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May 31, 2018

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

Attention: Kirsten Walli, Board Secretary

Dear Ms. Walli:

Re: Ontario Sustainable Energy Association Reply Submission for 2018 Cap and Trade Compliance Plans, EB-2017-0255 (Union Gas Limited)

Please find enclosed Ontario Sustainable Energy Association's reply submission for the above-noted matter.

Yours truly,

Robert Woon

Document #: 1373587

cc: Janis Wilkinson, OSEA
Marion Fraser, Fraser & Company

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Schedule B).

IN THE MATTER OF an Application by Enbridge Gas Distribution Inc and Union Gas Limited seeking approval of the Ontario Energy Board for their 2018 Cap and Trade Compliance Plans.

WRITTEN SUBMISSION OF ONTARIO SUSTAINABLE ENERGY ASSOCIATION

May 31, 2018

I. OVERVIEW

- 1 Enbridge Gas Distribution Inc. (Enbridge) and Union Gas Limited (Union) (collectively, the Utilities) brought applications seeking the Ontario Energy Board's (Board) approval for their respective 2018 Cap and Trade Compliance Plans in accordance with the Board's Regulatory Framework for the Assessment of Costs of Natural Gas Utilities' Cap and Trade Activities (Framework).¹
- 2 The Ontario Sustainable Energy Association (OSEA) is generally supportive of the Utilities' 2018 Compliance Plans. However, OSEA expects future compliance plans to include clearer timelines for the development of cost effective abatement

¹ EB-2015-0363, Report of the Board, Regulatory Framework for the Assessment of Costs of Natural Gas Utilities' Cap and Trade Activities dated September 26, 2016 [Framework].

measures and better inclusion of incremental energy efficient abatement measures.

- 3 OSEA supports the Utilities' progress in developing the Abatement Construct, a framework for selecting, funding and implementing customer and facility abatement measures. The Utilities are considering a portfolio of compliance options and have begun moving multiple new potential customer and facility abatement measures through the Initiative Funnel.
- 4 OSEA supports the Utilities' request for up to \$2 million for the Low Carbon Initiative Fund (LCIF) to support the Utilities' investigations, studies and pilot programs for potential new customer and facility abatement measures.
- 5 OSEA appreciates that it will take time and funding in order to take potential abatement measures from conceptual ideas into market ready programs. However, OSEA submits that the progress of the Utilities' development and incorporation of the proposed abatement measures should strive to be aligned with the timing of the provincial emission targets of the Cap and Trade program aiming to reducing greenhouse gas (GHG) emissions in Ontario.
- 6 Further, OSEA submits that the Utilities should be incorporating more incremental energy efficient abatement measures beyond their existing Demand Side Management Plans (DSM Plans). The Board's Marginal Abatement Cost Curve² (MACC) identified cost-effective abatement measures that are incremental to the Utilities' DSM Plans. The Board should require the Utilities in

² EB-2016-0359, ICF Marginal Abatement Cost Curve for Assessment of Natural Gas Utilities' Cap and Trade Activities dated July 20, 2017 [MACC].

future Compliance Plans to analyze the MACC on an individual measure basis, and for the Utilities to provide sufficient rationale if the Utilities do not incorporate abatement measures identified by the MACC to be cost-effective.

- 7 The Utilities have a significant role to play in assisting Ontario to meet the GHG reduction target, reducing GHG emissions overall and addressing climate change. The Utilities should strive to rapidly expand potential opportunities to reduce their customer and facility related emissions in order to achieve the necessary emissions reductions targets.

II. **ISSUES**

- 8 OSEA's submissions focuses on the following issues:

- (a) Issue 1.8 – Are the gas utility's proposed longer term investments reasonable and appropriate?
- (b) Issue 1.9 – Are the gas utility's proposed new business activities reasonable and appropriate?
- (c) Issue 1.10 – Are the gas utility's proposed GHG abatement activities reasonable and appropriate?

