

EB-2016-0296
EB-2016-0300
EB-2016-0330

**Union Gas Limited
Enbridge Gas Distribution Inc.
Natural Resource Gas Limited**

**Applications for approval of the cost consequences
of cap and trade compliance plans**

BOMA's SUPPLEMENTARY UNION COMPENDIUM

April 19, 2017

Tom Brett
Fogler, Rubinoff LLP
77 King Street West, Suite 3000
P.O. Box 95, TD Centre North Tower
Toronto, ON M5K 1G8

Tel: (416) 941-8861
Email: tbrett@foglers.com

Counsel for BOMA

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UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit 3, p. 44

- a) Please explain what is meant by project execution risk in this context.
 - b) What does Union mean by "it will manage liquidity risk by prioritizing selection of compliance instructions in 2017"? Please explain this in the context of the compliance instruments which Union has stated in its evidence are likely to be available to it, or not available to it, or that it does not intend to use, in 2017.
-

Response:

- a) The Climate Change Mitigation and Low-Carbon Economy Act, 2016 ("Climate Change Act") outlines prohibitions on the disclosure of certain information. These prohibitions are reflected in Section 4 of the OEB Cap-and-Trade Framework.¹

This question refers to information that has been classified as Strictly Confidential. In keeping with the legislation and with the best interests of ratepayers in mind, such information must remain Strictly Confidential in order to maintain the ability to effectively execute on Compliance Plans.

- b) The Climate Change Act outlines prohibitions on the disclosure of certain information. These prohibitions are reflected in Section 4 of the Cap-and-Trade Framework.

This question refers to information that has been classified as Strictly Confidential. In keeping with the legislation and with the best interests of ratepayers in mind, such information must remain Strictly Confidential in order to maintain the ability to effectively execute on Compliance Plans.

¹ Climate Change Mitigation and Low-carbon Economy Act, 2016, S.O. 2016, CHAPTER 7 (Climate Change Act) and Regulatory Framework for Assessment of Costs of Natural Gas Utilities' Cap-and-Trade Activities (EB-2015-0363)

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit 3, pp. 29-32

Preamble: Union provided its projected 2017 Compliance Plan administrative costs.

- a) For comparative purposes, please provide a breakdown of Union’s 2016 administrative costs which include the costs of IT billing system updates, staff resources, call centre, consulting, and any other amounts Union incurred or forecast to be incurred.
- b) Please provide variance analysis which compares, by cost element, the costs incurred in 2016 versus the projected administrative costs for 2017.
- c) Please discuss the rationale and appropriateness of the difference in staffing levels proposed by Union (13.5 FTEs in 2017) and Enbridge (7 FTEs in 2017).
- d) Please discuss the process that Union uses or intends to use to ensure that administrative costs are incremental to the Company’s current business and are required for the purpose of the Company meeting its Cap-and-Trade obligations.

Response:

- a) The Table below provides a breakdown of Union’s administrative costs for both 2016 actual and 2017 forecast.

Line No.	Particulars	2016 Cost (\$000)	2017 Forecast (\$000)
1	Salaries - <i>excluding customer contact centre</i>	1,670	2,542
2	Salaries - <i>customer contact centre</i>	12	275
3	Consulting & Market Research	484	670
4	Bad Debt - <i>related to Cap-and-Trade</i>	0	600
5	Revenue Requirement on Capital Costs	(4)	68
6	Other	63	68
7	Total	2,225	4,223

The Table below provides a breakdown of Union's consulting costs for both 2016 actual and 2017 forecast.

Line No.	Particulars	2016 Cost (\$000)	2017 Forecast (\$000)
1	Legal	135	150
2	Carbon Strategy & Analysis	152	120
3	Compliance Planning, Implementation & Customer Communication/Research	162	200
4	GHG Reporting & Forecasting	35	100
5	Offset Development	0	100
6	Total	484	670

Union has incurred approximately \$450,000 in incremental capital costs related to Cap-and-Trade at December 31, 2016. Union is forecasted to incur an additional \$400,000 in 2017 in capital costs related to Cap-and-Trade. Most of Union's capital costs relate to billing system updates required as a result of Cap-and-Trade. Capital costs are reflected in administration costs using a revenue requirement calculation.

