



450 – 1 Street S.W.
Calgary, Alberta T2P 5H1

Tel: (403) 920-2107
Fax: (403) 920-2308
Email: catharine_davis@transcanada.com

August 16, 2013

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Filed electronically

**Attention: Ms. Kirsten Walli
Board Secretary**

Dear Ms. Walli:

**Subject: Enbridge Gas Distribution Inc. (EGD) – Greater Toronto Area Project (GTA)
Union Gas Limited (Union) – Parkway West Project
Union – Brantford-Kirkwall/Parkway D Compressor Station Project
OEB File Nos: EB-2012-0451, EB-2012-0433, and EB-2013-0074
TransCanada PipeLines Limited (TCPL)
Supplemental Evidence**

Further to Procedural Order No. 7 in the above-captioned matters, enclosed for filing is the supplemental evidence of TransCanada PipeLines Limited.

Enbridge declined to answer a number of TransCanada's interrogatories related to the July 22nd amendments to its Application, or answered the interrogatories without providing the requested information. Rather than delay the rigorous timetable by which this matter is proceeding to hearing, TransCanada decided to file this supplemental evidence without the requested information, but reserves the right to pursue the requested information in cross-examination during the hearing.

Sincerely,
TransCanada PipeLines Limited

Original Signed by

Catharine Davis
Vice President
Pipelines Law

**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 **1. INTRODUCTION**

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

4 This evidence will:

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

18 **2. BACKGROUND AND CURRENT STATUS**

19 **2.1 History of the GTA Project**

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

24 In its February 12, 2013 amendment to the Original Application, Segment A was approximately
25 6.5 kilometers shorter because it began closer to Albion at TransCanada's proposed Bram West
26 interconnection. It was also re-sized to an NPS 42 pipeline. The change was the result of
27 collaboration between Union, Enbridge and TransCanada regarding facilities in the Parkway
28 corridor, with the objective of reducing the costs and environmental impacts of construction in the
29 corridor, as instructed by the Board in its EB-2011-0210 decision.

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

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

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

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

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

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

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

35 TransCanada's original evidence in this proceeding was premised on the February 12th version of
36 Enbridge's GTA Project. The parts of that evidence that are not premised on the MOU remain
37 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.

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

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

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

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

29 In summary, the cumulative negative impact on TransCanada’s revenues between November 1,
30 2015 and December 31, 2017 from the loss of long-haul revenues—and thus the potential
31 exposure of Ontario gas consumers when TransCanada’s TSA is disposed of after that date—will
32 be approximately \$960 million, including carrying costs. In considering the exposure of Ontario
33 gas consumers to the costs of the applied-for projects, the unavoidable cost of the redundant
34 facilities (estimated above to be approximately \$310 million) must be added, and this for the
35 dubious savings claimed by the LDCs as discussed below.

36 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.

1 **4. Segment A is oversized**

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

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

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

16 TransCanada has previously determined that in the context of the configuration contemplated in
17 the MOU, that the capacities of Segment A with NPS 36 and NPS 42 pipe are 1600 TJ/d and
18 2000 TJ/d respectively. As these are exactly the same capacities as those quoted by Enbridge,
19 TransCanada expects that Enbridge has used these same values to indicate the capacity of
20 Segment A of these two pipeline diameters. However these calculations (i.e. both those of
21 TransCanada and of Enbridge) are based on the requirements of TransCanada's integrated
22 system. These requirements include a pressure at Parkway of 6000 kPa (870 psi) to account for
23 area transient effects, and a pressure requirement of 4800 to 5000 kPa (700-725 psi) at Albion.
24 Neither of these requirements would apply for a Segment A that is being used exclusively for
25 Enbridge's distribution needs.

