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

**ONTARIO ENERGY BOARD**

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

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

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**Corrected Interrogatories of Building Owners and Managers Association,  
Greater Toronto ("BOMA") to Union Gas Limited ("Union")**

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February 27, 2017

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**Interrogatories of BOMA to Union**

**Issue 1.0**

1. ***Ref: EB-2016-0296, Exhibit 3, p25 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?

1. ***Ref: EB-2016-0296, Exhibit 2 Page 5 of 10***

*Preamble: The UFG volume forecast for 2017 is 89,851,375. It is based on the forecasted total throughput volumes for Union multiplied by the Board approved UFG Volume percentage of 0.219%.*

**Has Union Gas done any studies which bear out the Board’ approved UFG volume percentage? How does Union intend to address these emissions? How does the Board approved volume percentage compare to other major natural gas distributors? While Enbridge’s unaccounted for volumes, represent over 80 per cent of its facility related emissions, what are the factors that make Union Gas’ share 28%?**

Are the GHG emissions forecasts reasonable and appropriate?

Is the carbon price forecast reasonable and appropriate?

# Compliance Plan

Is the gas utility’s Compliance Plan overview reasonable and appropriate?

1. ***Ref: EB-2016-0296, Exhibit 3, p25 of 47***

*Preamble: As outlined in the cap-and-trade Framework, customer abatement programs related to compliance plans are intended to be incremental to the utilities’ DSM programs. As such, those programs are not included in Union’s 2017 Compliance Plan as a customer abatement activity. However, the forecasted customer volumes and emissions (Exhibit 2, Schedule 1) do reflect the significant impact of these programs to ensure that Union’s compliance obligation is not over-stated.*

**How will Union Gas assess the “additionally” of such reductions? Is this equivalent to the notion of free riders used in the DSM Plan?**

1. ***Ref: EB-2016-0296, Exhibit 1, p3 of 12, Updated***

*Preamble: Since the 1990’s, Union has had significant success in implementing Demand Side Management (“DSM”) programs to assist customers in reducing their natural gas consumption and related greenhouse gas (“GHG”) emissions. For 2017, there is an additional customer abatement program, the Plan that is incremental to the DSM plan. Going forward, Union will leverage its experience and skillset in reducing emissions as part of DSM, and evaluate the potential to reduce customer emissions further, thereby reducing Union’s compliance obligation. Union will include the outcome of this analysis in future compliance plans.*

How will Union assess the “additionally” of such reductions? Is this equivalent to the notion of free riders used in the DSM Plan? How does Union expect to verify offset credits? What options are under consideration? Will it be equivalent to verification process used in the DSM Plan? What are Union’s expectation for the scope and process for the Mid Term Review? Will intervenors and/or the DSM consultative or the OEB’s Evaluation Audit Committee be involved? Has Union assessed the options relative merging the two frameworks? Has any analysis of the costs and benefits of doing so been completed?

1. ***Ref: EB-2016-0296, Exhibit 3, p25 of 47***

*Preamble: Union is also exploring a number of opportunities for customer abatement such as the use of combined heat and power projects and renewable natural gas in the gas supply portfolio. Prudent customer abatement programs such as these will reduce Union’s compliance obligation, resulting in less compliance instruments, and provide diversity within the compliance plan. This allows Union to manage both non-compliance and financial risks. As Union evaluates these programs, the outcomes of this analysis will be provided in future compliance plans.*

**While it is clear that Renewable Natural Gas represents an incremental emissions reduction element, Union has included combined heat and power projects in previous DSM plans; how will these projects be differentiated from previous projects.**

* 1. Has the gas utility reasonably and appropriately conducted its Compliance Plan option analysis and optimization of decision making?
  2. Are the proposed performance metrics and cost information reasonable and appropriate?
  3. Has the gas utility reasonably and appropriately presented and conducted its Compliance Plan risk management processes and analysis?
  4. Are the gas utility’s proposed longer term investments reasonable and appropriate?
  5. Are the gas utility’s proposed new business activities reasonable and appropriate?

1. ***Ref: EB-2016-0296, Exhibit 3, p47 of 47, Updated***

*Preamble: Renewable Natural Gas (“RNG”). RNG is an alternative to conventional gas supply, is non-emitting, and can be stored, transmitted and distributed using the existing natural gas infrastructure. RNG is produced by capturing methane that results from the decay of any organic matter. Methane is captured at the source (e.g. landfills, waste water, agriculture), where it is “cleaned” and then integrated into the natural gas system. Union is examining how RNG can become part of the utility’s gas supply portfolio, which will require regulatory approval. While it is not expected that this will be feasible for 2017, Union is expecting RNG to be part of the gas supply portfolio as early as 2018. Union estimates that by 2020, up to 2% of system supply could be provided using RNG, increasing to up to 10% of total supply by 2030. Replacing 10% of the province’s conventional natural gas supply with RNG yields an estimated emissions reduction of up to 8 Mt CO2e/ year by 2030.*

