

CME INTERROGATORY #1

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 2, Question 7

Please provide a copy of the PIRA study.

RESPONSE

Please see response to Board Staff Interrogatory #17 which can be found at Exhibit I, Tab 1, Schedule 17.

CME INTERROGATORY #2

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 2, Question 7

To what extent has production of gas from Marcellus shale actually commenced?

RESPONSE

Please see the response to Board Staff Interrogatory #3 which can be found at Exhibit I, Tab 1, Schedule 3.

CME INTERROGATORY #3

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 2, Question 7

What assumptions has Enbridge Gas Distribution ("EGD") made pertaining to the total availability of gas supply from Marcellus shale, and the pace at which that supply will become available?

RESPONSE

Please see the response to Board Staff Interrogatory #17 at Exhibit I, Tab 1, Schedule 17 for the assumptions EGD has made pertaining to the total availability of gas supply and the pace at which that supply will become available.

CME INTERROGATORY #4

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 2, Question 7

What are the production risks associated with the availability of supply from Marcellus shale?

RESPONSE

A brief survey of financial reports from natural gas producers indicates that there are several production risks associated with the availability of supply from Marcellus shale. Below is a high level, though not exhaustive, list of potential risks:

- Price risk – Variability in the price of natural gas
- Demand risk – Variability in the demand for natural gas
- Regulatory and environmental risk – For example changes in taxation policy or restrictions on exploration and drilling due to concerns for the environment
- Operational risk – For example availability of drilling equipment or mechanical failures
- Capacity risk – For example availability of pipeline capacity to bring supply to market
- Other risks including macro economic, political and land related

To the extent that any or a number of these risks materialize, production from the Marcellus shale could be affected. At this time however, Enbridge does not expect any significant impact from these risks on Marcellus production.

CME INTERROGATORY #5

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 2, Question 7

Please provide the following information with respect to EGD's plans for acquiring gas from the new Marcellus shale supply:

- (a) When does EGD expect to be contracting for such supplies?
- (b) In what quantities?
- (c) At what price?
- (d) For what contractual term?
- (e) Will Niagara be the transaction point in all cases, or does EGD plan to purchase some gas at the point of production and acquire transportation on pipelines connecting the point of production to Niagara?

RESPONSE

- (a) Enbridge expects to be contracting for Marcellus shale supplies when the TCPL transport from Niagara becomes available.
- (b) The supply contracted by Enbridge would be equal to the contracted transport.
- (c) The price of supply at Niagara will depend on market pricing at the time of the supply contracting. Enbridge does not expect to enter into fixed price contracting for Marcellus supply.
- (d) Enbridge has not contracted for any Marcellus supply yet and therefore contractual terms for Marcellus supply are unknown at this time.
- (e) Niagara will be the transaction point for Marcellus supply.

CME INTERROGATORY #6

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Question 11

With respect to natural gas demand and supply within EGD's franchise area, please provide the following information:

- (a) EGD's long-term (at least ten (10) years) forecast of demand within its franchise area, and
- (b) EGD's year-by-year forecast of the extent to which it expects the demands of its franchise area to be satisfied with system gas and non-system gas respectively.

RESPONSE

- a) The table below shows Enbridge's current long range annual design demand forecast for all bundled system and non-system distribution customers:

Year	Demand (10 ⁶ m ³)
2011	11,372
2012	11,461
2013	11,558
2014	11,650
2015	11,724
2016	11,790
2017	11,875
2018	11,967
2019	12,072
2020	12,178

- b) Enbridge does not have a forecast of bundled demand by system gas and non-system gas customers beyond the test year budget. As a result the requested information cannot be provided.

CME INTERROGATORY #7

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Question 11

Please provide a complete list of each contract in EGD's gas supply portfolio showing, for each gas supply contract, the date of the contract, the gas supplier, the volume purchased, the point of purchase, the adjustment dates, if any, over the duration of the contract and the termination date of each contract.

RESPONSE

Please see the response to Board Staff Interrogatory #15 which can be found at Exhibit I, Tab 1, Schedule 15.