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

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

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

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

6 **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

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

9 **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

10 **5. LDC savings calculations**

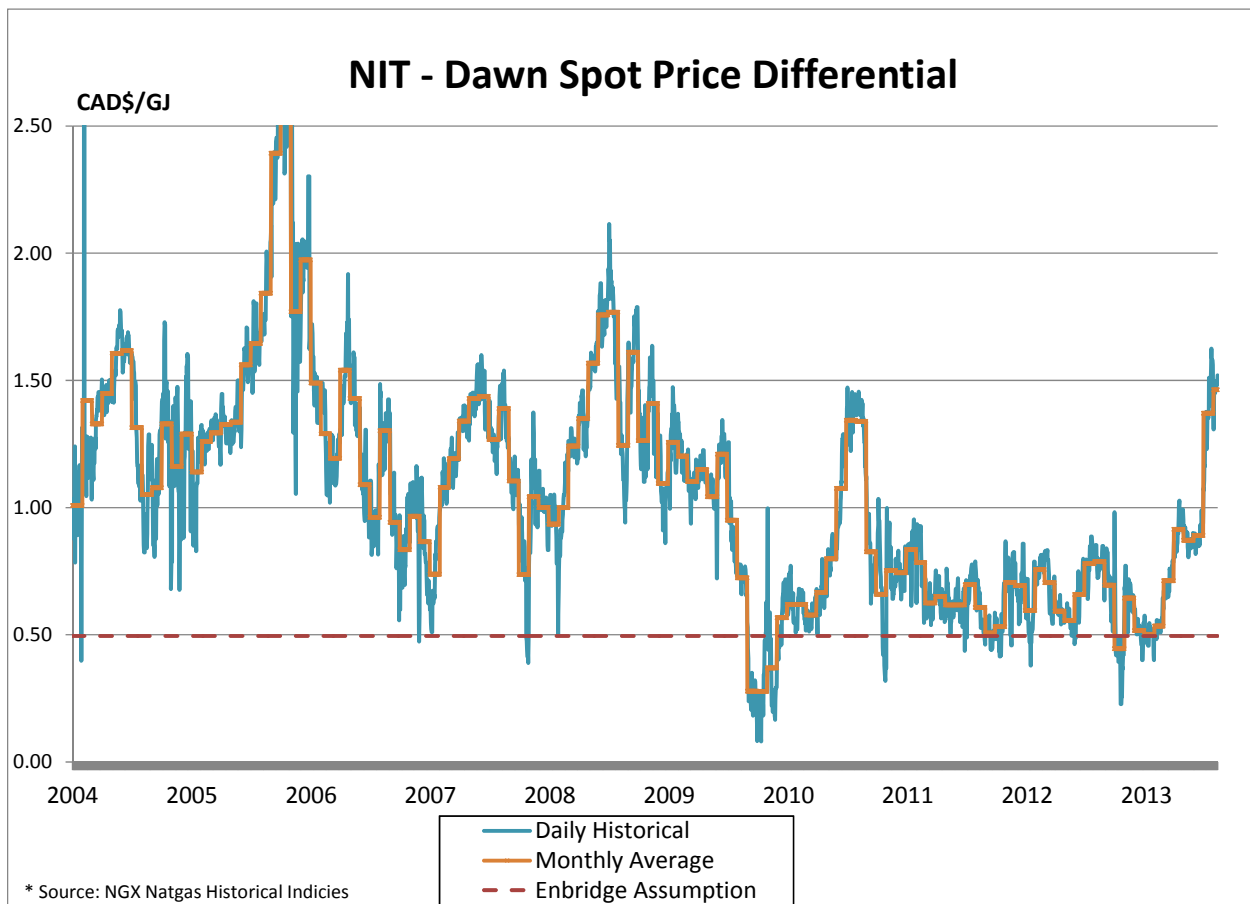
11 Union, Enbridge and Gaz Métro have provided evidence as to the savings that they hope to
 12 achieve if these projects proceed. Union and Enbridge have provided some detail of the
 13 derivation of the projected savings; Gaz Métro has provided very little detail.

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

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

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

8 The following chart demonstrates the range of the price differentials between NIT and Dawn since
 9 2004³, and hence the fragility of savings forecasts that are premised on price differentials:



10 It can be seen that the price differential has varied from monthly averages of approximately
 11 \$0.25/GJ to over \$2.50/GJ, with the current price differential of approximately \$1.50 being in the
 12 range of the historical norm. Accordingly, net savings are uncertain and there could in fact be a
 13 loss depending on the future price differentials between Empress and Dawn.

14 In other words, if the projects proceed, TransCanada's long-haul revenue loss will be a certainty
 15 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

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

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

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

9 **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)

10 The following table provides the results of the same calculations, but using Union's assumed
11 \$0.92/GJ price differential and TransCanada's calculation of LDC savings:

12 **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)

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

15 **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)

16 As shown in the Table above, the LDCs actually incur higher gas costs by shifting gas purchases
17 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.

