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February 06, 2012

VIA MAIL and E-MAIL

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge St.
Toronto, ON
M4P 1E4

Dear Ms. Walli:

Re: Enbridge Gas Distribution Inc. EB-2011-0243
Union Gas Limited EB-2011-0283

Interrogatories on behalf of Vulnerable Energy Consumers Coalition (VECC)

Please find enclosed the Interrogatories of VECC in the above-noted proceeding.
We have also directed a copy of the same to the Applicants.

Thank you.

Yours truly,

Michael Buonaguro
Counsel for VECC
Encl.

cc: egdregulatoryproceedings@enbridge.com
khockin@uniongas.com

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B; and in particular section 36 (2) thereof;

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for an Order or Orders approving and setting the cost consequences associated with the purchase of Ontario biomethane by Enbridge Gas Distribution Inc.;

AND IN THE MATTER OF an application by Union Gas Limited for an Order or Orders approving and setting the cost consequences associated with the purchase of Ontario biomethane by Union Gas Limited..

**Interrogatories on behalf of the
Vulnerable Energy Consumers Coalition (VECC)**

1.0: Role of the Utilities

VECC IR#1

Reference: Exhibit B Tab 1Page 17

Preamble: The proposed RNG prices are consistent with Ontario Government policy, particularly as reflected in the 2009 *Green Energy Act (GEA)*. The GEA states:

The Government of Ontario is committed to fostering the growth of renewable energy projects, which use cleaner sources of energy, and to removing barriers to and promoting opportunities for renewable energy projects and to promoting a green economy RNG Program is entirely consistent with Ontario Government policy by providing a complementary approach to the existing programs for renewable electricity generation..

- a. Confirm that neither EGD nor Union have a specific Legislated Mandate to procure RNG, or foster an RNG Industry. If not point to that specific mandate.
- b. Explain in more detail why the Utilities are proposing to procure RNG rather than pursuing other business strategies such as Enbridge Inc investing in the RNG Industry as it did in other Renewable Energy Sources such as electricity from Wind and Solar.

- c. Explain why instead of upgrading pipeline quality, Biomethane cannot be used to generate electricity under the Provincial OPA RESOP and FIT program?
- d. Provide examples in Ontario or Canada of where either Landfill gas or Anaerobic Digester gas is used to generate electricity and or provide thermal energy for local heating/process loads.
- e. Why is selling RNG at a premium to today's low gas prices the only viable business strategy for the landfill and digester gas industry?
- f. Summarize the *Need* for this Application as defined in the relevant Provincial Legislation- *Green Energy Act, Environmental Protection Act* etc.
- g. As private Investor-owned utilities (as opposed to Public utilities) what are the financial and other benefits to the shareholders of Union and EGD. Please list and where possible quantify these.
- g. Provide a list and discussion of all alternatives considered to the procurement of RNG for the system gas/ sales service portfolios. For example:
 - i. partnering with gas marketers wishing to provide a green alternative to their customers,
 - ii. providing RNG as a green option to sales service/system gas customers that wish to voluntarily purchase RNG, and
 - iii. procurement of RNG for the Utilities' Own Use Gas requirements and charging the cost to all customers.

Provide the analysis and working papers for all alternatives examined.

VECC IR #2

Reference: Exhibit B Tab1 Appendices

- a. Provide the Costs of the following preparatory work:
 - i. Alberta Innovates Technology Study
 - ii. Ipsos Reid Survey
 - iii. Electrigas Study
 - iv. Pricing Model

VECC IR#3

References: Exhibits B Tab 1Page 7 of 28: Exhibit B Tab 1 Appendix 1 Table 8 page 18

Preamble:

In June 2008, amendments to Ontario Regulation 232/98 and Revised Regulations of Ontario 1990, Regulation 347 under the *Environmental Protection Act* resulted in requirements for all landfills emitting in excess of 1.5 million m³ to collect landfill gas and flare it or use it in a manner that achieves a similar end. These requirements had previously applied only to landfills emitting in excess of 3 million m³, and to those landfills that were new and expanding.

- a. What is the target for the landfill gas RNG program-Landfills falling under Reg 347 or those that are under the threshold?
- b. How many of the former (>1.5 MMm³) and how many of the latter (<1.5MMm³)?
- c. Provide Lists and locations and legal ownership.
- d. Indicate which are in each Utilities franchise area and which are already capturing emissions and or utilizing the energy (or will do so in the near future)
- e. Map the sites based on proximity to the Union and EGD transmission and distribution systems including compression and storage facilities.
- f. Do EGD and Union plan to procure RNG from landfills other than those listed in this response? If yes provide additional details.