**On September 8, 2009, Order in Council (OC 1540-2009) was issued which gave both Union and Enbridge broader mandates with respect to renewable energy and conservation including some of the activities listed in the submission. In Union’s opinion, what is the current status of OC 1540-2009? Will additional government directives be required in the near future? What is required to implement the mandates already given to Union?**

1. ***Ref: Cost Consequences and General (Conflict of Interest)***
   1. Will Union Gas Limited (the utility), or a related party, as defined in Ontario Regulation 144/16, register as a market participant, to allow it to participate in the cap and trade market? Does it intend to buy, sell, trade, take derivative position on, or in any other way participate in the carbon market for its own account (or that entity's account); in other words, in the case of the utility, in any capacity other than on behalf of its ratepayers?
   2. If yes, what entity within the Union/Spectra family will be a registered market participant? Has any Union-related entity registered as a market participant?
   3. If yes, what arrangements will be made to ensure that the ratepayers will be protected from any conflicts of interest, preferential treatment of non-regulated Union affiliated companies, sharing of information with these entities, and the like, which could lead to higher costs for ratepayers? Would any profits from cap and trade activities of the entity be credited to the ratepayers' account?
   4. Ref: Ibid, p10 - Please confirm that any transactions conducted with an affiliate in the course of implementing a compliance program are, in terms of risk allocation, and price, and any other contractual or commercial matter, no more favourable to the affiliate than it would have been had the counterparty not been an affiliate.
2. ***Ref: Exhibit I, p6 – Cost Consequences***

Please explain why Union thinks it is necessary to estimate an Ontario "minimum auction reserve price", which is higher than the California price, outlined in the Board's Framework. What is the justification for imposing the additional burden on ratepayers?

1. ***Ref: Exhibit 3, p7***

Please provide the name of the person directly responsible and accountable for (i) the design, and (ii) the execution of Union compliance plan for 2017.

**Issue 1.1**

1. ***Ref: Exhibit 2, p1***

Please provide the October 7, 2016 list of mandatory and voluntary participants, provided by MOEE.

1. ***Ref: Exhibit 3, p26***

How will Union deal with the impact of converting its fleet to natural gas when the government agrees that such a fuel shift would decrease provincial emissions but increase Union's own emissions? Will the government provide a credit mechanism? Has this issue been settled?

1. ***Ref: Exhibit 3, p27***

Please make available the terms of reference for the study contracted to address a range of facility related GHG reduction projects? When does Union expect to have the results of the study? Will it file the study in a future proceeding?

1. ***Ref: Exhibit 3, Appendix A***

How will Union "minimize risk through diversification within the compliance portfolio" in 2017 since virtually none of the instruments which could be used to diversify risk, are available or fully developed to the point where they are generating emission credits or allowances. When will Union's proposed governance documents for offsets and abatement projects be available? What safeguards exist to ensure that utilities can purchase allowances in 2017 at auction, or otherwise, at prices that are not far above the reserve price, as has been recent experience in California and Quebec? How, if at all, will ratepayers be protected against an allowance cost/rate spike in (i) 2017; (ii) thereafter?

1. ***Ref: Exhibit 3, p36***

In order to reduce the number of calls to the Customer Contact Centre, does Union intend to provide a customer bill insert on the bills that explain the GHG-related increase to the customer's monthly delivery bid? If not, why not? Why should ratepayers bear the costs due to the utility failing to identify the exact GHG impact of the customer's delivery rate on the customer's delivery charge on its bill?

**Issue 1.2**

1. ***Ref: General; Statute Prescribes Total Allowances which are equal to 2017 GHG Emissions***

What percentage of Ontario's 2017 Class I allowances do Union's customers (excluding the LFEs and voluntary market participants) account for?

**Issue 1.4**

1. ***Ref: Exhibit 3, p 7***

Does Union have any GHG/Cap and Trade experts on its purchasing staff, or in any other part of its organization? Please provide the names and positions.

