

January 29, 2015

BY RESS & Courier

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
Toronto, Ontario
M4P 1E4

Dear Ms. Walli:

**Re: Union Gas Limited (“Union”)
Bay of Quinte Replacement Pipeline Project
Board File # EB-2014-0350**

Further to the interrogatories received in the above noted matter, please find attached two copies of Union’s responses.

Sincerely,

[original signed by]

Shelley Bechard
Administrative Analyst, Regulatory Projects

Encl.

cc: Pascale Duguay, Manager Facilities Applications
Zora Crnojacki, Chair (OPCC)

UNION GAS LIMITED

Answer to Interrogatories
of OEB

1. Ref: Pre-filed Evidence / Page 1 / Line 17; Pre-filed Evidence / Page 7 / Line 13; and Schedule 10: Quinte Land Rights Table

Preamble:

Union has noted on page 1 under the project summary that the proposed pipeline will require new land rights. Union has also noted on page 7 that it will require an encroachment permit from the Ministry of Transportation of Ontario ("MTO") and that a temporary land use agreement from the landowner to the south of the crossing has been obtained. Union also indicated that Schedule 10, Quinte Land Rights Table, identifies the land rights Union has obtained for the construction of the proposed pipeline.

Questions:

- a) Please clarify if any new land rights are to be obtained and please provide any updates to the land rights acquisition since the filing of the application.
- b) Please describe the prospects of acquiring all of the permanent and temporary land rights in time to adhere to the planned construction schedule for the pipeline.
- c) Please provide an update to the status of the encroachment permit from the MTO.
- d) Please describe what type of permit Union has obtained from the Mohawks of the Bay of Quinte.

Response:

- a/b) The only new land rights required for the project are temporary land rights south of the Skyway bridge which have been obtained.
- c) The Encroachment Permit application was filed December 12th, 2014 and is under review by the MTO.
- d) Union has engaged the Mohawks of the Bay of Quinte throughout the initial design, environmental and archaeology surveys for the replacement pipeline. Union is currently working with the Mohawks of the Bay of Quinte for a new Indian Act Section 28(2) permit for the new and existing Union Gas pipelines within the reserve.

2. Ref: Pre-filed Evidence / Page 3 | Line 1 and Schedule 14 / Page 14.

Preamble:

Union noted that it had worked with the MTO to determine a new location for the proposed pipeline. Union noted that it considered the following alternatives:

- i. Attaching the proposed pipeline to the other side of the Skyway Bridge;
- ii. Laying the proposed pipeline on the bottom of the Bay of Quinte; and
- iii. Directionally drilling the proposed pipeline from a number of different landfall locations.

Union in consultation with the MTO determined that the preferred location for the proposed pipeline was to directional drill the proposed pipeline adjacent to the Skyway Bridge within the MTO right of way.

In Neegan Burnside Ltd.'s letter dated October 24, 2014 to Chief R. Donald Maracle, it is mentioned in the third paragraph that "the pipeline is proposed to be located approximately 50 m beneath the floor of the Bay of Quinte in confined bedrock".

Questions:

- a) Please clarify the difference between alternatives ii. and iii.
- b) Please confirm that this preferred location has been communicated with all affected parties (i.e. all affected landowners, First Nations, Metis Nation, general public, government agencies, Ontario Pipeline Coordinating Committee ("OPCC"), etc.)
- c) Please provide the total estimated costs for each alternative considered.

Response:

- a) In scenario ii the proposed pipeline would be laid on the bottom of Bay of Quinte and would not be buried.

In scenario iii the proposed pipeline will be installed by directional drilling through the bedrock under the Bay of Quinte.

- b) Confirmed
- c) Please refer to answer for question 3

3. Ref: Pre-filed Evidence / Page 4 / Line 13

Preamble:

Union indicated that it has not completed a discounted cash flow ("DCF") report because the project is underpinned by the MTO's relocation requirement.

Question:

- a) Please provide a completed DCF report for each alternative Union considered.
- b) If the DCF is not applied for economic feasibility assessment of the project, please provide the methodology for comparing alternatives.

Response:

- a/b) A DCF analysis was not used to determine the preferred option for replacing the pipeline currently attached to the Skyway Bridge. A Qualitative and Quantitative analysis of 3 different alternatives was undertaken to determine the preferred option for the replacement.

Laying the pipeline on the bottom of the Bay of Quinte was discounted very early in the process due to the potential for significant environmental impacts to fish habitat and the potential for third party damage. Laying the pipe on the bottom of the Bay of Quinte was not seen as a viable alternate, and therefore a cost estimate was not completed.

Cost estimates for both construction and ongoing operation were developed for attaching the pipe to the Skyway Bridge and directional drilling the Bay of Quinte. The matrix below identifies constructability and Integrity issues for the three alternatives.

