

Ministry of the  
Environment, Conservation  
and Parks

Ministère de l'Environnement,  
de la Protection de la nature et  
des Parcs

Financial Instruments Branch

Direction des instruments  
financiers

77 Wellesley Street West  
10th Floor, Ferguson Block  
Toronto ON M7A 2T5

77, rue Wellesley Ouest  
10<sup>e</sup> étage, édifice Ferguson  
Toronto ON M7A 2T5



March 12, 2019

**MEMORANDUM**

**To:** Jennifer Murphy, P. Eng.  
Enbridge Gas Distribution Inc.

Peter Mussio  
Union Gas Ltd.

**From:** Eric Loi  
Senior Engineer, Industrial Specialist

**RE:** 2018 Natural Gas Composition and High Heat Value Data

---

Thank you for your letter (enclosed) dated March 6, 2019 on the natural gas composition and high heat value (HHV) data for the year 2018.

Regulation 390/18 (Greenhouse Gas Emissions, Quantification, Reporting and Verification) and the *Guideline for Quantification, Reporting and Verification of Greenhouse Gas Emissions* (Guideline) allow for the use of fuel high heat values in the calculation of greenhouse gas emission from general stationary combustion sources.

The provisions in the Guideline include the use of fuel sampling or results received from the fuel supplier at the minimum frequency of semiannually for natural gas. The high heat value data that is contained in your March 6, 2019 letter for your respective companies does meet the minimum semiannual frequency requirements for fuel sampling and subject to the facility meeting all the other applicable requirements in the Guideline pertaining to the measurement of natural gas, the data can be used for the calculation of greenhouse gas emissions in applicable equations.

Thanks for your cooperation in providing this data for facilities to use in the calculation of 2018 emission.

Yours truly,

A handwritten signature in blue ink that reads "Eric Loi".

Eric Loi, P.Eng., M.Eng.

Cc. Loraine Chan, Senior Program Advisor, Financial Instruments Branch, MECP

Encl.



Enbridge Gas Inc., Operating as Enbridge  
Gas Distribution  
500 Consumers Road  
North York, ON M2J 1P8

Enbridge Gas Inc., Operating as Union Gas  
50 Keil Drive North  
Chatham, ON N7M 5M1

March 6, 2019

Eric Loi, P. Eng., M. Eng.  
Senior Engineer  
Ministry of Environment, Conservation and Parks  
77 Wellesley St. West, Ferguson Block  
Toronto ON M7A 2T5

Delivered by E-mail: eric.loi@ontario.ca

Dear Eric:

**RE: 2018 Gas Composition and HHV Data**

Enbridge Gas Inc., operating as Union Gas and Enbridge Gas Distribution, is pleased to provide gas composition and higher heating value (HHV) information for the reporters who will be reporting in 2019 into the Ontario GHG reporting system. This is provided in the summary tables below for both Enbridge and Union franchise areas. We understand that that this information will be made available to facilities by the Ministry for use in calculations under Regulation 390/18 and information purposes.

Sincerely,

Jennifer Murphy, P. Eng.  
Supervisor, Carbon Strategy  
[jennifer.murphy@enbridge.com](mailto:jennifer.murphy@enbridge.com)

Peter Mussio  
Technical Manager, EHS  
[pmussio@uniongas.com](mailto:pmussio@uniongas.com)

Ontario: Typical Gas HHV [Enbridge Gas service area]		Jan-Jun 2018	Jul-Dec 2018
Natural gas HHV	(GJ/standard* m <sup>3</sup> )	0.0390	0.0385
Ontario: Typical Gas Composition [Enbridge Gas service area]			
methane	mole %	94.25	95.22
ethane	mole %	4.07	3.47
propane	mole %	0.20	0.17
butane	mole %	0.04	0.02
pentanes	mole %	0.01	0.00
hexanes+	mole %	0.01	0.00
nitrogen	mole %	0.84	0.62
carbon dioxide	mole %	0.58	0.50
oxygen	mole %	0.00	0.00
hydrogen	mole %	0.00	0.00
Total	mole %	100.00	100.00

\*Standard conditions: 15° Celsius, 101.325 kPa

This information is provided solely for the use of the reporting operations related to their compliance reporting obligation under Ontario Regulation 390/18 under the Environmental Protection Act, where applicable. While every effort has been made to ensure the accuracy of this information, Enbridge Gas does not warrant accuracy of the information for any purpose. Enbridge Gas provides no guarantee regarding gas composition or high heating value for any specific delivery point.

Ontario: Typical Gas Higher Heating Value [Union Gas service area]		Jan-Jun 2018	Jul-Dec 2018
Natural Gas HHV	(GJ/standard* m <sup>3</sup> )	0.0388	0.0391
Ontario: Typical Gas Composition [Union Gas service area]			
Methane	mole %	93.89	93.67
Ethane	mole %	4.42	5.08
Propane	mole %	0.28	0.27
Butane	mole %	0.05	0.04
Pentanes	mole %	0.01	0.01
Hexanes+	mole %	0.01	0.00
Nitrogen	mole %	0.83	0.57
Carbon dioxide	mole %	0.47	0.33
Oxygen	mole %	0.01	0.01
Hydrogen	mole %	0.03	0.02
Total	mole %	100.00	100.00

\*Standard conditions: 15° Celsius, 101.325 kPa

This information is provided solely for the use of the reporting operations related to their compliance reporting obligation under Ontario Regulation 390/18 under the Environmental Protection Act, where applicable. While every effort has been made to ensure the accuracy of this information, Union Gas does not warrant accuracy of the information for any purpose. Union Gas provides no guarantee regarding gas composition or high heating value for any specific delivery point.