CME INTERROGATORY #8

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Question 11

Please supplement the information contained in Exhibit B, Tab 1, Schedule 1, Appendix E to provide a complete list of each contract in EGD's transportation contract portfolio showing, for each contract, the date of the contract, the shipper, the receipt and delivery points, the capacity contracted, the possible adjustment dates, if any, over the duration of the contract, the termination date of each contract and an estimate of the extent to which EGD is currently utilizing the capacity under each contract.

RESPONSE

Please see the response to Board Staff Interrogatory #7 which can be found at Exhibit I, Tab 1, Schedule 7.

CME INTERROGATORY #9

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Question 11

What is EGD's current expectation with respect to the extent to which its existing gas supply and transportation arrangements will be adjusted or terminated when the services it has contracted for on the incremental facilities to be constructed by TransCanada Pipelines Limited ("TCPL") become available?

RESPONSE

Please see the response to Board Staff Interrogatory #1 which can be found at Exhibit I, Tab 1, Schedule 1.

CME INTERROGATORY #10

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Question 11

Please describe the adjustments EGD expects to make to each of these gas supply and transportation arrangements on any adjustment date that is available therein, or on their termination dates as a result of service becoming available on the incremental TCPL facilities described in the evidence for the carriage of Marcellus shale supply.

RESPONSE

Please see the response to Board Staff Interrogatory #1 which can be found at Exhibit I, Tab 1, Schedule 1.

CME INTERROGATORY #11

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Questions 13 and 14, Appendix F

Please provide the complete ten (10) year landed cost analysis for each source of supply considered showing the year-by-year results that produced the ten (10) year average landed costs shown in Appendix F.

RESPONSE

Please see the tables below.

10 Year Niagara Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	Niagara	Niagara	0.32	6.84	0.1249	0.0038	0.0189	0.1476	6.98	6.96	Enbridge CDA
2014	Niagara	Niagara	0.32	6.90	0.1249	0.0038	0.0191	0.1478	7.05	7.02	Enbridge CDA
2015	Niagara	Niagara	0.33	6.80	0.1249	0.0038	0.0188	0.1475	6.95	6.92	Enbridge CDA
2016	Niagara	Niagara	0.30	6.74	0.1249	0.0038	0.0186	0.1473	6.88	6.86	Enbridge CDA
2017	Niagara	Niagara	0.28	6.70	0.1249	0.0038	0.0185	0.1472	6.85	6.83	Enbridge CDA
2018	Niagara	Niagara	0.23	6.36	0.1249	0.0038	0.0176	0.1463	6.51	6.48	Enbridge CDA
2019	Niagara	Niagara	0.19	6.26	0.1249	0.0038	0.0173	0.1460	6.41	6.38	Enbridge CDA
2020	Niagara	Niagara	0.20	6.31	0.1249	0.0038	0.0174	0.1462	6.46	6.43	Enbridge CDA
2021	Niagara	Niagara	0.16	6.35	0.1249	0.0038	0.0175	0.1463	6.50	6.47	Enbridge CDA
2022	Niagara	Niagara	0.16	6.42	0.1249	0.0038	0.0177	0.1465	6.56	6.54	Enbridge CDA
Average			0.25	6.57	0.1249	0.0038	0.0181	0.1469	6.71	6.69	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E & F): Tolls in effect on Alternative Routes at the time of Enbridge's Analysis

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$/US = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJs

Real Commodity Prices were used for the Analysis

10 Year Dawn Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$US/mmBtu (H) = E+F+G	Landed Cost \$US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	Dawn	Dawn	0.24	6.76	0.1856	0.0065	0.0280	0.2201	6.98	6.95	Enbridge CDA
2014	Dawn	Dawn	0.25	6.83	0.1856	0.0065	0.0283	0.2204	7.05	7.02	Enbridge CDA
2015	Dawn	Dawn	0.32	6.78	0.1856	0.0065	0.0281	0.2202	7.00	6.98	Enbridge CDA
2016	Dawn	Dawn	0.29	6.72	0.1856	0.0065	0.0278	0.2200	6.94	6.91	Enbridge CDA
2017	Dawn	Dawn	0.26	6.69	0.1856	0.0065	0.0277	0.2198	6.91	6.88	Enbridge CDA
2018	Dawn	Dawn	0.21	6.34	0.1856	0.0065	0.0263	0.2184	6.56	6.54	Enbridge CDA
2019	Dawn	Dawn	0.18	6.24	0.1856	0.0065	0.0259	0.2180	6.46	6.44	Enbridge CDA
2020	Dawn	Dawn	0.13	6.25	0.1856	0.0065	0.0259	0.2180	6.47	6.44	Enbridge CDA
2021	Dawn	Dawn	0.10	6.29	0.1856	0.0065	0.0260	0.2182	6.51	6.48	Enbridge CDA
2022	Dawn	Dawn	0.09	6.35	0.1856	0.0065	0.0263	0.2184	6.57	6.54	Enbridge CDA
Average			0.21	6.53	0.1856	0.0065	0.0270	0.2192	6.74	6.72	Enbridge CDA
\$US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E & F): Tolls in effect on Alternative Routes at the time of Enbridge's Analysis

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$1 Us = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJ's

Real Commodity Prices were used for the Analysis

10 Year Vector (Chicago) Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	Vector/Dawn	Chicago	-0.07	6.45	0.4412	0.0065	0.0979	0.5456	6.99	6.97	Enbridge CDA
2014	Vector/Dawn	Chicago	-0.07	6.51	0.4412	0.0065	0.0988	0.5466	7.06	7.03	Enbridge CDA
2015	Vector/Dawn	Chicago	-0.04	6.43	0.4412	0.0065	0.0976	0.5454	6.97	6.95	Enbridge CDA
2016	Vector/Dawn	Chicago	-0.05	6.38	0.4412	0.0065	0.0969	0.5446	6.93	6.90	Enbridge CDA
2017	Vector/Dawn	Chicago	-0.05	6.38	0.4412	0.0065	0.0968	0.5445	6.92	6.89	Enbridge CDA
2018	Vector/Dawn	Chicago	-0.08	6.05	0.4412	0.0065	0.0919	0.5396	6.59	6.56	Enbridge CDA
2019	Vector/Dawn	Chicago	-0.10	5.96	0.4412	0.0065	0.0906	0.5384	6.50	6.48	Enbridge CDA
2020	Vector/Dawn	Chicago	-0.14	5.98	0.4412	0.0065	0.0908	0.5386	6.52	6.49	Enbridge CDA
2021	Vector/Dawn	Chicago	-0.16	6.02	0.4412	0.0065	0.0915	0.5393	6.56	6.54	Enbridge CDA
2022	Vector/Dawn	Chicago	-0.19	6.07	0.4412	0.0065	0.0922	0.5399	6.61	6.58	Enbridge CDA
Average			-0.10	6.22	0.4412	0.0065	0.0945	0.5423	6.77	6.74	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group: March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E & F): Tolls in effect on Alternative Routes at the time of Enbridge's Analysis

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$/Us = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJs

Real Commodity Prices were used for the Analysis

10 Year Alliance (CREC) Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	Alliance/Vector/Dawn	CREC	-1.24	5.28	1.8979	-0.3083	0.3352	1.9248	7.20	7.17	Enbridge CDA
2014	Alliance/Vector/Dawn	CREC	-1.24	5.35	1.8979	-0.3083	0.3394	1.9290	7.27	7.25	Enbridge CDA
2015	Alliance/Vector/Dawn	CREC	-1.08	5.39	1.8979	-0.3083	0.3419	1.9316	7.32	7.29	Enbridge CDA
2016	Alliance/Vector/Dawn	CREC	-1.10	5.34	1.8979	-0.3083	0.3388	1.9285	7.27	7.24	Enbridge CDA
2017	Alliance/Vector/Dawn	CREC	-1.13	5.30	1.8979	-0.3083	0.3368	1.9264	7.23	7.20	Enbridge CDA
2018	Alliance/Vector/Dawn	CREC	-1.16	4.97	1.8979	-0.3083	0.3169	1.9065	6.88	6.85	Enbridge CDA
2019	Alliance/Vector/Dawn	CREC	-1.18	4.88	1.8979	-0.3083	0.3116	1.9012	6.78	6.76	Enbridge CDA
2020	Alliance/Vector/Dawn	CREC	-1.19	4.93	1.8979	-0.3083	0.3142	1.9038	6.83	6.80	Enbridge CDA
2021	Alliance/Vector/Dawn	CREC	-1.24	4.95	1.8979	-0.3083	0.3155	1.9051	6.85	6.83	Enbridge CDA
2022	Alliance/Vector/Dawn	CREC	-1.31	4.95	1.8979	-0.3083	0.3155	1.9052	6.85	6.83	Enbridge CDA
Average			-1.19	5.13	1.8979	-0.3083	0.3266	1.9162	7.05	7.02	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E & F): Tolls in effect on Alternative Routes at the time of Enbridge's Analysis

