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**BY E-MAIL**

April 5, 2018

Kirsten Walli  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street, Suite 2701  
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Union Gas Limited  
2018 Cap and Trade Compliance Plan Application  
OEB File Number EB-2017-0255**

In accordance with Procedural Order No. 3, please find attached the topic areas and questions OEB staff intends to seek further clarification on at the technical conference related to the above noted proceeding.

Yours truly,

*Original signed by*

Josh Wasylyk  
Project Advisor, Application Policy & Climate Change

## OEB Staff Technical Conference Summary

OEB staff has outlined its technical conference questions for Union Gas Limited (Union) below. The areas that OEB staff seeks further information and clarity from Union include:

- a) ISSUE 1.10 – Are the gas utility’s proposed greenhouse gas abatement activities reasonable and appropriate?
- b) ISSUE 4 – Deferral and Variance Accounts

### **ISSUE 1.10 – Are the gas utility’s proposed greenhouse gas abatement activities reasonable and appropriate?**

OEB Staff Technical Conference – Union Question 1

Reference:

Exhibit B.Staff.30

*Answer to Interrogatory from OEB Staff*

*Reference: Exhibit 3, Tab 4, Appendix A, p. 4*

*Preamble:*

*Union Gas indicates that it adjusted the savings potentials found in the CPS and the OEB MACC because it claims that they were gross, i.e., did not exclude efficiency upgrades that would occur in the absence of DSM programming.*

*The OEB’s Natural Gas Conservation Potential Study explicitly gives special consideration to natural conservation, and notes that it gave special consideration to:*

- *Naturally-occurring improvements in equipment efficiency*
- *Expected penetration of more efficient equipment into the building stock*
- *Known, upcoming changes in building and equipment energy performance codes and standards*

*Questions:*

- a) *Please indicate why Union Gas believes that the opportunities identified in the OEB MACC are gross savings.*
- b) *Please confirm that Union Gas understands that the OEB MACC analysis is based on the data and analysis from the OEB CPS, which indicates that the reference case explicitly included natural conservation.*
- c) *Please explain how the adjustment factors Union Gas used to reduce the OEB MACC potential are reasonable, given that the reference case included natural conservation.*

### UNION RESPONSE

a) – c)

*Union understands that the opportunities identified in the MACC and CPS take into account some natural conservation; however, Union does not believe that this natural conservation takes into account all applicable factors. For example, as noted in the CPS “the reference case does not account for initiatives related to the Climate Change Action Plan, which was under*

*development at the time the analysis was completed. It is anticipated that some of these initiatives would reduce gas consumption in the reference case forecast, which would reduce the achievable potential savings found in this study.”<sup>1</sup> To account for all applicable factors including the significant amount of CCAP funding that is expected to continue Union applied a discount to each MACC within its incremental energy efficiency abatement opportunity analyses.*

## **OEB STAFF TECHNICAL CONFERENCE QUESTIONS**

- a) Please discuss how Union determined the adjustment factors to account for CCAP initiative savings in 2018, 2019 and 2020 and the manner in which Union applied these adjustment factors to each MACC.
- b) Please indicate if Union has developed different CCAP adjustment factors relative to each sector and/or end-use and the rationale and methodology for determining these adjustment factors.
- c) In Mr. Neme’s response to OEB Staff interrogatory GEC.ED.STAFF.4, he provided his expert opinion related to Union reducing the commercial and industrial savings potential identified in the MACC by 54%. Mr. Neme states:

“That said, it is important to emphasize that Union implicitly assumes that more than half – 54% – of the commercial and industrial savings potential identified in the MACC would be acquired through CCAP initiatives. It is hard to imagine that anything close to that amount – particularly in 2018 – could be acquired through initiatives that are both not comprehensively addressing the market (i.e. they are clearly targeting specific markets like hospitals, schools and social housing) and also just getting off the ground. In my experience, when starting from scratch, such initiatives take time to begin penetrating the market at anything close to the level necessary to acquire more than half the cost-effective savings potential.”

- i) Please provide the analysis Union conducted to determine that a 54% reduction to commercial and industrial savings potential was appropriate, including all calculations, methodology, and assumptions.
  - ii) Please discuss the appropriateness of Union reducing the commercial and industrial potential identified in the MACC by 54% when the CCAP initiatives target specific market segments and are in their infancy.
- d) Please provide the detailed discount factors Union has applied to each MACC, including all supporting analysis, calculations, assumptions and methodologies.

