

VIA E-MAIL

August 26, 2016

Ontario Energy Board  
Attn: Kirsten Walli, Board Secretary  
P.O. Box 2319  
27<sup>th</sup> Floor, 2300 Yonge Street  
Toronto ON M4P 1E4

**RE: EB-2016-0186 UNION GAS – Panhandle Replacement Project – FRPO IR’s to Union Gas**

Attached are the interrogatories of the Federation of Rental-housing Providers of Ontario (“FRPO”) in the Panhandle Replacement Project proceeding. The interrogatories were prepared with the assistance of Ms. A. Cheung who has previously been retained to provide evidence to the Board (EB-2014-0182). Her assistance was requested to ensure that we would obtain sufficient information for an understanding of the project and alternatives to the project for our consideration of the value of evidence to the Board in these matters. Our determination of the potential value of such evidence will be made when we have received that understanding.

We believe that it would be of assistance to the Board to raise a concern at this point relative to the discovery process and the consideration of intervenor evidence. As has been demonstrated in recent natural gas facilities applications, the complexity of the natural gas flows is a very technical topic. To completely understand a set of analyses, it is crucial to be clear on the conditions and assumptions made in receiving the output of the analysis. It is our view that, in spite of our best efforts to have precision in our questions and the applicant’s best efforts to be responsive, there are often limitations in getting a full understanding through one set of questions and answers. While a round of supplemental interrogatories may assist, our experience suggests that a technical conference may be the most effective approach. We wanted to bring this to the Board’s attention especially given the short duration afforded consideration of interrogatory responses prior to the deadline to inform the Board of an intention to file evidence. It is possible that a technical conference after the interrogatories are received may reduce the need to file evidence.

Respectfully Submitted on Behalf of FRPO,



Dwayne R. Quinn  
Principal  
DR QUINN & ASSOCIATES LTD.

c. K. Hockin – Union Gas, S. Andison, K. Lauesen – FRPO, A.S. Cheung  
Interested Parties EB-2016-0186

1. *Reference:* Tab 3, page 8, Table 3-1 - Bill Impacts of the Panhandle Replacement Project by Rate Class.

*Preamble:* FRPO requires further information to understand what cost allocation methodology was used to derive these impacts.

*Question:*

For the rates shown in Table 3-1, what cost allocation methodology is used under the Board Approved (i.e., Union's proposal versus 2013 Board Approved)?

2. *Reference:* Tab 3, paged 11-12.

*Preamble:* One of the stated benefits offers by the proposed alternative is it "*provides the necessary incremental capacity without the increased reliance on third party gas supply transportation services*".

*Questions:*

- a) Please explain why incremental third party supply transportation services should not be part of the preferred approach?
- b) Does Union rely on capacity arriving at Dawn or Parkway by third party gas supply transportation services in its peak day design? Please explain why these types of services should not be relied upon as part of a prudent design?
- c) Does Union plan to eliminate the use of third party gas supply transportation services to provide incremental capacity? Please explain.

3. *Reference:* Tab 4, pages 3-4.

*Preamble:* On page 3, Union states "*The Panhandle System predominantly flows from the Dawn Hub west to the market. Approximately 90% of the demand on the Panhandle System is served from the Dawn Hub on Design Day.*" On page 4, Union states "*The Panhandle System also flows from Ojibway east to the market. Approximately 10% or 60 TJ/d of the demand on the Panhandle System is served through Union's gas supply (to serve system customers) delivered at Ojibway on Design Day. Union relies on these firm deliveries in Design Day analysis of the Panhandle System to help reduce the physical transportation needs from Dawn. Ojibway provides some interconnectivity to the Dawn Hub,*

*enables access to natural gas supplies shipped through the PEPL system in the U.S. and contributes to the security and diversity of supply to the Dawn Hub.”*

*Questions:*

- a) Please explain the term “predominately”. Can the Panhandle System transport gas east to the Dawn Hub? What is the easterly flow capacity of the Panhandle System to Dawn?
- b) Please provide the gas supply contracts Union has on the PEPL and Trunkline systems for delivery at Ojibway, showing contract quantities and terms.
- c) Please provide the contract utilization of the gas supply contracts in (a) for the past 5 years, in terms of winter peak day, winter average day, summer peak day and summer average day.
- d) Please provide the amount of gas supplies from (c) delivered into Dawn for the past 5 years, in terms of winter peak day, winter average day, summer peak day and summer average day.
- e) Please provide the amount of capacity (TJ/day) that Union has not secured or is listing as Dawn supply in its gas supply portfolio for:
  - i) 2016/17
  - ii) 2017/18
  - iii) 2018/19

4. *Reference:* Tab 4, pages 4, lines 12-15.

