

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
TCPL INTERROGATORY #2

INTERROGATORY

Issue A1

- Reference(s)
- (i) Exhibit A, Tab 3, Schedule 9, Attachment 1, Page 3, Table A3: Commodity Price Assumptions
 - (ii) Exhibit E, Tab 1, Schedule 1, Page 9 of 9
 - (iii) Exhibit A, Tab 3, Schedule 9, Attachment 1, Pages 4-6

Preamble

EGD's calculation of gas supply savings is directly dependent on the gas commodity price assumptions. TransCanada wishes to better understand how EGD's future gas prices are derived and the impact that a larger Empress to Dawn gas price spread has on the calculation of total transportation savings and the net present value of the GTA project.

Request

- (a) Please explain how EGD (or its sources) has developed the commodity price assumptions in reference (i).
- (b) How are the long term commodity prices shown in reference (i) derived given that forward price trades only extend out for a 5 year period, for example on exchanges such as NGX and ICE.
- (c) Please confirm the prices in \$/GJ provided in reference (i) are in Canadian Dollars per GJ. If not, what currency and unit of energy is it in?
- (d) Please provide background information on OpenLink explaining their qualifications and reliability.
- (e) Did EGD consider any other sources for providing commodity price forecasts? If so, please provide those forecasts and explain why EGD decided to use OpenLink. If EGD did not consider any other price forecast sources, why not?
- (f) How does the Empress-Dawn basis shown in reference (i) compare to the Empress-Dawn basis used by Union in EB-2013-0074 at Schedule 11-4, page 1?

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- (g) How much does an Empress-Dawn basis change of \$0.10/GJ change EGD's Project Benefits calculations shown in reference (iii)?
- (h) Please calculate the Project Benefits using the same average Empress-Dawn basis differential used by Union in their Schedule 11-4 and provide the resulting information in tables similar to reference (iii).
- (i) Please calculate the Project Benefits using an Empress-Dawn basis differential of \$1.50/GJ and provide the resulting information in tables similar to reference (iii).
- (j) Please add a column to the table in reference (i) that shows the Empress – Dawn basis
- (k) Please compare the resulting average Empress-Dawn average basis with the average Empress-Dawn basis number used in Union's evidence in EB-2013-0074, Schedule 11-4, Page 1.
- (l) Please explain the reason for the large swing in the Empress-Dawn basis from 2017 to 2018 to 2019, in reference (i)
- (m) Is this the reason for the savings calculations in reference (iii) spiking in 2018? If not please explain the savings spikes in 2018.
- (n) Please confirm if the prices shown in Table A3 are Calendar or Contract years (November – October)
- (o) Please confirm if the GTA Project Benefit Calculations shown in Tables A4, A5, and A6 are Calendar Years or Contract years (November - October)

RESPONSE

- a) The commodity price assumptions utilized by Enbridge were sourced from Openlink. Openlink is the risk management software utilized by Enbridge for energy and financial risk management. Openlink designs and builds specialized trading and risk management software with a specific emphasis on the financial and energy sectors. The prices contained in Openlink are provided by independent third parties who specialize in generating and developing market information, including forward curves.

Enbridge understands that the projections of expected gas supply benefits contain risk. In fact with any forecast there is a risk that the projections produced at a point in time may not, and most likely will not, be exactly the same as what actually transpires in the future. Differences between what actually occurs and

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what was forecast to occur can be due to a variety of factors including input assumptions, model risk and structural breaks. For an assessment of various basis assumptions and capacity utilization assumptions please refer to the response g) thorough j) below.

- b) Please see the response to a) above.
- c) Confirmed.
- d) Please see the response to a) above.
- e) Enbridge did consider other sources for providing commodity price forecasts. However, the publicly available pricing forecasts that Enbridge is aware of only include projections for Henry Hub and/or AECO. For the expected gas supply benefits calculations Enbridge required pricing forecasts for Empress, Dawn, Niagara Falls and Iroquois. Openlink provides pricing for all of these points.
- f) The Empress-Dawn basis shown in reference (i) is, on average, 0.51 \$/GJ over the 2015 to 2025 timeframe. The Empress-Dawn basis assumed by Union in EB-2013-0074 at Schedule 11-4, page 1 is, on average, 0.92 \$/GJ over the 2014 to 2023 timeframe. The Empress-Dawn basis assumed by Union is, on average, 0.41 \$/GJ higher than that assumed by Enbridge.
- g to j) Enbridge's original intent was to displace STFT and peaking supplies with firm short haul transportation once the GTA Project Facilities were in service. This original intent was subsequently changed to assuming displacement of long haul firm transportation and peaking supplies with short haul firm transportation due to concerns related to the pricing and availability of STFT.

At Exhibit A, Tab 3, Schedule 5, pages 22 to 28, (2013-05-15-Update) Enbridge outlined these concerns. Since the aforementioned update Enbridge's concern related to the pricing of discretionary service on the Mainline has become a reality. TransCanada, in implementing the pricing discretion granted to it in the RH-003-2011 Decision has priced STFT such that a shipper which previously contracted for this service would choose FT rather than STFT due to the cost of discretionary transport. A further update and discussion of what has occurred in relation to TransCanada's actions and the concerns thereto related can be found at the response to IGUA Interrogatory #1 at Exhibit I.A1.EGD (Update).IGUA.1.

Enbridge would note that the expected gas supply benefits provided in both the 2013-05-15 update and in the update contained in the 2013-07-22 update at

Exhibit A, Tab 3, Schedule 5 contained a simplifying and conservative assumption of 100% utilization of firm long haul transportation. In the event that the GTA Project Facilities are not approved and Enbridge must contract for increased amounts of firm long haul transportation, including firming up the entire gas supply portfolio to eliminate all use of peaking and discretionary supply in the CDA and EDA, Enbridge will have to flow these contracts at a load factor significantly below 100% in order to match annual demand. In recognition of this the table below provides the basis scenarios requested by TransCanada along with two other scenarios which detail the expected gas supply benefits under different utilization conditions.

