

**Written Reply Evidence of
TransCanada PipeLines Limited**

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1.0 INTRODUCTION

1 On July 4, 2014, written evidence was filed by seven intervenors in this proceeding—
2 Enbridge Gas Distribution Inc. (Enbridge), Gaz Métro Limited Partnership Inc. (Gaz
3 Metro), and Union Gas Ltd. (Union) – (collectively, Market Area Shippers, MAS or
4 the LDCs); Alberta Northeast Gas, Limited (ANE);¹ the Industrial Gas Users
5 Association (IGUA); the Canadian Association of Petroleum Producers (CAPP); and
6 Centra Gas Manitoba Inc. (Centra).

7 Of all the myriad stakeholders in the Mainline—comprised of shippers, gas
8 consumers, gas producers, marketers, industry associations and governments,
9 including the 36 intervenors and commenters that have been granted standing by the
10 Board in this proceeding—only three filed evidence that opposes any aspect of the
11 Application.² The three opponents—CAPP, ANE and Centra—advance differing and
12 sometimes conflicting positions. The opposition of CAPP is limited to the issues of
13 pricing discretion given the relative risk of the Mainline under the Settlement. Centra
14 asks that the entire Application be denied on the basis of positions that it takes on the
15 issues of pricing discretion (PD) for discretionary services, toll methodology
16 (including segmentation) and cost allocation. ANE’s focus is on certain aspects of toll
17 methodology, as well as service features of the Settlement (renewal provisions/term-
18 up, long haul to short haul conversions, and FT-NR). ANE is the sole intervenor to
19 file evidence challenging the forecasts used in the development of Settlement tolls.

20 This reply evidence of TransCanada responds to various aspects of the positions taken
21 by intervenors that oppose the Application. It is comprised of three components—this
22 Written Reply Evidence of TransCanada (TransCanada Reply Evidence) and the
23 written reply evidence of two experts retained by TransCanada—Mr. John J. Reed of
24 Concentric Energy Advisers (Reed Reply Evidence) and Dr. Paul R. Carpenter of The
25 Brattle Group (Carpenter Reply Evidence).

26 The TransCanada Reply Evidence speaks to factual and policy aspects of the PD
27 issue. The company evidence shows that there was no physical or economic
28 withholding of capacity, that the firm recourse toll and the secondary market have
29 provided effective competitive discipline on TransCanada’s discretionary pricing.
30 The TransCanada data show that disconnects at NIT are a periodic phenomenon and
31 the impact on upstream or downstream commodity prices was not the result of its use
32 of PD. TransCanada also responds to opposing intervenor positions that relate to the
33 toll methodology and services aspects of the Settlement.

¹ ANE filed revised evidence July 28, 2014 (ANE Revised Evidence). [A62000]

² A letter of comment filed by Stratégies Énergétiques (SÉ) and l’Association québécoise de lutte contre la pollution atmosphérique (AQLPA) includes a recommendation related to biogas, a small source of supply that is not expected to be impacted by the no-bypass commitment made by the LDCs in the Settlement.

1 Mr. Reed addresses various positions taken by ANE, Centra and CAPP in respect of
2 TransCanada's Application and Mr. Reed's filed direct evidence. The positions that
3 are spoken to by Mr. Reed include the alleged absence of any need to modify the
4 existing tolling model (Decision Model) that was implemented in the Board's
5 RH-003-2011 Decision³ (ANE/Centra), the positions of Centra and Dr. Cicchetti in
6 opposition to segmented tolling and stranded costs (Centra), the impact of the
7 Settlement on the risk of the Mainline (ANE/CAPP), intervenor positions and
8 proposals on the pricing flexibility for discretionary services that was approved by the
9 Board in the Decision (CAPP), and assertions regarding the tolls for the 2015 to 2020
10 period (ANE/Centra). The Reed Reply Evidence demonstrates that the intervenor
11 positions are incorrect and unsupportable in fact, principle or precedent.

12 Dr. Carpenter responds to the conflicting opinions expressed by witnesses retained by
13 CAPP and by Centra who allege that TransCanada has been using its PD in ways that
14 are detrimental to economic efficiency and price formation in the markets that are
15 served by the Mainline, and that the actions of TransCanada constitute an exercise or
16 abuse of market power. Dr. Carpenter refutes the opinions of intervenor witnesses
17 that TransCanada's use of PD constitutes "economic withholding" of capacity that is
18 economically inefficient, that it impacted commodity prices both downstream and at
19 NIT, and that PD should be limited because the Settlement terms imply a reduction in
20 business risk. The Carpenter Reply Evidence demonstrates that the intervenors have
21 failed to present a sustainable analysis of the PD and its effects, and that their
22 conclusions are unfounded in fact.

