

## **EB-2016-0004 - Natural Gas Community Expansion Proceeding**

### **Environmental Defence Interrogatories On Evidence of Union Gas Distribution Inc. (“Union”)**

#### **1. Reference: Exhibit A, Tab 1, pp. 5-22**

Does Union agree that existing gas consumers should be required to subsidize expansions of Ontario’s natural gas distribution system only if all of the following criteria are met:

- a) The expansion will lead to a net reduction in Ontario’s greenhouse gas emissions [e.g., this could occur if the new customers’ previous energy source (e.g., heating oil) had higher greenhouse gas emissions];
- b) Expanding the gas system is the most cost-effective, feasible option to achieve the greenhouse gas emission reductions [i.e., do not expand the gas distribution system using existing customer subsidies if the emission reductions could be achieved at a lower cost by energy efficiency or renewable energy investments (e.g., home energy retrofits, heat pumps)]; and
- c) The subsidy is necessary to make the project happen [e.g., do not require existing customers to subsidize an expansion of the gas system if the cost could be recovered from the new customers via a surcharge on their gas rates]?

If “no”, please fully justify your response. Please specifically address each of the three criteria in your response. Note that the above three criteria would not be to the exclusion of other criteria required for community expansion.

#### **2. Reference: Exhibit A, Tab 1, pp. 5-22**

Please make best efforts to provide an estimate of the greenhouse gas emissions that would be produced by the consumption of natural gas by all customers estimated to convert to natural gas in the 33 communities currently under consideration by Union for community expansion, cumulatively from the present until: (a) 2020, (b) 2030, and (c) 2050. Assume that natural gas is expanded to all of the communities under consideration. Please make and state all necessary assumptions on a best efforts basis. Where possible, please use the same assumptions used in the profitability analysis and the stage 2 analysis contained in the Union evidence.

#### **3. Reference: Exhibit A, Tab 1, pp. 5-22 & EB-2015-0179, Exhibit A, Tab 1, p. 37**

Section 3.1 (d) of the Appendix B to EBO 188 refers to “estimates of the NPV and the benefit-cost ratio for the Investment Portfolio using a Societal Cost Test (“SCT”), defined in the Report of the Board, E.B.O. 169 III, as an evaluation of the costs and/or benefits accruing to society as a whole, due to an activity. The SCT analysis should be consistent with that used for the utilities’ DSM programs. The benefit-cost ratio shall be presented with and without monetized externalities.”

Please make best efforts to provide a benefit-cost ratio for the expansion of gas to the 33 communities currently under consideration by Union for community expansion. Please use a Societal Cost Test (“SCT”), defined in the Report of the Board, E.B.O. 169 III, as an evaluation of the costs and/or benefits accruing to society as a whole, due to an activity. Please use an SCT analysis that is consistent with the test used by Union in relation to DSM. Please account for the anticipated impact of cap and trade. Please present the ratio with and without monetized externalities. Please make and state all necessary assumptions on a best efforts basis. Please provide a spreadsheet of key assumptions and the underlying calculations.

**4. Reference: Exhibit A, Tab 1, pp. 35-38**

Please describe the contingency planning that has been undertaken by Union to assess the possibility that substantial reductions in natural gas consumption (e.g. 40%) will be required in Ontario in the medium term (e.g. by 2030).

**5. Reference: Exhibit A, Tab 1, pp. 35-38**

- (a) Please provide a list of all documents that have been prepared by Union to estimate the overall reductions in natural gas consumption that may be needed to meet Ontario’s GHG emission reduction targets.
- (b) Please provide a list of all documents possessed by Union prepared by third parties to estimate the overall reductions in natural gas consumption that may be needed to meet Ontario’s GHG emission reduction targets.
- (c) Please provide a copy of all documents listed in (a) and (b) above. If a document is not provided, please provide a justification. A document need not be provided if it simply repeats the estimates and analysis contained in a document already provided.

**6. Reference: Exhibit A, Tab 1, pp. 35-38**

An expert report by Chris Neme filed in EB-2015-0029 / EB-2015-0049 states as follows at pages 15 to 16:

In 2007, the Ontario government adopted the following set of greenhouse gas emission reductions targets:

- 6% reduction below 1990 levels by 2014;
- 15% reduction below 1990 levels by 2020; and
- 80% reduction below 1990 levels by 2050.