The 100% load factor scenario assumes that the long haul contracts to be displaced are completely full throughout the year. This is consistent with the flow assumptions made in the two aforementioned updates. The 42% load factor scenario assumes that the long haul contracts to be displaced are utilized fully only for the months of November to March. The 25% load factor scenario assumes that the long haul contracts to be displaced are utilized fully only for the months of December to February. The latter two scenarios are indicative of the supplies that would have been displaced if Enbridge was to utilize long haul firm transportation but flow these contracts as if they were STFT. Enbridge believes these additional scenarios are of importance since, from a planning and operational perspective Enbridge does not expect to fully utilize any additional long haul transportation it will have to contract for absent the GTA Project Facilities being in service.

<u>GTA Project Benefits Calculations for Current Base Case - Basis and Utilization Scenarios</u>			
\$ Millions	Average Empress- Dawn Basis = 0.51 \$/GJ	Average Empress- Dawn Basis = 0.92 \$/GJ	Average Empress- Dawn Basis = 1.50 \$/GJ
Long Haul Load Factor = 100% (January to December)	1,733	1,010	31
Long Haul Load Factor = 42% (November to March)	2,024	1,575	962
Long Haul Load Factor = 25% (December to February)	2,097	1,727	1,224

The commodity price assumptions utilized by Enbridge are provided in the table below:

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<u>Commodity Price</u>						
<u>Assumptions - Annual</u>	<u>Empress</u>	<u>Dawn</u>	<u>Empress-Dawn Basis</u>	<u>Niagara</u>	<u>Iroquois</u>	<u>EGD CDA</u>
<u>Average (\$/GJ)¹</u>						
2015	3.69	4.40	0.71	4.30	5.51	4.64
2016	3.85	4.44	0.59	4.40	5.62	4.68
2017	4.02	4.57	0.55	4.55	5.77	4.81
2018	4.42	4.75	0.33	4.72	5.95	4.98
2019	4.47	4.94	0.47	5.01	6.00	5.18
2020	4.52	5.03	0.51	5.08	6.05	5.26
2021	4.56	5.07	0.51	5.12	6.09	5.30
2022	4.60	5.10	0.50	5.16	6.12	5.34
2023	4.64	5.15	0.50	5.20	6.17	5.38
2024	4.68	5.15	0.47	5.24	6.21	5.39
2025	4.72	5.19	0.47	5.28	6.24	5.42

¹Commodity prices based on forward curves from OpenLink as at May 6, 2013.

The commodity price assumptions resulting from an average Empress to Dawn basis of \$0.92/GJ are provided below:

<u>Commodity Price</u>						
<u>Assumptions - Annual</u>	<u>Empress</u>	<u>Dawn</u>	<u>Empress-Dawn Basis</u>	<u>Niagara</u>	<u>Iroquois</u>	<u>EGD CDA</u>
<u>Average (\$/GJ)¹</u>						
2015	3.69	4.61	0.92	4.51	5.72	4.85
2016	3.85	4.77	0.92	4.73	5.95	5.01
2017	4.02	4.94	0.92	4.92	6.14	5.18
2018	4.42	5.34	0.92	5.31	6.54	5.57
2019	4.47	5.39	0.92	5.46	6.45	5.63
2020	4.52	5.44	0.92	5.50	6.46	5.68
2021	4.56	5.48	0.92	5.54	6.50	5.72
2022	4.60	5.52	0.92	5.58	6.54	5.76
2023	4.64	5.56	0.92	5.62	6.58	5.80
2024	4.68	5.60	0.92	5.70	6.66	5.84
2025	4.72	5.64	0.92	5.73	6.69	5.87

¹Commodity prices based on Empress forward curves and basis from OpenLink as at May 6, 2013 with the exception of Empress-Dawn basis which is the basis requested by TransCanada and assumed by Union.

The commodity price assumptions resulting from an average Empress to Dawn basis of \$1.50/GJ are provided below:

<u>Commodity Price</u>						
<u>Assumptions - Annual</u>	<u>Empress</u>	<u>Dawn</u>	<u>Empress-Dawn Basis</u>	<u>Niagara</u>	<u>Iroquois</u>	<u>EGD CDA</u>
<u>Average (\$/GJ)¹</u>						
2015	3.69	5.19	1.50	5.09	6.30	5.43
2016	3.85	5.35	1.50	5.31	6.53	5.59
2017	4.02	5.52	1.50	5.50	6.72	5.76
2018	4.42	5.92	1.50	5.89	7.12	6.15
2019	4.47	5.97	1.50	6.04	7.03	6.21
2020	4.52	6.02	1.50	6.08	7.04	6.26
2021	4.56	6.06	1.50	6.12	7.08	6.30
2022	4.60	6.10	1.50	6.16	7.12	6.34
2023	4.64	6.14	1.50	6.20	7.16	6.38
2024	4.68	6.18	1.50	6.28	7.24	6.42
2025	4.72	6.22	1.50	6.31	7.27	6.45

¹Commodity prices based on Empress forward curves and basis from OpenLink as at May 6, 2013 with the exception of Empress-Dawn basis which is the basis requested by TransCanada.

k) Please see the response to f) above.

l) The reason for the decrease in the Empress to Dawn basis in 2018 is a larger increase in the price of gas at Empress relative to the increase in the price of gas at Dawn.

m) Yes.

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- n) The prices shown in Table A3 are average prices for a calendar year.
- o) The GTA Project Benefit calculations in Tables A4, A5 and A6 are on a calendar year.

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