23 TransCanada accepts and adopts the Reed Reply Evidence and the Carpenter Reply
24 Evidence as evidence of TransCanada in this proceeding. TransCanada relies on the
25 evidence of Mr. Reed and Dr. Carpenter as part of the response of the company to
26 many of the positions taken by intervenors in their written evidence. The fact that
27 TransCanada does not address or respond to all statements or positions taken by
28 intervenors, or to any particular assertion or position, should not be taken as
29 acceptance of any intervenor positions. To the contrary, TransCanada does not accept
30 any of the positions of intervenors that are contrary to TransCanada's views or to the
31 Application as filed. TransCanada has, however, determined that no reply evidence is
32 required to respond to many of the statements or positions taken by intervenors that
33 are adverse to TransCanada's interests. Some of the intervenor positions will be dealt
34 with by TransCanada in cross-examination or argument rather than reply evidence,
35 and others will simply be left to be determined on the basis of the filed evidence alone.

³ National Energy Board Reasons for Decision, TransCanada PipeLines Limited, NOVA Gas Transmission Ltd., and Foothills Pipe Lines Ltd., RH-003-2011, Tolls and Tariff, March 2013 (RH-003-2011 Decision or the Decision).

1 The TransCanada Reply Evidence reflects the understanding that the primary purpose
2 of reply evidence is for the applicant to provide an evidentiary response to new and
3 previously unaddressed matters which intervenors have raised in their evidence.

4 It should therefore be noted that this TransCanada written reply evidence does not
5 necessarily comprise the entirety of the reply of TransCanada. The right of reply
6 exists and may be exercised by an applicant after the cases of the intervenors are in
7 the record, which means following completion of cross-examination of all intervenor
8 witnesses. The Board practice of filing written reply evidence of the applicant in
9 advance of the appearance of witnesses for the applicant is a convenience and
10 accommodation that has developed in the interests of regulatory efficiency. It does
11 not detract from the applicant's ultimate right to reply at the end of the evidentiary
12 portion of the proceeding. TransCanada may wish to adduce additional reply evidence
13 after cross-examination of all intervenor witnesses has been completed.

14 As in the Additional Written Evidence,⁴ in this TransCanada Reply Evidence the
15 common position of TransCanada and the LDCs is referred to as the "Settlement."
16 The reason for this is that, while fully cognizant of the process by which the Board is
17 considering the Application—as a contested tolls application outside of the
18 Settlement Guidelines—TransCanada believes that it must continue to be recognized
19 that the common position of the Settling Parties represents more than just a position
20 on which several different parties happen to have landed. The common position of the
21 Settling Parties is understood and referred to among them and by other stakeholders
22 as the "Settlement." The Settlement/common position is the result of intensive
23 negotiations. It builds on the structure and incentives that the Board established in the
24 Decision, and represents a series of compromises among the Settling Parties that
25 achieves a balance between TransCanada and its stakeholders as well as a balance
26 among TransCanada's stakeholders. Contrary to the evidence of ANE,⁵ the events
27 leading to the Settlement as described in Section 2 of the Application were such that
28 both the LDCs and TransCanada were highly motivated to reach a compromise. The
29 balanced outcomes of the Settlement were designed to enhance the vibrancy of the
30 gas industry and the Mainline for the long term. The fact that the Settlement achieves
31 a balance is an important reason why, in the context of this contested tolls application,
32 the terms of the Settlement are in the public interest and will result in tolls that are
33 just and reasonable.⁶

1.1 Overall Response to Intervenor Evidence

34 The intervenor evidence that has now been filed in this proceeding must be
35 considered in the overall context of the Application. Essentially, the Application

⁴ TransCanada's Additional Written Evidence, Section 1.0, page 2. [A60096]

⁵ ANE Revised Evidence, pages 23-24.

⁶ TransCanada's Additional Written Evidence, Sections 1.0 and 2.0, pages 1-4. [A60096]

1 seeks approval of an overall compromise that resolves the uncertainty that arose from
2 the RH-003-2011 Decision and provides stability and predictability for the future in a
3 manner that is fair to all stakeholders. The opposing intervenors either seek retention
4 of the RH-003-2011 Decision Model (notwithstanding that an off-ramp has been
5 reached) or to extract key components of the Settlement and replace them with
6 different provisions that would favour their proponents at the expense of all Mainline
7 shippers.

