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**Commission de l'énergie
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BY E-MAIL

December 22, 2017

To all parties in EB-2016-0137 | EB-2016-0138 | EB-2016-0139:

**Re: South Bruce Expansion Applications
EB-2016-0137 | EB-2016-0138 | EB-2016-0139**

Please find attached the final list of interrogatories for both EPCOR Southern Bruce Gas Inc. and Union Gas Limited. As per Procedural Order No. 9, responses from both proponents are due to be filed on January 11, 2018.

The OEB has reviewed all proposed interrogatories submitted by the parties. The OEB had consolidated questions to avoid repetition, and edited for clarity and to comply with the Board's directions concerning competitive aspects of the applicants' proposals.

The OEB finds that interrogatories relating to aboriginal consultation are not appropriate until the leave to construct proceeding. The OEB finds that questions relating to rate making such as details of rate base and costs are not appropriate until the OEB has a rates application from the successful applicant. Proposed interrogatories relating to these issues have not been included at this time.

Yours truly,

Original signed by

Kirsten Walli
Board Secretary

INTERROGATORIES for
EPCOR South Bruce Gas Inc.
South Bruce Expansion Applications
EB-2016-0137 | EB-2016-0138 | EB-2016-0139
December 22, 2017

Customer Attachments and Volumes

1. Ref: EPCOR's CIP Application / Schedule D / Table D1

Preamble:

EPCOR provided a ten year forecast of customer attachments by customer class.

Question:

- a) What are EPCOR's assumptions regarding total market size for each customer class?
- b) Please provide the customer attachment rates used in your original bid and the percentage breakdown between residential, commercial, industrial and agricultural customers (as applicable in your original bid).
- c) Please provide separate counts over the 10-year period for the forecast agricultural and large industrial customer attachments. For industrial customers, please provide your assumed:
 - i. number of industrial customers,
 - ii. number of agricultural customers, and
 - iii. average volume for industrial customers.

Metrics

2. Ref: EPCOR's CIP Application / Schedule D / Tables D1 and D3, Tab 2 / p. 6, Tab 5 / p. 18

Preamble:

EPCOR provided aggregate annual forecast volumes for its large volume contract customers and calculated its CIP criteria accordingly. EPCOR forecasted attaching 13 out of a total market of 20 potential industrial and large agricultural customers (65%) in the South Bruce area, 4,818 out of a total market of 8,301 potential residential customers (around 60%) and 447 out of a total market of 688 potential commercial customers (around 65%).

Questions:

- a) Using the information provided in the CIP proposal, calculate and provide the following metrics.
 - i. NPV of 10-year Revenue Requirement per Metre of Pipe (\$/m)
 - ii. Average Number of Customers per Kilometer (customers/km)
 - iii. Cumulative 10-yr Revenue Requirement per Unit of Volume (\$/m³)
 - b) Using an annual normalized average consumption (NAC) approach for large agricultural and industrial customers, calculate and provide the following metrics and CIP criteria.
 - i. Net Present Value (NPV) of 10-year Revenue Requirement assuming a commercial operation date within 24 months of approval
 - ii. Cumulative 10-year Revenue Requirement
 - iii. NPV of 10-year Revenue Requirement per Metre of Pipe (\$/m)
 - iv. NPV of 10-year Revenue Requirement per 10³m³ delivered (\$/10³m³)
 - v. Average Number of Customers per Kilometer
 - vi. Cumulative 10-yr Revenue Requirement per Unit of Volume
 - vii. Customer Years
 - viii. Cumulative 10-yr Volume
 - c) How much do large agricultural customers make up in both your original bid and in your answer to question 2(b)?
 - d) Assuming no industrial customers (and the associated pipe used to directly connect the industrial customers and associated volumes, with all other assumptions remaining the same), recalculate and provide the metrics and CIP criteria listed in 2(a) and 2(b) above. For clarification, the OEB is not seeking a complete redesign of the system in terms of pipe diameter, material, etc. In cases where the industrial customer is at the tail end of a pipeline, remove that portion of pipeline and recalculate the metrics and CIP criteria keeping all else unchanged.
3. Ref: Calculation of comparison criteria in EPCOR and Union CIPs – beginning of 10 year rate stability period

