

UNION GAS LIMITED

Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (“FRPO”)

Ref: EB-2012-0433 Section 10, page 92-93, para. 41 and Schedule 10-2

Please explain in greater detail why a Dawn to Empress/Emerson service would be required to balance at Dawn during a short term critical delivery scenario.

- a) Using TCPL Index of Customers, please identify the market participants that would currently hold 1.1 PJ/day of capacity between Emerson and Dawn to facilitate this stated need for service.

Response:

- a) Under the TransCanada Index of Customers there are no market participants that hold 1.1 PJ/d of either Empress-Dawn or Emerson-Dawn firm capacity. To clarify however, for the alternatives being discussed in EB-2012-0433, Section 10, pages 92 and 93 of 121 and Schedule 10-2, for this alternative to be successful, Empress-Dawn or Emerson-Dawn capacity is not required. This alternative requires either an exchange service or physical transportation from Dawn-Empress or Dawn-Emerson.

To evaluate this alternative, it is assumed that a loss of critical unit incident has occurred at Parkway that restricts flow through the compressors. Any loss of critical unit alternative has to be able to deliver the flow shortfall to the high pressure or discharge side of the Parkway compressors. If that alternative does include physical facilities at Parkway then the delivery of the flow shortfall cannot flow to Parkway on the Dawn-Parkway System.

For this alternative, natural gas has to flow in a two step process. In the first step, the gas supply at Dawn that would have flowed directly to Parkway needs to first flow back to Emerson or Empress. Although the first step could be completed through an exchange service or physical transportation, it would likely be an exchange service. For the second step, now that the Dawn gas is available at Empress or Emerson a transportation service on the TransCanada Mainline would be required to flow that natural gas from Empress or Emerson to Parkway where it is delivered at the high pressure or discharge side of Parkway.

For any alternative to provide loss of critical unit protection, the natural gas at Dawn must be moved to the high pressure or discharge side of the Parkway compressors.

To determine if this type of alternative was practical, Union issued a request for proposals (open season style) to market participants in December 2012 in an effort to see if an exchange service would be available on terms that would provide the flexibility required for loss of critical unit protection. Union received no interest from any market participants.

Since 2009, Union has experienced compressor outages within its system lasting from 2 months to 18 months at Lobo, Bright and Dawn. By nature compressor outages are unpredictable as to both timing and duration. This service therefore must be available to provide loss of critical unit protection under not just short term but also long term loss of critical unit events.

As discussed in the response to Exhibit I.A4.UGL.FRPO.33, the loss of critical unit protection alternative using Empress-Parkway or Emerson-Parkway transportation capacity plus an exchange from Dawn-Empress or Dawn-Emerson was not considered feasible by Union due to the uncertainty of capacity availability, the unfavourable costs and the lack of market interest in providing an exchange service.

UNION GAS LIMITED

Undertaking of Mark Isherwood
to FRPO

Using 2012 rates, to provide a comparison of commodity and fuel gas cost service around the horn vs direct path from Dawn to Parkway.

Attached is material filed by Union with the National Energy Board as Exhibit C64-19 in the TransCanada Application for Restructuring and Mainline Tolls for 2012-2013 (RH-003-2011). This analysis compares the cost of transportation from Dawn to Enbridge CDA on the TransCanada system. The analysis uses the Revised TransCanada Toll Design (June 29, 2012) and includes demand, commodity and fuel costs.

Three toll calculations were compared:

Method 1: TransCanada posted toll assumed to be “On the Path” from Dawn to Parkway to Enbridge CDA.

Method 2: “Around the Horn” toll calculated by adding all component transportation costs from Dawn to Emerson to Enbridge CDA.

Method 3: “Around the Horn” toll calculated using the TransCanada system average unit cost for distance calculation from Dawn to Emerson to Enbridge CDA.

The analysis shows that the “Around the Horn” transportation costs calculated by either adding component transportation costs or using the TransCanada system average unit cost for distance calculation are five to ten times greater than the “On the Path” toll. TransCanada transportation from Dawn to Enbridge CDA using the Dawn-Parkway System is more economic for Ontario natural gas customers.

Toll and Fuel Comparison - Dawn to Enbridge CDA

Method 1 - On Path				
Line No.	a	b	c	d
	Toll (\$/GJ)	Fuel (%)	Fuel (\$/GJ)	TOTAL (\$/GJ)
1 Dawn - Enbridge CDA	\$ 0.2276 (1)	0.15% (2)	\$ 0.0054 (3)	\$ 0.233