VECCIR#4

References: Exhibit B Tab 1Page 7/8: Exhibit B Tab 1 Appendix 1.

Preamble: The benefits of anaerobic digestion facilities on farms and in waste processing facilities (such as municipal waste water treatment and source separated organics facilities) include an opportunity to increase organic waste diversion rates, reduce waste management costs, improve odour control and reduce the level of pathogens through the treatment of manure and other organic materials that might otherwise be disposed of on land.

- a. Provide lists of Municipal and private anaerobic digestion facilities including legal ownership.
- b. Designate which are agricultural or other wastes (e.g. food processing) and which are other waste processing, e.g. SSO and WWTP.

- c. Map the known sites in proximity to the Union and EGD transmission and distribution systems including compression and storage facilities.

VECC IR#4

Reference: Exhibit B Tab 1 Page 10.

Preamble: As noted above, an alternative is electricity generation as part of the OPA's FIT program. For those projects where that option is available, the FIT program approach provides a predictable revenue stream over a 20-year term. A similar approach is required to enable a viable RNG industry.

- a. Provide a list of landfill gas and other facilities contracted and pending under the OPA administered FIT program.
- b. List the major qualifying criteria for each type of facility and a summary of the main contractual terms and conditions.
- c. Compare in tabular form, the RNG Program qualifying criteria and terms and conditions to those of the FIT program.

2.0: Cost Consequences

VECC IR#5

References: Exhibit B Tab 1 Page 11: Exhibit B, Tab 1, Appendix 3 Pages 5 and 13

Preamble: In the fall of 2010, the Utilities commissioned Ipsos Reid, an independent market research firm, to determine the attitudes of residential and commercial customers on issues related to RNG. The firm conducted an online survey of 1,052 residential natural gas customers (and a telephone survey of 500 commercial customers).

- a. Provide the demographic profile of the 1052 residential customers selected as the sample group for the Ipsos Reid survey and the # actual respondents in each demographic classification. Include data on # who are current system gas/sales service customers.
- b. Were all respondents *directly* responsible for the gas bill? If not indicate the number of respondents not responsible for the gas bill.
- c. For the System Gas/Sales Service Customers (question F2 Page 44 of Survey) breakout and summarize the responses on pricing for this segment.
- d. Summarize the responses on pricing for the Seniors Segment of the sample group and the system gas/sales service subset.

- e. Provide the response on pricing from the Low Income customers segment of the sample group and the system gas/sales service subset.
- f. Does EGD and Union agree that the customers are most affected by the premium for RNG are System Gas Customers and, as a subset the Seniors and Low income customers. Please discuss the responses/tolerance to RNG prices in the context of affordability for this subset of customers.
- g. Provide the Companies estimates of the # of Seniors and Low Income customers in their respective franchises. Include both those with bill responsibility as well, as a subset, those living in Social/ assisted housing where the bill may be paid by the housing provider.

VECC IR#6

Reference: Exhibit B Tab 1Page 13.

Preamble: 74% of residential natural gas customers expressed support for their utility purchasing RNG if the result is a 1% (\$9.60/year) increase in their gas bill. If the increase in respondents' natural gas bills due to RNG were set at 2% (\$18/year), the utility's purchase of RNG is still supported by 68% or over two-thirds of respondents. At the highest bill increase level surveyed, 4% (\$36/year), 57% of residential customers support the purchase of RNG by their utility.

- a. Confirm that the percentages and amounts are based on total annual bill.
- b. Provide the average and range of residential consumption underlying the above estimates Relate to the 1% and 2% levels.
- c. Did respondents provide information on their actual gas bills. If so provide a summary of this information.
- d. Separate the customer bill tolerances into commodity only and delivery and customer charges and provide the percentages, range and average costs based on the consumption range using current 11 cents/m³ and 5 year average cents/m³ for commodity cost.

VECC IR#7

Reference: Exhibit B Tab 1Page 14

Preamble: Traditional regulatory intervenors representing a wide spectrum of advocacy perspectives were invited to participate in a joint session hosted by the Utilities on July 19, 2011.

- a. Provide Copies of the Presentations.
- b. Provide a copy of the Minutes and/or any internal summaries of the meeting.
- c. Provide any copies of any responses provided to stakeholders at or following the meeting.
- d. Provide EGD and Union assessments of the inputs/feedback (positive and negative) from the meeting.