*Preamble:* Union states “*Currently, two ex-franchise shippers (C1) have transportation contracts to transport natural gas from Ojibway to the Dawn Hub on a year round basis.*”

*Questions:*

- a) Please provide a table of C1 contracts from Ojibway to Dawn or Dawn to Ojibway that are/were in place and/or executed in the period between 2013 to 2016, inclusive, showing the following detail:
  - i. Term
  - ii. Quantity
  - iii. Firm or interruptible
  - iv. Peak amount used
  - v. Date of peak utilization
  - vi. Any special conditions associated with the individual contract
  - vii. The renewal rights for these contracts.

5. *Reference:* Tab 4, page 4, lines 13-15.

*Preamble:* In respect of the C1 contracts, “*Union must be able to transport these volumes on the Panhandle System on a firm basis as requested by the shipper. However, Union cannot rely on these volumes at Ojibway when designing the system.*”

*Questions:*

- a) Is Union aware of, or has it used, a Must Nominate feature in the firm transportation contract services offered by other natural gas transmission companies in Canada? If yes, please provide details.
- b) Has Union considered offering a Must Nominate feature or any other market incentive to existing C1 shippers to establish firm deliveries to Ojibway?
  - i. If so, please provide a summary.
  - ii. If not, please explain why not?
- c) Could Union offer a free exchange service from Ojibway to Dawn for those who commit to nominate each day throughout the winter period? What would be the potential forgone revenue?
- d) Please file the section from the Settlement Agreement approved by the Board in EB-2015-0200 relating to Union’s obligation to seek market based solution prior to applying for incremental expansion of the Dawn-Parkway system.
  - i. Could this type of mechanism be sought to defer facilities while providing firm peak day deliveries to the Panhandle system including Leamington customers? Please explain your answer citing the specific limitations to this approach being tested as a feasible solution.
- e) On May 26, 2016, Union broadcast a request for companies to submit proposals to Unoin for Long Tern Firm Transportation capacity to the Panhandle Pipeline Interconnection at Ojibway starting as early as Nov. 1, 2016. The proposals were due May 31<sup>st</sup>, 2016.
  - i. Please file a copy of the request.
  - ii. Please file a summary of the submissions in tabular fashion that describes the path, quantity, start/end date, receipt and delivery points, secondary points and price and any conditions or contingent releases associated with the offer.
  - iii. Please provide a status on any capacity contracted and resulting terms.
  - iv. If no capacity was contracted, please indicate explain why?
  - v. Did Union seek or negotiate any winter only deliveries? If not, why not?

6. *Reference:* Tab 4, page 4, lines 17 to 20.

*Preamble:* Union states “*The amount of natural gas Union can accept from PEPL and transport from Ojibway toward Dawn is limited by the minimum daily Windsor area consumption and the capacity of the Sandwich Compressor Station located in Tecumseh. Currently, Union has a maximum capability to accept imports of*

*115 TJ/d at Ojibway on a yearly basis (summer month limitation).”*

*Questions:*

- a) Please explain why the amount of natural gas Union can accept from PEPL is not limited by its contracts with PEPL?
- b) Please explain why the maximum capability to accept imports of 115 TJ/d at Ojibway on a yearly basis. Please illustrate using a numerical example if necessary.
- c) Please provide the maximum imports Union can accept at Ojibway during the winter and summer, both on peak and average basis.
- d) Please explain why Union cannot use the maximum imports Union can accept at Ojibway to serve the Market demand.

7. *Reference:* Tab 4, Schedule 3, Panhandle System Schematic.

*Preamble:* FRPO requires clarification of this schematic.