Method 2 - Around the Horn, Cost of Facilities Used				
	Toll (\$/GJ)	Fuel (%)	Fuel (\$/GJ)	TOTAL (\$/GJ)
2 Dawn - Dawn(TCPL)	\$ 0.0072 (4)	0.51% (4)	\$ 0.0183 (3)	\$ 0.026
3 Dawn(TCPL) - St. Clair	\$ 0.0783 (5)	0.02% (2)	\$ 0.0007 (3)	\$ 0.079
4 St. Clair - Emerson	\$ 0.0982 (6)	1.00% (2)	\$ 0.0362 (3)	\$ 0.134 (7)
5 Emerson - Enbridge CDA	\$ 1.1067 (8)	1.17% (2)	\$ 0.0424 (3)	\$ 1.149
6 Full Path	\$ 1.2904		\$ 0.0976	\$ 1.388

Method 3 - Around the Horn Toll, Applying TCPL System Average Unit Cost for Distance Calculation				
	Toll (\$/GJ)	Fuel (%)	Fuel (\$/GJ)	TOTAL (\$/GJ)
7 Dawn-Emerson-Parkway	\$ 2.2142 (9)	see above	\$ 0.0976 (10)	\$ 2.312

Notes:

- (1) Exhibit B40, Adobe p. 58, Attachment 12.3: Toll Design, Tab 3 – 2013, Toll Design Schedule 5.2 Revised June 29, 2012, p. 19, line 32
- (2) Fuel percentages as per Exhibit B71, U-38, page 2 of 2; Fuel % to Union CDA used as proxy for fuel % to Enbridge CDA
- (3) Applies gas cost of \$3.62/GJ, average monthly NYMEX plus basis curve from ICE, August 27 9:45am
- (4) Union C1 Rate Schedule effective 2012-07-01; Fuel % is a blended rate of the seasonal fuel required per C1 rate schedule, which differs from the 0% fuel provided by TransCanada in U-38
- (5) Exhibit B40, Adobe p. 58, Attachment 12.3: Toll Design, Toll Design Schedule 5.2 Revised June 29, 2012, p. 19, line 45
- (6) Demand charges shown in Exhibit B64, U-32 Contracts FT16128 and FT17190, Adobe p. 23 and p. 27, prorated 70%/30% to achieve blended toll; Exchange Rate \$0.99 CDN/USD; Commodity and ACA charges shown in Exhibit B5-2, Adobe p.48, Attachment 12.1, Tab 2, Schedule 2.1, line 24-25
- (7) TCPL notes in Exhibit B71, U-38 that GLGT has not charged for fuel on the St. Clair to Emerson TBO path
- (8) Exhibit B40, Adobe p. 45, Toll Design Schedule 5.2 Revised June 29, 2012, p. 6, line 22
- (9) Distance of path is 3,887 km (Exhibit C56-8-2, Adobe p.38, the MAS's Evidence, p. 32);
- (10) Uses fuel calculation from Cost of Facilities Used (Method 2)

UNION GAS LIMITED

Undertaking of Paul Rietdyk
to FRPO

To advise heating degree days on January 23, 2013; were interruptible on or off, and what percentage utilization would Union project for this day.

The degree day on January 23, 2013 was a 30.3 DD and no interruptions had been called on the Dawn-Parkway system.

Union ran a verification using the Dawn-Parkway network model to simulate the conditions on January 23, 2013. The results from the simulation for the utilization of Parkway were within 1.5% of the actual conditions for the day.

1 undertaking, if Union could provide the heating degree days
2 for January 23rd, and I'm just going to expand upon that,
3 if I may, Mr. Millar, before we take an undertaking number,
4 to provide whether the interruptibles were on or off that
5 day, and then based upon projecting from whatever the
6 heating degree days were on the day to whatever peak day
7 would be, based upon Union's typical analysis, what
8 percentage utilization Union would project for a peak day
9 for the numbers that were provided in that table?

10 MR. ISHERWOOD: Just a point of clarification, Mr.
11 Quinn, I guess. Volumes going through Parkway end up
12 anywhere from Kapuskasing to Boston. Which heating degree
13 days do you want us to use?

14 MR. QUINN: Good point. Union has submitted
15 information on weather methodology, but current Board-
16 approved weather methodology with expectations for what
17 Union would plan for in its system going into the 2013
18 winter, so the peak days you would use when you were doing
19 your system planning for that winter.

20 MR. RIETDYK: So what we've planned for is actually
21 identified in the table in page 3 in (d). That would be
22 the percent utilization of those plants, and even coming to
23 this coming winter we're projecting that we'll need both
24 Parkway A and Parkway B in order to compress volumes on a
25 cold winter day; not just a peak day, but a cold winter
26 day.

27 MR. QUINN: I can appreciate that there is some
28 variability around it, but what we have here is actual

1 degree heating days and actual utilization. So I would
2 like if Union would, by way of undertaking, provide us the
3 heating degree days, interruptibles on or off, and then
4 project that to a 44 degree day interruptibles off in terms
5 of what your analysis could project utilization to be.

6 Clearly, if you want to put some caveats on it in
7 terms of the weather methodology used or assumptions that
8 go into that, that would be respected, also.

