

ONTARIO ENERGY BOARD

EB-2012-0451

EB-2012-0433

EB-2013-0074

IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for: an order or orders granting leave to construct a natural gas pipeline and ancillary facilities in the Town of Milton, City of Markham, Town of Richmond Hill, City of Brampton, City of Toronto, City of Vaughan and the Region of Halton, the Region of Peel and the Region of York; and an order or orders approving the methodology to establish a rate for transportation services for TransCanada Pipelines Limited;

AND IN THE MATTER OF an application by Union Gas Limited for: an Order or Orders for pre-approval of recovery of the cost consequences of all facilities associated with the development of the proposed Parkway West site; an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the Town of Milton; an Order or Orders for pre-approval of recovery of the cost consequences of all facilities associated with the development of the proposed Brantford-Kirkwall/Parkway D Compressor Station project; an Order or Orders for pre-approval of the cost consequences of two long term short haul transportation contracts; and an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the City of Cambridge and City of Hamilton.

**ENVIRONMENTAL DEFENCE'S
CROSS-EXAMINATION DOCUMENT BOOK 3
(FOR JOINT PANEL)**

Filed October 8, 2013

KLIPPENSTEINS

Barristers and Solicitors
160 John Street, Suite 300
Toronto, Ontario M5V 2E5

Murray Klippenstein, LSUC No. 26950G

Kent Elson, LSUC No. 57091I

Tel.: (416) 598-0288

Fax: (416) 598-9520

Lawyers for Environmental Defence

**ENBRIDGE GAS DISTRIBUTION INC.
UNION GAS LIMITED**

**Greater Toronto Area Project
Parkway West Project
Brantford-Kirkwall / Parkway D**

**EB-2012-0451
EB-2012-0433
EB-2013-0074**

**SUPPLEMENTAL EVIDENCE

Of

TRANSCANADA PIPELINES LIMITED**

August 16, 2013

1. INTRODUCTION

This supplementary evidence is filed in order to respond to the amendments to Enbridge's GTA Project application filed on July 22, 2013 (the "Amended Application").

This evidence will:

- describe the history of TransCanada's involvement in Enbridge's GTA Project through the Memorandum of Understanding ("MOU") that governs Segment A as an Enbridge/TransCanada joint project;
- explain why, without the MOU, Segment A should be viewed as solely for Enbridge's distribution needs and thus at NPS 42 is far over-sized in the Amended Application;
- describe why the savings that Enbridge and Union claim for their respective projects, in the new circumstances of the Amended Application, will not be realized, and why those predictions of savings are inaccurate and unreliable, and why the projects are likely to represent net costs rather than savings; and
- describe the misrepresentation by Union and Enbridge of the status of gas supplies available from the Western Canadian Sedimentary Basin, and why the projects, in the new circumstances of the Amended Application, could be well served without the need to access higher-cost supplies at Dawn.

2. BACKGROUND AND CURRENT STATUS

2.1 History of the GTA Project

The Board will recall that when Enbridge originally filed for leave to construct the GTA Project (the "Original Application"), Segment A of the project was an NPS 36 pipeline that commenced at a proposed new connection with Union, the Parkway West Gate Station, and proceeded easterly to Enbridge's Albion station.

In its February 12, 2013 amendment to the Original Application, Segment A was approximately 6.5 kilometers shorter because it began closer to Albion at TransCanada's proposed Bram West interconnection. It was also re-sized to an NPS 42 pipeline. The change was the result of collaboration between Union, Enbridge and TransCanada regarding facilities in the Parkway corridor, with the objective of reducing the costs and environmental impacts of construction in the corridor, as instructed by the Board in its EB-2011-0210 decision.

The discussions among the parties resulted in a binding Memorandum of Understanding (MOU) dated January 28, 2013, between Enbridge and TransCanada. This MOU resulted in the revision to the route and capacity of Segment A described above. Segment A will be used by TransCanada to transport volumes for its shippers (which includes Enbridge, Union and Gaz Métro) as part of the integrated TransCanada system. In the MOU, the objectives of Enbridge and TransCanada are described as follows:

- (a) to provide greater certainty with respect to the efficient development of natural gas infrastructure in the GTA and on TransCanada's Parkway to Maple path;

- (b) to optimize use of existing natural gas transportation infrastructure in and around the GTA and TransCanada's Parkway to Maple path to meet the capacity needs of the Parties' current and future respective customers;
- (c) to plan for future infrastructure to meet medium and long term needs in a coordinated fashion in order to manage rate impacts upon the current and future customers of both Parties;
- (d) to ensure reliability and adequacy of the Parties' respective services and gas transportation systems for customers; and
- (e) to manage infrastructure costs and potential risk of redundant infrastructure and other risks that may negatively impact either Party or its customers.

When Enbridge filed its February 12th amendment, the intention of Enbridge and TransCanada was that the two parties would be joint owners of Segment A. The MOU included a "transportation by other" (TBO) option if the parties could not make the joint-ownership objective work. The TBO option was designed to mimic joint ownership, in that TransCanada was obliged to contract for all of the transportation capacity on Segment A for at least 15 years, and to pay Enbridge the remaining book value of Segment A if it did not renew the transportation contract through to the end of the economic life of the line. TransCanada also had a right-of-first-refusal to purchase Segment A.¹ When the parties confronted the challenges that could arise from both the OEB and the NEB having jurisdiction over Segment A, they agreed that the TBO option was the appropriate one, and TransCanada so-elected pursuant to the MOU.

It is TransCanada's intent today and always has been to use its capacity on Segment A on an open access basis to serve customers wishing to move gas on the Mainline. TransCanada does not hold any capacity on any pipeline for its own use: all of TransCanada's TBO entitlements are held for the benefit of whichever shippers contract for transportation services on the Mainline, and the same will be true for TransCanada's capacity on Segment A.

On June 21st, Union and Gaz Métro brought a motion to stay the Application (and for various related orders) on the basis that the MOU was not compliant with the Board's Storage and Transportation Access Rule. At the Technical Conference Enbridge disputed this contention, but before the Union/Gaz Métro motion could be heard, Enbridge agreed to the relief sought in the motion, purported to terminate the MOU, and agreed to amend its application. Accordingly, the motion was withdrawn.

In the July 22nd version of the Application, the commencement of Segment A has reverted to Parkway West, TransCanada has no right or obligation to utilize Segment A capacity, but Segment A remains an NPS 42 pipeline.

TransCanada's original evidence in this proceeding was premised on the February 12th version of Enbridge's GTA Project. The parts of that evidence that are not premised on the MOU remain valid; this supplementary evidence addresses the further Amended Application.

¹ See MOU Schedule D, "Term & Termination"

2.2 Related Litigation

The substance of the July 22nd changes to the Application is contained in Exhibit A-1-9, which is Schedule 9. Paragraph 2 of this exhibit begins: "The reason for this update is the termination of a Memorandum of Understanding ("MOU") with TransCanada that provided exclusive access to capacity on the Segment A pipeline of the GTA Project."

It takes two parties to make a contract, and without an applicable termination clause, it takes two parties to terminate it. TransCanada has commenced an action in the Ontario Superior Court for specific enforcement of the MOU. The July 22nd amendment to the GTA Project is entirely inconsistent with the terms of the MOU. TransCanada has put Enbridge on written notice that if it proceeds with the GTA Project otherwise than in accordance with the MOU, it does so at its peril. TransCanada has given notice to Union and Gaz Metro that they too proceed in the face of TransCanada's contractual rights in relation to Segment A.

In Enbridge's response to Exhibit I.A1.EGD (Update). GEC.50-a is a notice of an open season by Union and Gaz Métro for a pipeline to transport gas from Albion to the Mainline at or near Vaughan. The premise of the Amended Application and of the Union compression and looping applications being considered in these proceedings is that there will be available capacity on Segment A above the Enbridge distribution requirements and an interconnection between whatever pipeline takes gas from Albion, to the Mainline near Vaughan. That premise is the subject of a contested proceeding before the National Energy Board.

Accordingly, all of the leave to construct applications combined in these proceedings are contingent on the outcome of regulatory and judicial litigation.

3. Transmission System Expansion Guidelines ("Guidelines")

Neither Union nor Enbridge is in compliance with the Guidelines as they apply to their respective projects. Both LDCs have failed to provide a complete and accurate assessment of the impact of their respective proposed facilities on existing infrastructure and on Ontario consumers. In TransCanada's original evidence filed July, 2013, in Section 6.0, TransCanada discussed the Guidelines and its general view on the impact that these projects would have on existing transportation pipeline infrastructure in Ontario. TransCanada stated that it would continue to analyze these impacts.