<i>Scenario</i>	<i>Project Cost (\$)</i>	<i>O&M Cost (\$ over 50 years (No Discounting))</i>	<i>Pipeline Constructability and Integrity</i>	
			<i>Pros</i>	<i>Cons</i>
(i) Bridge Attachment	5,200,000	6,100,000	- Lower initial Capital cost	- MTO's preference is not to install pipelines on the side of bridges - No MTO approval to install new pipeline on the side of the bridge -High Operational and Maintenance cost - On going safety concerns with the annual and periodical maintenance (e.g. traffic safety mitigation required while working on the bridge) - Pipeline is exposed to harsh conditions, e.g. change in temperature,

				<p>snow and ice buildup, wind, vibrations, road salts etc.</p> <ul style="list-style-type: none"> - Risk of damage to pipeline during bridge rehabilitation by MTO
<p>(ii) Laying Pipeline on Bottom of the Bay of Quinte</p>	<p>See paragraph 2 above</p>	<p>See paragraph 2 above</p>	<ul style="list-style-type: none"> - Provides ability to execute In-line inspection on Picton lateral 	<ul style="list-style-type: none"> - Not identified as industry wide best practice. - High environmental impact during construction. - Environmental impact post installation - Exposed to Marine traffic. - Annual inspection is required for pipeline integrity. - Potential for 3rd party damage
<p>(iii) Directional Drill</p>	<p>8,900,000</p>	<p>540,000</p>	<ul style="list-style-type: none"> - Low Operational and Maintenance cost - Provides ability to execute In-line inspection on Picton lateral - Improve cathodic protection of the pipeline. - Established industry wide best practice - Minimal potential for 3rd party damage 	<ul style="list-style-type: none"> - High Initial Capital cost

Based on the total lifecycle costs of the alternatives, and the advantages of a buried pipeline, directional drilling of the Bay of Quinte is the preferred option.

4. Ref: Pre-filed Evidence I Page 6 I Line 19

Preamble:

Union noted that it is currently in negotiations with the MTO to abandon in-place the existing NPS6 pipeline attached to the Skyway Bridge.

Questions:

- a) Please give an update to the status of these negotiations.
- b) What is the estimated useful life left on the NPS6 pipeline?
- c) Does the abandonment of the NPS6 pipeline have any significant impacts from an accounting perspective? What will be the accounting treatment of abandoning this asset?
- d) In the event that the MTO does not take on the existing NPS6 pipeline, how does Union plan to address removing the pipeline? What are the additional costs associated with Union removing the existing pipeline? Have these costs been included in the project's estimated costs?
- e) Please confirm whether or not Union will follow the Technical Standards and Safety Authority's guidelines for pipeline abandonment. Please include a copy of these guidelines.

Response:

- a) Union and MTO have had further discussions regarding the abandonment of the pipeline and MTO is considering purchasing the pipeline. A draft agreement was provided to MTO for review and Union understands the agreement is currently being reviewed by MTO legal staff.
- b) If the MTO had not requested that Union remove the pipeline from the Skyway Bridge, Union would not be replacing the pipeline at this time. If in the future the integrity management program identified significant issues with the pipeline it would be replaced at that time.
- c) The accounting for the abandonment of the NPS6 pipeline will be treated consistently with the policy of abandonment of all regulated property, plant and equipment (PP&E). When regulated PP&E is abandoned, the original cost plus the cost of abandonment, less salvage value, is charged to accumulated depreciation.
- d) In the event that the MTO does not take on the existing pipeline Union will remove the pipeline off the bridge. The cost of removing the existing NPS6 pipeline is included in the project's estimated cost.

- e) Yes. The Technical Standards and Safety Authority's guidelines for pipeline abandonment is attached.



PIPELINE ABANDONMENT CHECKLIST

PLANNING

1. Has subsidence been considered for pipelines having a diameter greater than 323.9 mm (12 inches)?
2. Has the pipeline company notified the landowners and proper authorities (municipalities, MOE, MTO, MNR, etc.) of the abandonment?
3. Have abandonment procedures for crossings been agreed upon by utilities (road, railway, pipelines, etc.) and authorities responsible for rivers and streams crossed by the pipeline?
4. Has consideration been given to the effect of drainage in the area surrounding the abandoned pipeline, which may act as a conduit for ground water after the pipe is perforated by corrosion?
5. Has consideration been given to the removal of all the aboveground facilities?
6. Has consideration been given to any hazards posed to people, equipment, wildlife or livestock by any apparatus left in place above or underground?

IMPLEMENTATION

1. Has the abandoned pipeline been physically isolated from the live pipeline?
2. Has the pipeline been drained of all fluids and adequately cleaned to prevent ground water contamination from hydrocarbon residue on the pipe wall after the pipe is perforated by corrosion?
3. Have all aboveground facilities been removed and has consideration been given to removing underground facilities such as anode beds and tanks?