- b) The following analysis provides an explanation for the variances between 2016 and 2017 administrative costs by cost element, as provided above. Union's actual 2017 costs could vary from the forecast.

Salaries - excluding customer contact centre

The increase in 2017 forecast salaries compared to 2016 is the result of realizing a full year's expense for 2017 as opposed to a partial year's expense for 2016. Throughout 2016, Union ramped up its Cap-and-Trade FTE commensurate with the scope and complexity of Cap-and-Trade related work requirements. As a result, Union's 2016 Cap-and-Trade salaries include a pro-rata of the 2016 total that is applicable to Cap-and-Trade. For 2017, Union is including a full year of salaries for the 13.5 Cap-and-Trade FTE.

Salaries - customer contact centre

Union's customer contact centre costs represent seven temporary employees hired due to expected increases in calls to the customer contact centre as a result of Cap-and-Trade implementation and billed beginning January 1, 2017. These temporary employees started in December 2016. Therefore, there are significantly less costs for 2016 than forecasted for 2017.

Consulting

The increase in 2017 forecast consulting costs compared to 2016 costs, is attributable to forecast costs for offset regulations and protocols, compliance planning and implementation and GHG reporting and forecasting. Union's offset consulting costs started in 2017 and there were no costs for 2016. Union's compliance planning/implementation costs will increase due to execution and transactional costs expected in 2017. GHG reporting and monitoring is expected to increase in 2017 as a result of additional measurement, reporting and verification expected in 2017.

Bad debt related to Cap-and-Trade

Union did not start billing customers Cap-and-Trade related charges until 2017, and therefore, there are no bad debts related to Cap-and-Trade for 2016.

Revenue requirement on capital costs

Union's revenue requirement on capital costs will increase in 2017 as these capital assets become available for use and are placed into service in 2017.

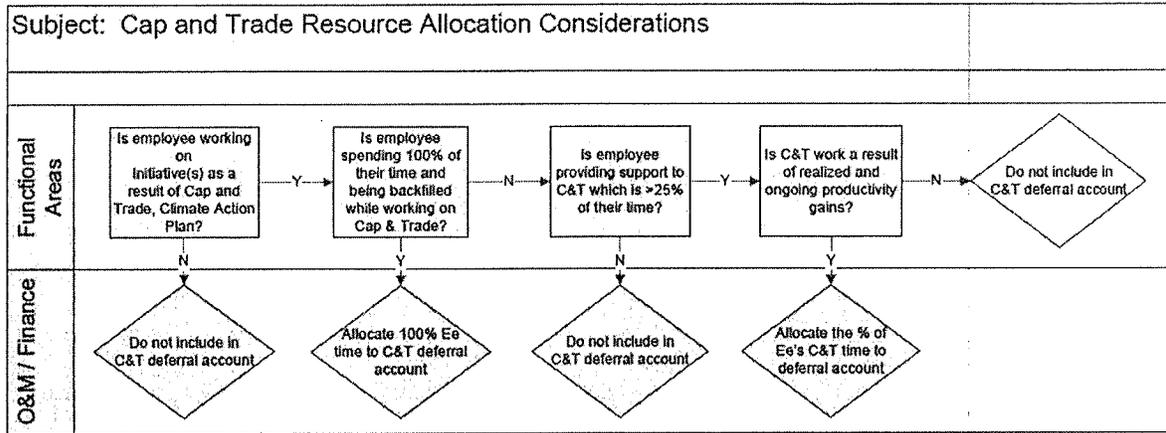
Other

Other expenses represent employee expenses, office supplies and computer expenses. Other expenses are not expected to increase significantly in 2017.

- c) Union does not have the information required to adequately assess and justify the difference in staffing levels proposed between Union and Enbridge. Please see Exhibit B.SEC.3 for a description of Union's 13.5 FTE roles.
- d) In order to properly support the incremental work resulting from the Cap-and-Trade and CCAP, Union has incurred administrative costs. These costs are comprised of new incremental roles and existing roles supporting the incremental work. In the case of existing roles, Union has reallocated work, refined processes and restructured support teams to drive productivity gains allowing for these roles to assume the incremental Cap-and-Trade work.