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

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

9 First Enbridge has assumed that its Direct Purchase customers will contract for an additional
10 157,768 GJ/d of long-haul firm service from Empress. Enbridge then assumes that if the
11 Applications are approved, these Direct Purchase customers will drop their long-haul firm service
12 contracts and take an assignment of short-haul Dawn-Parkway capacity on the Union system
13 from Enbridge. In Exhibit I.A1.Enbridge (Update).TCPL.6, Enbridge was asked to provide some
14 evidence or rationale to support this assumption. Enbridge did not provide any such evidence.
15 Consequently TransCanada assumes that this assumption has no supporting evidence.
16 TransCanada notes that it has not received any requests for long-haul firm service to the
17 Enbridge CDA from any Direct Purchase customer. If this Enbridge assumption turns out to be
18 false, Enbridge's claimed savings would be reduced by approximately \$60 million/year.

19 Second, Enbridge has assumed a large increase (191,500 GJ/d) in the amount of contracted
20 long-haul STFT by 2016 relative to current levels. In Exhibit I.A1.EGD (Update).TCPL.13,
21 TransCanada requested an explanation for this large increase. Enbridge declined to provide a
22 response so this assumption is not supported by any evidence. Again, any assumed contractual
23 long-haul volume that does not actually materialize (and thus does not exist for conversion to
24 short-haul) serves to incorrectly increase the savings claimed by Enbridge. The unsubstantiated
25 191,500 GJ/d of incremental STFT volumes incorrectly increase the savings claimed by Enbridge
26 by approximately \$70 million/year.

27 **6. Supposed supply diversity from the Applications**

28 **6.1 GTA Project exacerbates a narrow supply path diversity for Enbridge**

29 TransCanada submits that, especially from an LDC perspective, transportation path diversity is as
30 important as supply diversity, because the latter goes to economic opportunities whereas the
31 former goes to both economic opportunities and security of supply. On the measure of
32 transportation path diversity, the GTA project fails because it leaves the Enbridge franchise area
33 increasingly dependent on one pipeline system, Union's Dawn-Parkway system. Based on
34 information provided in the response to Exhibit I.A1.EGD (Update).TCPL.1, TransCanada
35 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

1 **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

2 What the numbers show is that of the contracts that Enbridge holds with TransCanada and Union
 3 to serve its customers, 83% of those contracts rely on the Dawn to Parkway system.¹⁰
 4 TransCanada also notes that Enbridge, as indicated in its response to Exhibit.I.A3.EGD (Update).
 5 APPrO.16, intends to contract for an additional 170 TJ/d of short haul service to the Enbridge
 6 EDA, which will further increase its reliance on Union's Dawn to Parkway system. TransCanada
 7 considers this to be an important metric that Enbridge has omitted from its analysis. A major
 8 incident on the Union system could result in major supply impact on the Enbridge franchise area.
 9