Union, Enbridge and Gaz Métro have all calculated the "savings" that they submit will accrue to their customers if these applications are approved. TransCanada has reviewed these calculations and while TransCanada has serious concerns with some of those calculations, the major deficiencies are:

- (1) they do not in any way take into consideration the impact that the approval of these applications will have on TransCanada's existing infrastructure and the consequential impact that they will have on Ontario consumers (savings arising from a project are only transitory if they become increased expenses in subsequent years); and
- (2) the projected savings are premised on differences between gas commodity costs at Empress and at Dawn that are optimistic and inherently unreliable.

The major impact that the approval of the Union and Enbridge applications (the “Applications”) will have on TransCanada is in the loss of revenue from long-haul firm transportation (FT) service from Empress. If these applications are approved, the three LDCs have all stated that they will dramatically reduce their currently contracted FT volumes for service from Empress to their franchise areas. These reductions will be replaced with a roughly commensurate amount of short-haul service. The loss of revenue from the reduced long-haul service is roughly eight times the revenue from the replacement short-haul service.

As the Board is aware, Ontario consumers have historically paid increased TransCanada tolls, off-setting the short-term savings that the Ontario LDCs have realized by switching from long-haul to short-haul service on the Mainline. As TransCanada explained in its originally filed testimony, the RH-003-2011 Decision leaves higher Mainline tolls as the default outcome when TransCanada’s cumulative revenue deficiency in the Toll Stabilization Account (TSA) is disposed of at the end of the multi-year fixed tolls period, scheduled for December 31, 2017. While there is a risk that the NEB will require TransCanada to absorb some, or all of a revenue deficiency, if this does not happen, the savings that Enbridge and Union (and Gaz Métro) hope to realize with lower transportation costs will evaporate and Ontario consumers will have paid for more expensive Dawn-sourced gas to no benefit resulting in a net loss.

If the projects proceed TransCanada’s revenues will decline by approximately \$455 million per year, based only on the first phase of the proposed Union / Gaz Métro bypass². The replacement revenue from short-haul service would be approximately \$55 million per year. Thus the net revenue reduction experienced by TransCanada would be approximately \$400 million per year.

Another impact on Ontario consumers is that some pipeline company, TransCanada or another, must incur the costs required to build the facilities necessary to provide the increased replacement short-haul service on which the Applications are premised. If TransCanada builds a new pipeline from Albion to the Maple area the capital cost would be approximately \$310 million, and it can be expected that any other pipeline company would incur roughly the same costs. These are costs for redundant infrastructure, and must be deducted from any savings hoped to be achieved from the creation of such infrastructure.

In summary, the cumulative negative impact on TransCanada’s revenues between November 1, 2015 and December 31, 2017 from the loss of long-haul revenues—and thus the potential exposure of Ontario gas consumers when TransCanada’s TSA is disposed of after that date—will be approximately \$960 million, including carrying costs. In considering the exposure of Ontario gas consumers to the costs of the applied-for projects, the unavoidable cost of the redundant facilities (estimated above to be approximately \$310 million) must be added, and this for the dubious savings claimed by the LDCs as discussed below.

This issue is further explored in Section 5 below.

² The first phase of the proposed Union / Gaz Métro bypass is from Albion to Vaughan. The proposed second phase is to continue the bypass to Maple, which will result in even larger potential lost Mainline revenues, potentially to be paid by Ontario gas consumers on the disposition of the TSA.

4. Segment A is oversized

If Enbridge does not rely on the MOU to justify the sizing of Segment A, then its only known need is for the reinforcement of Enbridge's distribution system, and the appropriate size of Segment A is NPS 24.

Enbridge has failed to consider any potential Segment A pipe sizes smaller than NPS 36 and has recently amended its application to reflect an NPS 42 pipeline. Enbridge has quoted the capabilities of these pipe sizes as 1600 TJ/d (NPS 36) and 2000 TJ/d (NPS 42) (Exhibit I.A3.EGD (Update).TCPL.23) but has not provided sufficient data for a third party to verify these numbers. Taking these capabilities as provided, it seems obvious that NPS 36 and especially NPS 42 are significantly oversized for Enbridge's market requirement of 800 TJ/d. Enbridge has stated that GTA demand above 800 TJ/d "will be met through other supply paths" (Exhibit I.A3.EGD (Update).TCPL.24).

Given the refusal of Enbridge to provide the data with which the appropriateness of pipeline sizes smaller than NPS 36 can be considered by the Board, TransCanada has completed its own calculations on the capability of Segment A.

TransCanada has previously determined that in the context of the configuration contemplated in the MOU, that the capacities of Segment A with NPS 36 and NPS 42 pipe are 1600 TJ/d and 2000 TJ/d respectively. As these are exactly the same capacities as those quoted by Enbridge, TransCanada expects that Enbridge has used these same values to indicate the capacity of Segment A of these two pipeline diameters. However these calculations (i.e. both those of TransCanada and of Enbridge) are based on the requirements of TransCanada's integrated system. These requirements include a pressure at Parkway of 6000 kPa (870 psi) to account for area transient effects, and a pressure requirement of 4800 to 5000 kPa (700-725 psi) at Albion. Neither of these requirements would apply for a Segment A that is being used exclusively for Enbridge's distribution needs.

For a Segment A that is only for Enbridge's 800 TJ/d requirements, TransCanada has calculated that NPS 24 pipe is more than sufficient. First, TransCanada understands that Union's new compression, which includes loss of critical unit protection, will provide Enbridge with a pressure of 6450 kPa (935 psi) at Parkway West. Second, Enbridge has quoted the Maximum Operating Pressure (MAOP) of the system to which Segment A connects at Albion as 3344 kPa (485 psi) (footnote in Exhibit A, Tab 3, Schedule 3, Page 4 of 25). Based on these two values, TransCanada has calculated the capability of an NPS 24 at approximately 950 TJ/d, which is more than sufficient for Enbridge's requirements. TransCanada has calculated that if the Segment A pipe size was to remain at NPS 36 or NPS 42, the resulting pressure at Albion would be 6230 kPa and 6340 kPa respectively. To arrive at Albion with a higher than required distribution pressure as suggested by Enbridge (Exhibit I.A3.EGD (Update).TCPL.24) is overbuilding of either Segment A, Union compression or both.

Enbridge has stated (Exhibit I.A3.EGD (Update).TCPL.23(e)(i)) that "in the event that there are no shippers for the transportation service under Rate 332, the Company proposes to allocate the entire revenue requirement of Segment A to its distribution customers". Enbridge has declined to provide the difference in cost between NPS 24 and NPS 42 pipe, and so TransCanada has

performed the calculations. TransCanada has estimated that approximately \$135 million extra would be borne by distribution customers with an NPS 42 line.

As Enbridge has declined to provide it, the table below shows TransCanada's calculations of capability of a Segment A pipeline that is only connected to the Enbridge system, based on the pressure assumptions described above.

Table 4.1 Hydraulic Design Conditions and Resulting Pipe Capability

Inlet Pressure	6450 kPa
Outlet Pressure	3344 kPa
NPS 24 Capability	950 TJ/d
NPS 30 Capability	1725 TJ/d
NPS 36 Capability	2780 TJ/d
NPS 42 Capability	4100 TJ/d

As Enbridge has declined to provide it, the table below shows an estimate of Segment A costs. This shows a \$135 million dollar difference between the NPS 24 and NPS 42 cost.

Table 4.2 First Year Rate Base Addition for 27.4 km of Segment A

	27 km Parkway West to Albion Cost	Information Source
NPS 24	\$ 178 million	TransCanada estimate
NPS 30	\$ 224 million	TransCanada estimate
NPS 36	\$ 267 million	Exhibit I.A3.EGD (Update).TCPL.23
NPS 42	\$ 313 million	Exhibit I.A3.EGD (Update).TCPL.23