LIABILITY/RISK MANAGEMENT

1. Does the pipeline company have a contingency plan to remedy any contamination caused by the abandoned pipeline?
2. Has consideration been given to conducting post-abandonment surveillance programs?
3. Has consideration been given to maintaining signage after the pipeline is abandoned?
4. Has consideration been given to providing a locate service after the pipeline is abandoned?

5. Ref: Pre-filed Evidence / Page 3 / Line 19

Preamble:

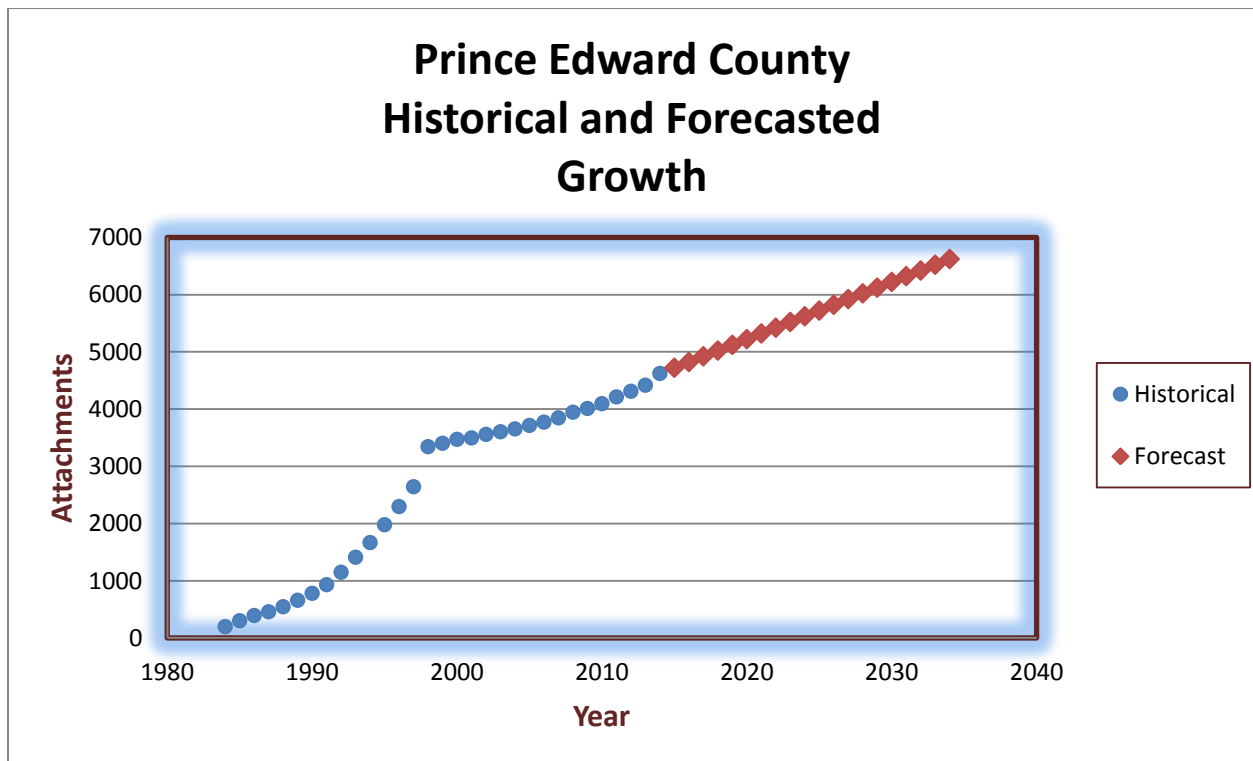
Union noted that after reviewing the proposed growth and the current operation of the Picton Lateral, it was established that NPS8 pipe is the correct design for the Bay of Quinte crossing.

Question:

Please provide the analysis supporting the upsize of the pipeline from an NPS6 to an NPS8 pipe.

Response:

This high pressure network is comprised of approximately 25.3km of NPS6 pipeline from TCPL to the Picton Town Border Station. The minimum pressure requirement into the Town Border Station is 1862kPa in order to feed the downstream 1725kPa MOP system. The existing system has approximately 2 years of additional capacity before minimum inlet pressures will no longer be met and portions of the NPS6 will have to be reinforced. With the anticipated future growth on this system, Installing NPS8 under the Bay of Quinte will eliminate the need to loop or replace the river crossing in the future and provide some additional capacity to the system which has the potential to delay reinforcement of the Picton system. A chart showing the historical and forecasted growth for Prince Edward County is attached.



6. Ref: Pre-filed Evidence / Page 1 / Line 2

Preamble:

Union applied for a Board order for leave to construct facilities under section 90 of the OEB Act.

Question:

Please comment on the attached Board staff proposed draft conditions of approval and for section 91 order. Please note that these conditions are standard conditions and are a draft version subject to additions or changes.

Response:

Union accepts these Conditions of Approval.