

September 16, 2015

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON M4P 1E4

Dear Ms. Walli:

**RE: EB-2015-0166/EB-2015-0175 – Union Gas Limited – Pre-Approval of the Cost Consequences of NEXUS Long Term Contract – Undertaking Responses**

Please find attached Union's responses to Undertakings in the Technical Conference held September 8 and 9, 2015. These will be filed in RESS and copies will be sent to the Board.

If you have any questions with respect to this submission please contact me at (519) 436-5473.

Yours truly,

*[Original signed by]*

Karen Hockin  
Manager, Regulatory Initiatives

cc: Charles Keizer, Torys  
All Intervenors

UNION GAS LIMITED

Undertaking of Mr. Shorts  
To Mr. Quinn ("FRPO")

Union to advise what the summer base load is at Union EDA, Union NDA, and Union CDA areas.

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The summer base load for the north areas are the following:

EDA Results

2014-2015 Actual = 106 TJ/day  
2015-2016 Forecasted = 108 TJ/day  
2016-2017 Forecasted = 109 TJ/day

NCDA Results

2014-2015 Actual = 7.3 TJ/day  
2015-2016 Forecasted = 7.4 TJ/day  
2016-2017 Forecasted = 7.5 TJ/day

NDA Results

2014-2015 Actual = 98 TJ/day  
2015-2016 Forecasted = 100 TJ/day  
2016-2017 Forecasted = 100 TJ/day

Assumptions

- Summer base load is assumed to be 0 HDD from Load Cold Analysis
- Delivery area volumes are based on the current North heat value conversion factor of 37.97 GJ/km<sup>3</sup> (effective April 1, 2015)
- Includes all t-service and interruptible volumes

UNION GAS LIMITED

Undertaking of Mr. Shorts  
To Mr. Quinn ("FRPO")

Union to include the landed cost analysis for the 20,000 market based service effective November 1, 2015.

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Please see Attachment 1 for the Landed Cost Analysis.

Landed Cost Analysis for 20,000 market based service effective November 1, 2015

Landed Cost Analysis  
 2015-2016 Transportation Contracting Analysis

	Route (A)	Point of Supply (B)	Basis Differential \$US/mmBtu (C)	Supply Cost \$US/mmBtu (D) = Nymex + C	Unitized Demand Charge \$US/mmBtu (E)	Commodity Charge \$US/mmBtu (F)	Fuel Charge \$US/mmBtu (G)	100% LF Transportation Inclusive of Fuel \$US/mmBtu (I) = E + F + G	Landed Cost \$US/mmBtu (J) = D + I	Landed Cost \$Cdn/G (K)	Point of Delivery (L)
(2)	<b>TCPL Niagara</b>	Niagara	-0.415	2.9522	0.1212	0.0000	0.0000	0.1212	\$3.07	<b>\$3.61</b>	Kirkwall
	Dawn	Dawn	-0.016	3.3517	0.0000	0.0000	0.0000	0.0000	\$3.35	<b>\$3.94</b>	Dawn
	<b>Marcellus to Dawn Market Based Transportation</b>	Marcellus - Dom Sth Pt	-1.231	2.1365	1.2680	0.0000	0.0000	1.2680	\$3.40	<b>\$4.00</b>	Dawn
	<b>Michcon to St. Clair</b>	SE Michigan	-0.065	3.3022	0.0618	0.0000	0.0614	0.1233	\$3.43	<b>\$4.03</b>	Dawn
(2)	<b>Vector 2014</b>	Chicago	-0.095	3.2722	0.1900	0.0018	0.0314	0.2232	\$3.50	<b>\$4.11</b>	Dawn
	<b>Vector 1 Year (Mkt Quote)</b>	Chicago	-0.095	3.2722	0.2100	0.0018	0.0314	0.2432	\$3.52	<b>\$4.13</b>	Dawn
(2)	<b>PEPL (2012-2017)</b>	Panhandle Field Zone	-0.349	3.0184	0.3200	0.0441	0.1455	0.5096	\$3.53	<b>\$4.15</b>	Ojibway
(2)	<b>Vector (2008-2016)</b>	Chicago	-0.095	3.2722	0.2500	0.0018	0.0314	0.2832	\$3.56	<b>\$4.18</b>	Dawn
	<b>GLGT to TCPL</b>	Northern Michigan	-0.055	3.3122	0.2718	0.0074	0.0202	0.2995	\$3.61	<b>\$4.25</b>	Dawn
(2)	<b>Trunkline/Panhandle</b>	Trunkline Field Zone - ELA	-0.097	3.2701	0.1923	0.0299	0.1321	0.3543	\$3.62	<b>\$4.26</b>	Ojibway
(2)	<b>PEPL - (2014-2015)</b>	Panhandle Field Zone	-0.349	3.0184	0.4200	0.0441	0.1455	0.6096	\$3.63	<b>\$4.27</b>	Ojibway
(2)	<b>Trunkline/Panhandle</b>	Trunkline Field Zone 1A	-0.082	3.2851	0.1923	0.0275	0.1254	0.3452	\$3.63	<b>\$4.27</b>	Ojibway
(2)	<b>Panhandle Longhaul (2010-2017)</b>	Panhandle Field Zone	-0.349	3.0184	0.4251	0.0441	0.1455	0.6147	\$3.63	<b>\$4.27</b>	Ojibway
	<b>ANR-Michcon-Union (Gulf)</b>	ANR South East	-0.098	3.2697	0.3884	0.0161	0.1397	0.5442	\$3.81	<b>\$4.48</b>	Dawn
(2)	<b>Alliance/Vector (2000-2015)</b>	CREC	-0.904	2.4635	1.6035	-0.3772	0.1368	1.3631	\$3.83	<b>\$4.50</b>	Dawn
	<b>ANR-GLGT-TCPL</b>	Fayetteville	-0.071	3.2965	0.5364	0.0216	0.0981	0.6561	\$3.95	<b>\$4.65</b>	Dawn
(1)	<b>TCPL SWDA</b>	Empress	-0.630	2.7374	1.2078	0.0000	0.0635	1.2713	\$4.01	<b>\$4.71</b>	Dawn
(2)	<b>TCPL CDA</b>	Empress	-0.630	2.7374	1.3103	0.0000	0.0745	1.3848	\$4.12	<b>\$4.85</b>	Union CDA