1. ***Ref: Ibid, p8***
   1. Has Union received approval from the MOECC of its participant registration application?
   2. Please provide a copy of the approval. If it has not obtained approval, when does it expect such approval?
   3. Which carbon market data provider(s) has Union subscribed to?
   4. Please provide samples of the carbon market exchange data that Union has acquired from ICF.
   5. Please provide the name of the other consultants that Union has engaged on each of the topics set out at p10.
2. ***Ref: General***
   1. Please advise when Union expects the Board will assess the prudency of Union's 2017 compliance plan actual expenditures, including the allowances purchased either at auction, from third parties, from the Ontario government reserve, or elsewhere. Please provide a complete answer.
   2. Please confirm that, given that Union has stated that it will not propose any customer abatement projects (other than the GIF grant(s) driven projects) in 2017, nor any long term capital expenditures, nor new business activities (at least to the point where measurable savings are realized in 2017), its 2017 compliance plan, and the fact that a secondary market for allowances and credits has not yet been developed, does Union agree that its 2017 compliance plan will consist entirely, or close to entirely, of purchases of allowances and options, futures, or other derivatives related to such purchases.
   3. How many emission units will be generated by GIF-driven customer abatement projects in 2017, and what percentage of required emission units will they constitute? What is the forecast average cost of emission units produced by these projects?
   4. Aside from allowances purchased at auction or from the government reserve, or elsewhere, what other elements may be present in Union's 2017 compliance plan?
3. ***Ref: Exhibit 3, p20 et seq***
   1. 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?
   2. Will the sales and purchases be transacted on ICE exclusively, or will there likely be other platforms, including private purchases and sales?
   3. 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?
   4. 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.
   5. Please provide a copy of the ICE Ontario only carbon contract.
   6. 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.
   7. 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.
4. ***Ref: Exhibit 3, p29***
   1. 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.
   2. How many additional full-time personnel will be hired as part of the FTE complement?
   3. What are the names of the personnel working on the unit?
5. ***Ref: Exhibit 3, p34***

Please confirm that any income tax increases not driven by cap and trade compliance obligations will not be included in cap and trade deferral accounts, in 2017, or in any later year.

**Issue 1.8**

1. ***Ref: Exhibit 1, p4***
   1. Why are Union RNG and CNG initiatives not in scope for the 2017 compliance plan? Please explain fully.
   2. Is Union seeking cost recovery for costs related CNG and RNG initiatives in 2017 rates? Please explain.
2. ***Ref: Exhibit I, p4 of 12***

Union is not including any long-term investments as part of its 2017 compliance plan. Union states that it needs to first determine the mechanism for cost recovery of these investments.

* 1. Please explain what is meant more fully.
  2. What does Union consider an appropriate "mechanism for cost recovery"?

1. Does Union expect to obtain a reduction of its GHG emission for the RNG initiative in 2017? If not, when will the reduction in GHG emissions be phased in, in approximately what magnitude, over each year of the initial compliance period.
2. ***Ref: Exhibit 3, Appendix B, p5, paragraph 3***
   1. The document speaks of standard cap and trade contracts. Which standard contracts have been developed to date? Please provide copies of each of the standard contracts that have been developed to date. What other contracts will be developed, and when? Have the standard contracts been reviewed as per paragraph 3.6 of Exhibit 3, Appendix B, p 7?
   2. Has the Compliance Plan for 2017 been approved by the Union Gas executives? On what date?
   3. Were any changes made to the plan as part of the Senior Executive Approval process? Please summarize the changes at a high level.
   4. Ibid – p5, paragraph 3.2 – Please explain the "tolerances" that are enforced by the Spectra Risk Management Committee, as part of the Spectra corporate risk management policy.
3. ***Ref: Ibid, p6***

Please explain the meaning in the risk management context of "cover ratios" and "compliance position thresholds", and "relative market price levels".

1. ***Ref: Ibid, p8***

Please provide a copy of the Union Gas Credit Guidelines.

1. ***Ref: Exhibit 3, Appendix C***
   1. Please provide the names and qualifications of staff at Blue Markets Toronto office, other than Mr. Berends, together with their CVs and general experience in carbon markets, especially in California or Quebec.
   2. Have the Toronto based principals any experience with the California and/or Quebec auctions?
2. 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?
   1. Please list what Union understands to be the derivatives in use in gas purchase markets in some North American jurisdictions.
   2. 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.
   3. Why, broadly speaking, would Union consider the use of derivatives in the cap and trade market? What would be the potential advantages and disadvantages?

**Issue 1.10**

1. ***Ref: Exhibit 3, p25***

Given the scope for abatement activities in Union's franchise, why has Union not proposed a full slate of abatement activities for 2017 analogous to the GIF program and in addition to the DSM program?

* 1. Please confirm that Union includes no abatement-driven savings, or investments in its compliance plan for 2017, other than the GIF program.
  2. What is the basis of the calculation of the 2017 savings from the GIF program? What are the forecast 2017 savings in 2018, 2019, and 2020?
  3. (i) Does Union have full cost recovery of its administration of the Green Investment Fund projects? (ii) Please provide a copy of the Agreement between Union and the Ontario Government, pertaining to Union GIF program. What was the rationale for the $42 million Union received from the government? What is the proposed budget for each year of the compliance period?