Preamble:

For each of Union and EPCOR's CIPs, the parties did not agree, and the Board did not specify, when during the project life the 10 year rate stability period should begin. As such, options include at the start of project construction, or when the first customer is attached. In EPCOR's CIP, the 10 rate year stability period was started as of January 2019, the year when construction began as EPCOR will have an approved tariff at that time. As a result, for the first year of the project (2019), EPCOR stated that it only included industrial volumes for the two last months when the system was in service. This means that over the 10 year rate stability period EPCOR has 110 months of industrial customer volume included in its total volume values. EPCOR states that it appears that Union started its 10 year period when the system was in service. As a result, Union appears to have 120 months of industrial customer volume in its total volume values. This will result in two of the three metrics agreed to between the parties – cumulative 10 year revenue requirement per unit of volume and cumulative 10 year volume – are not using the same number of months over which industrial volume is accumulated when calculating the metric.

For residential and commercial customers there appears to be no misalignment on the volumes between EPCOR and Union as both EPCOR and Union agreed on the common assumption that residential and commercial customers will be connected at midyear for volume calculation purposes. In order to ensure the agreed to metrics are directly comparable, EPCOR proposed to recalculate its metrics using the same timing assumption that Union appears to have used by starting the 10 year rate stability period at the time of initial customer attachment.

Question:

Please recalculate the metrics in 2(a) and 2(b) with the 10 year rate stability period starting at the time the system was in service, without changing any of the other assumptions used in the CIP.

Indigenous Issues

4. Ref: EPCOR's CIP Application / Tab 5 / p. 25 / Items 45-46

Questions:

- a) What impacts will EPCOR's proposal have on the provision of natural gas to Saugeen Ojibway Nation reserve communities and off-reserve members in the region?
- b) What impacts will EPCOR's proposal have on the cost of natural gas to Saugeen Ojibway Nation reserve communities and off-reserve members in the region?

Infrastructure

5. Ref: EPCOR's CIP Application / Tab 2 / p. 7 / Item 19, Tab 5 / p. 20 / Item 10

Preamble:

EPCOR addresses potential benefits of CHP volumes included in its forecast for the CIP proposal, acknowledging it has no commitment from the customer.

Question:

Has the economic feasibility of the CHP facility has been validated? If so, indicate whether the related volumes are included in EPCOR's volume forecast and confirm that the system has been designed with adequate capacity to serve the CHP facility and that associated costs are included in the revenue requirement.

6. Ref: EPCOR's CIP Application / Tab 5 / pp. 20-22 / Items 13-21

Question:

Please provide the length of pipelines to be used for all supply and distribution mains by size within material type steel, MDPE, or HDPE) in a format similar to Table 4 (Supply Laterals) and Table 5 (Distribution Pipelines) included in Union's CIP proposal.

Scheduling/Next Steps

7. Ref: EPCOR's CIP Application / Tab 5 / p. 25 / Items 45-46

Questions:

- a) If EPCOR were to be selected as the successful proponent, how soon after would EPCOR commit to submitting its Leave to Construct application with the Board?
- b) Please elaborate on what outstanding activities EPCOR needs to undertake, including the EIA and community consultation process, to be in a position to submit an LTC Application.

INTERROGATORIES for
Union Gas Limited
South Bruce Expansion Applications
EB-2016-0137 | EB-2016-0138 | EB-2016-0139
December 22, 2017

Customer Attachments and Volumes

1. Ref: Union Gas' CIP Proposal / p. 18 / Table 7

Preamble:

In Table 7, Union Gas provided a ten-year forecast of customer attachments by customer class.

Questions:

- a) What are Union Gas' total market size and assumptions for each customer class?
- b) Please provide separate counts of the forecast commercial, agricultural and large industrial customer attachments over the 10-year period. For industrial customers, please provide your assumed:
 - i. number of industrial customers,
 - ii. number of agricultural customers, and
 - iii. average volume for industrial customers.
- c) Please provide the customer attachment rates used in your original bid and the percentage breakdown between residential, commercial, industrial and agricultural customers as applicable.