5. LDC savings calculations

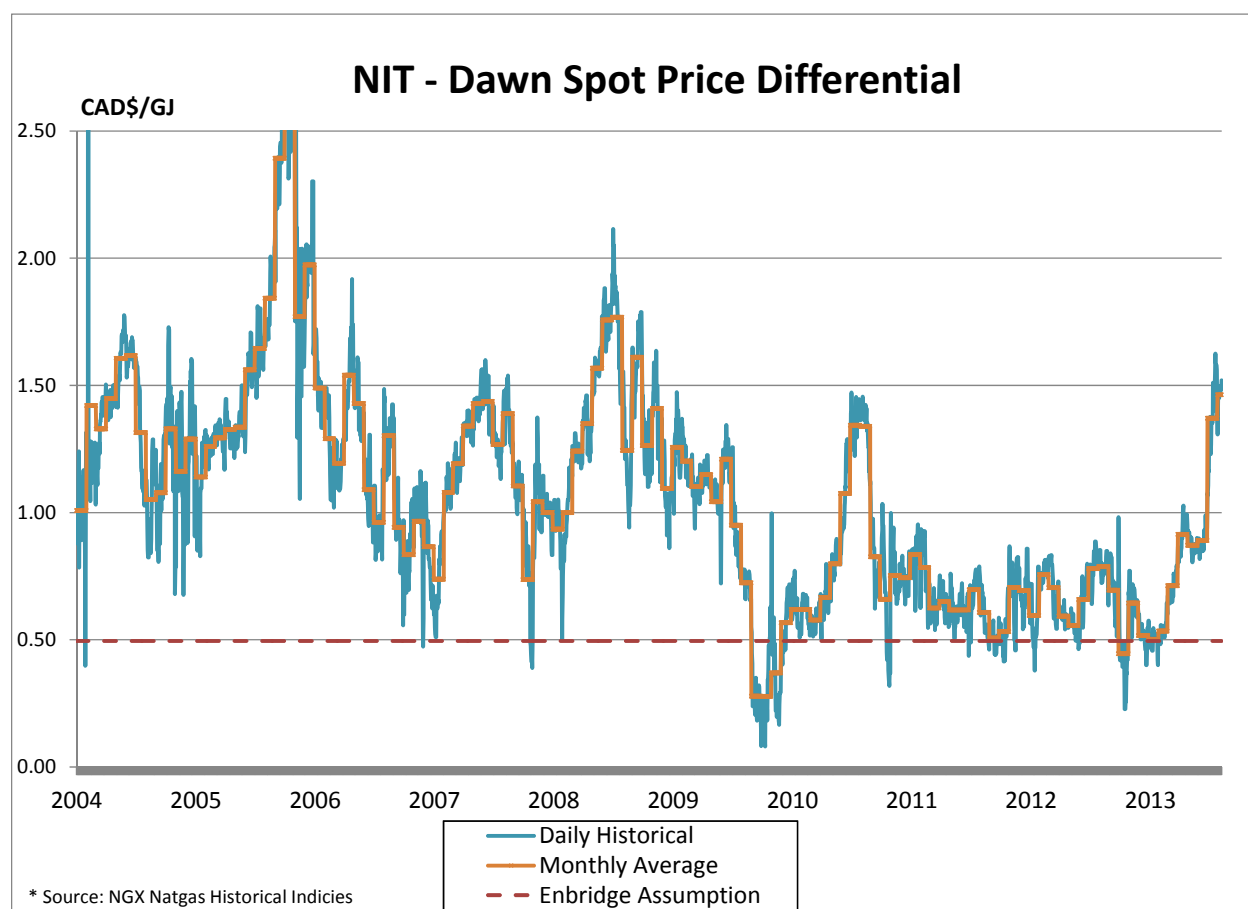
Union, Enbridge and Gaz Métro have provided evidence as to the savings that they hope to achieve if these projects proceed. Union and Enbridge have provided some detail of the derivation of the projected savings; Gaz Métro has provided very little detail.

In this case, the LDCs are proposing to reduce their purchases of gas at Empress by approximately 767,000 GJ/d and increase their purchases of gas at Dawn (and perhaps Niagara in Enbridge's case) by an equivalent amount. Gas is currently more expensive at Dawn than at Empress, so all other things being equal, the short term savings achieved by any of the LDCs is determined by deducting the higher commodity cost at Dawn relative to Empress from the lower tolls that the LDCs hope to pay from Dawn to their markets relative to the toll from Empress to their markets.

When looking ten years into the future, as the LDCs do in this case, informed observers will differ, sometimes by a considerable amount, on what the difference between the Dawn and Empress gas prices will be (the difference being termed the "spread" or "price differential").

This is evidenced in these proceedings by the deviance amongst the price differential forecasts used by the three LDCs. Union's experts forecast an average Empress-Dawn price differential of \$0.98/MMBtu US (\$0.917/GJ CDN) over the 2014-2023 period (see Sch. 11-4, col. C). Enbridge's experts forecast the Empress-Dawn price differential over the 2016-2025 period to be approximately \$0.49/GJ CDN. (See A-3-9 Attachment 1, pg. 3). Gaz Métro provides an Empress-Dawn price differential of \$0.73/GJ (Exhibit M.SCGM.TCPL 1). TransCanada is unable to determine how it was applied.

The following chart demonstrates the range of the price differentials between NIT and Dawn since 2004³, and hence the fragility of savings forecasts that are premised on price differentials:



It can be seen that the price differential has varied from monthly averages of approximately \$0.25/GJ to over \$2.50/GJ, with the current price differential of approximately \$1.50 being in the range of the historical norm. Accordingly, net savings are uncertain and there could in fact be a loss depending on the future price differentials between Empress and Dawn.

In other words, if the projects proceed, TransCanada's long-haul revenue loss will be a certainty and this represents a potential cost to Ontario consumers. The costs of the redundant facilities

³ The NIT/Dawn price differential is used as a proxy for the Empress/Dawn price differential

will be a certainty and these represent direct costs to Ontario consumers. The predicted savings are anything but certain.

For example, Union calculates its savings at approximately \$15 million per year premised on a price differential of \$0.92/GJ. Price differentials are currently in the range of \$1.50/GJ, which if sustained would erase Union's predicted savings and give rise to a substantial loss.

The following table indicates the LDCs' calculations of savings⁴, with the resulting impacts on the revenue deficiency in the TSA⁵ that tracks revenues during the multi-year fixed tolls period (all analysis assumes the Enbridge current Base Case in the July 22 Updated Evidence):

Table 4.3 Net Impact Based on LDC Stated Savings

(\$M / year)	Forecasted Savings	TSA Impact	Net Impact
Gaz Métro	88	(117)	(29)
Enbridge	173	(251)	(78)
Union	15	(33)	(18)
Total	276	(401)	(125)

The following table provides the results of the same calculations, but using Union's assumed \$0.92/GJ price differential and TransCanada's calculation of LDC savings:

Table 4.4 Net Impact Based on \$0.92/GJ Price Differential from Empress to Dawn

(\$M / year)	Forecasted Savings	TSA Impact	Net Impact
Gaz Métro	30 ⁶	(117)	(87)
Enbridge	98	(251)	(153)
Union	9 ⁷	(33)	(24)
Total	137	(401)	(264)

The following table provides the results of the same calculations, but using current price differentials of \$1.50/GJ and TransCanada's calculation of LDC savings:

Table 4.5 Net Impact Based on \$1.50/GJ Price Differential from Empress to Dawn

(\$M / year)	Forecasted Savings	TSA Impact	Net Impact
Gaz Métro	(26)	(117)	(143)
Enbridge	(6)	(251)	(257)
Union	(6)	(33)	(39)
Total	(38)	(401)	(439)

As shown in the Table above, the LDCs actually incur higher gas costs by shifting gas purchases to Dawn from Empress using current price differentials.

⁴ TransCanada has been unable to confirm these calculations and provides its own calculation of LDC savings in subsequent tables.

⁵ TSA and the NEB RH-3-2011 Decision are discussed in detail in TransCanada's original evidence.

⁶ Exhibit M.TCPL.CME.1, Attachment 1A, page 3.

⁷ Exhibit M.TCPL.CME.1, Attachment 1A, page 1.

And it must not be forgotten that, as previously noted, \$310 million⁸, in addition to \$135 million (see table 4.2) to increase the size of Segment A from NPS 24 to NPS 42, will be spent to build facilities to take the gas from Enbridge's Segment A to the Maple area so that the \$264 million (assuming a \$0.92/GJ price differential) or \$439 million (assuming a \$1.50/GJ price differential) in losses can be achieved.

TransCanada notes that Enbridge's calculations assume two major contractual changes that may or may not occur prior to November 1, 2015. If these changes do not occur as assumed by Enbridge, the savings claimed by Enbridge will be over-stated.

First Enbridge has assumed that its Direct Purchase customers will contract for an additional 157,768 GJ/d of long-haul firm service from Empress. Enbridge then assumes that if the Applications are approved, these Direct Purchase customers will drop their long-haul firm service contracts and take an assignment of short-haul Dawn-Parkway capacity on the Union system from Enbridge. In Exhibit I.A1.Enbridge (Update).TCPL.6, Enbridge was asked to provide some evidence or rationale to support this assumption. Enbridge did not provide any such evidence. Consequently TransCanada assumes that this assumption has no supporting evidence. TransCanada notes that it has not received any requests for long-haul firm service to the Enbridge CDA from any Direct Purchase customer. If this Enbridge assumption turns out to be false, Enbridge's claimed savings would be reduced by approximately \$60 million/year.

Second, Enbridge has assumed a large increase (191,500 GJ/d) in the amount of contracted long-haul STFT by 2016 relative to current levels. In Exhibit I.A1.EGD (Update).TCPL.13, TransCanada requested an explanation for this large increase. Enbridge declined to provide a response so this assumption is not supported by any evidence. Again, any assumed contractual long-haul volume that does not actually materialize (and thus does not exist for conversion to short-haul) serves to incorrectly increase the savings claimed by Enbridge. The unsubstantiated 191,500 GJ/d of incremental STFT volumes incorrectly increase the savings claimed by Enbridge by approximately \$70 million/year.