**Issue 2**

1. ***Ref: Monitoring and Reporting, Exhibit 4, Schedule 1***
   1. Why should Union's report of the amounts spent on the components of its compliance program (found at Exhibit 4, Schedule 1) be strictly confidential, provided that it were partly aggregated? Abatement project costs can then be compared with the average and median allowance auction costs, as reported by the government after each auction, and the 2017 reserve bid price. This comparison would be very helpful in determining prudency of the plan. The various compliance components are widely known. The abatement projects are comparable to DSM projects. Release of the offset costs, which are limited by statute to 8% of total eligible emission units, in aggregate form, would not prejudice Union unduly and, again, would assist in exercising prudency. It appears clear that in 2017, most, if not all coverage for emissions will have to come from allowances, due to the absence of other instruments. Please explain why the release of this information would seriously prejudice Union and its ratepayers.
   2. How will intervenors be able to analyse and comment upon the prudency of expenditures under the plan if there is not at least information on aggregated cost of most of the tranches of the compliance plan?

**Issue 3**

1. ***Ref: Customer Outreach, Exhibit 5, p1***

Please provide the survey, and the survey results, from the December survey, and the survey, and survey results (if available) from the March survey.

1. ***Ref: General***

What assistance will Union make available to voluntary and LFE participants to assist them in developing their compliance plans?

**Issue 4**

1. ***Ref: Exhibit 3, p35***
   1. Please confirm that annual gas volume emission purchase risk will be managed by use of deferral accounts, and explain how that will work, in the case of both over-purchase and under-purchase of allowances, at one or more of the four auctions in 2017. Please provide an example of under-purchase and over-purchase, and how the variances are managed through the new deferral account.
   2. Please explain how price risk will be handled through deferral accounts, or otherwise, including purchasing practices.
   3. How will price risk be managed in the absence of a functioning future/option markets, either exchange based (ICE) or otherwise.
   4. Will the ICE exchange be available to buy/sell GHG allowance or credits in 2017? What instruments have been developed to date for use on ICE?
   5. Please describe the nature of the liquidity risk, if any, that Union faces in 2017. To what extent is the risk mitigated by Union bidding for sufficient volumes of allowances at the 2017 auctions. Does Union intend to ask the government to guarantee that the amounts of allowance required by the utilities will be available to the utilities, at reasonable prices, through the sale of the government's reserve allowances or otherwise, given that other methods of obtaining allowance or generating credits (together with emission units) will likely not be available in 2017. In Union's view, is the government aware of the various risks faced by customers and utilities in securing necessary allowances? Does it have sufficient safeguards?
2. ***Ref: Exhibit 3, p37***
   1. In order to be consistent with the disclosure by EGD of its Alpha Carbon Market Report, please provide a copy of those parts of the Clear Blue Report that deal with the cap and trade market history, etc., the risks that are present in that market, and the tools that are available to mitigate those risks.
   2. Do Clear Blue's characterization of the cap and trade market differ in any material respect from Alpha's view?
3. ***Ref: Exhibit 3, p38 – Counterparty Risk***

Please confirm there is no counterparty risk in dealing with the purchase of allowance from the Government of Ontario. Please provide Union's credit risk abatement package that it now uses for gas purchases, and describe how the guidelines it intends to adapt for use in the purchase/sale of GHG allowances/credits.

1. ***Ref: Exhibit 3, Credit Risk Question, Non-compliance Risk, p39***
   1. Based on its studies to date and experience in Quebec and WCI, and latest registration data on market participants, what counterparties does Union anticipate will be engaged in the secondary market? How many? What types of organizations? Please provide a list of the registered marketed participants as of today's date. What additional entrant does Union expect and when?
   2. Please confirm that Union will deal with its own non-compliance risk, by simply doing its job properly.
2. ***Ref: Exhibit 3, p42***

Please explain, in more detail, the impact on price risk of the fact that, under the Ontario cap and trade gas regime (Statute and Ontario Regulation 144) utilities, unlike California, are not eligible for free allowances. How have free allowances been used in California and Quebec?

1. ***Ref: Exhibit 3, p44***
   1. Please explain what is meant by project execution risk in this context.
   2. 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.

**Issue 5; Issue 6**

1. ***Ref: Exhibit 5, Appendix C, p2***

Please confirm that the statement "Customers buying gas from energy marketers will also pay this charge" is meant to refer to a charge for 2017 emission allowance, not necessarily the 3.3 cents per cubic meter, referred to in the previous sentence.

1. ***Ref: Exhibit 7, Schedule 1, p1***
   1. Please explain the fact that in some of the rate costs (3.4240 cents/m³) for facility related GHG emissions obligation, why is the rate higher than the 3.3181 for customer related GHG emissions obligation?
   2. Please show the derivation of the 389,882 cubic meters.

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