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$1 US = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJ's

Real Commodity Prices were used for the Analysis

10 Year TCPL(Empress) Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	TCPL	Empress	-1.07	5.45	1.6222	0.0698	0.1678	1.8598	7.31	7.29	Enbridge CDA
2014	TCPL	Empress	-1.06	5.52	1.6222	0.0698	0.1700	1.8620	7.38	7.36	Enbridge CDA
2015	TCPL	Empress	-0.90	5.57	1.6222	0.0698	0.1713	1.8633	7.43	7.40	Enbridge CDA
2016	TCPL	Empress	-0.92	5.51	1.6222	0.0698	0.1697	1.8617	7.38	7.35	Enbridge CDA
2017	TCPL	Empress	-0.95	5.48	1.6222	0.0698	0.1687	1.8606	7.34	7.31	Enbridge CDA
2018	TCPL	Empress	-0.98	5.15	1.6222	0.0698	0.1585	1.8504	7.00	6.97	Enbridge CDA
2019	TCPL	Empress	-1.01	5.06	1.6222	0.0698	0.1558	1.8477	6.91	6.88	Enbridge CDA
2020	TCPL	Empress	-1.01	5.10	1.6222	0.0698	0.1571	1.8491	6.95	6.93	Enbridge CDA
2021	TCPL	Empress	-1.06	5.13	1.6222	0.0698	0.1578	1.8497	6.98	6.95	Enbridge CDA
2022	TCPL	Empress	-1.13	5.13	1.6222	0.0698	0.1578	1.8497	6.98	6.95	Enbridge CDA
Average			-1.01	5.31	1.6222	0.0698	0.1634	1.8554	7.17	7.14	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E & F): Tolls in effect on Alternative Routes at the time of Enbridge's Analysis

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$/US = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJ

Real Commodity Prices were used for the Analysis

CME INTERROGATORY #12

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Questions 13 and 14, Appendix F

Revise the complete ten (10) year landed cost analysis for each source of supply, to be provided in response to the previous question, by using the interim long-haul and short-haul tolls TCPL has asked the National Energy Board ("NEB") to approve effective January 1, 201[1].

RESPONSE

Please see the tables below. In the event that the TCPL interim toll application is approved the landed cost for Niagara supply increases from \$6.69/GJ to \$6.78/GJ and the landed cost for Empress supply decreases from \$7.14/GJ to \$6.85/GJ. Based on the proposed TCPL tolls, Niagara supply remains competitive with other alternatives.