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

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

23 **7. WCSB supply is understated**

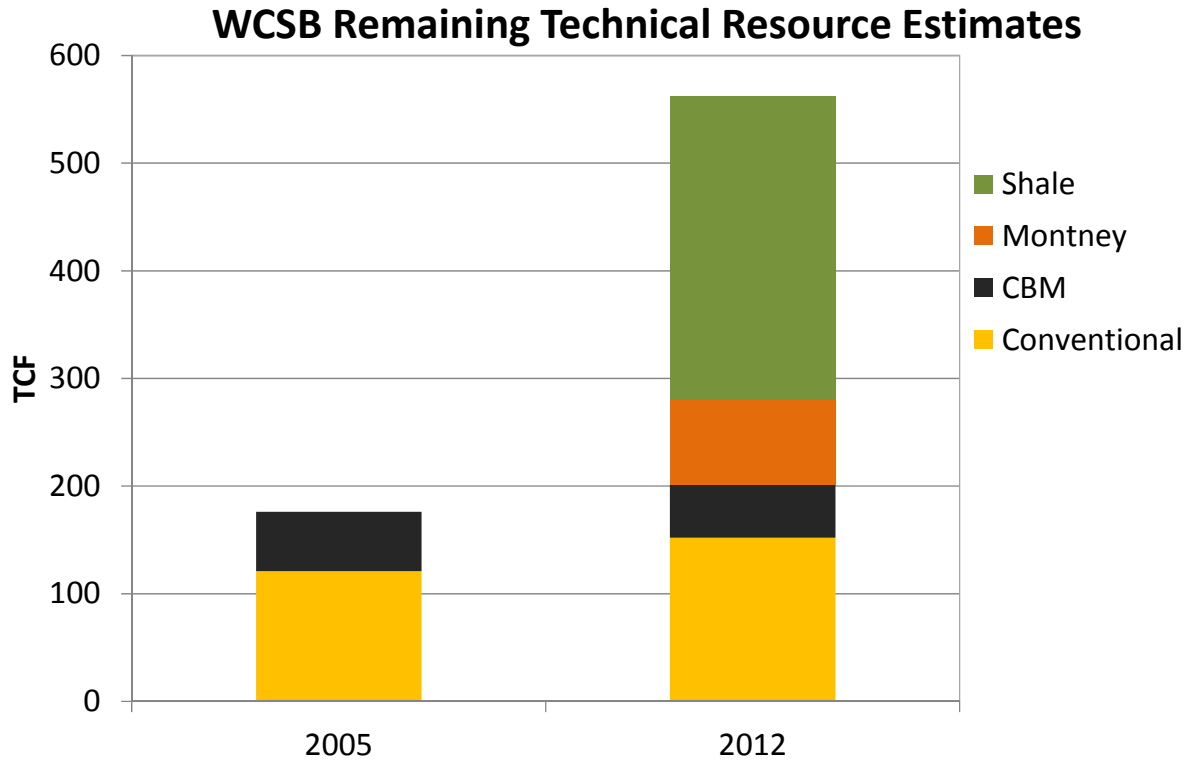
24 The supply analysis put forward by Enbridge and Union in their applications provides a
 25 misleading characterization of the WCSB as a potential source for Eastern LDC supply.
 26 TransCanada conducts detailed WCSB supply analysis and is providing its views on the future
 27 potential for WCSB gas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

28 TransCanada uses a technical recoverable estimate of approximately 560 Tcf for WCSB ultimate
 29 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).