8 The Application, filed December 20, 2013, is for approval of the Mainline 2013-2030
9 Settlement that TransCanada had reached with the three largest Mainline customers:
10 Enbridge, Union and Gaz Metro. After a comment process, the Board advised that it
11 could not approve the Settlement under the NEB Settlement Guidelines, but it would
12 consider the Application as a contested tolls application. TransCanada took the
13 opportunity provided by the Board to file Additional Written Evidence with the
14 express purpose of providing additional evidentiary support to satisfy the Board that
15 the terms of the Settlement, taken as a whole and considered as a contested tolls
16 application, are in the public interest and will result in just and reasonable tolls.⁷

17 TransCanada's stated position is that the tolls and tariff terms for which approval is
18 sought in the Application will provide the stability and predictability that will move
19 the market for Mainline transportation to the point where shippers can have timely
20 access on agreeable terms to the services that the market demands, including services
21 that require investments by the Mainline. Approval of the Application will facilitate
22 both the growth and rationalization of Mainline capacity while providing
23 TransCanada with a reasonable prospect that it will recover its investment, including
24 a risk/reward incentive mechanism that aligns the interests of the Mainline and its
25 stakeholders. Taken as a package, the tolls and tariff terms included in the Settlement
26 and the Application represent a set of compromises that achieve the desired objectives
27 in a manner that balances the interests of the Mainline and its stakeholders while
28 advancing the Canadian public interest.⁸

29 As described in the Application, the Settlement resolves matters of great significance
30 to the natural gas industry and those who rely on natural gas. Approval of the
31 Application by the Board will forestall a return to the litigious and uncertain
32 environment that followed the issuance of the RH-003-2011 Decision in which the
33 transportation market was paralyzed. At the highest level, the Settlement represents a
34 balance of interests and compromises by TransCanada and the LDCs that will provide
35 market participants with long-term certainty and stability of Mainline tolls while
36 creating an environment that will facilitate the investment required to support the
37 efficient development of natural gas infrastructure in Canada. The Settlement resolves

⁷ TransCanada's Additional Written Evidence, Section 1.0, page 1. [A60096]

⁸ TransCanada's Additional Written Evidence, Section 4.0, pages 26-27. [A60096]

1 the litigation and provides long-term certainty and stability in respect of both market
2 access and Mainline tolls.

3 Letters of comment that were filed earlier in this proceeding made it clear that timing
4 is of the essence for the benefits of the Settlement to be fully achieved, and emphasize
5 the importance of the Settlement to various interested persons in:

- 6 • supporting the development of new infrastructure to meet market demand⁹
- 7 • reducing the uncertainty and promoting certainty and stability¹⁰
- 8 • supporting major industrial investments¹¹
- 9 • avoiding long periods of litigation before regulators and the courts¹²
- 10 • resolving uncertainty associated with future capital investments in the Mainline¹³

11 Acceptance by the Board of any of the opposing intervenor positions would
12 undermine the Settlement, and could destroy the negotiated resolution of the industry
13 issues by precipitating a determination of the Settling Parties that the decision of the
14 Board in this proceeding is not one that allows the Settlement to continue. Through
15 this TransCanada Reply Evidence, and the evidence of Mr. Reed and Dr. Carpenter,
16 TransCanada demonstrates that the intervenor positions are without merit and should
17 be rejected by the Board, such that the provisions of the Settlement are authorized to
18 govern the tolls and services of the Mainline.

1.2 Some Specifics of Intervenor Evidence

19 In their joint evidence, the MAS emphasize the importance of expeditiously
20 approving the Application to reduce the uncertainties surrounding the Canadian
21 natural gas market, emphasizing that dismissal of the Application would cause the
22 litigious environment surrounding the natural gas market that existed prior to the
23 filing of the Settlement to again prevail.¹⁴ Similar views are expressed in the evidence
24 of IGUA.¹⁵

⁹ See, for example, letters of comment of TransCanada of April 14, 2014 [A59671]; Gaz Métro of April 9, 2014 [A59623]; Union Gas Limited of February 7, 2014 [A57292], Enbridge Gas Distribution Inc. of April 14, 2014 [A59666], and J.P. Morgan Commodities Canada Corporation of February 5, 2014 [A57142], Ontario Ministry of Energy of February 3, 2014 [A56930]. See, for example, letter of comment of TransCanada of April 14, 2014 [A59671].

¹⁰ See, for example, letters of comments of Union Gas Limited of February 7, 2014 [A57292], Seneca Resources of February 7, 2014 [A57272], and Ministère des ressources naturelles du Québec of February 7, 2014 [A57300].

¹¹ See, for example, IFFCO letter of comment of April 14, 2014 [A59662].

¹² See, for example, letter of comment of Tenaska Marketing Canada of February 7, 2014 [A57269].

¹³ See, for example, letter of comment of TransCanada of April 14, 2014 [A59671].