III. **ISSUES 1.8, 1.9, AND 1.10 – LONG-TERM INVESTMENTS, NEW BUSINESS ACTIVITIES, AND GHG ABATEMENT ACTIVITIES**

- 9 OSEA is generally supportive of the Utilities' 2018 Compliance Plans and the progress the Utilities have made from their respective 2017 Compliance Plans in relation to long-term investments, new business activities and GHG abatement activities.

A. 2017 COMPLIANCE PLANS

10 In the 2017 Cap and Trade Compliance Plan hearings, OSEA submitted that the Utilities' 2017 Compliance Plans were not reasonable or appropriate in terms of the long-term investments, new business activities and GHG abatement activities. The Utilities included little to no customer or facility abatement activities in their respective 2017 Compliance Plans and focused primarily on purchasing of allowances. Further, the Utilities did not provide a comparison of the costs of investing in abatement versus purchasing allowances as required by the Framework.³

11 OSEA submitted that the Utilities should have been "conducting feasibility studies, pilot programs, and other investigations immediately to mitigate risk and be in a position to incorporate the abatement activities that will be required to meet Ontario's emission targets."⁴

12 Given the short timeline between the issuance of the Framework and the deadline to submit the 2017 Compliance Plans, OSEA requested that the Board direct the Utilities to conform to the Framework on future compliance plans, including providing a full and detailed assessment of abatement activities.⁵

B. INITIATIVE FUNNEL AND LCIF FUNDING

13 OSEA is encouraged by the Utilities' efforts to address OSEA's concerns in the Utilities' 2018 Compliance Plans. In their 2018 Compliance Plans, the Utilities have created an approach to identify and select potential new abatement measures through the "Abatement Construct", which includes screening criteria,

³ EB-2016-0296/0300/0330, OSEA Reply Submission dated May 19, 2017 at para 18.

⁴ EB-2016-0296/0300/0330, OSEA Reply Submission dated May 19, 2017 at para 4.

⁵ EB-2016-0296/0300/0330, OSEA Reply Submission dated May 19, 2017 at para 48.

a four phase “Initiative Funnel” for low carbon initiatives, and the LCIF.⁶ The Utilities have identified several new potential customer and facility abatement measures which are proceeding through the Initiative Funnel. OSEA is pleased to see the progress the Utilities have made since filing their 2017 Compliance Plans.

Enbridge Abatement Initiatives

14 Enbridge listed several customer abatement measures that it is pursuing which are at different stages of the Initiative Funnel:

- (a) Conceptualize – Enbridge is identifying and exploring opportunities for smart metering, RNG-Gasification, and Carbon Capture.
- (b) Formulate – Enbridge is investigating Hydrogen (Power to Gas), Net-Zero Homes/Micro-Generation, Expanded NGV, and Natural Gas Air-Source Heat Pumps. Enbridge has begun and will continue to implement these measures on a pilot project basis in 2018.⁷
- (c) Propose – Enbridge is seeking approval to implement a RNG Procurement Program, a Geothermal Services Program, and a Natural Gas Renewable Enabling Program.⁸ Enbridge indicated that it is seeking a Provincial subsidy to make its RNG Procurement Program viable.⁹

⁶ EB-2017-0224, Exhibit C, Tab 1, Schedule 1, at pp 9-11; EB-2017-0224, Exhibit C, Tab 5, Schedule 1, Page 4; EB-2017-0255, Exhibit 1, at p 5.

⁷ EB-2017-0224, Exhibit C, Tab 5, Schedule 2, p 3.

⁸ EB-2017-0224, Exhibit C, Tab 5, Schedule 2, p 3.

⁹ EB-2017-0224, Exhibit C, Tab 5, Schedule 2, p 10.