6. Supposed supply diversity from the Applications

6.1 GTA Project exacerbates a narrow supply path diversity for Enbridge

TransCanada submits that, especially from an LDC perspective, transportation path diversity is as important as supply diversity, because the latter goes to economic opportunities whereas the former goes to both economic opportunities and security of supply. On the measure of transportation path diversity, the GTA project fails because it leaves the Enbridge franchise area increasingly dependent on one pipeline system, Union's Dawn-Parkway system. Based on information provided in the response to Exhibit I.A1.EGD (Update).TCPL.1, TransCanada calculates Enbridge reliance on the Union system as follows:

⁸ Plus the \$25 million that it will cost to expand service to Enbridge on TransCanada's Hamilton Line

Table 6.1 TransCanada and Union Contracts – 2015 with GTA Project Facilities

Enbridge Contract by Path	TJ/d	% of Total
TransCanada Long-haul (includes STFT)	501	12.3
TransCanada Short-haul (includes STS)	954 ⁹	23.4
Union contracts	2,625	64.3
Total	4,080	100

What the numbers show is that of the contracts that Enbridge holds with TransCanada and Union to serve its customers, 83% of those contracts rely on the Dawn to Parkway system.¹⁰

TransCanada also notes that Enbridge, as indicated in its response to Exhibit.I.A3.EGD (Update). APPrO.16, intends to contract for an additional 170 TJ/d of short haul service to the Enbridge EDA, which will further increase its reliance on Union's Dawn to Parkway system. TransCanada considers this to be an important metric that Enbridge has omitted from its analysis. A major incident on the Union system could result in major supply impact on the Enbridge franchise area.

TransCanada disputes the claim that the GTA project increases supply diversity. Although the project may increase access to additional US sourced supply at the Dawn Hub, such as via the proposed Nexus project, the majority of that supply must still come to the GTA on the Union system. As noted above, this makes the Enbridge franchise more dependent on only one transportation path, the Union system.

Enbridge has risked a further reduction in supply diversity by purporting to cancel the MOU. Under the MOU, Enbridge's supply to the GTA will flow directly into Enbridge's GTA reinforcement project from TransCanada's proposed Bram West interconnect. By connecting to the Mainline at Bram West, Enbridge would be able to access gas supplies delivered from the north through the Mainline in the event of an incident on Union's Dawn to Parkway system. Connecting the GTA project as now proposed by Enbridge in the Amended Application eliminates this supply option, and leaves Enbridge distribution customers with an increased level of exposure to an incident on Union's Dawn to Parkway system.

7. WCSB supply is understated

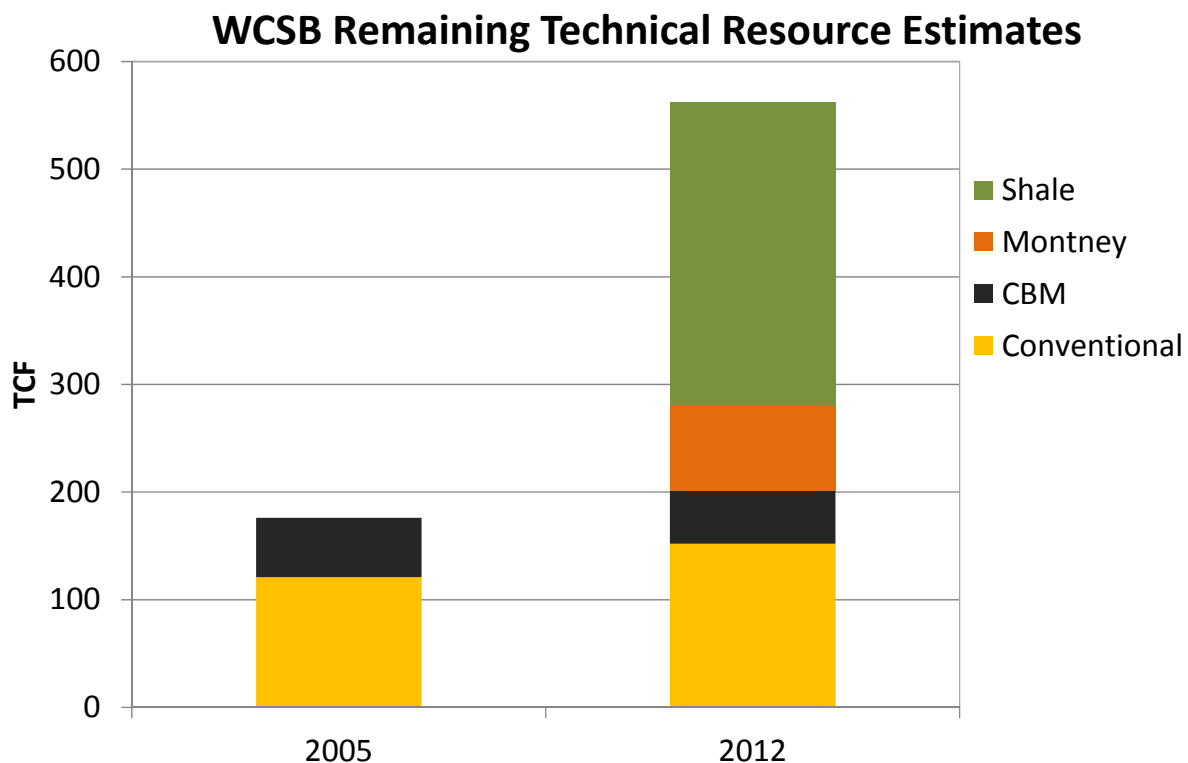
The supply analysis put forward by Enbridge and Union in their applications provides a misleading characterization of the WCSB as a potential source for Eastern LDC supply. TransCanada conducts detailed WCSB supply analysis and is providing its views on the future potential for WCSB gas supply as follows.

TransCanada uses a technical recoverable estimate of approximately 560 Tcf for WCSB ultimate potential resources in its Base Case supply analysis. This number has more than tripled since

⁹ Contract volumes on the Hamilton line total 200 TJ/d, leaving 754 TJ/d of TransCanada short-haul dependent on the Union system.

¹⁰ The TransCanada short haul contracts referenced in the table above include 200 TJ/d that Enbridge intends to contract from Niagara to the Parkway Enbridge CDA, which will not utilize the Dawn to Parkway system. As a result, this contract quantity is not reflected in the 83% number.

- 1 2005. This estimate has never been higher. Figure 7-1 shows the growth of forecast ultimate
2 potential resources over time.



3 **Figure 7-1 WCSB Remaining Technical Resource Estimates**

TransCanada resource estimates based on compilation of data from National Energy Board (NEB), Energy Resources Conservation Board (ERCB), Alberta Geological Survey (AGS), British Columbia Ministry of Energy and Mines, (BCMEm), Canadian Society of Unconventional Gas (CSUG), Canadian Association of Petroleum Producers (CAPP)

- 4 By this measure there are ample supplies in the WCSB to satisfy eastern LDC markets for many
5 decades to come.
- 6 With the advent of horizontal drilling and multi-stage fracturing, the North American gas
7 supply/demand balance has been altered, with a supply glut dramatically reducing prices (Figure
8 7-2).

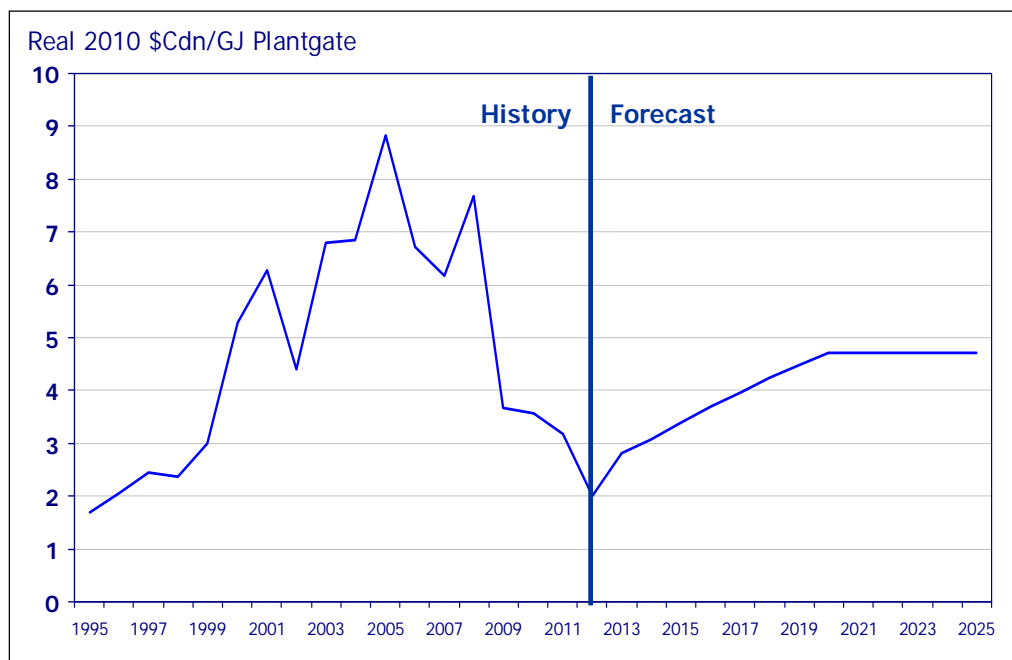


Figure 7-2 Canadian Plant Gate Gas Prices

The low prices had a major impact on WCSB conventional supply development as producers have avoided developing some of the more marginal gas plays that have higher development costs associated with them. As a result, WCSB conventional production has declined (Figure 7-3).