¹⁴ See, for example the Joint Written Evidence of the Market Area Shippers, Q/A 26. [A61517]

¹⁵ See Evidence of Dr. Shahrzad Rahbar on behalf of IGUA, Q/As 4 through 8. [A61499]

1 Investors like IFFCO are seeking access to natural gas as part of their business plans,
2 and appear ready to make significant investment if the Settlement Tolls are
3 approved.¹⁶ Similarly, producers like Seneca Resources are ready to enter into long-
4 term contracts to access the Canadian market.¹⁷

5 By contrast to the MAS and other intervenors that support the Settlement, ANE takes
6 the position that approval of the Application would deconstruct the framework
7 adopted by the Board in the RH-003-2011 Decision and that approval is not
8 warranted on the basis that TransCanada is unable to invest in its system under the
9 RH-003-2011 Decision Model.¹⁸ ANE largely ignores the fact that an off-ramp to the
10 RH-003-2011 Decision has been reached. When it does acknowledge the off-ramp,
11 ANE insists that any change in tolls resulting from an off-ramp having been reached
12 should rely on historical data, such as the TSA balance, and ignore relevant facts and
13 expectations related to market evolution over the period for which tolls would be set,
14 such as those that would result from TransCanada making new Mainline
15 infrastructure investments.

16 Centra's opposition to the Application focuses on its objection to the segmentation of
17 the Mainline that is proposed to be implemented for 2021 and beyond.

18 Centra and CAPP also object to the continuation of the PD for IT and STFT services
19 granted by the Board in the RH-003-2011 Decision, alleging that PD has had an
20 impact on commodity prices (although the Centra and CAPP positions conflict). It is
21 also clear that the positions of CAPP and Centra on this issue are premised on a
22 fundamental disagreement with the Board's view, expressed in the RH-003-2011
23 Decision, that those who require guaranteed access to the Mainline should pay the full
24 year cost of the capacity they require.¹⁹

25 The Centra evidence simply ignores the impetus for the changes proposed in the
26 Application. Similarly, ANE summarily dismisses the issues that gave rise to the
27 Settlement through its stated disagreement to the fact that the RH-003-2011 Decision
28 results in tolls that are inadequate for TransCanada to recover new capital
29 investment.²⁰ This position ignores the evidence that Mainline revenues would be
30 expected to fall to approximately half of the revenue requirement in 2017 in a
31 scenario where investments that facilitate conversion to short haul were to occur
32 under the Compliance Tolls.²¹

¹⁶ See, for example, letter of comment of IFFCO April 14, 2014. [A59662]

¹⁷ See, for example, letter of comment of Seneca Resources of July 3, 2014. [A61451]

¹⁸ See ANE Revised Evidence, Q/A 14. [A62000]

¹⁹ See, for example CAPP response to TransCanada 1.12(a). [A62151]

²⁰ See ANE's response to TransCanada-ANE-1.2(a). [A62162]

²¹ See TransCanada Response to NEB 1.3a.1), and in particular Table NEB 1.3-1. [A61101]

1 Eastern markets demand access to new sources of supply and TransCanada wants to
2 serve this market. However, TransCanada cannot make investments that would be
3 detrimental to it and its shareholders. The Settlement is a solution with a long term
4 vision towards cost recovery and a long term plan that makes it possible for
5 TransCanada to undertake facilities expansions while providing for toll certainty and
6 stability.

7 Resolving these matters in the manner achieved through the Settlement should not
8 wait until all the details of the tolling model that may be in place on the Mainline
9 beyond 2020 are in place – as Centra would have the Board do. Implementation of the
10 tolling parameters proposed in the Application is essential now to resolving
11 immediate and important issues. At the same time, approval of these parameters will
12 not constrain the Board’s future determinations as to whether Mainline tolls for a
13 given period are just and reasonable and not unjustly discriminatory, nor constrain
14 TransCanada or its stakeholders from advancing proposals for fundamental changes
15 that entail a more substantial departure from cost of service tolls.²²

16 It speaks volumes about the balance inherent in the Settlement that two opponents of
17 the Application—ANE and Centra—hold completely opposite views about the
18 appropriate allocation of Mainline costs: ANE suggests that eastern short haul
19 shippers should pay less of the Western Mainline costs, while Centra suggests that
20 those same eastern short haul shippers should pay more of the Western Mainline
21 costs. These divergent views illustrate how it would be virtually impossible for
22 Mainline stakeholders to reach consensus on these matters, while highlighting the
23 reasonableness of the balance achieved through the Settlement.