15 Enbridge also identified facility-abatement measures that it is pursuing (and will continue to pursue subject to LCIF funding) which are all at the “Conceptualize” stage of the Initiative Funnel, and include:

- (a) Portable Booster Compressors
- (b) High Bleed Pneumatic Devices
- (c) Building Efficiency Improvements, and
- (d) Natural Gas Air-Source Heat Pumps.¹⁰

Union Abatement Initiatives

16 Union listed several customer abatement measures that it is pursuing which are at different stages of the Initiative Funnel:

- (a) Conceptualize – Union is identifying and exploring opportunities for Residential-Scale Carbon Capture and Utilization, Building Skins, Biomass Conversion to RNG, and Automatic Meter Reading.
- (b) Formulate – Union is investigating Integrated Air-Source Heat Pumps, Ground Source Heat Pumps, Net Zero Energy and Net Zero Energy Ready Homes, Hydrogen and Power to Gas, and Microgeneration.
- (c) Propose – Union is proposing a RNG procurement program.¹¹

¹⁰ EB-2017-0224, Exhibit C, Tab 5, Schedule 3, p 2.

¹¹ EB-2017-0255, Exhibit 3, Tab 4, p 13.

- 17 Union also identified facility-abatement measures that it is pursuing, which are at various stages of the Initiative Funnel:
- (a) Conceptualize – Union is identifying and exploring opportunities for Portable Blowdown Recovery and possible projects under the Federal Methane Regulations.
 - (b) Formulate – Union is investigating Fugitive Emissions Management and Station Heating Equipment.
 - (c) Propose – Union is proposing Process Integration.¹²
- 18 OSEA supports the Utilities’ efforts in pursuing the potential new customer and facility abatement measures. OSEA submits the Board should require the Utilities to provided additional details about the abatement measures in future Compliance Plans. Additional details should include detailed budgets, work plans, proposed schedules, preliminary projections about market penetration, rate-payer implementation costs, preliminary estimates on GHG emission reductions and the associated carbon cost savings.
- 19 Union provided some additional details about its proposed measures upon request, including a description of deliverables and the proposed timeline.¹³ However, this information, along with other additional details about the proposed measures should be mandatory in order for the intervenors, Board staff, and the Board to assess the progress of the Utilities’ efforts to identify new abatement measures to incorporate in their respective compliance plans. This is particularly

¹² EB-2017-0255, Exhibit 3, Tab 4, p 13.

¹³ EB-2017-0255, Exhibit JT1, pp 1-6.

important since the Utilities are currently proposing that the funding for the investigations of potential abatement measures come from rate-payers through the LCIF.

- 20 OSEA submits that the progress of the Utilities' investigation of abatement measures needs to be expedited where possible. Union projects that its investigations and pilot programs for Stage 1 and Stage 2 initiatives will not be completed until the end of 2018 or well into 2019.¹⁴ Union stated on cross examination that none of the abatement measures in Stage 2 of the Initiative Funnel will be ready for market by the end of 2018.¹⁵ Enbridge did not provide a timetable, but stated on cross-examination that it likely will not have results from its abatement measure pilot projects and studies before submitting its 2019-2020 Cap and Trade Compliance Plan by August 2018.¹⁶
- 21 The Government of Ontario has set significant emissions reductions targets for the province. Ontario's emissions reduction target for 2020 is set at 15% below 1990. The target for 2030 is 37% below 1990 levels.¹⁷
- 22 ICF International concluded that in order to achieve Ontario's 2030 reduction target, natural gas consumption and transportation fuel use will need to be reduced by 50% by 2030.¹⁸
- 23 The Framework recognizes that abatement programs are a key part of the effort to reduce Ontario's GHG emissions.¹⁹ The Utilities have a significant role in

¹⁴ Exhibit JT1.17, pp 1-6.

¹⁵ Hearing Transcript Volume 1, p 167.

¹⁶ Hearing Transcript Volume 3, p 121-2.

¹⁷ EB-2017-0255, Exhibit B.ED.21, Attachment B, p 1.

¹⁸ EB-2017-0255, Exhibit B.ED.21, Attachment B, p 2.

meeting Ontario's emission targets, reducing GHG emissions overall and helping to address climate change.