Please see Figure 1 below for the methodology and guidelines that Union uses to ensure that incremental administrative costs attributable to Cap-and-Trade obligations are properly accounted for. These costs are reviewed quarterly to ensure appropriateness and correct capture of administrative costs.

Figure 1



UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit 3, p. 20 et seq

- a) When does Union expect the secondary market for allowances/credits to begin operation in Ontario? Will it start in 2017 or 2018? What would be the principle features of such a market, based on experience in Quebec and Ontario? In general terms, how does Union foresee it will operate?
- b) Will the sales and purchases be transacted on ICE exclusively, or will there likely be other platforms, including private purchases and sales?
- c) Can the ICE platform be used only for GHG futures, or can it be used for other transactions, such as and spot transactions? What other types of transactions will ICE support?
- d) How have the secondary markets operated in Quebec and California? Please provide a history including volumes and prices in those markets. Please provide any available studies on the operation of those markets or links to sites where such studies can be found.
- e) Please provide a copy of the ICE Ontario only carbon contract.
- f) Please provide a copy of, or a link to, the offset programs that have been used in California and Quebec. When will Ontario offset guidelines be available? Please confirm that Union does not expect offsets being available for use in 2017, in Ontario. Please provide a link to information on Alberta's offset experience.
- g) What does Union anticipate would be the advantages/disadvantages of having a link to the WIC market in 2018, or at a later date? Please discuss fully.

Response:

- a) On January 30, 2017, ICE listed an Ontario Carbon Allowance Futures contract for trading which can be considered to be the beginning of the secondary market in Ontario. Union notes that a small number of transactions have occurred to date. Union notes that the Board provides an overview of compliance options that would be available to participants in Ontario's carbon market on pages 5 and 6 of the OEB's Regulatory Framework for the Assessment of Costs of Natural Gas Utilities' Cap-and-Trade Activities. The Ontario secondary market is new and under development, and a platform such as ICE will help in the development of the Ontario secondary market. Union is not certain when the Ontario

secondary market will fully develop and mature. Union cannot predict specifically how the Ontario secondary market will operate.

- b) Secondary market transactions in the Ontario carbon market may include transactions facilitated by exchanges such as ICE, or over-the-counter (“OTC”) bilateral transactions.
- c) Currently, ICE has one contract listed related to the Ontario carbon market. This contract is a futures contract for 2017 Vintage Ontario Carbon Allowances with a December 2017 delivery requirement. ICE also lists other vehicles, such as futures, swaps, and options contracts, that are applicable to WCI allowances. Union expects that more products will be available to Ontario market participants once Ontario links to the WCI market.
- d) See Exhibit 3, pp. 41-42 for an overview of the secondary market prices in Québec and California. Additional information related to carbon markets can be found at www.californiacarbon.info.
- e) Please see Attachment 1.
- f)
 - A link to California’s offset program is provided here https://www.arb.ca.gov/cc/capandtrade/capandtrade/unofficial_ct_030116.pdf
 - A link to Québec’s offset program is provided here <http://legisquebec.gouv.qc.ca/en/pdf/cr/Q-2,%20R.%2046.1.pdf>
 - A link to information on Alberta’s Offset Credit System Protocols is provided here <http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/offset-credit-system-protocols.aspx>

The Ministry of Environment and Climate Change (“MOECC”) has issued a Compliance Offset Credits Regulatory Proposal¹ (“Offset Regulatory Proposal”) on November 15, 2016 for public comments (EBR-012-9078). The Offset Regulatory Proposal is a draft document that outlines policy options on a number of program elements including: start dates, verification requirements, offset credit creation criteria and issuance, etc.

Union has no specific information on when the Ontario Final Offset Credit Regulations will be available.