24 The CAPP evidence largely ignores the importance of FT service on the Mainline by
25 focusing exclusively on the pricing of discretionary services. TransCanada
26 understands that parties would prefer to ship on the Mainline without having to make
27 commitments to pay annual costs. That position is economically rational but
28 unworkable, as evidenced by the situation that brought about the RH-003-2011
29 proceeding and the implementation of pricing discretion by the Board in the
30 RH-003-2011 Decision. As noted by the Board in the Decision:

31 The current pricing methodology for IT and STFT is not appropriate. Shippers
32 using IT or STFT to meet a firm operating requirement do not contribute
33 sufficiently to the Mainline’s fixed costs. For example, shippers are
34 increasingly able to meet their peak requirements for gas by contracting for
35 STFT for a short term (for as little as one week), often paying only 110 per
36 cent of the corresponding FT toll for that term. This provides shippers the
37 assurance that they will receive service when they need it, but pay only a

²² See TransCanada’s Additional Written Evidence, Section 2.2.1, pages 9-10. [A60096]

1 fraction of the full year's cost of having the Mainline's capacity available to
2 them.

3 The pricing discretion proposed by TransCanada under the Restructuring
4 Proposal did not go far enough. In our view, conferring greater discretion on
5 TransCanada to set bid floors for IT and STFT service will provide
6 TransCanada the opportunity to recover the costs of its capacity, during the
7 period of time in which its capacity is used, from those who use it.

8 TransCanada will have to assess how to price IT and STFT. Optimizing
9 billing determinants and maximizing net revenues on the Mainline, while
10 mitigating the threat of bypass, requires TransCanada to exercise judgment
11 about how much it charges. TransCanada is accountable for how it exercises
12 its discretion and is encouraged by the new incentive mechanism to make
13 decisions that result in the greatest Mainline net revenue, which in the long-
14 run will benefit shippers who require Mainline service.²³

15 As noted in TransCanada's Additional Written Evidence:

16 The experience with pricing flexibility for IT and STFT since implementation
17 on July 1, 2013 confirms that it has functioned as intended by the Board.
18 Shippers who require guaranteed access to the Mainline have reverted to FT
19 service, reversing the migration toward discretionary service that had
20 prevailed for several years before the RH-003-2011 Decision. Specifically,
21 during the first six months of 2013, before implementation of pricing
22 flexibility, firm contracts on the Mainline were approximately 4900 TJ/d,
23 including approximately 1100 TJ of long haul contracts. Since then, firm
24 contracts on the Mainline have continued to increase nearing a total of 7800
25 TJ/d at the end of March 2014, including long haul contracts exceeding 3500
26 TJ/d.²⁴

27 The Centra and CAPP evidence does not challenge the fact that pricing discretion has
28 been successful in optimizing overall Mainline revenues through higher levels of firm
29 contracting and higher IT and STFT prices. Rather, these parties argue that pricing
30 discretion should be taken away from TransCanada or limited in its scope because the
31 exercise of that discretion has, they allege, had an impact on commodity prices. In
32 this reply evidence, TransCanada, Dr. Carpenter and Mr. Reed respond to the CAPP
33 and Centra positions. Ultimately however, TransCanada invites the Board to focus on
34 the relevant issues associated with PD that were recognized in RH-003-2011 – the
35 need for TransCanada to have the tools to optimize billing determinants and
36 maximize net revenues on the Mainline – and to dismiss discussion of price impacts

²³ RH-003-2011 Decision, page 2.

²⁴ See TransCanada's Additional Written Evidence, Section 3.1, page 17. [A60096]

1 as not being helpful to the determination to be made with respect to IT and STFT
2 pricing.

3 TransCanada and the vast majority of Mainline stakeholders recognize that
4 compromise is required. The TransCanada Reply Evidence shows the
5 Settlement/common position reflects an appropriate balance of interests that is
6 responsive to the current environment, consistent with regulatory principles, is in the
7 Canadian public interest, and will result in tolls that are just and reasonable.

8 In the sections that follow, TransCanada addresses specific topics and issues raised by
9 intervenors that oppose the Application.

2.0 TOLL METHOD, TOLLING PARAMETERS AND TOLLS

1 In this section, TransCanada responds to intervenor positions regarding
2 TransCanada's proposed toll methodology, the forecast of billing determinants,
3 revenues and costs, and the resulting tolls. This evidence has been structured to first
4 address general concepts related to the Settlement, followed by a response to
5 intervenor criticism directed at the tolling parameters proposed for the 2021-2030
6 period. TransCanada then provides reply evidence related to the 2015-2020 tolls and
7 the forecasts underpinning them. TransCanada also responds to ANE's own proposal
8 for 2015-2017 tolls.

9 ANE and Centra expressed the position that there is no substantive basis to change
10 the toll methodology set in accordance to the RH-003-2011 Decision, and ANE
11 claims that the Compliance Tolls should actually be lowered. These parties also
12 expressed concerns on the proposed toll methodology, with ANE largely focused on
13 the 2015-2017 period, while Centra's concerns primarily relate to the segmentation of
14 Mainline tolls proposed for 2021 and beyond. These parties advance views that some
15 or all aspects of TransCanada's proposed Mainline toll methodology and resulting
16 tolls, inappropriately shift cost responsibility, do not adhere to toll design principles,
17 and result in unjust and unreasonable tolls.