10 Year Niagara Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (A)	Point of Supply (B)	Basis Differential \$/mmBtu (C)	Supply Cost \$/mmBtu (D) = Nymex + C	Unitized Demand Charge \$/mmBtu (E)	Commodity Charge \$/mmBtu (F)	Fuel Charge \$/mmBtu (G)	100% LFT With Fuel \$/mmBtu (H) = E+F+G	Landed Cost \$/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	Niagara	Niagara	0.32	6.84	0.2152	0.0000	0.0189	0.2341	7.07	7.04	Enbridge CDA
2014	Niagara	Niagara	0.32	6.90	0.2152	0.0000	0.0191	0.2343	7.14	7.11	Enbridge CDA
2015	Niagara	Niagara	0.33	6.80	0.2152	0.0000	0.0188	0.2340	7.03	7.01	Enbridge CDA
2016	Niagara	Niagara	0.30	6.74	0.2152	0.0000	0.0186	0.2338	6.97	6.94	Enbridge CDA
2017	Niagara	Niagara	0.28	6.70	0.2152	0.0000	0.0185	0.2337	6.94	6.91	Enbridge CDA
2018	Niagara	Niagara	0.23	6.36	0.2152	0.0000	0.0176	0.2328	6.59	6.57	Enbridge CDA
2019	Niagara	Niagara	0.19	6.26	0.2152	0.0000	0.0173	0.2325	6.49	6.47	Enbridge CDA
2020	Niagara	Niagara	0.20	6.31	0.2152	0.0000	0.0174	0.2326	6.54	6.52	Enbridge CDA
2021	Niagara	Niagara	0.16	6.35	0.2152	0.0000	0.0175	0.2327	6.58	6.56	Enbridge CDA
2022	Niagara	Niagara	0.16	6.42	0.2152	0.0000	0.0177	0.2329	6.65	6.63	Enbridge CDA
Average			0.25	6.57	0.2152	0.0000	0.0181	0.2333	6.80	6.78	Enbridge CDA
\$/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E): Interim TCPL Tolls for NiagaraSupply

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$/ Us = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJs

Real Commodity Prices were used for the Analysis

10 Year Dawn Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (A)	Point of Supply (B)	Basis Differential \$/US/mmBtu (C)	Supply Cost \$/US/mmBtu (D) = Nymex + C	Utilized Demand Charge \$/US/mmBtu (E)	Commodity Charge \$/US/mmBtu (F)	Fuel Charge \$/US/mmBtu (G)	100% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	TCPL	Empress	0.24	6.76	0.2674	0.0000	0.0280	0.2954	7.05	7.03	Enbridge CDA
2014	TCPL	Empress	0.25	6.83	0.2674	0.0000	0.0283	0.2957	7.12	7.10	Enbridge CDA
2015	TCPL	Empress	0.32	6.78	0.2674	0.0000	0.0281	0.2955	7.08	7.05	Enbridge CDA
2016	TCPL	Empress	0.29	6.72	0.2674	0.0000	0.0278	0.2952	7.01	6.99	Enbridge CDA
2017	TCPL	Empress	0.26	6.69	0.2674	0.0000	0.0277	0.2951	6.98	6.96	Enbridge CDA
2018	TCPL	Empress	0.21	6.34	0.2674	0.0000	0.0263	0.2937	6.64	6.61	Enbridge CDA
2019	TCPL	Empress	0.18	6.24	0.2674	0.0000	0.0259	0.2933	6.54	6.51	Enbridge CDA
2020	TCPL	Empress	0.13	6.25	0.2674	0.0000	0.0259	0.2933	6.54	6.52	Enbridge CDA
2021	TCPL	Empress	0.10	6.29	0.2674	0.0000	0.0260	0.2935	6.58	6.56	Enbridge CDA
2022	TCPL	Empress	0.09	6.35	0.2674	0.0000	0.0263	0.2937	6.64	6.62	Enbridge CDA
Average			0.21	6.53	0.2674	0.0000	0.0270	0.2944	6.82	6.79	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010
Basis (CREC and Empress) Col (D): Average of monthly forward curves
Transportation Tolls Col (E): Interim TCPL Tolls for Dawn Supply
Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast
Foreign Exchange Col (J): \$1 US = 1.051 CDN
Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1.055056 GJ's
Real Commodity Prices were used for the Analysis