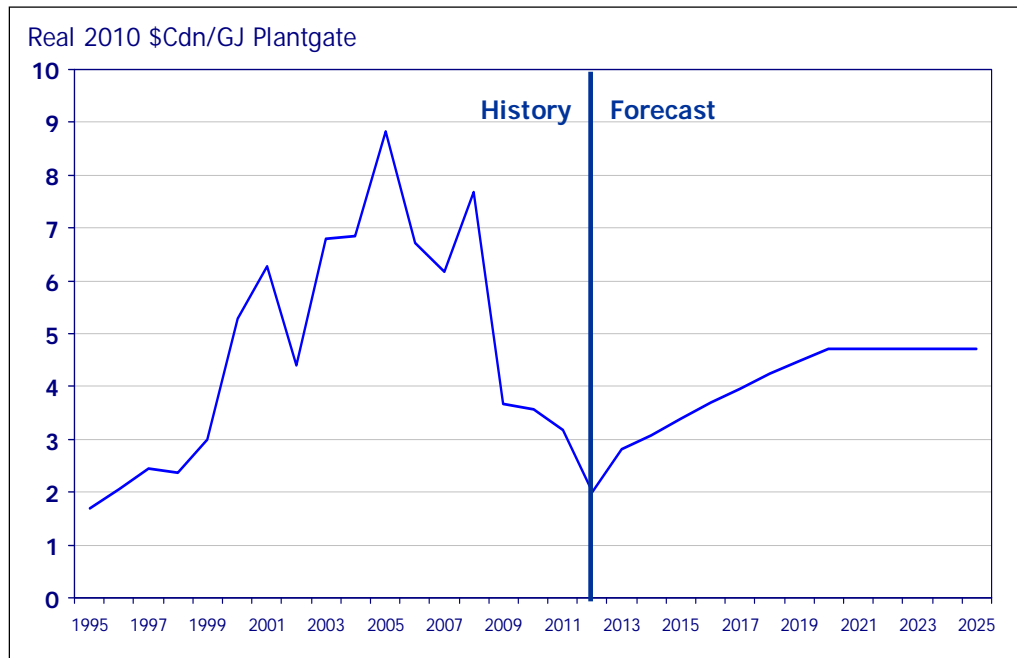
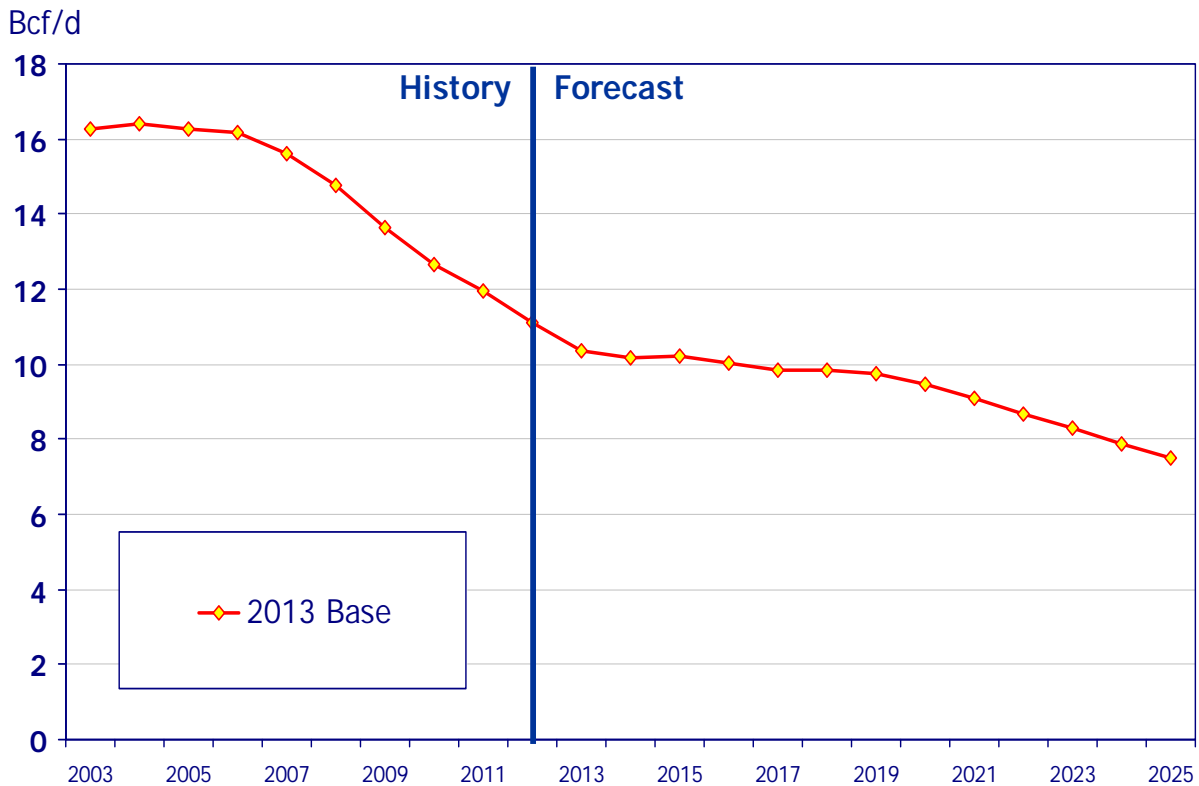


Figure 7-2 Canadian Plant Gate Gas Prices

1
2
3
4
5

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).



1

Figure 7-3 WCSB Conventional Supply

2

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.

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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.