VECC IR#8

Reference: Exhibit B Tab 1Page 16

Preamble: FortisBC (Terasen Gas) has moved forward in buying RNG for its renewable, carbon neutral benefits and its prospective price stability. FortisBC has taken steps to roll out a Biomethane Service Offering as a result of a December 2010 Decision by the BC Utilities Commission. In the first phase, customers *will have the option of designating 10% of the natural gas they use as RNG.* [emphasis added] Fortis BC will then inject the equivalent amount of renewable gas into its system. Currently, Fortis BC has two sources of biomethane (expected to deliver an annual amount in the range of 60,000 – 70,000 GJs of biomethane into Fortis BC’s distribution system by the end of 2011).

- a. Confirm this is a voluntary election by Fortis’ customers.
- b. Provide a copy of the BCUC Decision.
- c. Provide an update of the FortisBC status as of 2011- number of customers by class electing RNG Contracted volumes and actual amounts actually injected for 2011 and projected for 2012.

3.0: Impacts on the Distribution System

VECC IR#9

Reference: Exhibit B Tab 1Page 23

Preamble: Using the rates in effect at the time of filing, and limiting the impact on a standard residential customer to approximately \$18 per year, the Utilities propose to the Board that no more than 3.3 petajoules (87 million m₃) of EGD’s and 2.2 petajoules (58 million m₃) of Union’s current system supply portfolios be purchased from RNG producers within this Program.

- a. Please provide the following in tabular form:

- i. Projected 2012-2016 RNG volumes and prices for each class and total.
 - ii. Historic 2007-2011 System Supply Volumes and average prices by class.
 - iii. 5 year System Supply forward projection for 2012-2016.
- b. Provide in tabular form:
- c.
 - i. Historic Own Use Gas Volumes and average prices (as charged to rates).
 - ii. 5 year Own Use Gas forward 2012-2016 projection.
 - iii. Historic 2007-2011 Ontario Local Production Gas volumes and average prices.
 - iv. 5 year Ontario Local Production Gas forward 2012-2016 projection.

VECC IR #10

Reference: Exhibit B Tab 1Page 22 Exhibit B, Tab 1, Appendix 5.

Preamble: Electrigan then worked with EGD and Union to develop a single, simple pricing model for each of AD and landfill-sourced RNG. The pricing models were developed with a view to settling on prices that would support an ROE in the proximity of 11% in a number of scenarios, without the price exceeding a threshold determined by the Utilities to be excessive and unlikely to be supported by their customer base.

- a. Using typical hypothetical cases for each of LG and AD provide pricing model runs in Excel active spreadsheet format. List all assumption and provide commentary and explanatory notes.
- b. Using data from the consultant's sources and/or the OPA Website run comparable price models for electricity production at the same scale and similar assumptions (as long as these are compatible with the FIT program). Provide the results in Excel active spreadsheet format with input assumptions and explanatory notes.
- c. Confirm that the FIT program is under review and prices may change as a result.

VECC IR#11

Reference: Exhibit B Tab 1Page 25

- a. Please provide:

- i. Draft working copies of the capacity reservation forms.
 - ii. The standard form contract.
- b. Indicate how prices provided to RNG suppliers will be adjusted in future e.g. inflation, WACOG indexed or other index.

VECC IR#12

Reference: Exhibit B Tab 1 Page 28.

Preamble: When RNG is produced and injected into the natural gas network there are operational implications that need to be considered. Each RNG project will need to be evaluated individually to determine the capability of the surrounding natural gas pipelines to accept the RNG. This can be performed using modeling tools and real-time testing. The ability to connect RNG supply to the utility's gas pipeline system is dependent on the market takeaway capacity.

- a. At max RNG volume provide an assessment of the impact on mainline pipeline capacity and associated costs (today's rates) for all supply routes to Dawn (Union) and to Parkway (EGD).
- b. Provide an estimate of impacts on Storage Capacity and costs for each utility.

4.0: Cost Allocation

VECC IR#13

References: Exhibit B Tab 1 Page 8: EB-2011-0390 Exhibit Q1-3 Tab1 Schedule 1 Pg1 In 3.

- a. List in detail the benefits of RNG to the utilities' and specifically to residential customers in particular to Seniors and Low Income customers.
- b. List and Compare benefits of Ontario Local Production to those of RNG.
- c. Confirm the EGD forecast of volumes and price for 2012 Local Ontario Production is 730 103 m³ at a cost of \$ 140,000 based on a price of \$202.85/103 m³ (\$5.38/GJ).
- d. Provide the Comparable data for Union.
- e. If Ontario Production received the same price as RNG (\$15/GJ) what would the potential increase in volumes contracted?

Questions to EGD on Section C EB-2011-0242

VECC IR#14

References: Exhibit C Tab 1 Schedule 1 Pg 1 para 2: EB-2011-0390 Q1-3 Tab4 S1 Pg 2.