Metrics

2. Ref: Calculation of comparison criteria in EPCOR and Union CIPs – beginning of 10 year rate stability period.

Preamble:

For each of Union and EPCOR's CIPs, the parties did not agree, and the Board did not specify, when during the project life the 10-year rate stability period should begin. As such, options include at the start of project construction, or when the first customer is attached. In EPCOR's CIP, the 10-year stability period was started as of January 2019, the year when construction began as EPCOR will have an approved tariff at that time. As a result, for the first year of the project (2019), EPCOR only included industrial volumes for the two last months when the system was in service. This means that over the 10-year rate stability period EPCOR has 110 months of industrial customer volume included in its total volume values. It appears that Union started its 10-year period when the system was in service. As a result, Union appears to have 120 months of industrial customer volume in its total volume values. This will result in two of the three metrics agreed to between the parties – cumulative 10 year revenue requirement per unit of volume and cumulative 10 year volume – are not using the same number of months over which industrial volume is accumulated when calculating the metric.

For residential and commercial customers there appears to be no misalignment on the volumes between EPCOR and Union as both EPCOR and Union agreed on the common assumption that residential and commercial customers will be connected at midyear for volume calculation purposes. In order to ensure the agreed to metrics are directly comparable, EPCOR proposes that it recalculate its metrics using the same timing assumption that Union appears to have used by starting the 10 year rate stability period at the time of initial customer attachment.

Questions:

Please confirm the point of time in the project that the 10-year rate stability period begins. If you did not begin the 10-year rate stability period at the time of initial customer attachment, please recalculate the metrics below using that assumption. All other assumptions used in the CIP should remain unchanged:

- a) Net Present Value (NPV) of 10-year Revenue Requirement
- b) Cumulative 10 year Revenue Requirement
- c) Cumulative 10 year Revenue Requirement per Unit of Volume
- d) Customer Years
- e) Cumulative 10 year Volume

3. Ref: Calculation of comparison criteria in EPCOR and Union CIPs – beginning of 10 year rate stability period.

Preamble:

In s. 3, Union Gas reported the results for each of the three metrics resulting from its CIP proposal.

Questions:

- a) Using the information provided in the CIP proposal, calculate and provide the following metrics.
 - i. NPV of 10-year Revenue Requirement per Metre of Pipe (\$/m)
 - ii. Average Number of Customers per Kilometer (customers/km)
 - iii. Cumulative 10-yr Revenue Requirement per Unit of Volume (\$/m³)
- b) If Union Gas' customer attachment rates are materially different than 60% residential and 65% or commercial customers, then use these rates to recalculate and provide the following metrics and CIP criteria (at an average consumption of 11,144 m³ for all Commercial Customers). When recalculating the following metrics and CIP criteria, all other assumptions used in Union's CIP should remain the same (e.g. timing of customer attachments).
 - i. Net Present Value (NPV) of 10-year Revenue Requirement
 - ii. Cumulative 10-year Revenue Requirement
 - iii. NPV of 10-year Revenue Requirement per Metre of Pipe (\$/m)
 - iv. Average Number of Customers per Kilometer
 - v. Cumulative 10-yr Revenue Requirement per Unit of Volume (\$/m³)
 - vi. Customer Years
 - vii. Cumulative 10-yr Volume
- c) Assuming no industrial customers (and the associated pipe used to directly connect the industrial customers and associated volumes, with all other assumptions remaining the same), recalculate and provide the metrics and CIP criteria listed in a) and b) above. For clarification, the OEB is not seeking a complete redesign of the system in terms of pipe diameter, material, etc. In cases where the industrial customer is at the tail end of a pipeline, remove that portion of pipeline and recalculate the metrics and CIP criteria keeping all else unchanged.