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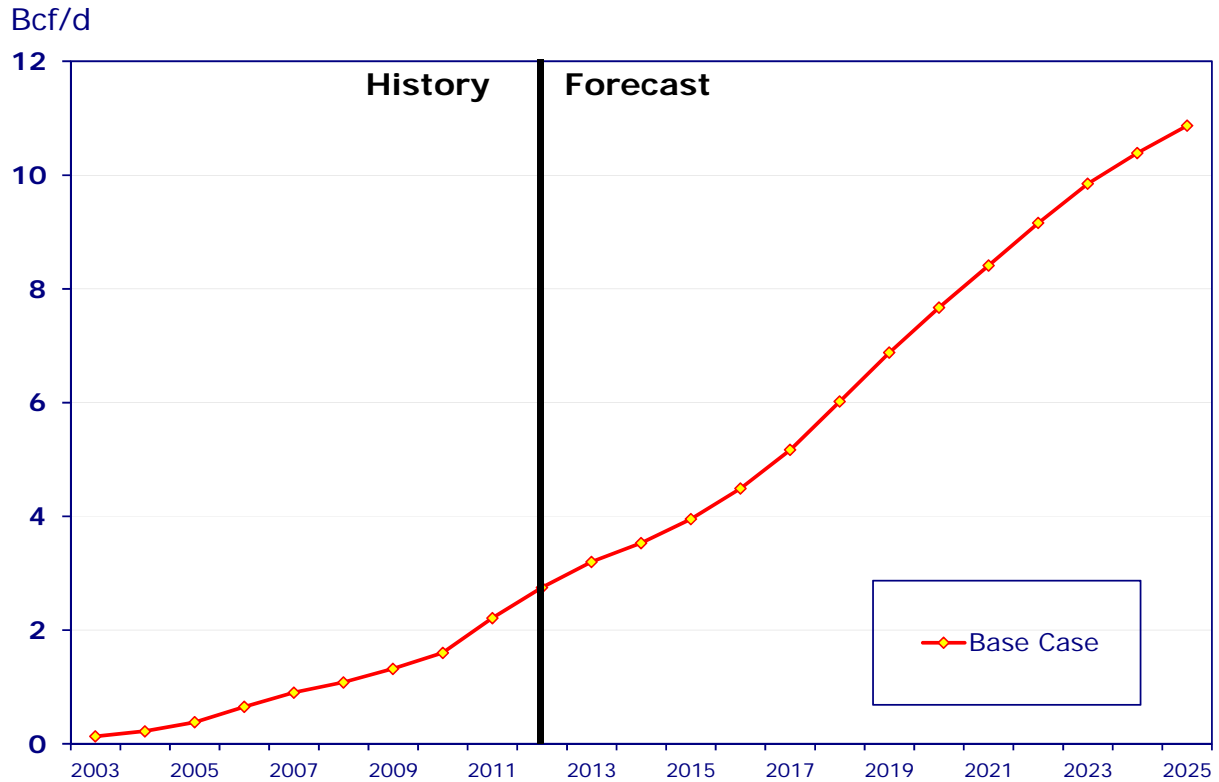
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As a result of the generally positive developments related to the potential economic production of shale and other tight formation plays and in anticipation of LNG export capability, TransCanada has included approximately 11 Bcf/d of production in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