*Questions:*

- a) Please provide all the pipelines that interconnect at Ojibway on the U.S. side and on the Canadian side.
- b) Please confirm there are no other interconnections with pipelines owned by a third party or by Union.
- c) If not confirmed, please provide a schematic showing all other interconnections.
- d) Please provide Union’s understanding of any potential interconnections of new pipelines (such as Nexus and Rover), the timing of those connections, the relative proximity to Ojibway and, if known, the additional capacity to Ojibway.
- e) Please provide the amount of unsubscribed capacity available at Union Ojibway from Panhandle Eastern Pipeline.

8. *Reference:* Tab 5, page 2, lines 6-19.

*Preamble:* Union describes 10 assumptions used in design day model for the Panhandle system in the Reference.

*Questions:*

- a) Please confirm all the assumptions were previously approved by the Board.
- b) If confirmed, please provide copies of the decisions approving each of the 10 assumptions.
- c) If not confirmed, please provide the following:
  - i. The methodology used to derive in-franchise customers Design Day estimates, including the underlying firm contract demand, historical consumption, and forecast growth. Please include a numerical example to illustrate.

- ii. The contracts underpinning the delivery of 60 TJ/d at Ojibway.
- iii. The actual C1 Ojibway to Dawn flows for the past 5 years in terms of highest, lowest and average flows for the winter season and the summer season.
- iv. The maximum operating pressure and the maximum allowable operating pressure for the Panhandle system. If the two pressures are different, please explain.
- v. An explanation for the determination of the required pressure and supply from Dawn. Please include a numerical example to illustrate.
- vi. An explanation for the determination of the minimum pressures for laterals and stations, at Brighton Beach Power Station and Leamington North Gate Station.

9. *Reference:* Tab 5, page 4, lines 5 – 20.

*Preamble:* “Currently there is a significant amount of interruptible demand served from the Panhandle System, equivalent to approximately 20% of the firm Design Day volume. The majority of this demand is greenhouse and power generating customers. ... New and expanding customers are not requesting interruptible service, but some customers are willing to take interruptible service on a short-term basis as a bridge until firm service becomes available.”

*Questions:*

- a) Please breakout the amount of interruptible demand between the Leamington area and the Windsor area.
- b) For each market area in (a), please breakout the amount of interruptible demand by greenhouse and power generation market sectors.
- c) Please provide the amount of interruptible demand that has requested to firm that is supported by a letter of request or response to firm bid process for each of the greenhouse and power generation markets in the respective geographic markets.
- d) What is Union’s view of the effectiveness of using interruptible demand in increasing asset utilization? Please explain.
- e) Please provide any studies Union has performed recently on increasing the incentive for customers to stay or go on interruptible service. Has Union tested these incentives with current customers in these market areas?
- f) Has Union assessed the viability of a new firm service with limited interruption? If yes, please explain. If not, please explain why not.

10. *Reference:* Tab 5, page 5, lines 1 – 4.

*Preamble:* “On an operational basis, Union has been able to manage physical interruptions based on C1 Ojibway to Dawn transportation activity. This activity allows interruptible customers to be served on colder days where otherwise they would need to be interrupted, provided the C1 volumes are delivered to Union at Ojibway.

FRPO would like to understand this mechanism better.

*Questions:*

For each day of the last 3 winters including 2013/14 to 2015/16, on the days when there were interruptions or when there could have been interruptions:

- a) Please provide the daily deliveries from Ojibway and the amount of interruptible volumes that were allowed to flow broken down between the Windsor area and the Leamington area.
- b) What contractual feature does Union need to establish incremental firm winter gas supply at Ojibway in order to facilitate firm deliveries to these markets?

11. *Reference:* Tab 5, page 6, lines 4-13.

*Preamble:* Union describes 2 constraints on the Panhandle System, namely maintaining the minimum delivery pressure of 1724 kPa to Brighton Beach Power Station (BBPS) and West Windsor Power Station (WWPS) at the western end of the system, and maintaining the minimum inlet pressure of 2275 kPa at the Leamington North Gate Station.