- 24 The Utilities' pilot programs for proposed abatement measures are in the early stages of development. It is unlikely that the Utilities will have abatement measures ready to bring to market before submitting their 2019-2020 Cap and Trade Compliance Plans, which cover the remainder of Ontario's first compliance period.
- 25 Given Ontario's ambitious emissions reduction targets, the Utilities' 2018 Compliance Plans and their subsequent Compliance Plans should rapidly implement abatement measures that reduce both customer and facility GHG emissions. In the near immediate future, the Utilities should move beyond the exploratory stage and take greater steps now in order to meet their future compliance obligations.

LCIF

- 26 OSEA supports the Utilities' request for up to \$2 million in funds for the proposed LCIF to advance abatement measures through the Initiative Funnel.²⁰
- 27 As stated above, in the 2017 Compliance Plan hearings, OSEA submitted that the Utilities should be investigating potential new abatement measures through studies and pilot programs. Investment of potential new abatement measures that reduce GHG emissions will assist rate-payers in reducing their Cap and Trade compliance costs and assist the province in meeting its GHG emission targets.

¹⁹ Framework, p 21.

²⁰ EB-2017-0224, Exhibit C, Tab 5, Schedule 1, p 10; EB-2017-0255; Exhibit 3, Tab 4, p 14.

28 Notwithstanding, OSEA submits that the Utilities should be engaging with the Government of Ontario to access funds available through the province's Cap and Trade Program to minimize the need for the LCIF to be rate-payer funded. The Utilities have had some discussions with the Government of Ontario to secure funding for the Utilities' proposed renewable natural gas procurement program. The Board should direct the Utilities to seek government funding for the LCIF and report on their progress in future Compliance Plans.

C. ENERGY EFFICIENT ABATEMENT MEASURES

29 The Utilities did not propose any incremental energy efficient abatement measures beyond their respective DSM programs and programs under the Green Investment Fund. Union stated that it "determined that there is no cost-effective incremental energy efficiency program that would be prudent to pursue at this time within the existing DSM Framework."²¹ Enbridge states that it "reviewed the MACC relative to current DSM targets and found that all cost-effective savings are already captured."²²

High-Level Analysis Conducted by the Utilities

30 In coming to their respective conclusions, the Utilities took similar high level approaches by calculating the total natural gas savings identified by the MACC and applying adjustment factors for free ridership and franchise area. Each Utility then compared the gross savings calculated for each Utility under the MACC to the total amount of savings projected under their respective DSM

²¹ EB-2017-0255, Exhibit 3, Tab 1, p 4.

²² EB-2017-0224, Exhibit C, Tab 5, Schedule 2, p 28.

Plans.²³ For example, the MACC identified for the residential sector at the Mid-Range LTCPF, approximately 97 million m³ of annual natural gas savings potential that is cost-effective. Enbridge calculated that of the 97 million m³, the potential savings attributed to Enbridge would be 51 million m³ after applying a 15% free ridership adjustment and a 62% franchise area adjustment. Enbridge's projected savings under its DSM Plan for the residential sector is 56 million m³, therefore Enbridge concludes there are no incremental cost-effective abatement under the MACC.

- 31 Through the above analysis, Enbridge concluded that its DSM Plan projected more natural gas savings in total than the total projected natural gas savings potential under the MACC for the commercial/industrial and residential sectors.²⁴
- 32 Union's analysis showed that its DSM Plan projected more natural gas savings in total for the commercial/industrial sector compared to the total savings potential under the MACC.²⁵ However, for the residential sector, Union identified that it could save more natural gas based on the MACC compared to its residential DSM Plan.²⁶ Notwithstanding, Union did not incorporate any additional incremental energy efficient abatement measures for the residential sector in its 2018 Compliance Plan and stated:

Union did, however, identify cost-effective abatement opportunities incremental to Union's existing DSM programs within the Residential sector in all carbon price forecast scenarios. Union will

²³ EB-2017-0255, Exhibit 3, Tab 4, Appendix A, pp 4-7; EB-2017-0224, Exhibit C, Tab 5, Schedule 2, pp 25-26.

²⁴ EB-2017-0224, Exhibit C, Tab 5, Schedule 2, p 26.