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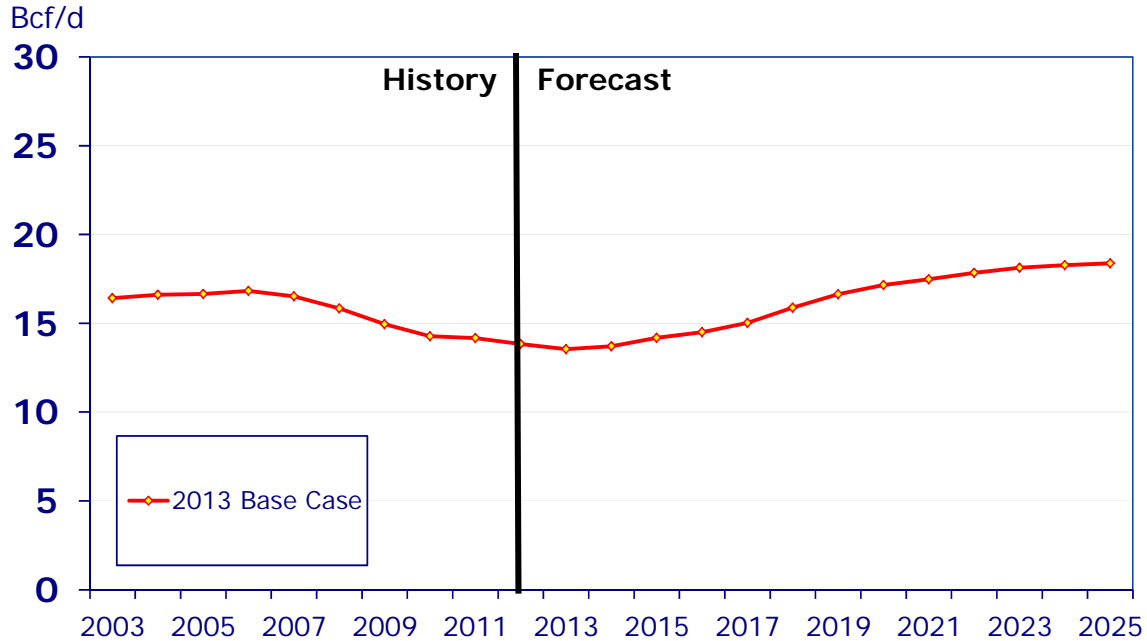
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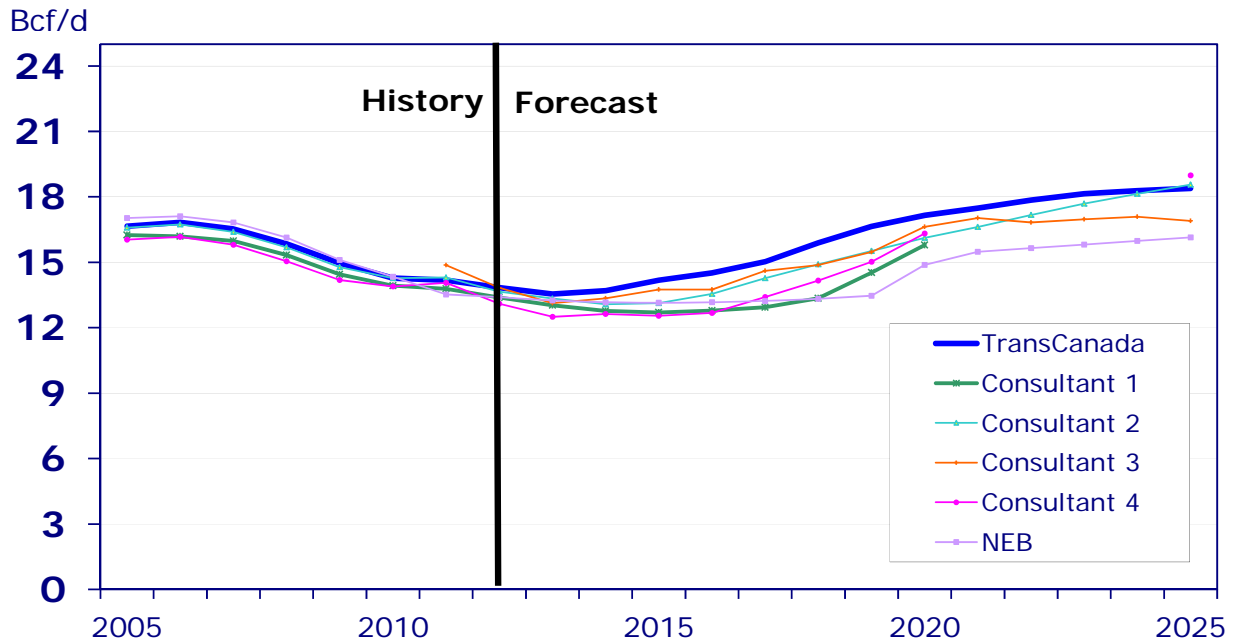
1 **Figure 7-4 WCSB Unconventional Supply**

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



1 **Figure 7-5 Total WCSB Supply**

2 TransCanada has compared its forecast to third party forecasts (Figure 7-6). The forecasts range
 3 from a low of 16 Bcf/d to a high of 19 Bcf/d by 2025. If all forecasts were normalized to a common
 4 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.

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Figure 7-6: WCSB Supply Comparisons