*Questions:*

- a) Please provide the minimum delivery pressure from PEPL. Please identify the location at which the minimum delivery pressure occurs on the Panhandle System Schematic. If that location varies, please provide the conditions for each to be the location of minimum delivery.
- b) Please provide the highest, average and lowest delivery pressures from PEPL for the past 5 years, separately for the winter and summer periods.
- c) Please describe the changes to the Panhandle System’s capacity if (i) increasing the delivery pressure from PEPL, (ii) decreasing the inlet pressure at the Leamington North Gate Station; and (iii) both (i) and (ii).
- d) Please explain what changes in contracts and/or facilities would be required to implement

- (i) increasing the delivery pressure from PEPL, (ii) decreasing the inlet pressure at the Leamington North Gate Station; and (iii) both (i) and (ii).
- e) Please explain whether the 2 constraints described are due to physical facilities or due to market demands. Please explain what steps can be undertaken to alleviate those constraints, other than the proposed alternative.

12. *Reference:* Tab 5, page 7, lines 18 – 21.

*Preamble:* “Union has identified incremental demand for firm service across the entire market, including the new Windsor Mega hospital, the new Gordie Howe International Bridge, CNG facilities for transport fleets, and load increases for existing industrial customers, further reinforcing the need for incremental capacity.”

*Question:*

Please provide the forecasted incremental firm demand, the location of the delivery point and the year of connection for each of the four components described in the above evidence reference.

13. *References:* Tab 5, page 8, Table 5-1 – Design Day (TJ/d); page 12, Table 5-2 – Design Day Forecast Growth.

*Preamble:* Union provides a forecast of system capacity and system demand for each of the years 2017/18 to 2021/22 in Table 5-1 but not for each of the years in Table 5-2.

*Questions:*

- a) Please provide the derivation of the system capacity for each of 2017/18 to 2021/22.
- b) Please provide the forecast system demand for each year from 2022/23 to 2036/37.
- c) Please explain how the proposed Panhandle Reinforcement Project will help meet the forecast demands in (b), including what additional facilities would be required and the locations of these facilities.
- d) Please provide the forecast system demand for 2037/38 to 2042/43. Please explain how much excess capacity is expected with the proposed Panhandle Reinforcement Project plus any additional facilities identified in (c).

14. *References:* Tab 5, page 8, Table 5-1, Design Day; Tab 4, Schedule 3, Panhandle system Schematic; Tab 4, page 4, lines 19-20 “*Union has a maximum capability to accept imports of 115 TJ/d at Ojibway on a yearly basis (summer month limitation)*”.

*Preamble:* FRPO requires further information to understand the design day capacities shown in Table 5-1, the summer month limitation described in Tab 4, page 4 and the system schematic shown in Tab 4, Schedule 3.

*Questions:*

- a) Please provide flow schematics for the design day and for the summer month limitation identified in the References showing the following:
  - i. MAOP and MOP for each pipeline segment
  - ii. The flows (load taken at the lateral) and pressures for each receipt point, delivery point, pipeline junctions, as well as the suction and discharge sides of each compressor station, including all laterals off the 16” or 20” pipelines.
  - iii. The length of pipe between each source of gas, lateral, junction (eg. Between the Brighton Beach/West Windsor lateral and the NPS 16/20 junction), compressor or transmission station.
- b) Please describe the capacity limiting factor or bottlenecks in (a) above.
- c) Please describe the steps necessary and the associated cost to remove the limiting factors or bottlenecks in (b) above.

15. *Reference:* Tab 5, page 17, lines 18 – 21.

*Preamble:* “*Similarly, incremental supply at Ojibway is only suited to efficiently serve demands in the far west end of the Market in Windsor (between Ojibway and Sandwich Compressor) and does not provide the increase in pressures along the NPS 20 pipeline that are needed to support growth in Leamington - Kingsville.*”

*Question:*

Please fully explain why supply at Ojibway “is only suited to efficiently serve demands” between Ojibway and Sandwich. Please ensure the response provides detail on the physical engineering limitations of the pipeline, compressor and estimated costs to overcome any of these limitations.

16. *Reference:* Tab 6, page 7, footnote 2 “*This would bring the total contracted Union deliveries at Ojibway to 94 TJ/d, which maximizes Union’s import capability given the 115 TJ/d limit and the existing renewable Ojibway to Dawn capacity of 21 TJ/d held by a third party.*”

*Preamble:* FRPO would like to understand more about the 21 TJ/day renewable\_Ojibway to Dawn capacity.