The MOECC has engaged the Climate Action Reserve (“CAR”) to lead the development of the Ontario Offset Protocols according to the timeline below:

¹http://www.downloads.ene.gov.on.ca/envision/env_reg/er/documents/2016/012-9078.pdf

Protocols and Initial Schedule



Number of Months From Project Start	1	2	3	4	5	6	7	8	9	10	11	12
Mine Methane Protocol												
Ozone Depleting Substances Protocol												
Landfill Gas Protocol												
Conservation Cropping Protocol												
Organic Waste Digestion Protocol												
Forestry Protocol												
Afforestation Protocol												
Refrigeration Systems Protocol												
Fertilizer Management Protocol												
Grasslands Protocol												
Emission Reductions from Livestock Protocol												
Organic Waste Management												
Urban Forestry Protocol												

g) Union anticipates many advantages of having a link to the Western Climate Initiative (“WCI”) market in 2018, or at a later date, and views it positively. In theory, a linked market could increase market liquidity through opening access to a broader pool of compliance instruments across partnering jurisdictions. In addition, having a link to the WCI market provides Ontario Cap-and-Trade participants with larger holding and purchasing limits, giving them more flexibility in meeting their compliance obligation.

However, the advantages of a linked market must be weighed against the risks. First it is likely that there will be outflow of capital outside the province, as Ontario market participants purchase compliance instruments in other jurisdictions. As well, there will be increased exposure to policy and regulatory changes in linked jurisdictions. A link to the WCI market could expose Ontario participants to further currency risk. It can also limit the government’s ability to customize policy decisions, resulting in more stringent program requirements. This is why Ontario must remain engaged with all WCI partners in order to ensure the system works for Ontario.



ICE Futures U.S.
Feb 27, 2017

ICE FUTURES U.S.

Ontario Carbon Allowance Vintage 2017 Future

Contract Specifications

Description	Physically delivered greenhouse gas emissions allowances where each is an allowance issued by the Province of Ontario or a linked program ("Ontario Carbon Allowance") representing one metric ton of CO2 equivalent under the Ontario Climate Change Mitigation and Low-carbon Economy Act and its associated regulations, rules and amendments, all together known as the "Ontario Cap and Trade Program".
Contract Symbol	OC7 Vintage 2017
Settlement Method	Physical delivery
Contract Size	1,000 Ontario Carbon Allowances
Currency	CAD
Minimum Price Fluctuation	The price quotation convention shall be One CAD cent (\$0.01) per Ontario Carbon Allowances; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.
Listing Cycle	<ol style="list-style-type: none">1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December
Last Trading Day	Three Business Days prior to the last Business Day of the delivery month

Contract Specifications

Deliverable Instruments	<p>The deliverable instruments are Ontario Carbon Allowances equal to the contract size delivered through the Compliance Instrument Tracking System Service (CITSS).</p> <p>Ontario Carbon Allowances acceptable for delivery are those having a vintage corresponding to the specified vintage year.</p> <p>Ontario Carbon Allowances acceptable must be able to be delivered into CITSS accounts registered in Ontario.</p>	
Registry	CITSS	

UNION GAS LIMITED

Answer to Interrogatory from
School Energy Coalition ("SEC")

Reference: Exhibit 3, p. 29

Please describe the roles and responsibilities of the proposed 13.5 FTEs related to Cap and Trade.

Response:

Role and Responsibilities	Number of FTE's
<u>Cap-and-Trade Team</u> <i>Manager, Cap-and-Trade</i> <ul style="list-style-type: none"> Overall responsibility for implementation of Cap-and-Trade regulations and compliance plans <i>Program Manager, Cap-and-Trade</i> <ul style="list-style-type: none"> Leads activities on establishment of process changes, governance structures, reporting and monitoring, regulatory requirements, and compliance plan filings <i>Cap-and-Trade Advisor</i> <ul style="list-style-type: none"> Leads interpretation and analysis of regulations, research of other jurisdictions, response to Cap-and-trade proposals from ministries, and support communications content regarding Cap-and-Trade 	3.0
<u>Environment, Health and Safety</u> <i>Principal EHS Technical Advisor</i> <ul style="list-style-type: none"> Accountable for all Regulatory reporting of greenhouse gas emissions, including all provincial reporting under O.Reg.452 and O.Reg 143 as well as federal reporting under Section 46 of the Canadian Environmental Protection Act. <i>Environmental Specialist (2 roles)</i> <ul style="list-style-type: none"> Emissions calculations and reporting, technical support related to Cap-and-Trade and GHG emissions including emissions measurement, assessment of emission reduction opportunities and research. 	3.0
<u>Finance</u> <i>Finance Analyst</i> <ul style="list-style-type: none"> Responsible for the development of business design requirements including billing and reporting changes and the ongoing financial tracking for the new compliance instrument acquisition process, and financial analyses 	1.0
<u>Gas Supply</u> <i>Senior Buyer, Carbon Markets</i> <ul style="list-style-type: none"> Responsible for the development and execution of Union's compliance instrument procurement strategy and the management of Union's CITSS accounts 	1.0

<p><u>Technology and Innovation</u> <i>Manager, Natural Gas Technology and Innovation and Project Manager, Natural Gas Technology and Innovation</i></p> <ul style="list-style-type: none"> • Assessment of emerging technologies and innovations for renewable natural gas, with the goal of increasing the technology and commercial readiness levels of those technologies • Evaluation and development of Cap-and-Trade's Offset Protocols and strategy around offsets <p><i>Manager, Customer Technology and Innovation</i></p> <ul style="list-style-type: none"> • Assessment of emerging technologies and innovations for the natural gas end-user in the residential, commercial and industrial markets, that reduce GHG emissions 	3.0
<p><u>Distribution Business Development</u> <i>Director, Distribution Business Development and Strategic Accounts (25% allocated to C&T)</i></p> <ul style="list-style-type: none"> • Accountable for creating and executing strategies and approach to market required to develop new end use markets for natural gas, including renewable natural gas. Interface with government ministries on the development of Climate Change Action Plan initiatives <p><i>Manager, Distribution Business Development – Planning (25% allocated to C&T)</i></p> <ul style="list-style-type: none"> • Supports the development of opportunities in RNG markets by providing research, analytics and stakeholder support <p><i>Manager, Distribution Business Development - RNG</i></p> <ul style="list-style-type: none"> • Accountable for developing the market approach for renewable natural gas, identifying partnerships, business models and products with industry partners, potential customers, associations, and government <p><i>Business Development Manager</i></p> <ul style="list-style-type: none"> • For RNG, develops new customer and industry relationships in target markets, supports business cases, creates materials on market opportunities, facilitates contracting for services, and develops sustainable processes 	2.5
<p>Total</p>	13.5

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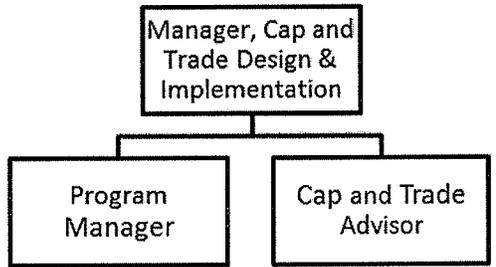
Answer to Interrogatory from
Building Owners and Managers Association ("BOMA")

Reference: Exhibit 3, p. 29

- a) Please show an organizational chart for the Union cap and trade organization, which identifies the function of each of the FTEs or partial FTEs that will make up the incremental 13.5 FTEs requested.
- b) How many additional full-time personnel will be hired as part of the FTE complement?
- c) What are the names of the personnel working on the unit?

Response:

- a) Shown below is the organizational chart for Union’s Cap-and-Trade organization. This organization is comprised of three incremental FTEs.



Please see the response at Exhibit B.SEC.3 for additional information on Union’s Cap-and-Trade FTEs.

- b) Union does not anticipate adding any roles beyond the 13.5 FTEs identified.
- c) The titles of the permanent personnel working on Cap-and-Trade are noted above and for all 13.5 FTE please see the response at Exhibit B.SEC.3.