In subsequent years, additional climate policies, including the “conservation first” policy, were adopted. More recently additional significant policy commitments have been made. For example, the province recently joined Quebec, British Columbia, California, and other sub-national jurisdictions in re-affirming a commitment to at least an 80% carbon emission reduction by 2050. In the Spring of 2015 it also established a new commitment

to a 37% carbon emission reduction in the province by 2030 and committed to imposing a carbon “cap-and-trade” policy to meet those requirements.

These policy decisions, including the most recent commitments made just several months ago, raise questions about whether the OEB’s 2014 gas DSM budget guidelines are outdated. Though the province was expected to meet its 2014 target, it is currently expected to fall about 30% (about 19 megatonnes) short of the emission reductions required to meet its 2020 target. Absent new policies or programs (i.e. with the current Climate Change Action Plan as the baseline), the province is currently projected to see its emissions gradually increase back to 1990 levels. Thus, the province will need much greater reductions – on the order of 67 megatonnes – to meet its new 2030 target. That translates to about 4.5 megatonnes reduction per year, which is on the order of 2.5% annually, for each of the next 15 years. Natural gas accounts for approximately 30% of all greenhouse gas emissions in the province, so some portion of the additional future emission reductions will almost certainly have to come from the natural gas sector.

- (a) Does Union agree that “some portion of the additional future emission reductions will almost certainly have to come from the natural gas sector”? If not, please explain why not.
- (b) Does Union agree that this will require overall declines in natural gas consumption in Ontario?
- (c) Please indicate if Union disagrees with any sentences in the above passage and why.
- (d) Please file a copy of the above-referenced expert report.

**7. Reference: Exhibit A, Tab 1, pp. 35-38**

An expert report by Paul Chernick filed in EB-2015-0029 / EB-2015-0049 states as follows at pages 22 to 23:

The Ontario goals include reduction of jurisdictional emissions by about 26% from 2013 to 2030, or about five times the reductions expected from the [U.S.] Clean Power Plan. Ontario’s goals are more aggressive than those of the Clean Power Plan. That difference may increase the marginal cost of reaching those goals compared to that of the Clean Power Plan. While the Clean Power Plan relies heavily on renewables, efficiency, and gas backing out coal-fired generation, Ontario has already eliminated coal on its electric system. Additional reductions in Ontario carbon emissions will require such further measures as the following:

- backing down gas generation (which requires twice the load reduction per tonne avoided, compared to backing down coal),
- reducing usage of natural gas in buildings,...

- (a) Does Union agree with the above? If not, please explain.

- (b) Does Union agree that this will require overall declines in natural gas consumption in Ontario?
- (c) Please indicate if Union disagrees with any sentences in the above passage and why.
- (d) Please file a copy of the above-referenced expert report.

**8. Reference: Exhibit A, Tab 1, pp. 35-38**

Please provide and file:

- (a) Union's most recent DSM Annual Report
- (b) A copy of the most recent Ontario Climate Change Update published by the Minister of the Environment and Climate Change;
- (c) A copy of the most recent Climate Change Report published by the Environmental Commissioner of Ontario; and
- (d) A copy of Ontario's Climate Change Strategy.

**9. Reference: Exhibit A, Tab 1, pp. 5-22 & EB-2015-0179, Exhibit A, Tab 1, p. 37**

- (a) Please provide a copy of the natural gas price forecast figures used to calculate the net present value ("NPV") of anticipated customer fuel savings.
- (b) Please provide a copy of the natural gas price forecast figures used to calculate the Total Resource Cost in Union's EB-2015-0029/EB-2015-0049.
- (c) If the figures in response to (a) are lower than the figures in response to (b), please (i) recalculate NPV figures on page 33 of Union's evidence and (ii) recalculate the benefit-cost ratio calculated in response to interrogatory # 3 above based on the natural gas price forecast figures in (b) above.

**10. Reference: Exhibit A, Tab 1, pp. 5-22 & EB-2015-0179, Exhibit A, Tab 1, p. 37**

- (a) Has Union compared the stage 2 benefits that would flow from a dollar of spending on the community expansion projects it is considering and:
  - a. The stage 2 benefits that would flow from a dollar of DSM spending; and
  - b. The stage 2 benefits that would flow from a dollar of spending on renewable energy spending, such as investment in heat pumps?

If yes, please provide the comparison.

- (b) Has Union compared the stage 3 benefits that would flow from a dollar of spending on the community expansion projects it is considering and:

- a. The stage 3 benefits that would flow from a dollar of DSM spending; and
- b. The stage 3 benefits that would flow from a dollar of spending on renewable energy spending, such as investment in heat pumps?

If yes, please provide the comparison.