²⁵ EB-2017-0255, Exhibit 3, Tab 4, Appendix A, p 5.

²⁶ EB-2017-0255, Exhibit 3, Tab 4, Appendix A, p 6.

assess the incremental opportunity and pursue it through DSM Framework where possible.²⁷

The Roles of DSM and Cap and Trade

- 33 The Utilities should not defer incremental energy efficient abatement measures exclusively to their respective DSM programs. The Framework recognized that there would be potential overlap between the existing DSM programs and Cap and Trade. The Framework stated:

The OEB is confident that any potential overlap can be appropriately addressed through the robust EM&V process of the DSM framework. The DSM framework also includes a mid-term review provision (to be completed by June 1, 2018) that will provide an appropriate opportunity to assess the DSM framework in light of Cap and Trade program.²⁸

- 34 The Utilities have taken a position that all energy efficient abatement measures should be done exclusively under the DSM framework. The Utilities jointly submitted that

assessment of energy conservation is more appropriately considered as part of the DSM Framework as opposed to being considered under the Cap and Trade Framework.²⁹

- 35 The Utilities further submitted that

the board consider the addition of the cost of carbon to the existing TRC cost-effectiveness test [within the DSM Framework] effective from the time of launch of Ontario's Cap-and-Trade Program (January 1, 2017).³⁰

- 36 OSEA submits that the issue of how energy efficient abatement measures are dealt with by the DSM framework and Cap and Trade framework must be

²⁷ EB-2017-0255, Exhibit 3, Tab 4, p 43.

²⁸ Framework, p 28.

²⁹ Letter from Dennis O'Leary to Kirsten Walli, dated April 20, 2018, Re: DSM Framework and the Cost of Carbon, DSM Framework Mid-Term Review: EB-2017-0127 & EB-2017-0128 [Utilities' April 20, 2018 Letter].

³⁰ Utilities' April 20, 2018 Letter.

addressed. There is an inherent conflict between the two frameworks since what is deemed “cost-effective” is determined through different tests under the different frameworks.

37 The DSM Framework provides that:

The Board will adopt an enhanced TRC test, or the “TRC-Plus” test, which the gas utilities should use to screen all potential DSM programs when developing their multi-year DSM plans. The gas utilities should directly apply a 15% non-energy benefit adder to the benefit side of the TRC test calculation.³¹

38 Though the TRC-Plus test considers a 15% non-energy benefit adder, it does not consider the carbon costs associated with the natural gas savings produced by the abatement measure. The DSM Framework was issued before the Cap and Trade Program in Ontario came into force. There is no discussion in the DSM Framework about the potential implications of carbon costs.

39 In contrast, the Cap and Trade Framework provides that:

it is premature to apply the TRC or SCT to the Utilities’ Compliance Plans at this time. The OEB will consider the use of additional tests such as the TRC or SCT after gaining experience with the assessment of Compliance Plans.³²

40 The Framework further states:

The OEB understands that a Utility may choose to develop its own, company-specific MACC to inform the development of its Compliance Plan however, the OEB will rely on the OEB MACC as its principal tool for assessing Utilities’ selection of compliance options and results cost consequences.³³

³¹ DSM Framework, p 33.

³² Framework, p 22.

³³ Framework, p 20.

41 OSEA submits that unless and until a further determination is made by the Board about how incremental energy efficient abatement measures are to be implemented by the Utilities under the DSM Framework and Cap and Trade Framework, Utilities should be incorporating incremental energy efficient abatement measures under both frameworks.

Cost-Effective Abatement Measures Identified by the MACC

42 The Utilities stated that they used the MACC as the principal tool in assessing incremental energy efficient abatement measures.³⁴

43 OSEA submits that the high level approaches the Utilities undertook using the MACC are not sufficient to identify potential incremental energy efficient abatement measures. The Utilities should be assessing whether the individual measures identified by the MACC to be cost-effective can be incorporated in the Utilities' respective Compliance Plans.