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association (“BOMA”)

Reference: Exhibit 3, Appendix C

- a) BOMA understands that Union currently does not use derivatives in its gas purchase activities other than the NYMEX futures market. Is that still the case?
- b) Please list what Union understands to be the derivatives in use in gas purchase markets in some North American jurisdictions.
- c) Please comment on the use of derivatives in the Quebec and California Cap-and-Trade markets, including stating which derivatives are used, the extent to which they have been used, the purpose for which they have been used, and any other pertinent information.
- d) Why, broadly speaking, would Union consider the use of derivatives in the Cap-and-Trade market? What would be the potential advantages and disadvantages?

Response:

- a) Financial hedging related costs in the gas supply portfolio were disallowed in EB-2007-0606¹. Union does not use derivatives in its gas purchase activities, including the use of the NYMEX futures contracts.
- b) Derivatives that are available to support gas supply purchases in North America include futures, swaps and options, for the purposes of hedging price risk.
- c) Union is not aware of the extent derivative contracts in the Québec and California carbon markets are used. Union notes that ICE lists swaps and options related to California Carbon Allowances.
- d) The Climate Change Mitigation and Low-Carbon Economy Act, 2016 (Climate Change Act) outlines prohibitions on the disclosure of certain information. These prohibitions are reflected in section 4 of the Cap-and-Trade Framework.²

This question refers to information that has been classified as Strictly Confidential. In keeping with the legislation and with the best interests of ratepayers in mind, such information

¹ Union’s multi-year 2008-2012 incentive regulation proceeding – OEB decision dated July 31, 2008.

² Climate Change Mitigation and Low-carbon Economy Act, 2016, S.O. 2016, CHAPTER 7 (Climate Change Act) and OEB Regulatory Framework for Assessment of Costs of Natural Gas Utilities’ Cap-and-Trade Activities (EB-2015-0363)

must remain Strictly Confidential in order to maintain the ability to effectively execute on Compliance Plans.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Reference: Exhibit 3, pp. 24 - 28

Preamble: Union describes its historic DSM efforts and generally discusses customer abatement options that may be explored as an activity included in a future Compliance Plan. However, Union has not proposed any new customer-related or facility-related abatement activities incremental to its OEB-approved DSM programs outside of the Green Investment Fund activities funded by the Government of Ontario.

- a) Other than the GIF activities, please discuss the rationale for not including any customer and facility-related abatement activities as part of the 2017 Compliance Plan.
- b) How will Union’s Cap-and-Trade strategy be integrated into the company’s business plan? For example, how will GHG emissions reduction (facility-related abatement) decisions be incorporated into its business planning process for capital investments?

Response:

a&b) This response addresses multiple questions received from the Board and intervenors related to Union’s level of abatement (customer and facilities) and long term investments included in Union’s 2017 Compliance Plan, and the expectation for future plans.

Context: New Program and Significant Uncertainty

In order to respond appropriately to questions regarding the degree to which abatement and long term investments are addressed in Union’s 2017 Compliance Plan, it is important to review the context in which the program was introduced and implemented.

First, the Cap-and-Trade program is new to Ontario, to the natural gas utilities, and to customers. In addition, the Cap-and-Trade program was implemented in Ontario more quickly than any other jurisdiction, including California and Québec. Ontario’s intention to adopt a Cap-and-Trade system was announced in the spring of 2015. The draft regulations and legislation (issued in February 2016) gave participants their first glimpse of program design and timing, with launch set for January 1, 2017. The final regulations were issued and the Climate Change Mitigation and Low-Carbon Economy Act passed in May 2016 with the Climate Change Action Plan being issued in June 2017 (6 months before the Regulatory Framework for the Assessment of Costs of Natural Gas Utilities’ Cap-and-Trade Activities (the “Framework”) was launched in Ontario). The OEB then developed the Framework and

delivered it at the end of September 2016. This Framework required the utilities to file a comprehensive Compliance Plan by mid-November 2016.

Second, the program itself is complex and new to the province and the utilities. Union's first priority is to ensure that the program is implemented effectively, efficiently, on time, and in compliance with the regulations and the Framework. It is critical that Union develop the systems, processes, expertise and governance necessary to ensure compliance. Given the nascence of the program, and its complexity, it is prudent to approach the program simply at first, taking action based on program elements that are known and documented.