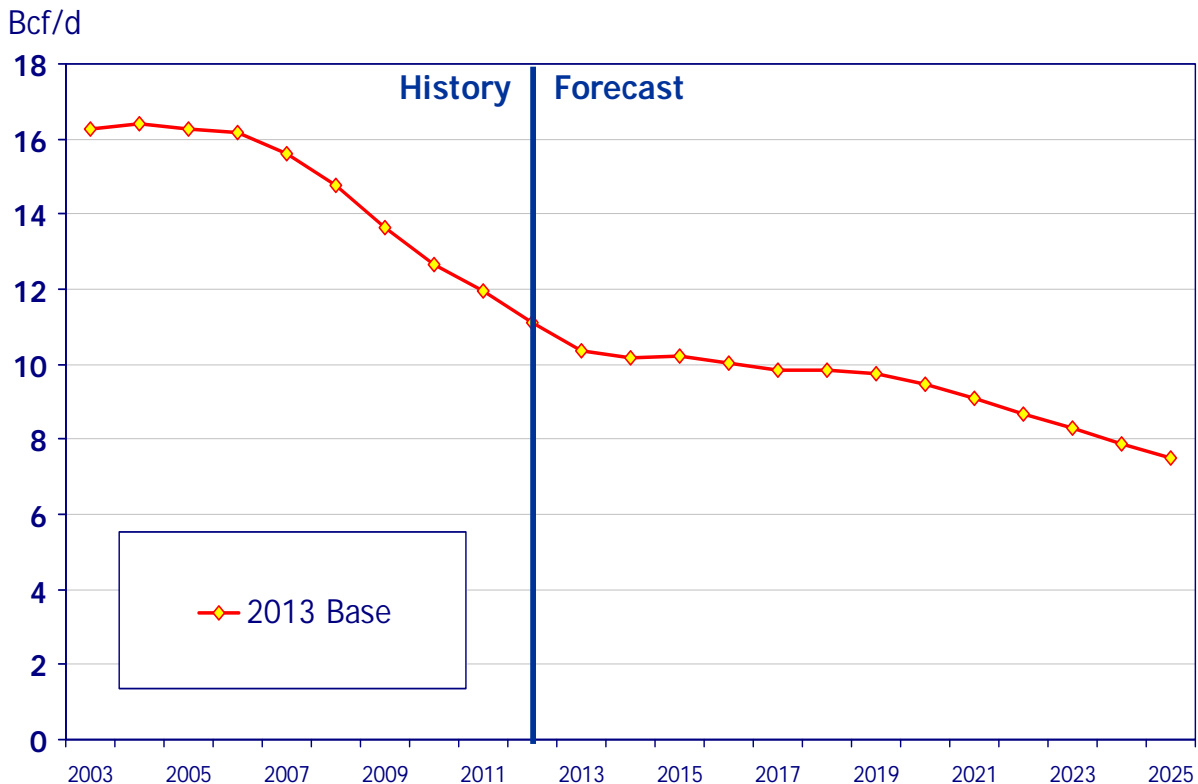


Figure 7-3 WCSB Conventional Supply

Due to improvements in technology, changes in regulation, royalty incentives, production efficiencies, and the expectation of higher prices, conventional production is now forecast to flatten out over the 2013-2018 period before it resumes its long term decline. By 2025, TransCanada's Base case declines to approximately 7.5 Bcf/d from the 2012 level of 11.0 Bcf/d.

Major advances in technology, particularly in the use and improvement of multi-stage fracturing and horizontal drilling technology, have allowed new unconventional resources such as the shales and other tighter formations to be tapped. Supply costs for these resources have declined over time as the technology continues to improve. As a result, technical recoverable resource estimates for the basin have increased substantially.

As a result of the generally positive developments related to the potential economic production of shale and other tight formation plays and in anticipation of LNG export capability, TransCanada has included approximately 11 Bcf/d of production in its Base Case by 2025 from new areas such as the Montney gas play, Duvernay, Horn River, Liard and Cordova shales (Figure 7-4).

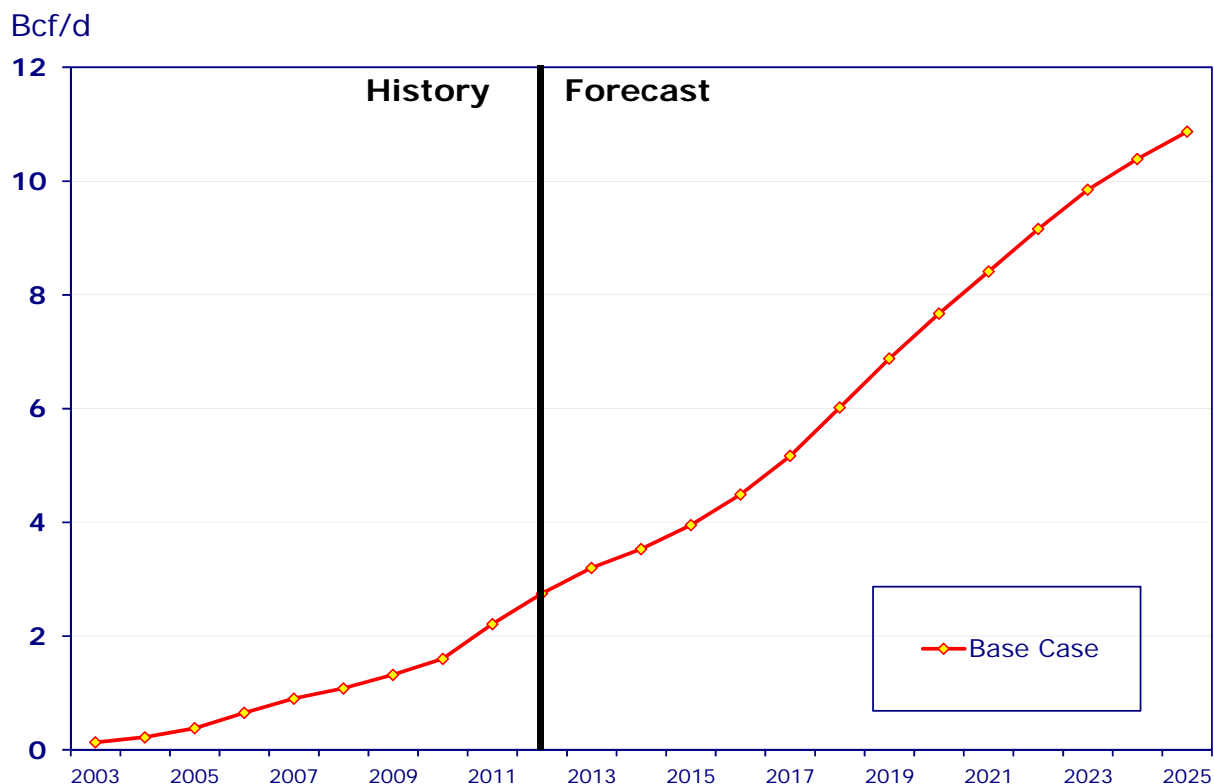


Figure 7-4 WCSB Unconventional Supply

The significant growth in unconventional supply results in TransCanada's Base Case forecast for total WCSB supply (conventional and unconventional combined) rising to about 18 Bcf/d by 2025 (Figure 7-5). Unconventional production in the WCSB is real, happening today, and is not just a potential future supply. At present, unconventional production is already approximately 3 Bcf/d and is growing. Producers are developing these supplies today and are asking TransCanada (and other companies) to connect these supplies to its existing pipeline grid with actual contracts. Currently over 70% of all supply development activity in the WCSB is now targeting unconventional plays.