(1) For Reference Only

(2) Existing Union Gas Contract

**Sources for Assumptions:**

Gas Supply Prices (Col D):

ICE Jan 27, 2015

Fuel Ratios (Col G):

Average ratio over the previous 12 months or Pipeline Forecast

Transportation Tolls (Cols E & F):

Tolls in effect on Alternative Routes at the time of Union's Analysis

Foreign Exchange (Col K)

\$1 US =

\$1.240 CDN

From Bank of Canada Closing Rate Jan 27, 2015

Energy Conversions (Col K)

1 dth = 1 mmBtu =

1.055056

Union's Analysis Completed:

Jan 2015

Paths included in analysis are those with comparable services available for contracting, as well as relevant benchmarks and currently contracted paths.

UNION GAS LIMITED

Undertaking of Mr. Tetreault  
To Mr. Wolnik (“APPrO”)

Union to update the chart on page 3 of APPrO 2 to include the deliverability from Union storage into Dawn as well as the westerly flow contracts on the Dawn to Parkway System.

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Please find the tables below. Included in the tables are volumes that could be withdrawn from storage and volumes shippers are contractually able to deliver westerly to Dawn.

<b>Upstream Pipelines</b>	<b>Peak Day Pipeline Capacity (PJ/D)</b>		
	<b>2015</b>	<b>2016</b>	<b>2017</b>
Vector	1.6	1.6	1.9
Panhandle Pipelines - Ojibway	0.2	0.2	0.2
TransCanada (Great Lakes)	2.0	2.0	2.0
Bluewater	0.3	0.3	0.3
Enbridge (Tecumseh Storage)	2.7	2.7	2.7
St. Clair/Michcon	0.3	0.3	0.3

<b>Dawn Storage Capacity</b>	<b>Peak Day Storage Capacity (PJ/D)</b>		
	<b>2015</b>	<b>2016</b>	<b>2017</b>
Dawn Storage Withdrawals	3.3	3.3	3.2

<b>Westerly Contracted Capacity*</b>	<b>Peak Day Contracted Capacity (PJ/D)</b>		
	<b>2015</b>	<b>2016</b>	<b>2017</b>
M12X	0.4	0.4	0.4
C1 LT Transport Kirkwall to Dawn	0.2	0.6	0.5
C1 LT Transport Parkway to Dawn	0.4	0.4	0.4

\* Contracts allow for westerly flow but there is no requirement for customers to transport gas using this service on any given day.

UNION GAS LIMITED

Undertaking of Mr. Shorts  
 To Mr. Rubenstein (“SEC”)

Union to provide the chart referred to in JT1.3.

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Similar to Exhibit B.T4.Union.TCPL.9, expiry dates are shown for the individual Union South contracts from Exhibit B.T2.Union.Staff.12.