18 ANE asserts that TransCanada's proposal would treat Eastern Triangle shippers
19 differently by shifting revenue responsibility from the Prairies and NOL to the
20 Eastern Triangle through the steps applied to derive tolls for the 2015-2020 period. In
21 contrast, Centra asserts that the proposed segmentation of the Mainline would
22 facilitate the shifting of long-term costs to Western Mainline shippers post-2020.

23 Contrary to these positions, TransCanada's proposed cost allocation for both the 2015
24 – 2020 period and the tolling parameters proposed for the post-2020 periods
25 appropriately reflect cost accountability under the current and expected future use of
26 the system. The proposal provides for an orderly transition from the traditional
27 integrated system tolling methodology to a segmented model in the context of the
28 balance achieved in the Settlement. These proposed changes build on the existing
29 Compliance Tolls and therefore preserve cost allocation aspects of the RH-003-2011
30 Decision, such as the energy / energy-distance cost allocation within tolls.²⁵ The
31 tolling approach reflected in the Settlement is similar to that used by the Board in
32 establishing the Compliance Tolls, where surrogate tolls were calculated under the
33 Board-approved toll design and then adjusted by a fixed percentage to achieve an
34 Empress to Union SWDA toll of \$1.42/GJ.²⁶ TransCanada proposes to adjust
35 Compliance Tolls by a fixed percentage as well. The changes will also ensure that
36 tolls for the Eastern Triangle recover the Eastern Triangle costs as well as a portion of

²⁵ See TransCanada's responses to NEB 1.1(b) and NEB 1.15. [A61101]

²⁶ See RH-003-2011 Decision, pages 222-223.

1 the Western Mainline costs through the Bridging Contribution. These outcomes are
2 appropriate considering shippers' migration to and request for service within the
3 Eastern Triangle, and the proposed transition to a segmented toll structure where
4 Eastern Triangle shippers will benefit from new infrastructure and increased access to
5 supply closer to market.

6 TransCanada also endorses the reply evidence of Mr. Reed on these issues who
7 expresses, among other things, the following views:

- 8 • Retention of the Decision Model as recommended by ANE and Centra, which
9 would increase the potential for extended litigation, uncertainty, bypass and thus
10 longer-term harm to the Mainline, is directly contrary to the Board's statements
11 that TransCanada has a duty to protect the long-term viability of its system. Thus,
12 retaining the existing Decision Model such as suggested by these parties without
13 reasonably addressing the longer-term cost recovery and tolling implications is
14 not in the public interest.
- 15 • In contrast to Centra's assertions opposing segmented tolling:
 - 16 • Western Mainline shippers will benefit from the proposed new infrastructure
17 in the Eastern Triangle, since absent resolution of the infrastructure issue
18 achieved by the Application, which includes the construction of new facilities
19 in the Eastern Triangle, and the commitment of the LDCs to retain long-haul
20 contracting through 2020, the system faces significant risk of partial or full
21 bypass, thus harming all remaining shippers, particularly captive shippers, and
22 TransCanada.
 - 23 • There is no basis to support a new "hold harmless" standard for Western
24 Mainline shippers.
 - 25 • Considering that there are a number of factors that remain uncertain and
26 TransCanada has projected that Western Mainline costs could be reasonably
27 expected to be recoverable post-2020, it is premature for the parties to debate,
28 and for the Board to now determine, whether there will be stranded costs post-
29 2020, let alone responsibility for such potential costs.
- 30 • Centra's recommendation for an earnings moratorium on the Western Mainline is
31 completely unsupported.

32 This reply evidence demonstrates appropriateness of the proposed tolling method,
33 including segmentation of the Eastern Triangle post-2020, proposed cost allocation,
34 billing determinant, revenue and cost forecasts, and the resulting tolls for the 2015-
35 2020 period. The Centra and ANE evidence on these matters should be rejected by
36 the Board.

2.1 Toll Methodology and Tolling Parameters

1 In this section, TransCanada addresses intervenors' criticism of the proposed toll
2 method and tolling parameters proposed in the Application. The four tolling
3 parameters applicable to the 2021-2030 period are:

- 4 • Revenue requirement associated with the Eastern Triangle will be separated from
5 the Western Mainline, i.e., costs associated with those particular segments will be
6 assigned to the revenue requirement for those respective segments, and thus will
7 be recoverable independently from one another for the post-2020 period.
- 8 • The unamortized Bridging Contribution payable in Eastern Triangle tolls after the
9 end of 2020 will continue to be reflected in the Eastern Triangle segment revenue
10 requirement and amortized for recovery through the end of 2030.
- 11 • The LTAA balance at December 31, 2020 will be allocated to the Eastern
12 Triangle revenue requirement for 2021 and beyond, and amortized at the annual
13 Eastern Triangle composite depreciation rate.
- 14 • The Board's practice of rolling-in Mainline facilities costs will continue to apply
15 to the regime in which the Eastern Triangle is segmented from the Western
16 Mainline such that the costs of facilities additions in the Eastern Triangle will be
17 rolled-in to Eastern Triangle tolls.

