the GGEIDA, does Enbridge have a target percentage of administrative costs in relation to total costs?

### **Energy Probe IR EGD # 5 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 2, Pages 4-6

**Preamble:** Energy Probe wishes to understand better the Government Policy background to the company's RNG Procurement Proposal.

- a) Please provide/file a copy of the referenced Navigant Report
- b) Provide references to any other reports/documents that EGD has relied upon to prepare its proposal.
- c) Please provide/file a copy of the referenced Minister Thibault's Letter of December 10, 2016
- d) Please provide a copy/extract of the relevant parts from the OEB "Gas Supply Framework."
- e) Please provide a summary schedule/list of meetings with MOECC and OEB Staff on RNG Procurement. Include main topics discussed and specific documents provided by the parties.

### **Energy Probe IR EGD #6 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 2, Page 5

**Preamble:** ICF identified a range of carbon abatement costs associated with RNG in the range of \$77 to \$1,990 per tCO<sub>2</sub>e. In its report ICF indicated that these values were based on a desk top review of studies dating back to 2011. In pages 50 to 53 of its report ICF also noted a number of limitations and caveats relating to its analysis of RNG potential and costs.

- a) What range of procurement costs has EGD assumed for the RNG procurement initiative?
- b) Please provide the detailed analyses to support the response.

### **Energy Probe IR EGD # 7 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 2, Page 6

**Preamble:** Enbridge is now ready to proceed with RNG procurement opportunities in 2018, and will look to purchase a portion of its annual gas throughput from renewable sources. The Company's planned activities to support RNG production in Ontario with its proposed RNG Enabling Program are discussed at a high level later in this Exhibit; however, will be fully outlined in the Company's EB-2017-0337 submission to the Board to be made later this year.

- a) Please explain in detail why EGD is requesting recovery of costs of RNG procurement in 2018 rates, absent proper/complete evidence supporting this request.
- b) In the response please discuss in detail how this pre-approval request differs from pre-approval of major infrastructure/facilities, including feasibility cost control/management and from natural gas supply and transportation contracts.

- c) Please provide a detailed outline of the Scope of the EB-2017-0337 Application.

### **Energy Probe IR #8 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 1, page 9

- a) Is there a current agreement between Enbridge and the province regarding Renewable Natural Gas (RNG) projects? If so, please provide it.
- b) Please provide any correspondence or other communications with the Province to support a joint procurement/RFP
- c) How is the cost of RNG going to be calculated? Will it be on an individual project basis or a total envelope encompassing all RNG projects in 2018?
- d) Will Enbridge track the difference between forecasted RNG costs and actual costs once the project is functional? Will that cost be covered by Enbridge or provincial funding?
- e) Will Enbridge provide an annual review of the actual costs of its various RNG projects? If so, will that review be provided to the Board?

### **Energy Probe IR #9 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 1, page 28

Has Enbridge submitted or designed a revised weighted scorecard formula?

### **Energy Probe IR EGD # 10 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 2.

**Preamble:** As there is no established RNG market in Ontario, in order to ensure the lowest cost for RNG, Enbridge will utilize a tendering process for RNG supplies. ....  
Enbridge is of the view that it would be beneficial if this tendering process was carried out cooperatively with the Province.

- a) Please indicate the timing of the RFP(s)
- b) Will EGD conduct the RFP/tender(s) with Union Gas and/or EPCOR. Please discuss.
- c) Please explain why a 10-year term is appropriate for existing RNG supplies such as landfill gas?
- d) Will the tender(s) be based on a landed cost? If so, please provide an example, including gas quality, transportation, clean up and compression. If not, provide details of how the bids will be evaluated.
- e) Will EGD request Board Approval of the specific RNG Contracts?

### **Energy Probe IR EGD # 11 RNG**

**Reference:** Exhibit C, Tab 5, Schedule 2, Pages 9 &10 and Table 2

**Preamble:** It is expected that in the short and medium term, RNG will be priced at a premium over conventional natural gas. The RNG funding model proposed by Enbridge will be consistent with the province's CCAP and LTEP.

- a) Please provide the natural gas and carbon price forecasts used in Table 2
- b) Please indicate the natural gas delivery point assumed and the landed cost/m<sup>3</sup>, including storage and transportation.
- c) Please indicate the assumptions and resulting landed cost for RNG equivalent.
- d) Provide the estimated annual Benefit/cost to an average EGD residential customer in the CDA
- e) Please provide the annual GHG abatement cost per customer and compare with a carbon tax similar to BC using same assumptions.

### **Energy Probe IR EGD # 12 RNG**

**Reference:** Exhibit D, Tab 1, Schedule 1, Table 1

- a) Please provide the 2017 and 2018 administrative costs related to RNG.
- b) Reconcile 2018 costs to the Referenced Table 1.
- c) If there is a projection for 2019 please provide this.
- d) Please confirm/explain if the costs assume separate or joint RNG program/procurements with Union as part of Amalco.

## **B. Interrogatories on Pre-filed Evidence of Union Gas Limited. EB-2017-0255.**

### **Energy Probe IR Union #1 RNG**

**Reference: General**

**Preamble:** See EP EGD IR#1

Please adopt/confirm EGDI response and/or an additional specific response related to Union's C&T Application.

### **Energy Probe IR Union #2 RNG**

**Reference:** Exhibit 3, Tab 4, Page 17

**Preamble: Energy Probe wishes to understand the Government Policy background to the Company's RNG Procurement Proposal.**

- a) Please provide/file a copy of the referenced Navigant Report
- b) Provide a copy of Union Gas Limited's Long-Term Energy Plan Review submission, December 16, 2016,

- c) Provide references to any other reports/documents that Union has relied upon in preparation of its Plan.
- d) Please provide/file a copy of the referenced Minister Thibeault's Letter of December 10, 2016
- e) Please provide a copy of the relevant extract(s) from the OEB "Gas Supply Framework".
- f) Please provide a Summary schedule/list of meetings with MOECC and OEB Staff on RNG Procurement. Include main topics discussed and specific documents provided by the parties.