Third, there are many uncertainties around the program. These uncertainties include:

- Outstanding Regulations
 - Early Reduction Credits
 - Administrative Penalties
 - Compliance Offset Credits Regulations
- Ministry of the Environment and Climate Change ("MOECC") development of Offset Protocols
- Western Climate Initiative ("WCI") partnership
 - Linking decision with California and Québec
 - Regulatory amendments associated with linkage
 - Negotiations with other potential partner jurisdictions, beyond 2018
- Allocation of funds related to the Climate Change Action Plan ("CCAP")
- Full details on Ontario Climate Change Solutions Deployment Corporation (aka "Green Bank").
- Post-2020 Cap-and-Trade program design, both for Ontario as well as California and Québec
- The OEB's development of a Long Term Carbon Price Forecast
- The OEB's development of Marginal Abatement Cost Curves ("MACC")

These uncertainties impact Union's ability to plan for incremental abatement activities and long term investments in 2017 and beyond. Union expects some of the outstanding regulations to be released by the end of 2017. However, there could be ongoing regulation amendments beyond this calendar year.

2017 Compliance Plan Abatement Activities

Union recognizes the value of abatement as part of the overall Cap-and-Trade program and the critical role that abatement will play in enabling the province to meet its emissions reduction targets. Union currently provides a comprehensive portfolio of customer abatement programs through DSM. In addition to the aggressive timelines and significant program uncertainties noted above, Union recognizes that the integration between Cap-and-Trade and DSM still needs to be addressed. Union is aware that the OEB will be initiating a DSM Mid-Term review process this spring that may begin to address this issue.

Regarding facilities abatement, Union has begun work on a study to evaluate potential facilities abatement projects, and intends to provide the outcomes of this study in its 2018 Compliance Plan. The initiation of any abatement activities coming out of this study will be dependent on the resolution of a number of uncertainties noted above, particularly the Long Term Carbon Price Forecast and MACC, and assurance of cost recovery. The long term carbon price forecast and the MACC will be required to prioritize which projects should be developed.

Union believes that it is important that future abatement programs and long-term investments are thoroughly and appropriately evaluated in order to uphold the program's guiding principles, specifically cost effectiveness, cost recovery, and continuous improvement (Framework, pp.7-8). This is consistent with the Framework which requires a thorough analysis of the costs, risks and alternatives to accompany the inclusion of a proposal in the plan. Given the insufficient time, the fact that key aspects of the Cap-and-Trade program remain in development, and the significant uncertainties that remain, this thorough and informed review was not feasible for the 2017 Compliance Plan.

Long Term Investments

Similarly, Union is not able to outline long-term investments in its 2017 Compliance Plan. In addition to the uncertainties noted above, it is not appropriate for Union to include any long term investments in the compliance plans until cost recovery is assured. This is consistent with how the Framework describes that cost recovery for these types of investments will be dealt with (Framework, p.27). Even if Union had been able to address all of the outstanding information and uncertainties noted above, it would not have been possible to present these investments for review and have their cost recovery assured before the 2017 Compliance Plan was filed in November 2016.

However, as noted in Union's 2017 Compliance Plan (Exhibit 3, pp.26-47), Union has begun investigative work on both Renewable Natural Gas ("RNG") and Compressed Natural Gas ("CNG") initiatives. Union has dedicated resources working on these opportunities which are currently in the early stages of development. Union is working to gain more endorsement from the Ontario government, including development of a grant structure under CCAP, and alignment with other stakeholders to see these programs move forward. However, it is premature to include these in the scope of Union's 2017 Compliance Plan as the CCAP programs are not defined and are not expected to be implemented until later in 2017 or 2018. Union is unable to proceed further until the government announces program design and advances specific CCAP funding commitments. In addition, further detail yet to be released by the OEB on the MACC and the long term carbon forecast are also critical factors in assessing long-term investments such as these.