OEB Staff Technical Conference Question 2

References:

Exhibit B.Staff.29

*Answer to Interrogatory from OEB Staff*

*Reference: Exhibit 3, Tab 2, Appendix A, pp. 2-3 and Table 1*

*Preamble:*

*Union Gas states that it conducted an analysis of the OEB's Conservation Potential Study (CPS) and LTCPF and determined that incremental abatement opportunities were not cost-effective over an average 15-year measure life once Ontario's cap and trade market is linked to WCI.*

*Questions:*

- a) Please provide all supporting data and analysis that Union Gas used to calculate the marginal costs of incremental abatement (in \$/tonne) in Table 1.
  - i. Please describe whether Union Gas' calculations include costs and benefits to the utilities only, or also includes costs and benefits to the ratepayer.**
- b) Please provide the cost-effectiveness threshold (in \$/tonne) that Union Gas used to determine that the incremental abatement activities were not cost-effective.*

UNION RESPONSE

- a) The methodology used to determine the Marginal Cost (\$/Tonne) figures in Union's application at Exhibit 3, Tab 4, Appendix A, p. 3, Table 1, can be found at Exhibit 3, Tab 4, Schedule 1. Specifically, the \$60/Tonne figure can be found in Column m, line 4 and the \$119/Tonne figure can be found in Column m, line 5. The costs and savings used in Union's application at Exhibit 3, Tab 4, Schedule 1 are informed by the CPS and are referenced in the notes below the table.
  - i. Exhibit 3, Tab 4, Schedule 1 calculates the cost per CO<sub>2e</sub> tonne abated, based on the costs and savings provided in the CPS. The costs include all program costs (program delivery costs and customer incentive costs) as per the CPS, and the benefits include natural gas m<sup>3</sup> savings as per the CPS (converted to CO<sub>2e</sub> emissions saved).**
- b) Union utilized the Minimum LTCPF, Mid-Range LTCPF and Maximum LTCPF outlined in the LTCPF Report to determine the cost-effectiveness threshold for emission savings between 2018 and 2028.<sup>1</sup> For emission savings in years beyond 2028, Union assumed the 2028 figures.*

Exhibit B.Staff.19

*Answer to Interrogatory from Ontario Energy Board Staff ("Staff")*

*Reference: Exhibit 3, Tab 1, p. 62; Exhibit B.Staff.1, Attachment 1, p.6 (p.15 of slide deck)*

*Preamble:*

*Union Gas states that it "has evaluated incremental energy efficiency opportunities, facilities abatement initiatives, as well as new technologies. Generally, these opportunities cannot be advanced, because they are not cost-effective at this time. Given that cost recovery within the existing regulatory mechanisms (whether that be DSM, gas supply procurement, or carbon*

*procurement) is largely predicated upon prudence and cost effectiveness, this represents a barrier to advancing these measures.”*

*In the IRRs provided by Union Gas in response to Issue 1.1.10 (RNG), Board Staff IR #1, Attachment 1, Union Gas provides a slide deck. On page 15 of the slide deck, Union Gas states “conservation remains the lowest cost solution to reducing emissions and saving customers money.” It also contains a graphic stating that “Residential Customers save \$2.67 for each dollar spent on natural gas conservation (ECO, 2016).”*

*Question:*

- a) *Given Union Gas’ statement above and the statements in the slide deck, please explain:*
- i. *Union Gas’ decision to prioritize RNG and not to pursue other abatement opportunities in its 2018 Compliance Plan.*
  - ii. *Whether the abatement activities that Union Gas is seeking government funding for are cost-effective. Please provide all data and supporting analysis that Union Gas used to calculate cost-effectiveness in \$/tonne CO<sub>2</sub>e.*

#### UNION RESPONSE

- a)
- i. *As stated in Union’s response at Exhibit B.Staff.1 d), the advancement of other abatement activities is not dependent upon OEB approval of Union’s RNG proposal. Rather, Union’s pursuit of DSM and other abatement initiatives is complementary to its RNG proposal, and Union is taking steps to advance different forms of abatement in parallel. As outlined in Union’s response at Exhibit B.Staff.1 e), Union has met with provincial Ministries in relation to other applicable measures that can be effective in reducing GHG emissions, and may require funding. These include energy efficiencies, CNG and geothermal. Union has also had energy efficiency program discussions with government focused on Residential, Commercial/Industrial, Indigenous, and Market Transformation opportunities that complement existing DSM programs.*
  - ii. *As outlined in Union’s application at Exhibit 3, Tab 4, pp. 41-42, “For opportunities that may not be cost-effective within the DSM Framework, Union will pursue these through CCAP and GreenON as this ensures that there is no duplication of program offerings. Any duplication in program offerings will not provide ratepayers or the programs with the most efficient means of reducing GHG emissions.” As noted in Union’s response at Exhibit B.Staff.1 e), cost effectiveness of RNG procurement in terms of the utility impact on its ratepayers is subject to government funding. Please see the response at Exhibit B.Staff.1 f), for an evaluation of the cost effectiveness of Union’s RNG proposal.*