*Questions:*

- a) Please explain Union’s use of the term renewable. Who has the right to renew?
- b) Please describe what rights, premiums or other compensation was exchanged by the parties to arrive at this renewable condition.
- c) What right does Union have to provide notice and terminate the contract?
- d) When was this contract executed?
- e) Please provide all similar renewable contracts Union has on its system.
- f) Was this renewable contract approved by the Board?
- g) What right does the Board have to order a provision of notice and termination?

17. *References:* Tab 6, pages 9 – 10; EB-2016-0118 Ex. A, Tab 4, Appendix A, Schedule 2

*Preamble:* In Tab 6, “*Union has also estimated that, on a forecasted basis, the landed cost of PEPL Field Zone supply delivered to Union at Ojibway over a 10 year term (2016 to 2026) is approximately \$0.30/GJ higher than the cost of Dawn sourced supply over the same period.*” In EB-2016-0118, Union shows a lower landed cost for gas supplies from Ojibway as compared to those from Dawn for the period 2015 to 2018.

*Question:*

Please fully explain the methodologies and assumptions used in the forecast in this application and those used in the referenced document filed on 2016-04-19 in proceeding EB-2016-0118.

18. *Reference:* Tab 6, page 12, lines 2 – 4.

*Preamble:* “Incremental Ojibway deliveries yield diminished returns to serve demand beyond the Windsor market between Sandwich and Dawn (i.e. for each 1 GJ of incremental Ojibway deliveries, less than 1 GJ of capacity is created east of Sandwich)”.

*Questions:*

- a) Please explain, by way of a numerical example, the derivation of the 1 GJ of incremental Ojibway deliveries that equates to less than 1 GJ of capacity east of Sandwich.
- b) Please provide, similar to (a) above, for 1 GJ of incremental Dawn deliveries to west of Sandwich.
- c) Please confirm the results in (a) and (b) above would be the same for capacity east/west of Comber Transmission Station instead of Sandwich. If not confirmed, please provide similar analyses provided in (a) and (b) above.

19. *Reference:* Tab 6, Schedule 2, Integrity Maintenance Cost Assumptions for Panhandle NPS 16 Pipeline.

*Preamble:* FRPO requires further information of the maintenance cost assumptions.

*Question:*

How many sections and what lengths have been replaced in the last 20 years?

20. *Reference:* Tab 8, pages 9-10.

*Preamble:* “The 2013 Board-approved cost allocation study reflects the maximum design capacity of 15,188 10<sup>3</sup>m<sup>3</sup>/d (or 573 TJ/d)<sup>1</sup>, which includes the Panhandle System capacity of 12,355 10<sup>3</sup>m<sup>3</sup> (or 466 TJ/d) and St. Clair System import capacity of 2,833 10<sup>3</sup>m<sup>3</sup>/d (or 107 TJ/d)<sup>1</sup>. Of the total maximum design capacity of 15,188 10<sup>3</sup>m<sup>3</sup>/d, the firm long-term ex-franchise Rate C1 and Rate M16 demands represent 2,737 10<sup>3</sup>m<sup>3</sup>/d and the remaining 12,452 10<sup>3</sup>m<sup>3</sup>/d is allocated to Union South in-franchise rate classes. The allocation to Union South in-franchise rate classes is in proportion to the combined Panhandle System and St. Clair System firm Design Day demands. The methodology for allocating

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<sup>1</sup> Energy conversion based on the 2013 Board-approved heat value of 37.75 GJ/103m<sup>3</sup>.

*Panhandle System and St. Clair System demand costs was most recently reviewed and approved by the Board in EB-2011-0210 (Union's 2013 Cost of Service proceeding)."*

*Question:*

Please provide the actual daily receipts for the Panhandle System and the St. Clair System over the last three winters.

21. *Reference:* Tab 8, pages 12-14

*Preamble:* The reference describes the ex-franchise rate design and the C1 Transportation charges.

*Questions:*

- a) Please provide the original evidence on which the Board approved for the use of C1 transportation as a means of managing transportation asset utilization, and all updates to the original approved approach to C1 transportation.
- b) Please provide a table showing C1 revenues on the Ojibway path and the St. Clair path starting with Board-approved 2013 and continuing with the actual revenues from each year from 2013 to 2015.
- c) Please update the tables 8-1 to 8-5 including both St. Clair and Panhandle updates and using the peak daily utilization for C1 as the demand allocator for those rate classes.