Union will seek approval of the costs of these types of programs in a separate leave to construct or rates application as appropriate, and then will subsequently address them in future Compliance Plans.

2018 and Longer Term Planning

Union expects significant uncertainties will persist through filing of its 2018 Compliance Plan, including linkage to the WCI, CCAP program development, etc. Items that may become known over the coming months, such as offset regulations, the MACC curve and Long Term Carbon Price Forecast will be relatively new information at the time of Union's 2018 filing. In addition, the market itself (both government auction and the secondary market) for compliance instruments will remain in its infancy with little history to gauge trends. This is consistent with a recent decision from the OEB that noted "*...the market has not had time to react and data is not available. The OEB agrees that such unknowns add uncertainty.*"¹

Union is committed to addressing abatement and long term investments more fully in future Compliance Plans. This will allow Union to assess these items as the market matures, the uncertainties resolve, and the mechanisms to ensure cost recovery are determined. Union believes this measured, prudent approach is in the best interest of ratepayers, and is also consistent with the Framework's guiding principle of continuous improvement.

¹ EB-2016-0186 Decision and Order, p 6

UNION GAS LIMITED

Answer to Interrogatory from
Building Owners and Managers Association (“BOMA”)

Reference: EB-2016-0296, Exhibit 3, p. 25 of 47 Updated

Preamble: For 2017, there is only one customer abatement program included in Union’s compliance plan that is incremental to the DSM plan. Through the Government of Ontario’s GIF Union has entered into an agreement with the Ministry of Energy to receive funding of \$42 million to enhance the Home Reno Rebate offering and achieve additional GHG emissions reductions through 2018.

What differentiates the GIF funded Home Reno Rebate from Union's existing program. How will the savings be differentiated to insure additional GHG emission reductions are from the GIF program elements? Will Union include the customer savings and costs from the home energy efficiency retrofit program in its DSM monitoring and reporting system? Will such savings contribute to any shareholder incentives?

Response:

With funding from the Green Investment Fund (“GIF”), Union enhanced the Home Reno Rebate offering. The enhancements include the following three changes:

1. Expanded eligibility for participation, including:
 - o Homes that use oil, propane, or wood as their primary heating fuel (rather than just natural gas)
 - o Homes that use natural gas as their primary heating fuel but are not serviced by Union or Enbridge Gas Distribution

2. New rebates for:
 - o High-efficiency oil furnaces and boilers
 - o High-efficiency propane furnaces and boilers
 - o High-efficiency wood burning systems
 - o Air-source heat pumps
 - o Smart thermostats

3. Increased rebate levels for measures already included in the offering.

Homes that participate in the enhanced Home Reno Rebate Offering, and their associated GHG emission savings, will be attributed to either Union’s DSM portfolio or the GIF based on the following rules:

1. 100% of the results from homes outside of Union's franchise area will be attributed to the GIF.
2. 100% of the results from homes within Union's franchise that use a primary heating option other than natural gas will be attributed to the GIF.
3. 100% of the results directly related to the smart thermostat will be attributed to the GIF.
4. For all other results, there will be a two-phased approach to attribution each year. During Phase 1, 80% of the results will be attributed to Union and 20% will be attributed to the GIF. If at any point in a given year Union exhausts its DSM funding available, or elects to stop using DSM funds for the enhanced Home Reno Rebate offering, Phase 2 of attribution will begin. During Phase 2, 100% of the offering's results will be attributed to the GIF. Phase 1 will reset on January 1st of each year.

For further details on the attribution agreement for GHG emissions savings between Union and the Ministry of Energy, refer to:

http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/536605/view/UNION_Ltr_2015-2020%20DSM%20Plan_Green%20Investment%20Fund%20Letter_20160728.PDF

Union tracks all customer savings and costs from the enhanced Home Retrofit Program, regardless of whether the homes are attributed to Union's DSM portfolio or the GIF. Homes attributed to Union's DSM portfolio will count towards Union's DSM Resource Acquisition scorecard and shareholder incentive. Homes attributed to the GIF will not count towards Union's DSM portfolio and will not contribute to any DSM shareholder incentive.