10 Year Vector/Dawn Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	TCPL	Empress	-0.07	6.45	0.5230	0.0000	0.0979	0.6209	7.07	7.04	Enbridge CDA
2014	TCPL	Empress	-0.07	6.51	0.5230	0.0000	0.0988	0.6219	7.13	7.11	Enbridge CDA
2015	TCPL	Empress	-0.04	6.43	0.5230	0.0000	0.0976	0.6206	7.05	7.02	Enbridge CDA
2016	TCPL	Empress	-0.05	6.38	0.5230	0.0000	0.0969	0.6199	7.00	6.98	Enbridge CDA
2017	TCPL	Empress	-0.05	6.38	0.5230	0.0000	0.0968	0.6198	6.99	6.97	Enbridge CDA
2018	TCPL	Empress	-0.08	6.05	0.5230	0.0000	0.0919	0.6149	6.66	6.64	Enbridge CDA
2019	TCPL	Empress	-0.10	5.96	0.5230	0.0000	0.0906	0.6136	6.58	6.55	Enbridge CDA
2020	TCPL	Empress	-0.14	5.98	0.5230	0.0000	0.0908	0.6139	6.59	6.57	Enbridge CDA
2021	TCPL	Empress	-0.16	6.02	0.5230	0.0000	0.0915	0.6145	6.64	6.61	Enbridge CDA
2022	TCPL	Empress	-0.19	6.07	0.5230	0.0000	0.0922	0.6152	6.68	6.66	Enbridge CDA
Average			-0.10	6.22	0.5230	0.0000	0.0945	0.6175	6.84	6.82	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E): Tolls in effect on Vector Route at the time of Enbridge's Analysis, while Interim TCPL Tolls for Dawn Supply

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$1 US = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1.055056 GJ's

Real Commodity Prices were used for the Analysis

10 Year Alliance/Vector/Dawn Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	TCPL	Empress	-1.24	5.28	1.9797	-0.3148	0.3352	2.0001	7.28	7.25	Enbridge CDA
2014	TCPL	Empress	-1.24	5.35	1.9797	-0.3148	0.3394	2.0043	7.35	7.32	Enbridge CDA
2015	TCPL	Empress	-1.08	5.39	1.9797	-0.3148	0.3419	2.0068	7.39	7.37	Enbridge CDA
2016	TCPL	Empress	-1.10	5.34	1.9797	-0.3148	0.3388	2.0037	7.34	7.31	Enbridge CDA
2017	TCPL	Empress	-1.13	5.30	1.9797	-0.3148	0.3368	2.0017	7.30	7.28	Enbridge CDA
2018	TCPL	Empress	-1.16	4.97	1.9797	-0.3148	0.3169	1.9818	6.95	6.93	Enbridge CDA
2019	TCPL	Empress	-1.18	4.88	1.9797	-0.3148	0.3116	1.9765	6.86	6.83	Enbridge CDA
2020	TCPL	Empress	-1.19	4.93	1.9797	-0.3148	0.3142	1.9791	6.91	6.88	Enbridge CDA
2021	TCPL	Empress	-1.24	4.95	1.9797	-0.3148	0.3155	1.9804	6.93	6.90	Enbridge CDA
2022	TCPL	Empress	-1.31	4.95	1.9797	-0.3148	0.3155	1.9804	6.93	6.90	Enbridge CDA
Average			-1.19	5.13	1.9797	-0.3148	0.3266	1.9915	7.12	7.10	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group; March 2010

Basis (CREC and Empress) Col (D): Average of monthly forward curves

Transportation Tolls Col (E): Tolls in effect on Alliance and Vector Routes at the time of Enbridge's Analysis, while Interim TCPL Tolls for Dawn Supply

Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast

Foreign Exchange Col (J): \$1 US = 1.051 CDN

Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1.055066 GJ's

Real Commodity Prices were used for the Analysis

10 Year TCPL(Empress) Landed Cost Analysis on Year-by-Year (2013-2022)

Year	Pipeline/Path (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% LFT With Fuel \$/US/mmBtu (H) = E+F+G	Landed Cost \$/US/mmBtu (I) = D+H	Landed Cost CAD\$/GJ (J)	Point of Delivery (K)
2013	TCPL	Empress	-1.07	5.45	1.3990	0.0000	0.1678	1.5668	7.02	6.99	Enbridge CDA
2014	TCPL	Empress	-1.06	5.52	1.3990	0.0000	0.1700	1.5690	7.09	7.07	Enbridge CDA
2015	TCPL	Empress	-0.90	5.57	1.3990	0.0000	0.1713	1.5703	7.14	7.11	Enbridge CDA
2016	TCPL	Empress	-0.92	5.51	1.3990	0.0000	0.1697	1.5687	7.08	7.06	Enbridge CDA
2017	TCPL	Empress	-0.95	5.48	1.3990	0.0000	0.1687	1.5677	7.05	7.02	Enbridge CDA
2018	TCPL	Empress	-0.98	5.15	1.3990	0.0000	0.1585	1.5575	6.71	6.68	Enbridge CDA
2019	TCPL	Empress	-1.01	5.06	1.3990	0.0000	0.1558	1.5548	6.62	6.59	Enbridge CDA
2020	TCPL	Empress	-1.01	5.10	1.3990	0.0000	0.1571	1.5561	6.66	6.63	Enbridge CDA
2021	TCPL	Empress	-1.06	5.13	1.3990	0.0000	0.1578	1.5568	6.68	6.66	Enbridge CDA
2022	TCPL	Empress	-1.13	5.13	1.3990	0.0000	0.1578	1.5568	6.68	6.66	Enbridge CDA
Average			-1.01	5.31	1.3990	0.0000	0.1634	1.5624	6.87	6.85	Enbridge CDA
\$/US/mmBtu	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Nymex (Henry Hub)	6.52	6.58	6.47	6.43	6.43	6.13	6.07	6.12	6.19	6.26	6.32

Source of Assumptions:

Gas Supply Prices Col (D): PIRA Energy Group: March 2010
Basis (CREC and Empress) Col (D): Average of monthly forward curves
Transportation Tolls Col (E): Interim TCPL Tolls for Empress Supply
Fuel Ratios Col (G): Average ratio over 2010 (Jan - Sep) or Pipeline Forecast
Foreign Exchange Col (J): \$1 Us = 1.051 CDN
Energy Conversions Col (J): 1 Dth = 1 mmBtu = 1,055,056 GJ's
Real Commodity Prices were used for the Analysis

CME INTERROGATORY #13

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 4, Questions 13 and 14, Appendix F

Will EGD be supporting or resisting TCPL's Application for interim and permanent tolls in accordance with the Application TCPL recently filed with the NEB? Please provide EGD's rationale for the position that it will be taking in response to TCPL's Application.

RESPONSE

Please see the response to Board Staff Interrogatory #24 which can be found at Exhibit I, Tab 1, Schedule 24.

CME INTERROGATORY #14

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, page 6, Table A

Please revise Table A to add thereto a line entitled "Niagara Supply" and then broaden the Table to show EGD's Budgeted Gas Supply Acquisition for the period 2011 to 2022 so as to demonstrate when and the extent to which EGD expects to add Niagara Supply to its portfolio in each of those years, as well as the adjustments, if any, to other sources of supply in each of those years.

RESPONSE

The proposed contract will not commence until November 2012 and will therefore not form part of EGD's portfolio in 2011. Beyond 2011 the Company does not forecast or budget supply acquisition by supply hub or basin. Please see the response to Board Staff Interrogatory #15 at Exhibit I, Tab 1, Schedule 15 for a discussion of how the proposed contract could fit into EGD's supply and transportation portfolio for the next few years.

CME INTERROGATORY #15

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, pages 7 to 10 and EGD's November 9, 2010 letter at page 2

What will EGD do if the Board rejects the application for pre-approval and instead, directs EGD to proceed in accordance with the traditional regulatory approach where prudence reviews take place some time after a transaction becomes operative and not before? Will EGD proceed with the transaction and assume risks associated with the traditional regulatory approach? Please provide EGD's rationale for its response to this question.

RESPONSE

In this scenario where one assumes that the Board rejects EGD's application for pre-approval it is not currently possible to determine whether EGD will proceed with the transaction or provide notice of cancellation to TransCanada. That decision would depend upon other things including the Board's stated rationale for rejecting the application.