Exhibit B.T2.Union.Staff.12 Line Reference	Pipeline	Receipt Point	Delivery Point	Volume	Daily Units	Expiry Date
Line 16	Alliance	Northern Alberta	Cdn/US Interconnect	2,266.2	10 <sup>3</sup> m <sup>3</sup>	Nov 30, 2015
Line 17	Alliance (L.P.)	Cdn/US Interconnect	Vector	80,000	MCF	Nov 30, 2015
Line 18	Vector (L.P.)	Chicago	Cdn/US Interconnect	80,000	DTH	Nov 30, 2018
Line 19	Vector Canada	Cdn/US Interconnect	Dawn (Union)	84,405	GJ	Nov 30, 2018
Line 21	Panhandle	Field Zone	Ojibway (Union)	25,000	DTH	Oct 31, 2017
Line 21	Panhandle	Field Zone	Ojibway (Union)	2,000	DTH	Oct 31, 2017
Line 22	Panhandle	Field Zone	Ojibway (Union)	10,000	DTH	Oct 31, 2016
Line 24	Trunkline	East Louisiana	Bourbon	20,467	DTH	Oct 31, 2017
Line 25	Panhandle	Bourbon	Ojibway (Union)	20,000	DTH	Oct 31, 2017
Line 27	Vector	Chicago	Cdn/US Interconnect	81,000	DTH	Nov 30, 2015
Line 27	Vector	Chicago	Cdn/US Interconnect	25,000	DTH	Oct 31, 2017
Line 28	Vector Canada	Cdn/US Interconnect	Dawn (Union)	85,460	GJ	Nov 30, 2015
Line 28	Vector Canada	Cdn/US Interconnect	Dawn (Union)	26,376	GJ	Oct 31, 2017
Line 30	Market Based Transportation	Dominion South Point	Dawn	20,000	DTH	Oct 31, 2016
Line 32	DTE	Michcon Generic	St. Clair	10,000	DTH	Oct 31, 2016
Line 32	DTE*	Michcon Generic	St. Clair	60,000	DTH	Oct 31, 2018

\* Contract terminates the earlier of NEXUS going into service or October 31, 2018