#### OEB STAFF TECHNICAL CONFERENCE QUESTIONS

- a) Please explain what cost test Union used to determine “that incremental abatement opportunities were not cost-effective over an average 15-year measure life once Ontario’s cap and trade market is linked to WCI.” (from Exhibit B.Staff.29)

- i. Please list and describe all of the costs and benefits that Union included in its cost test analysis used to calculate cost-effectiveness of the abatement programs considered in developing the 2018 Compliance Plan.<sup>1</sup>
  
- b) Compare and contrast the cost test that Union used for incremental abatement programs with those used to calculate the cost effectiveness of RNG. Please list and describe all of the costs and benefits included in the cost tests.
  
- c) Please provide the following cost effectiveness calculations using a CCAP discount factor of 15% (as opposed to 54% used by Union)
  - i. Calculate the cost-effectiveness of the abatement measures Union considered in developing its 2018 Compliance Plan using the following cost effectiveness tests:
    - a. Utility Cost Test, including the following costs:
      1. Utility incentive costs
      2. Utility program delivery costs
  
    - And the following benefits:
    3. Natural gas avoided costs, comprising commodity costs, upstream capacity costs and downstream distribution system costs
    4. Avoided cost of carbon, based on the mid-range LTCPF scenario
  - b. TRC-Plus Test, with costs and benefits as defined in section 9.1.3 of the Filing Guidelines for the DSM Framework (2015-2020) (EB-2014-0134)
  - c. Compare the cost-effectiveness of abatement using the results of the UTC test and the TRC-Plus test to the cost of an allowance (\$18.99).
  
- d) Please clarify how Union considered the data provided in the MACC for the specific customer abatement end use categories (see Table 3 on page 15 of the MACC report) by providing details and supporting documentation on the extent to which the measures shown in the MACC are currently addressed in DSM programming.
  - a. Industrial: Please describe how Union is currently capturing the full potential identified in the MACC, making reference to the measures shown in Table 7 on pages 30 and 31 (particularly for industrial direct heating, HVAC, and steam hot water system due to significant abatement potential). Please provide the number of projects completed in 2017 and average project size.
  - b. Commercial: Please describe how Union is capturing the full potential identified in the MACC, making reference to the measures shown in Table 11 on pages 36-38 (particularly for space heating, due to significant abatement potential). Please provide number of projects completed in 2017 and average project size
  - c. Residential: Please describe how Union is capturing the full potential identified in the MACC, making reference to the measures shown in Table 15 on pages 36-38

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<sup>1</sup> For example, utility program delivery costs, utility incentive costs, natural gas avoided costs, avoided costs of carbon, etc

(particularly for space heating, due to significant abatement potential). Please provide number of projects completed in 2017 and average project size.

#### **ISSUE 4 – Deferral and Variance Accounts**

Preamble:

Union response to OEB Staff interrogatory

*Reference: Exhibit B.Staff.6, page 2 of 3*

*“On an actual basis, the price of natural gas and carbon may be different from the forecast price at the time the RNG contract is negotiated, however, the cost to ratepayers will be contracted rate (i.e., the forecast of natural gas and carbon at the time the RNG contract is finalized and will be fixed for the term of the RNG contract.”*

Union response to LPMA interrogatory

*Reference: Exhibit B.LPMA.8*

*“RNG contracts that are negotiated at the same time will use the same forecasts for natural gas and carbon. As new or updated gas and carbon forecasts become available any new RNG contracts will be negotiated using the new forecasts.”*

For context, in response to an interrogatory from CCC Enbridge stated the following:

*Reference: Exhibit I.C.EGDI.CCC.10, page 3 of 3*

- *Bullet # 5 – variances from the assumed gas costs in the RNG procurement model vs. actual gas costs at the relevant time will be reflected in the PGVA*
- *Bullet # 7 – where the cost of carbon allowances is different from the LTCPF at the time of the RNG RFP then the amounts recorded in the GHG-Customer Variance Account will be higher or lower than expected*

#### **OEB Staff Technical Conference Questions**

1. It appears that Union’s and Enbridge’s treatment of actual costs as related to RNG procurement is different. For example, Enbridge intends to reflect gas cost variances in the PGVA and allowance cost variances in the GHG-Customer Variance Account, while it appears that Union Gas does not.
  - a) Please confirm OEB staff’s understanding is correct.
2. Does Union think that the treatment of actual costs for gas and carbon related to RNG procurement should be the same for both distributors? If not, please explain why not?