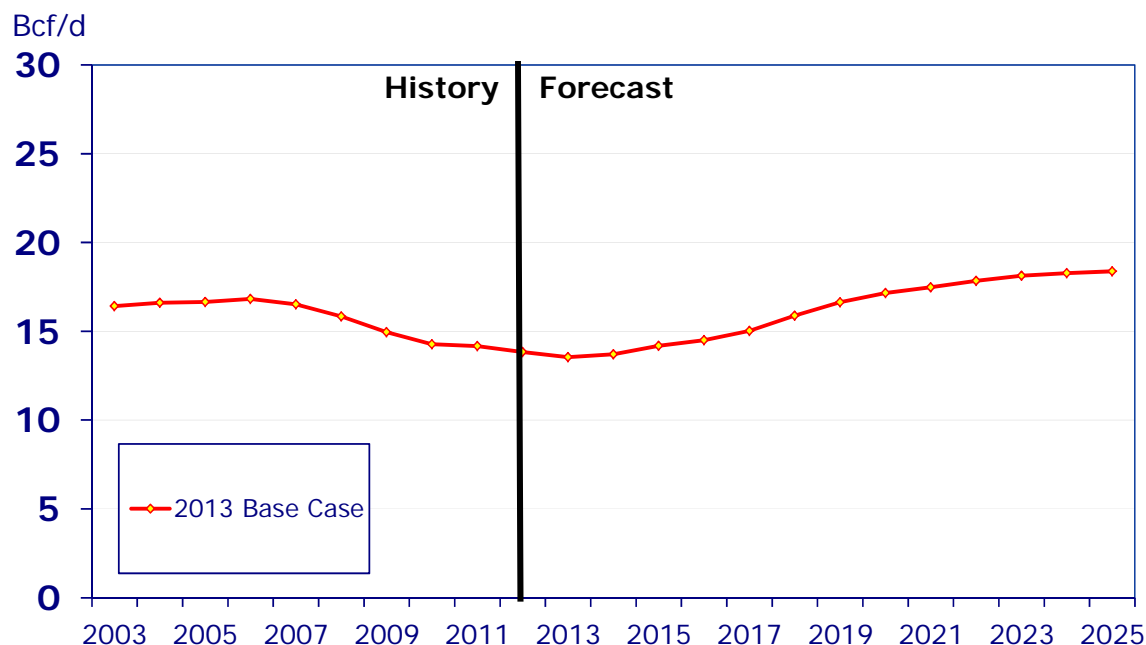
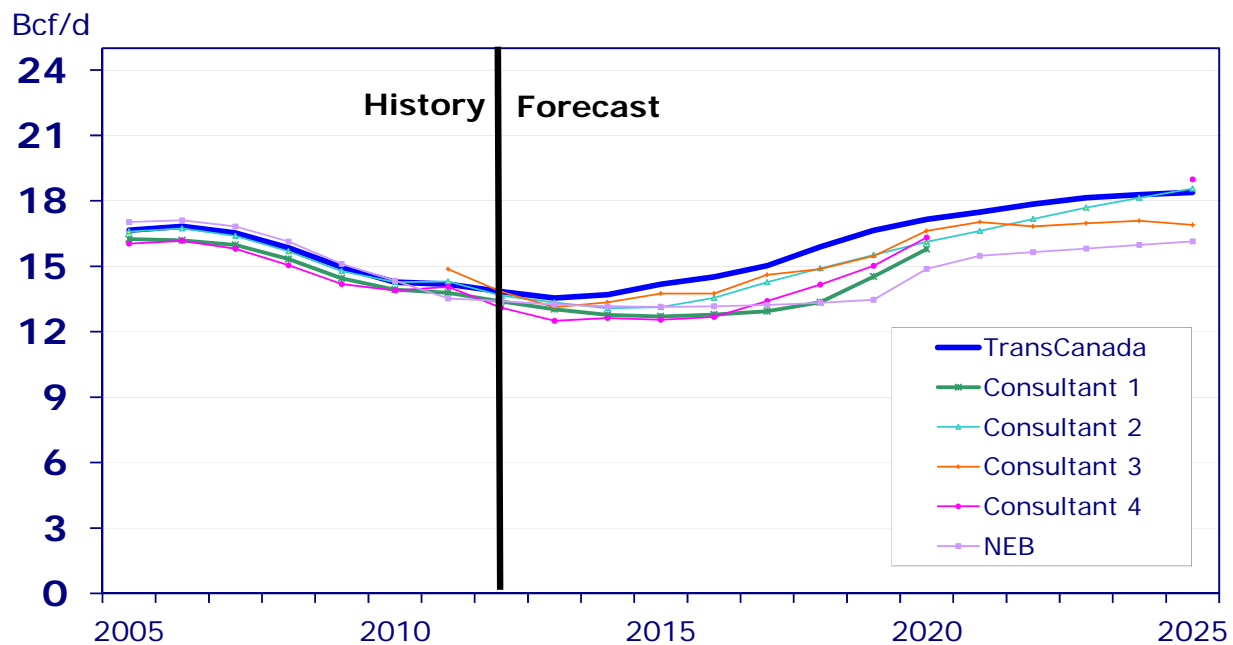


Figure 7-5 Total WCSB Supply

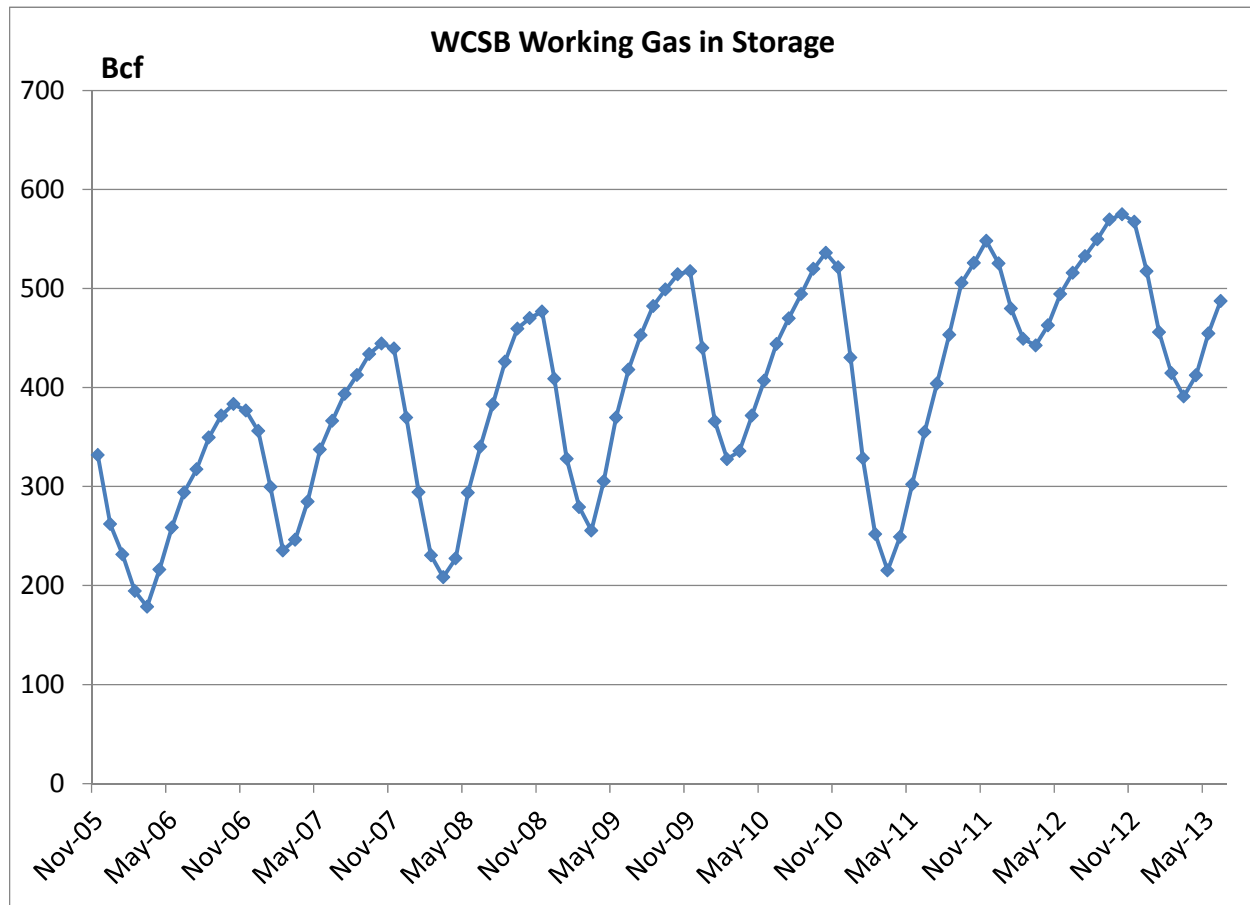
TransCanada has compared its forecast to third party forecasts (Figure 7-6). The forecasts range from a low of 16 Bcf/d to a high of 19 Bcf/d by 2025. If all forecasts were normalized to a common starting point for the year 2013, 5 of the 6 forecasts are within 0.8 Bcf/d by 2020.



Sources: Energy Supply and Demand Projection to 2035, NEB, 2011. Consultant forecasts are proprietary.