### **Energy Probe IR Union #3 RNG**

**Reference: Exhibit 3, Tab 4, Pages 18-20 and Figure 3**

**Preamble:** The OEB-issued MACC also identified that RNG is not a cost-effective measure relative to the cost of carbon. In order to advance the adoption of RNG in support of provincial GHG emission targets and incent the development of the RNG market, additional provincial funding and MOECC program support is required. This will also provide RNG in a cost-effective manner for Union's customers and cost recovery for the utility.

- a) Please provide a schedule/calculation that provides the benefit/cost of RNG for a typical Union customer. List all key assumptions,
- b) Compare to a carbon tax, at certain levels similar to BC and other jurisdictions.
- c) Compare RNG to other alternatives such as Residential DSM using the same assumptions.

### **Energy Probe IR Union #4 RNG**

**Reference: Exhibit 3, Tab 4, Page 19**

**Preamble:** Earlier in 2017, Union and EGD developed an RNG proposal for the Province that will achieve the market objectives of the province by providing a mechanism to facilitate RNG procurement funding and cost recovery. This RNG proposal provides:

- Long-term, fixed price contracts with producers that supports the development of RNG in Ontario, consistent with CCAP objectives of long-term emissions reductions;
  - Utilization of government funding to purchase RNG while minimizing the impact to ratepayers relative to the cost of conventional natural gas supply; and,
  - Regulatory efficiency through the use of existing regulatory frameworks and mechanisms to procure RNG for ratepayers and to diminish the need for further regulatory process.
- a) Did Union use the E.B.O.188 Feasibility framework (Phase I Phase II and III) to compare supply alternatives such as RNG and demand reduction options?
  - b) If so please provide this analysis. If not please explain why this has not been done prior to requesting pre-approval for RNG procurement?

- c) Please provide Union's view of the difference(s) between Government Project funding and Carbon Tax Revenue

### **Energy Probe IR Union #5 RNG**

**Reference:** Exhibit 3, Tab 4, Page 20; Exhibit 3, Tab 4, Page 22

**Preamble:** Union expects to enter into fixed price RNG procurement contracts with terms up to 10 years in duration, subject to provincial funding. Based on these RNG contracts, Union will then enter into a contractual arrangement with the province to provide provincial funding equal to the difference between the fixed price of RNG contracted with the producer, and the cost of conventional natural gas plus the avoided cost of carbon. The inclusion of the avoided cost of carbon is to recognize that customers would have incurred a carbon cost in the absence of RNG.

This represents the premium for RNG, as illustrated in the numerical example in Figure 3.

- a) Please indicate the timing of the RFP(s)
- b) Will these be regional-based?
- c) Will Union conduct the RFP/tender(s) with Enbridge and/or NRG/EPCOR. Please discuss.
- d) Please explain why a 10-year term is appropriate for existing RNG supplies such as landfill gas?
- e) Will the tender(s) be based on a landed cost? If so, please provide an example, including gas quality, transportation, clean up and compression. If not, provide details of how the bids will be evaluated.
- f) Will EGD request Board Approval of the specific RNG Contracts?

### **Energy Probe IR Union #6 RNG**

**Reference:** Exhibit 3, Tab 4, Page 21 and Figure 3

**Preamble:** The following is an example to show how the mechanism will work in principle. In this example, Union has assumed the following:

- 2018 forecast carbon price of \$17.00 (based on the OEB LTCPF mid-range scenario) for rate setting purposes. This equates to a rate impact of approximately \$0.85/GJ.
- Long-term contracted RNG price of \$16.00/GJ
- 2018 forecasted cost of conventional natural gas of \$3.91/GJ

- a) Please provide the natural gas and carbon price forecasts used in the example and Figure 3.
- b) Is Union proposing \$16/GJ for RNG or is this a high level estimate? What evidence is this figure based on?
- c) Please indicate the natural gas delivery point(s) assumed and the landed cost/m<sup>3</sup>, including storage and transportation.
- d) Please indicate the assumptions and resulting landed cost for RNG equivalent.
- e) Provide the estimated annual benefit/cost of RNG to an average Union South and Union North residential customer.

- f) Please discuss in detail based on Figure 3, and the responses, why RNG is the most viable option for abatement of residential GHG compared to purchasing credits.

### **Energy Probe IR Union #7 RNG**

**Reference:** Exhibit 3, Tab 4, Pages 22-23

**Preamble:** Since Union's ability to procure RNG is dependent on funding, Union has not included any RNG in its gas supply portfolio for 2018 and has not reflected any related GHG emissions reductions in the 2018 Compliance Plan. However, as highlighted above, customers would incur costs equal to the forecast cost of conventional natural gas plus the forecast avoided cost of carbon.

If Union is successful in acquiring RNG supply in 2018, the quantity is expected to be small in relation to Union's 2018 compliance obligation. Any GHG emission reductions realized in 2018 will be reflected in actual activity, and Union's gas supply purchases and compliance instrument procurement will be adjusted accordingly.

- a) Given that the greater-than-market costs of RNG will be covered from funds collected from the cap-and-trade policy, what percentage of Ontario's cap-and-trade money will come from natural gas customers?
- b) Please explain in more detail the impacts in 2018 of Union's RNG proposal on the distribution costs for residential customers and how these will be flowed into rates in 2018 and beyond. In responding, discuss in context of Union and Enbridge (Amalco) application for a Rate Setting Mechanism for 2019 and beyond.