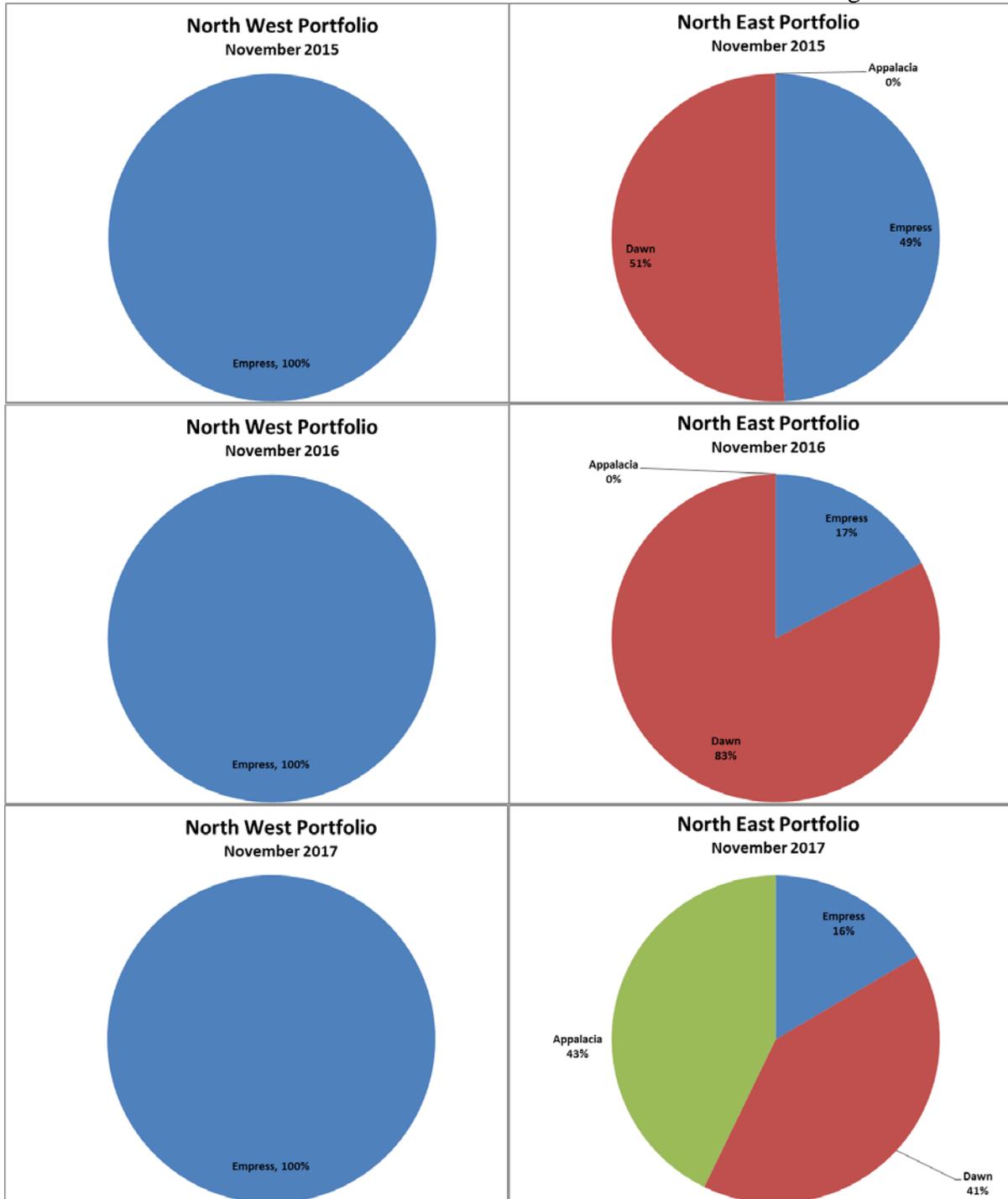
UNION GAS LIMITED

Undertaking of Mr. Shorts  
To Mr. Ross ("TCPL")

Union to provide the pie charts that go along with those transportation contracts for each of the delivery areas in the North.

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Please see below for the pie charts illustrating the data from the table in Exhibit B.T2.Union.Staff.12 for Union's North West and North East portfolios for each of 2015, 2016 and 2017.

The North West Portfolio includes Union MDA, Union WDA and Union SSMDA.  
The North East Portfolio includes Union NDA, Union NCDA and Union EDA.



UNION GAS LIMITED

Undertaking of Union  
To Mr. Quinn ("FRPO")

Union to confirm whether any of Union's responses in the Dawn Parkway proceeding are not able to be brought into this proceeding by way of reference.

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The question listed in the transcripts as JT2.1 is incorrect. No such undertaking was given as the question was answered on the record by Mr. Keizer at NEXUS Technical Conference Transcript ("TR"), September 9, 2015, page 3, line 3 and in response to further related questions on pages 3 through 5.

There was discussion at the Technical Conference regarding responses to two interrogatories (September 8, 2015 TR at pages 19 through 24). Union reserved on whether they would take an undertaking. At the beginning of September 9, 2015, TR page 2, lines 6-13, Union agreed to respond to provide clarification with respect to Exhibit B.T4.Union.FRPO.18 ("FRPO 18") and Exhibit B.T1.Union.FRPO.17 ("FRPO 27"), and clarify any discrepancies between the numbers that exist there.

Union confirms that the 2017 Dawn Parkway proposed facilities are included in the analysis provided for both FRPO 18 and FRPO 27.

Union notes that FRPO 18 and FRPO 27 analyses represent different scenarios, as requested in each of the questions.

In FRPO 18, Union responded to the scenario that an additional or incremental 158,258 GJ/d arrives at Kirkwall and is assumed to be transported to Parkway. All other parameters are kept constant per the question. The question asks how much Dawn to Parkway capacity would be "freed up". In this scenario, Dawn to Parkway transportation capacity is not "freed up", but rather the capacity shortfall of the Dawn Parkway system would increase by approximately 92,000 GJ/d, as an impact of transporting this incremental volume from Kirkwall to Parkway.

In FRPO 27, Union responded to the scenario that 158,258 GJ/d of supply is delivered at Kirkwall instead of Dawn, such that the supply is shifted. The question asks if facilities requirements would be less. In this scenario, based on the 2017/18 peak day analysis including the 2017 proposed facilities, 63,954 GJ/d of additional Dawn to Parkway capacity could be transported in addition to the existing Dawn to Parkway system surplus of 30,393 GJ/d. The response to FRPO 27 then reviewed the proposed 2017 facilities and determined the supply shift would not eliminate the need for the proposed facilities. Removal of one of the compressors (Bright C or Lobo D) resulted in a capacity shortfall of approximately 244,000 GJ/d in 2017/18. This large shortfall would not be manageable through contracted services and therefore, in this scenario, all the compression proposed in the 2017 Dawn Parkway Project is required. No changes to required facilities.