Figure 7-6: WCSB Supply Comparisons

Another clear indicator of ample WCSB supply is the amount of gas in western storage facilities at the end of both the injection and withdrawal seasons over the last 8 years (Figure 7-7). These growing storage volumes and capacity indicate that the WCSB is awash with supply and capable of meeting seasonal demands. The recent decline in transportation of gas to eastern markets from the WCSB is not due to a lack of supply available, rather a lack of contracting and demand.

**Figure 7-7 WCSB Working Gas in Storage**

Source: NGTL system receipts and historical WCSB flow balance

Both Enbridge (EB-2012-0451, Exhibit A, Tab 3, Schedule 5, page 16, Figure 9) and Union (EB-2012-0433, Section 4, Figure 4-4) refer to a graph from an ERCB supply study which shows only conventional supply from only Alberta. They claim that production will decline to approximately 7 Bcf/d by 2021, which is a gross misrepresentation of the supply capability of the WCSB. The appropriate forecast is for both conventional and unconventional supply for the total WCSB, as presented in Figure 6-5. This figure shows total WCSB supply at approximately 17 Bcf/d in 2021, with this forecast validated by several other forecasts including the NEB.

Although west coast LNG export facilities will access some of this supply, there will be ample volumes remaining to securely supply eastern markets for decades to come as the ultimate

potential resource base has tripled since 2005 when the eastern LDCs were largely accessing WCSB supply.

8. Conclusion

It is submitted that this supplemental evidence establishes that Segment A, as currently applied for in the absence of the MOU, is substantially over-sized and will represent a wholly unnecessary cost burden to distribution customers.

In addition to being over-sized, Segment A in combination with the other projects applied-for in these proceedings contributes to approximately \$1.3 billion in capital expenditure: \$1 billion for the Union and Enbridge projects and \$310 million for the pipeline from Albion to Maple, whoever builds it. The evidence indicates that this capital cost will be incurred with the result that the LDCs will expose their customers to the risk of almost \$1 billion in future tolls when TransCanada's TSA is disposed of. And all of this is being done so that the LDCs can pay between \$260 million and \$425 million /year more for their gas by buying it at Dawn¹¹. Into the bargain, Enbridge reduces its supply path diversity to the point where it is highly reliant on a single path.

For these reasons, TransCanada opposes the Amended Application and submits that it is not in the best interest of the nation, Ontario, or Ontario's consumers.

¹¹ Based on Empress to Dawn price differentials of \$0.92 and \$1.50/GJ



ONTARIO ENERGY BOARD

FILE NO.: EB-2012-0433
EB-2012-0451
EB-2013-0074

VOLUME: 3

DATE: September 17, 2013

BEFORE:	Cynthia Chaplin	Presiding Member and Vice-Chair
	Marika Hare	Member
	Peter Noonan	Member

1 MR. POCH: Do those two terms survive regardless of
2 what happens in these proceedings?

3 MR. ISHERWOOD: They do.

4 MR. POCH: All right. So you're going to enjoy that
5 benefit regardless?

6 MR. ISHERWOOD: Yes.

7 MR. POCH: Okay.

8 So I want to just look at that then, how the math
9 works now. You've spoken of it that you're going to -- the
10 intent is that the differential between short-haul and
11 long-haul is going to be maintained, whatever happens to
12 tolls, that the differential in dollars and cents, as
13 opposed to percentage, you expect -- you expect -- and the
14 intent is to try to maintain it.

15 MR. ISHERWOOD: That's correct.

16 MR. POCH: And what level is the expectation? I think
17 I heard \$1.45, roughly?

18 MR. ISHERWOOD: No, sorry, the expectation in this
19 element is a surcharge -- or an increase in the short-haul
20 tolls. We're going to do our best to try and keep that to
21 below 50 percent.

22 MR. POCH: No, I didn't mean the increase. I meant
23 what's the differential between short-haul and long-haul?
24 What are you expecting to hold?

25 MR. ISHERWOOD: Today, short-haul from Parkway to the
26 EDA is 25 cents, and I believe the long-haul path to the
27 RDA is \$1.65, I believe.

28 MR. POCH: Right. And that was -- so we're talking

1 about \$1.40 is the difference.

2 MR. ISHERWOOD: Today, correct.

3 MR. POCH: Today. Okay. And the intent is to try to
4 keep it at that scale?

5 MR. ISHERWOOD: That's correct.

6 MR. POCH: All right. TCPL cites in their evidence --
7 it's cited that Union's long-term forecast for the price
8 differential -- commodity price differential between Dawn
9 and Empress as 92 cents?

10 MR. ISHERWOOD: That's correct.

11 MR. POCH: You hold by that?

12 MR. ISHERWOOD: Yes.

13 MR. POCH: All right. So when you calculate your gas
14 savings, in simple terms you're saying -- you're looking at
15 the volumes that you can -- that these projects will allow
16 you to move from long-haul to short-haul. You're going to
17 save a \$1.40 on each cubic metre, and you're going to pay
18 92 cents more for the gas, and so the difference between
19 those figures is your gas savings. Is that right?

20 MR. ISHERWOOD: Yes, I think so.

21 MR. POCH: Okay. And so for every \$1.40 that you save
22 on transportation costs, TCPL loses \$1.40 in revenue,
23 roughly?

24 MR. ISHERWOOD: That's true.

25 MR. POCH: All right. Now, the first six years of
26 that you're going to be -- you and all shippers are going
27 to be making a bridging payment.

28 MR. ISHERWOOD: That's correct.

1 MR. ISHERWOOD: So the 48 cent savings, if you want.
2 And we're talking about here about a 12 cent increase in
3 short-haul tolls. So there is still a savings within the
4 bucket.

5 MS. CHAPLIN: But I guess what I'm trying to
6 understand is: Is the reason that there are savings
7 because the shortfall is going to be collected over a
8 longer period of time than what it's being accrued in? In
9 other words, it's six years of shortfall being collected
10 over 16 years, and that's why you see some savings?

11 MR. ISHERWOOD: I think that would have a small
12 impact. The bigger impact is the difference in price of
13 gas between buying gas at Dawn versus buying gas in
14 Alberta. So without even this agreement happening, to
15 calculate the savings you need to look at the toll
16 differential between long-haul and short-haul, which we've
17 gone through in some depth.

18 The other thing we always look at is the difference in
19 cost of buying gas at Empress versus buying gas at Dawn.
20 And that's an important part of the calculation as well.

21 The impact of the bridging contribution being spread
22 out 16 years versus six years would have an impact as well,
23 but the bigger impact is the gas cost savings between Dawn
24 and Empress.

25 MS. CHAPLIN: Thank you.

26 MR. POCH: Mr. Isherwood, just in that compare -- you
27 compared the 48 cents that you're -- sort of your net
28 savings, by saving \$1.40, but having to pay an extra 92

1 cents. You save 48, but for every 48 cents you save, at
2 the margin, all else being equal -- I hear you, Mr. Henning
3 -- all else being equal, TCPL loses \$1.40 that would add to
4 their bridging needs.

5 MR. ISHERWOOD: We've already established that, yes.

6 MR. POCH: All right. I just wanted to make sure,
7 because we don't want to compare apples and oranges. The
8 12 cents is a 16-year amortized number, as opposed to a
9 six-year number.

10 MR. ISHERWOOD: But I think, you know, the important
11 thing here is Ontario needs to get access and Quebec needs
12 to get access to Dawn at Niagara. Other utilities, other
13 market participants, have already gotten access. I think
14 Ms. Giridhar described this at the Friday technical
15 conference: The settlement agreement is about getting
16 equal access to everybody. There's no first, there's no
17 second. Everybody gets access, and we get the same
18 benefits, and TCPL is protected. I think it's really a
19 win-win amongst the market and the pipeline company, TCPL.

20 MR. POCH: Well, I certainly see how TCPL's
21 shareholders are -- get some protection here, and I
22 understand that the gas companies here get to put pipe in
23 the ground. I guess what we're looking at is whether it
24 helps the end-users.

25 MR. ISHERWOOD: I think the point that Mr. Henning
26 made yesterday was, without this type of agreement Ontario
27 would be stranded. We will have the highest cost gas in
28 North America. So what we're trying to protect is to make

1 MR. SMITH: Thank you very much, members of the panel.
2 Those are my questions.

3 **QUESTIONS BY THE BOARD:**

4 MS. CHAPLIN: Thank you. Following on from that, Mr.
5 Isherwood, I have one question still on that general area.
6 So you've given the explanation for the importance of these
7 projects in terms of enhanced access. But one of the
8 underpinnings of the application was this calculation of
9 gas cost savings.

10 MR. ISHERWOOD: Yes.

11 MS. CHAPLIN: So I'm going to come back to that again,
12 just to see if I can understand it better, because my
13 understanding of the agreement with TCPL and sort of the
14 general expectation is that TCPL more or less is going to
15 be kept whole as a result of this shift from long-haul to
16 short-haul?

17 MR. ISHERWOOD: That's correct.

18 MS. CHAPLIN: So maybe the monies reallocated are
19 moved around, but there's not really -- not driving costs
20 out of the TCPL system. They're still going to be
21 recovered?