Preamble: Based on an acceptable residential bill impact level of \$18 per year, EGD has estimated that the limit of current system gas volumes to be replaced by RNG supplies would equal approximately 87 million m³ (3.3 million GJs) or 1.5% of its system sales volume forecast of 5,853 million m³ (220.6 million GJs). This estimate is based on EGD's July 1, 2011 QRAM forecast of volumes and gas costs in which EGD replaced 87 million m³ of delivered supply at Dawn with RNG supplies.

- a. Confirm the Average commodity price in the January 1 2012 QRAM and shown on System Gas customers bills is 11.9 c/m³.
- b. How have differential storage and transportation costs been calculated? Provide the calculations and provide a copy of a schedule corresponding to Reference noted above.
- c. Provide Updated Versions of Table 1 and Table 3 based on January 1 commodity costs charged to System Gas customers and taking into account changes to storage and transportation costs.
- d. Calculate and provide results of analyses based on commodity price points for system gas starting at 10c/m³ with increments of \$1c/m³ to 15c/m³.
- e. Provide the Pricing Model Spreadsheets for the runs in Excel active format.

VECC IR#15

References: Exhibit C Tab 1 Schedule 3 Page 2 para 9.

- a. Provide a detailed status report on the Dufferin SSO RNG project.
- b. Explain why this and other pilot projects should not be undertaken as an initial phase before launching the RNG Program on a more widespread basis.

VECC IR#16

References: EB-2011-0390 Exhibit Q1-3 Tab 2 S1, Pg 1 and Tab 4, S1, Pg 2.

- a. Provide a Copy of the January 2012 QRAM EB-2011-0390 evidence referenced above.

- b. Confirm the Company's Own Use Gas forecast for 2012 is 6656.9 103 m³ and the price effective Jan 1 2012 is \$185.683/103 m³ (11.85c/m³).
- c. Using these (or corrected) OUG volumes and price as a baseline, rerun several pricing model scenarios to calculate a range illustrating the annual impact on rates assuming that the price premium for RNG procurement is streamed into the Company's own use gas component of supply and delivery.
- d. Provide the Result in tabular form and as an Active Excel Spreadsheet together with all assumptions and notes.
- e. Provide a version of EB-2011-0390 Exhibit Q1-3 Tab4 S1 Pg 2 incorporating the above rate impacts Compare with and discuss differences from the base reference Schedule.

Questions to Union on Section C EB-2011-0283

VECC IR#17

References: Exhibit C Tab 1Schedule 1Pg 1para 2: EB-2011-0382 QRAM.

Preamble: In summary, to manage the customer bill impacts to a maximum of approximately \$18/year, Union will limit RNG contracts in this program to a cumulative total of 1.7 PJs in the south and to 0.5 PJs in the north, for a total volume limit of RNG of 2.2 PJs.

- a. Update all the figures in the paragraphs under “Impact of RNG Purchases on South General Service Customers and North General Service Customers” to reflect the January 2012 Approved Commodity and other rates.
- b. Update Exhibits C Appendix 1 Schedules 1 -9 to reflect the approved charges and rates in the January 2012 QRAM.
- c. Confirm the following:
 - i. Alberta Border Reference Price-11.5704 cents/rri'
 - ii. Ontario Landed Reference Price-20.3322 cents/rri'
 - iii. Current average Commodity Rates for sales service customers in the Southern Northern and Eastern rate zones as shown on Sales Service customers bills
- d. Calculate and provide results of price model analyses based on commodity price points for sales service gas starting at 10c/m³ with increments of \$1c/m³ to 15c/m³.

- e. Provide the Pricing Model Spreadsheets for the runs in Excel active format.

VECC IR#18

References: EB-2011-0392 QRAM and Exhibit C Appendix 1 Schedules 1-3.

- a. Provide a Schedule that shows the forecast 2012 Gas Supply portfolio(s), including volumes and current prices. Ensure that detail includes Unions Own Use Gas and Local Ontario Production volumes and prices.
- b. Provide the Company's Own Use Gas volume forecast for 2012 and the price effective Jan 1 2012 (\$xx/103 m³ (yyc/m³).
- c. Using these OUG volumes and price as a baseline, rerun several pricing model scenarios to calculate a range illustrating the annual impact on rates assuming that the price premium for RNG procurement is streamed into the Company's own use gas component of supply and delivery.
- d. Provide the Result in tabular form and as an Active Excel Spreadsheet together with all assumptions and notes.
- e. Provide versions of Exhibit C Appendix 1 Schedules 1-3 incorporating the above Scenarios (RNG streamed to Own Use Gas) Compare with and discuss differences from the base reference Schedules updated to reflect EB-2011-0390 Commodity rates and charges.