Please see the response to Board Staff Interrogatory #22 at Exhibit I, Tab 1, Schedule 22 for implications related to this scenario should it occur.

CME INTERROGATORY #16

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, pages 7 to 10 and EGD's November 9, 2010 letter at page 2

Assume that the Board conditions a pre-approval of the contract on terms that expose EGD's shareholder to risks associated with the actuals, pertaining to any of the elements in the landed cost comparisons, turning out to be materially different from EGD's forecasts for those elements. Under such conditions, will EGD proceed with its proposed transaction with TCPL?

RESPONSE

EGD does not believe that such a condition would be appropriate. Such a condition would expose EGD to risks on items that it does not control and from which it derives no benefit. The assumed condition is not in keeping with the current approach through which EGD has the obligation to enter into prudent supply and transportation arrangements but is not exposed to risk because some items turn out differently than forecast. Forecasting risk is inherent in any forward looking analysis. The pre-approval process is to mitigate such risks to the utility so that commitments may be made to allow new infrastructure to be built.

EGD has not forecasted any elements in the landed cost comparisons. Current pipeline tolls and fuel ratios are the inputs for the landed cost analysis. Estimates of future basis differentials were provided by PIRA pursuant to a consulting project. EGD does not consider it appropriate that its shareholder should be exposed to risks associated with the actual landed costs turning out materially different from these forecasts. Under its regulatory model EGD does not assume, is unable to mitigate, and is not compensated for market risk associated with its gas supply function. If such conditions were imposed by the OEB, EGD would not likely proceed with the proposed transaction.

CME INTERROGATORY #17

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, pages 7 to 10 and EGD's November 9, 2010 letter at page 2

Assume that the Board conditions its pre-approval of the TCPL contract on terms that expose EGD's shareholder to the following:

- (a) risks pertaining to EGD's utilization of the incremental TCPL facilities that turns out to be materially lower than it currently estimates, and/or
- (b) risks that EGD's utilization of other facilities that it either owns or holds under contract with third parties materially declines as a consequence of its utilization of the incremental TCPL facilities described in the evidence.

Will EGD proceed with its proposed transaction with TCPL under such conditions?
Please provide the rationale for EGD's response to this question.

RESPONSE

Enbridge does not believe that such conditions would be appropriate for the reasons set out in response to CME Interrogatory #16 at Exhibit I, Tab 1, Schedule 16.

Enbridge will make every effort to ensure that the proposed contract is fully utilized. Please see the response to Board Staff Interrogatory #3 at Exhibit I, Tab 1, Schedule 3 and the response to Board Staff Interrogatory #20 at Exhibit I, Tab 1, Schedule 20 for a discussion of how Enbridge intends to utilize the proposed contract and how Enbridge utilizes its transportation contracts. Given the manner in which the Company operates and utilizes the assets in its transportation portfolio EGD does not believe it would be appropriate for the Board to impose such conditions. If the Board were to condition its pre-approval based on the terms above, EGD would not likely proceed with the proposed transaction.

CME INTERROGATORY #18

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, pages 7 to 10 and EGD's November 9, 2010 letter at page 2

Over the period 2011 to 2022, to what extent are the total costs of acquiring gas and third party transportation, to meet the needs of EGD's in-franchise customers, from sources other than Niagara likely to exceed the total costs of acquiring gas supply and third party transportation from sources including Niagara? Please provide a detailed calculation of the net cost or benefit of EGD's plan to modify its gas supply and third party transportation portfolio to include Niagara Supply.

RESPONSE

EGD is not planning to de-contract transportation should the Board approve the proposed contract. The proposed contract will be used to replace Dawn spot and peaking supplies for system reliability reasons. Please see Exhibit B, Tab 1, Schedule 1, Appendix F for the landed cost analysis. Current expectations are for the costs of acquiring Niagara transportation and supply to be cheaper than the cost of acquiring transportation and supply from other sources. Based on these expectations, all else equal, the total costs of acquiring gas and third party transportation from sources other than Niagara are likely to exceed the total costs of acquiring gas supply and third party transportation from sources including Niagara.