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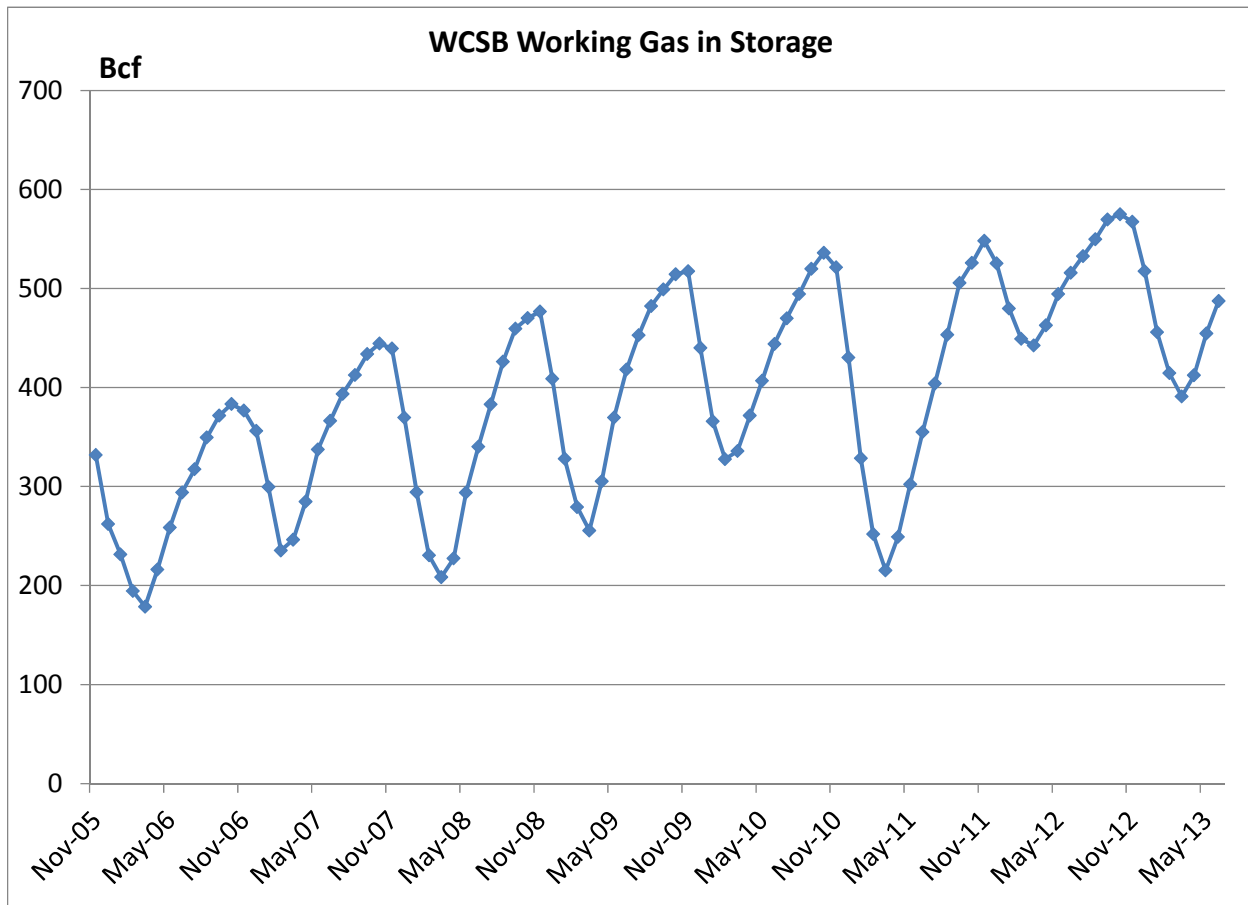
Another clear indicator of ample WCSB supply is the amount of gas in western storage facilities at the end of both the injection and withdrawal seasons over the last 8 years (Figure 7-7). These growing storage volumes and capacity indicate that the WCSB is awash with supply and capable of meeting seasonal 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.

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Figure 7-7 WCSB Working Gas in Storage

Source: NGTL system receipts and historical WCSB flow balance

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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.

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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

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

3 **8. Conclusion**

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

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8 In addition to being over-sized, Segment A in combination with the other projects applied-for in
9 these proceedings contributes to approximately \$1.3 billion in capital expenditure: \$1 billion for
10 the Union and Enbridge projects and \$310 million for the pipeline from Albion to Maple, whoever
11 builds it. The evidence indicates that this capital cost will be incurred with the result that the LDCs
12 will expose their customers to the risk of almost \$1 billion in future tolls when TransCanada's TSA
13 is disposed of. And all of this is being done so that the LDCs can pay between \$260 million and
14 \$425 million /year more for their gas by buying it at Dawn¹¹. Into the bargain, Enbridge reduces its
15 supply path diversity to the point where it is highly reliant on a single path.

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17 For these reasons, TransCanada opposes the Amended Application and submits that it is not in
18 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