4. Ref: Union Gas' CIP Proposal / p. 6 / Table 1, p. 18 / Table 7, p. 19 / Table 8, Schedule 5
EPCOR's CIP Application / Schedule C / p. 2

Preamble:

In Schedule 5 of Union's CIP, it indicates that phase one of the system will be in service in November 2019. As noted in Schedule C of the joint letter of EPCOR and Union filed with the Board on October 2, 2017, the parties have agreed that the volume recorded for industrial customers will reflect the date a particular industrial customer is forecast to be connected to the system. Table 7 indicates that the three industrial customers served by Union are attached in year 1. The industrial customer volume for year 1 is forecast at 16,596,000 m³ which suggests those customers are connected at the beginning of year 1 as annual industrial volume does not increase materially in year 2 and beyond. There are also 1,507 residential and 105 commercial customers attached in year 1. Given the above volume forecast there is an apparent disconnect when linking these volumes with the revenue requirement for the 12 months of year 1 which is forecast to be \$471,000. The revenue requirement in year 2 is forecast to be \$5,234,000 (an increase of 1,000%) and increases annually from that value. It appears that the revenue requirement for year 1 is not aligned with having all industrial customers connected for a full year plus residential and commercial customers connected within that year.

Questions:

- a) Please confirm the time period for year 1, including the start and end month and year.
- b) Please provide a detailed explanation as to why the revenue requirement for year 1 is materially different from year 2. The response should include an explanation as to the material drivers for the increase in the revenue requirement from year 1 to year 2.
- c) Please recalculate the revenue requirement and/or forecasted volumes for year 1 taking into account the length of time that the system is in service (including Industrial Customers) for that year. Using that value, recalculate the following CIP metrics, keeping all other assumptions constant:
 - i. Net Present Value (NPV) of 10-year Revenue Requirement
 - ii. Cumulative 10 year Revenue Requirement
 - iii. Cumulative 10 year Revenue Requirement per Unit of Volume
 - iv. Customer Years
 - v. Cumulative 10 year Volume

5. Ref: Union Gas' CIP Proposal / Tab 5 / p. 6

Preamble:

On page 6 of 35 of its CIP proposal, Union has identified CIP Comparison Criteria as follows:

Year	Annual Revenue Requirement (\$000's)	Cumulative Volume (103m3)
1	471	19,124
2	5,234	44,617
3	7,361	73,936
4	7,801	105,620
5	8,030	138,729
6	8,143	172,602
7	8,205	208,176
8	8,252	243,649
9	8,293	279,249
10	8,327	315,403

Questions:

- a) Please provide further information regarding Union's forecasted Annual Revenue Requirement as compared to its forecasted Cumulative Volume since the volumes provided do not reflect the corresponding revenue requirement.
- b) Do the large increase in Annual Revenue Requirement year over year indicates that Year 1 may be considered a partial service year? If Year 1 is not a partial service year, please explain the reason for the increase after Year 1.

6. Ref: Union Gas' CIP Proposal, EPCOR CIP Proposal / Tab 5 / p. 26

Preamble:

In Procedural Order No. 8 for these proceedings, the OEB reaffirmed the principle of fully allocated costs as set out in the Generic Decision in EB-2016-0004, which prevents cross-subsidization of new expansion customers by current ratepayers. In page 26 of EPCOR's CIP, EPCOR confirms alignment with the Board's direction for fully allocated costs, and provides its methodology of ensuring full costs are borne by Southern Bruce ratepayers fairly and equitably. While in its CIP Union affirms the use of common assumptions, on a number of matters, there is no confirmation of the use of fully allocated costs. Given the importance of this principle and the material impact it could have on the economics of system expansion and on current customers there should be direct confirmation of the use of fully allocated costs.

Question:

Please confirm that when determining the revenue requirement for each year of your CIP all O&M costs were determined using the principle of fully allocated costs. Provide detail as to how this principle was adhered to when calculating these costs.

Indigenous Issues

7. Ref: Union Gas' CIP Proposal / pp. 32-33

Preamble:

Union is committed to building long-term productive relationships with members of the First Nation and Métis communities based on mutual respect and economic opportunity.

Questions:

- a) What impacts will Union's proposal have on the provision of natural gas to Saugeen Ojibway Nation reserve communities and off-reserve members in the region?
- b) What impacts will Union's proposal have on the cost of natural gas to Saugeen Ojibway Nation reserve communities and off-reserve members in the region?

Scheduling/Next Steps

8. Ref: Union Gas' CIP Proposal

Questions:

- a) If Union were to be selected as the successful proponent, how soon after would Union commit to submitting its Leave to Construct application with the Board?
- b) Please elaborate on what outstanding activities Union needs to undertake, including the EIA and community consultation process, to be in a position to submit an LTC Application.