9 MR. RIETDYK: We could certainly provide you with the
10 actual conditions on January 23rd, Mr. Quinn. When it
11 comes to actually doing system design, we're required to
12 meet all of our firm obligations for those particular days.
13 There's no direct correlation between what happened on
14 January 23rd and what we would expect to see on a peak
15 winter day.

16 MR. QUINN: Actually, you may have given us a helpful
17 way of looking at this, Mr. Rietdyk. You know what your
18 obligations were in terms of firm obligations. You also
19 have information as to what was actually nominated.

20 So to the extent that there was an under-nomination
21 relative to your expectation for those firm contracts, you
22 can embed that also in the analysis and say, if all of
23 those firm obligations had to be met, then this is what we
24 would project as utilization.

25 MR. RIETDYK: We'll undertake to provide you with
26 those conditions on that particular day.

27 MR. QUINN: Thank you, Mr. Rietdyk.

28 MR. MILLAR: JT2.3. Obviously it's a lengthy

1 undertaking, at least in terms of words, so we may have to
2 let the transcript speak for itself on that.

3 **UNDERTAKING NO. JT2.3: TO ADVISE HEATING DEGREE DAYS**
4 **ON JANUARY 23, 2013; WERE INTERRUPTIBLES ON OR OFF;**
5 **AND WHAT PERCENTAGE UTILIZATION WOULD UNION PROJECT**
6 **FOR THIS DAY.**

7 MR. QUINN: I think Mr. Rietdyk and I understand one
8 another. We had the pleasure of serving together some
9 decades ago together at Union Gas, so I think we're on the
10 same page here.

11 Just in that regard, I guess I'm going to start off
12 with a high-level question, and then I don't know who may
13 be on Union's later panel, so you can move me to the next
14 panel that's appropriate.

15 I did want to ask about a FRPO interrogatory, ask our
16 scoreboard operator to get up FRPO 22, if you would,
17 please? It's Union.A1.FRPO.22.

18 Union had provided information for us, and I would
19 appreciate that the printing is quite small, but if you can
20 just turn it up, I'm not sure we're going to have to get
21 into any of the detail here. I think that will be
22 appreciated by most.

23 What I wanted to show in this picture I'll get to in a
24 moment, first off, does Union use a transient or steady-
25 state simulation for its transmission needs?

26 MR. RIETDYK: For the Dawn-Parkway system, I assume
27 that is what you are referring to, we use the transient
28 state simulation.

UNION GAS LIMITED

Answer to Interrogatory from
Board Staff

Ref: EB-2013-0074, Section 7 – New Dawn-Parkway System Demands, Page 14 of 14,
Lines 9-19

Preamble: Union notes that although it expects future growth opportunities on the Dawn-Parkway System, it is also faced with trying to manage significant turn back risk with the greatest risk of turn back beginning in 2016. Union will attempt to re-sell or re-purpose turn back capacity. In the event that Union is unable to fully mitigate this risk, it may apply to the Board for a deferral account to capture the lost revenue as a result of turn back for the cost of the unused capacity.

a) Please provide forecasts for the possible rate impacts on all rate classes that would result from the lost revenues Union would incur if it is not able to re-sell or re-purpose turn back capacity.

Response:

a) For the purposes of this response, Union has assumed M12 turnback on the Dawn-Parkway system from November 1, 2015 to November 1, 2019 of 1,200,000 GJ/d (as per Exhibit I.A1.UGL.Staff.10 part c) Table 1), comprised of:

- 500,000 GJ/d of M12 Dawn to Kirkwall capacity;
- 700,000 GJ/d of M12 Dawn to Parkway capacity.

Approximately 509,000 GJ/d of the 700,000 GJ/d M12 Dawn to Parkway capacity represent the U.S. Northeast utilities' contract expirations between November 1, 2016 and November 1, 2019. Union is not forecasting that the U.S. Northeast utilities will turn back Dawn-Parkway capacity.

To determine the possible rate impacts on all rate classes, Union compared:

- the 2013 Board-approved cost allocation study including the 2018 Parkway West and Brantford to Kirkwall and Parkway D Compressor Project costs and demands to;
- the 2013 Board-approved cost allocation study including the 2018 Parkway West and Brantford to Kirkwall and Parkway D Compressor Project costs and demands and the M12 turnback of 1,200,000 GJ/d described above.

Please see Attachment 1 for the cost allocation impacts and Attachments 2 and 3 for the rate impacts to in-franchise rate classes and the M12 rate class, respectively.

During a 2014 to 2018 Incentive Regulation term, assuming no delay in regulatory approvals or downstream pipeline facilities, Union is at risk for any M12 turnback that it is unable to resell. Accordingly, there would be no impact on in-franchise and ex-franchise rates as a result of turnback until Union's next rebasing proceeding in 2019.