18 This reply evidence specifically addresses the appropriateness of the proposed rolled-
19 in tolling treatment of new Eastern Triangle facilities and the proposed segmentation
20 of the Eastern Triangle in the post-2020 timeframe in the context of the overall
21 Application. In addition, TransCanada addresses criticism of its cost allocation among
22 segments and responds to Centra's evidence related to stranded costs and a proposed
23 earnings moratorium for the Western Mainline.

2.2 Proposed Tolling Treatment for New Eastern Triangle Facilities is Appropriate

24 Dr. Cicchetti, on behalf of Centra, makes comments on TransCanada's proposed
25 rolled-in tolling treatment of new Eastern Triangle facilities, but it is unclear as to
26 whether or not he supports a different methodology or simply suggests that the tolling
27 treatment for these new facilities be addressed on a case-by-case basis in the future.²⁷
28 As discussed in TransCanada's response to information request NEB 2.4, a tolling
29 treatment to recover only the new Eastern Triangle facilities costs does not address
30 the loss of revenue associated with the conversion of long-haul to short-haul that the
31 new build would facilitate, nor does it recognize the integrated nature of the Eastern
32 Triangle facilities.

²⁷ See Reed Reply Evidence on behalf of TransCanada, pages 25 – 27.

1 As discussed in the Reed Reply Evidence, it is a long-standing Board practice to
2 utilize a rolled-in tolling approach for new facilities that are integrated with existing
3 facilities to serve the requirements of existing and new shippers collectively, where
4 the nature of the service to be provided is not custom or distinct. This is the case for
5 the new facilities being proposed in the Application, and there is no basis to deviate
6 from this long-standing Board tolling approach. A move toward segmented tolling
7 does not change the appropriateness of this approach given the new Eastern Triangle
8 facilities will be integrated with the existing Eastern Triangle facilities and the service
9 to be provided on the new facilities is the same as that on the existing facilities.

10 Contrary to Dr. Cicchetti's suggestion,²⁸ it should also be noted that as a Western
11 Mainline shipper, Centra will have no cost responsibility for new Eastern Triangle
12 facilities under the Application proposal in either the 2015 – 2020 transition period,
13 or under the 2021-2030 segmented tolls period, because Eastern Triangle costs would
14 be recovered exclusively from Eastern Triangle shippers.²⁹ Centra would only bear a
15 portion of these Eastern Triangle costs to the extent it uses transportation services in
16 the Eastern segment.

2.2.1 TransCanada Proposed Cost Allocation among Segments is Reasonable

17 ANE raised concerns about the proposed cost allocation among segments that
18 TransCanada has used in its proposed tolling method to establish 2015 – 2020 tolls.
19 Specifically, ANE suggests that the allocation of OM&A costs to the various
20 segments is unreasonable and results in too much of these costs being allocated to the
21 Eastern Triangle.

22 Certain costs not directly assignable by segment require an allocation method among
23 segments to be used. OM&A costs have been assigned to segments on a 50% energy
24 and 50% energy-distance basis. This allocation appropriately reflects the cost drivers
25 for OM&A costs, both energy and energy-distance. Also, as the use of the system
26 results in a higher concentration of contracts and throughput in the Eastern Triangle,
27 it is also reasonable to expect that a larger share of OM&A costs would be assigned to
28 the Eastern segment where proportionally more of the service is being provided and
29 consumed.

2.2.2 Segmentation Post-2020 is Appropriate

30 Centra expresses concerns with the proposed segmented toll design in the post-2020
31 period and suggests it will unfairly shift costs to the Western Mainline. TransCanada
32 believes, in the context of the Settlement as a whole, a move toward a segmented toll
33 design is appropriate in the post-2020 period. A move toward segmentation (along

²⁸ Cicchetti Evidence on behalf of Centra, page 10.

²⁹ See TransCanada's response to NEB 1.4 (c) and (d).

1 with the other three Tolling Parameters for the 2021-2030 period for which approval
2 is sought under the Application) is responsive to the market, and can be implemented
3 while better positioning the Mainline to remain viable. The Application provides for
4 an orderly transition from an integrated toll design to a segmented toll design over the
5 6-year period (2015 – 2020) facilitated by the Bridging Contribution.