44 Union did review the individual measures identified by the MACC to identify gaps in its existing DSM Plan. For a group of measures identified by the MACC to be cost-effective under the Cap and Trade program, Union stated the following:

*These measures have either been denied by the OEB within the current or previous DSM Frameworks, or have been assessed by Union within the DSM Framework and have been identified as low priority measures (either due to poor TRC-Plus cost effectiveness or limited market opportunity). Union submits that should these measures require reassessment, they should continue to be assessed within the DSM Framework, and that it is not appropriate to duplicate the DSM Framework within the Cap-and-Trade Framework.*³⁵

³⁴ EB-2017-0255, Argument in Chief of Union Gas Limited, para 54; EB-2017-0224, Argument in Chief of Enbridge Gas Distribution, para 74.

³⁵ EB-2017-0255, Exhibit B.Staff.31, pp 3-4.

- 45 Union in its Argument-In-Chief also cited duplication as rationale for it to not pursue cost-effective incremental energy efficient abatement measures in its 2018 Compliance Plan.³⁶
- 46 OSEA submits that duplication is not sufficient rationale not to pursue cost-effective incremental energy efficient abatement measures under the Cap and Trade Framework. As stated above, the Framework recognized the potential overlap between DSM and Cap and Trade, but the Board did not order that abatement measures should be done exclusively through one framework or other.
- 47 Further, OSEA submits that poor TRC-Plus cost-effectiveness is not a valid justification not to pursue cost-effective incremental energy efficient abatement measures under the Cap and Trade Framework. Under the current Framework, the TRC-Plus test is not relevant to assessing cost-effective abatement measures. During the cross-examinations, Union counsel stated that the Board should be assessing the reasonableness of the compliance plan within the Framework as it is exists.³⁷ Therefore, Union should not be deferring conservation measures identified as cost-effective under the MACC because the measures had a poor TRC-plus cost effectiveness rating under the DSM Framework. The two frameworks are separate and take different factors into consideration.

³⁶ EB-2017-0255, Argument in Chief of Union Gas Limited, para 61.

³⁷ Ontario Energy Board Hearing Transcript, Volume 1, April 23, 2018, p 165 [Hearing Transcript Volume 1].

- 48 Enbridge did not examine the individual measures identified by the MACC to determine if there were any gaps under its DSM Plan.³⁸ During cross-examination, Enbridge stated that there are potential abatement measures that have been identified by the MACC as cost-effective under Cap and Trade that may not be in Enbridge's existing DSM Plan.³⁹
- 49 OSEA submits that the Board should provide direction to the Utilities to confirm that Utilities are required to incorporate cost-effective incremental energy efficient abatement measures under the existing Cap and Trade Framework.
- 50 OSEA also submits that the Board should direct the Utilities that if the Utilities utilize the OEB MACC as the primary tool, the Utilities must consider the individual measures identified by the MACC and provide sufficient justification why the Utilities are not pursuing any energy efficient abatement measure if identified to be cost-effective under the MACC.

IV. CONCLUSION

- 51 OSEA supports the Utilities' 2018 Compliance Plans applications for Board approval.
- 52 OSEA requests that the Board provide the Utilities with the following directions for future compliance plans:
- (a) Utilities are required to provide additional details about the customer and facility abatement measures in their respective Initiative Funnel, including but limited to detailed budgets, work plans, proposed schedules,

³⁸ Hearing Transcript Volume 3, pp 116-117.

³⁹ Hearing Transcript Volume 3, pp 117-118.

preliminary projects about market penetration, rate-payer implementation costs, preliminary estimates on GHG reductions, and the associated carbon cost savings

- (b) Utilities are required to engage with the Government of Ontario to seek funding for the LCIF from available funds from the provincial Cap and Trade Program
- (c) Utilities are required to incorporate cost-effective incremental energy efficient abatement measures under the existing Framework until directed otherwise, and
- (d) Utilities are required to analyze the individual abatement measures identified by the Board's MACC and provide sufficient justification about why they are not pursuing any energy efficient abatement measures that are identified by the Board's MACC to be cost-effective.