22 MR. ISHERWOOD: That's correct.

23 MS. CHAPLIN: And I believe you've also testified that
24 the gas commodity is more expensive at Dawn than at
25 Empress?

26 MR. ISHERWOOD: Yeah, so we have that 92-cent number.

27 MS. CHAPLIN: Right.

28 MR. ISHERWOOD: On the record. So the difference is

1 92 cents.

2 MS. CHAPLIN: So can you explain for me how are there
3 any gas cost savings in that situation? In the broad
4 sense?

5 MR. ISHERWOOD: So in the new framework, if the
6 settlement agreement gets approved by the NEB, there's
7 still the differential between long-haul and short-haul
8 that still drives that \$15.4 million savings.

9 So the way I look at it is we're going from a
10 framework today to the new framework, and that has the
11 costs increasing for long-haul and short-haul. But I think
12 the part that I'd like to think about as well is the
13 current framework, even though there's a lower toll, is not
14 recovering all its costs today, and those costs are
15 unfortunately accumulating in a deferral account that gets
16 dealt with in 2017.

17 So I think people have a comfort level that today's
18 tolls are cheaper. Why don't we just keep going on those
19 tolls?

20 The reality is in four years, in 2017, those costs
21 will become as high as the -- as high as the settlement
22 tolls or potentially even higher. And in the meantime for
23 those four years, if we left it alone and just kept on the
24 compliance tolls, there's no access to Dawn for Ontario or
25 for Quebec. So what the loss is is access to the new and
26 growing supplies in Marcellus and Utica; that's the
27 difference.

28 So to the extent that we can get TCPL comfortable and

1 they can recover their costs, then it opens up the whole
2 world of options and choice for customers to go back to the
3 new supply.

4 MS. CHAPLIN: And have you quantified that broader
5 analysis of access? Or is that something the joint panel
6 may be able to do?

7 MR. ISHERWOOD: Yeah, I think -- and I think, just
8 based on yesterday and today, I think it would be important
9 for the joint panel to come forward with not the only
10 expectations of the tolls in that new settlement, but to
11 also describe why the existing framework is not
12 economically advantageous for Ontario or Quebec, and what
13 that means to us as well.

14 MS. CHAPLIN: Or some sort of quantitative comparison?

15 MR. ISHERWOOD: Yes.

16 MS. CHAPLIN: Thank you. That would be helpful.

17 The Panel has no further questions, so this witness
18 panel is excused with the Board's thanks.

19 And let's press on and...

20 MR. SMITH: Radical changes ahead. I will call Ms.
21 George to come forward, and ask, I believe, three of the
22 six to leave us.

23 MR. ISHERWOOD: I'll be a lot more comfortable up
24 here, then.

25 **UNION GAS - PANEL 3**

26 **Jim Redford, Previously Sworn**

27 **Mark Isherwood, Previously Sworn**

28 **Paul Rietdyk, Previously Sworn**

SETTLEMENT TERM SHEET

This Term Sheet sets out all of the material terms of settlement among Gaz Metro, Union Gas Limited (Union), Enbridge Gas Distribution Inc. (Enbridge or EGD) (jointly, “the LDCs”) and TransCanada PipeLines Limited (TransCanada or Mainline) (all four settlement participants may be referred to jointly as “the Parties”) and is legally binding on the Parties upon execution of this Term Sheet and until such time as the Parties have entered into a Settlement Agreement that by its terms supersedes this Term Sheet.

High Level Principles

- The Mainline will be segmented so that the Eastern Ontario Triangle (EOT) rate base is separated from the Northern Ontario Line (NOL), and the Prairies;
- Capital expansions in the EOT will be promptly pursued to meet market needs and will be added to EOT rate base. TransCanada agrees to accommodate the requests of EOT shippers that request additional short haul capacity during the term of the settlement and reasonably thereafter according to industry practice;
- A temporary transitional bridging contribution that ensures the Mainline recovers all of its annual costs (adjusted accordingly to reflect TransCanada’s contribution) is made by shippers;
- After the end date of this agreement, the Prairies and NOL will be tolled independent of the EOT;
- This Term Sheet will supersede the prior Memorandum of Understanding made between TransCanada and EGD dated January 28, 2013, and amended on April 26, 2013 and May 21, 2013 (the MOU). On execution of this Term Sheet, the MOU is revoked in its entirety;
- Parties supporting this settlement agree to file in a timely manner and support any regulatory applications required to implement the terms of this proposal, even if the settlement is contested by other third parties, including representations in front of Provincial regulators if a party requests it; and
- The Parties will by September 10, 2013 obtain internal approvals obligating each to execute an agreement (Settlement Agreement) pursuant to the terms and principles set forth herein.

Term of the Settlement Proposal on Tolls Aspects

- The term related to the toll segmentation agreement within this settlement will be from January 1st, 2015 to December 31, 2020 (with the exception of the bridging contribution for supply flexibility addressed below and the tolling methodology which will have no specified expiry date); and
- Compliance tolls remain in effect until December 31st, 2014.

- This commitment does not preclude the LDCs accepting direct supply within their own franchise on a marginal basis (less than 5% of their needs / example : possible bio-methane projects promoted or supported by a government in the future);
- TransCanada agrees that beyond a total flow from Kirkwall to Parkway on the Domestic Line of approximately 200,000 GJ/d plus local deliveries off the line, TransCanada will commit to using Union's Dawn to Parkway system for any current or future flow requirements between either Dawn or Kirkwall to Parkway for at least the next 16 years;
- TransCanada agrees not to initiate bypass facilities to serve end users within the LDCs' franchise areas for the 16 year term;
- Nothing in this agreement will impede TransCanada's ability to utilize GLGT backhaul up to currently contracted for quantities;
- Roll-in of TQM and Union TBOs in the EOT segment will be actively supported by all the parties to this agreement for at least the next 16 years; and
- All LDCs will commit to maintain a minimum of 13% of their system supply transportation portfolio in long haul paths until at least the end of 2020. The system supply transportation portfolio of each LDC is the overall capacities needed to serve the franchise not including their direct purchase customers.

Contracts Duration and Renewal Notice

- Renewal notice for all firm contracts on the Mainline to be set to 2 years;
- In the case that new facilities are needed on the Mainline, all existing contracts with termination dates past the proposed build date, that can affect the design of the new facilities, will be required to be extended by five years commencing on the date the new facilities are placed in service. Shippers requesting new service requiring incremental facilities will be required to agree to a 15 year term commencing on the date the new facilities are placed into service;
- A shipper with a long haul contract will have the option and full flexibility of converting to short haul within the term of their contract subject to existing capacity being available (and the 13% of portfolio long haul minimum noted above), or if new capacity is required, a 3 years notice (to allow for construction) and a 15 year term commitment per the above. However, the 3 years notice will not be applicable to the King's North project or the 2016 Expansion described in "Parkway to Maple Issues" below; and
- Loss of revenues on long haul paths will not be used to assess the viability of a new build to serve the market via short haul.

Litigation Issues

A number of proceedings are in progress at the NEB, OEB and the Ontario Superior Court of Justice, in which TransCanada and the LDCs are in an adversarial mode. All parties agree to withdraw from litigation upon the receipt by all parties by no later than September 10, 2013 of their respective Board of Director approvals or other internal approvals as required, pursuant to the terms set forth in this Term Sheet:

- Enbridge, Gaz Metro and Union will withdraw their Complaint filed at the NEB against TransCanada;
- Union and Gaz Metro will withdraw their Section 71 application at the NEB;
- Union and Gaz Metro will not file an application at the OEB for a leave to construct a jointly owned pipeline originating at Albion, until an NEB decision is rendered on the Settlement Agreement;
- EGD and TransCanada will execute a full and final release of any and all claims arising out of the MOU, in a form approved by EGD in its sole discretion, of TransCanada's claim issued in the Ontario Superior Court of Justice bearing Court File No. 13-58570 (the "Claim"), commenced in Ottawa on August 16, 2013. TransCanada and EGD will consent to an order dismissing the Claim against EGD on a without costs basis; and
- TransCanada will support the immediate build of Parkway West, Parkway D, Brantford to Kirkwall and the GTA project as currently proposed (42 inches from Parkway). TransCanada will withdraw its intervention in the OEB proceeding and will send a letter to the OEB indicating that as a result of the settlement, it now supports the projects.

TransCanada will continue with its Tariffs and Services Modifications application (RH-001-2013) with the NEB, however, upon regulatory approval of the Settlement Agreement, will amend its tariff to effect the relevant terms and conditions of this settlement.

In recognition of the Parties' desire to work co-operatively on behalf of their customers, any new future complaint or claim to be filed against one of the parties to this agreement would have to be solely based on actions, events and agreements that have occurred after the execution of this Term Sheet. All previous disputes will be considered as closed for good.