6 As discussed in detail within the reply evidence of Mr. Reed, Western Mainline
7 shippers stand to benefit from implementation of the Application, under a segmented
8 tolling environment, through the avoidance of partial or full bypass of the Mainline
9 and the retention of billing determinants, the removal of which could create
10 significant risk for remaining shippers. Centra fails to recognize that TransCanada is
11 not, in this Application, seeking approval for tolls in the post-2020 period. Approval
12 of segmentation of the Eastern Triangle starting in 2021 as part of the Application
13 would not compromise the Board's ability to establish just and reasonable tolls for the
14 Western Mainline in the future. As stated in TransCanada's Additional Written
15 Evidence³⁰, Mainline tolls after 2020 could reflect a number of factors, including
16 developments beyond cost of service regulation that would address fundamental
17 allocations of risk and reward between TransCanada and its shippers. TransCanada
18 remains committed to continuation of balanced and effective at-risk models for some
19 or all of the Mainline's revenue requirement.

2.2.3 No Stranded Costs or Earnings Moratorium

20 Centra also suggests that segmentation raises the prospect of alleged stranded
21 Western Mainline assets, suggesting this issue should be addressed now in light of the
22 alleged potential underutilization of Western Mainline assets in the future under the
23 Application regime. As further addressed in the reply evidence of Mr. Reed,³¹
24 TransCanada believes this is unwarranted and, at the very least premature, when it is
25 unknown at this time what the future demand of the Western Mainline will be, and
26 there is no basis to suggest that stranded assets will exist in the post-2020 period.
27 Further, as noted in the Additional Written Evidence of TransCanada, segmented toll
28 levels in the 2021-2030 period for the Western Mainline are expected to be within a
29 reasonable range.³²

30 Centra also recommended, in response to information request NEB 1.6, an earnings
31 moratorium on the Western Mainline over the 2015-2020 period that would be used
32 to accelerate depreciation of the Prairies Line. As further explained in the reply
33 evidence of Mr. Reed, such an approach would be contrary to the requirements of the
34 fair return standard and Board precedent and policy, and is not warranted in the
35 current circumstances of the Mainline.

³⁰ TransCanada's Additional Written Evidence, Section 2.2.1, page 9. [A60096]

³¹ Reed Reply Evidence, pages 20-23.

³² TransCanada's Additional Written Evidence, Section 2.2.3, pages 12-14. [A60096]

2.3 2015-2020 Tolls

1 In this section, TransCanada responds to specific criticism of intervenors with respect
2 to the proposed tolls for the 2015-2020 period, and of the parameters reflected in their
3 calculation, including the forecasts of firm billing determinants (Firm BD),
4 Discretionary Miscellaneous Revenue (DMR), and of the revenue requirement.
5 TransCanada also addresses ANE's forecast for Firm BD, DMR and select
6 components of the revenue requirement.

7 This evidence responds primarily to ANE, the only intervenor to have filed evidence
8 related to the Application forecast of billing determinants, revenues and costs used in
9 support of the ANE proposed tolls for 2015-2017. ANE asserts that TransCanada
10 used Firm BD and DMR levels that are too conservative and has overstated the
11 revenue requirement for the 2015 – 2020 toll calculations. As explained below,
12 TransCanada disagrees— unlike ANE's forecast, the Application forecast is
13 reasonable and reflective of anticipated market trends over the period for which tolls
14 are proposed to be established.

15 ANE also claimed that a “failure to provide information that would allow a
16 reasonable review of the billing determinants forecast represents a material
17 concern.”³³ To the contrary, TransCanada has provided a throughput analysis which
18 was presented in the response to information request NEB 1.25,³⁴ and a
19 corresponding outlook of DMR in the response to information request NEB 1.26.
20 Furthermore, TransCanada has provided details regarding its forecast Firm BD in
21 response to information requests NEB 1.26 and ANE 1-41, which itemize the forecast
22 billing determinants by path, by month, by Mainline segment and reflects the
23 expected eastern LDCs switch from long-haul to short-haul. TransCanada therefore
24 submits that there is no merit to ANE's criticisms. TransCanada has provided
25 adequate information to support the reasonableness of the billing determinants and
26 other parameters reflected in the proposed tolls for 2015-2020.

2.3.1 2015-2020 Toll Levels are Just and Reasonable

27 ANE expresses concerns over the proposed toll methodology for 2015-2020. These
28 concerns reflect ANE's ill-founded position that any change in tolls as a result of a
29 positive TSA balance off-ramp should be limited to a downward toll adjustment.³⁵

30 ANE also claims that the “application would set tolls at levels that exceed the *status*
31 *quo* toll scenario in TransCanada's restructuring proceeding...”³⁶ In fact, as shown in

³³ ANE Revised Evidence, Q&A 51, page 33.

³⁴ TransCanada's NEB 1.25 (revised June 27, 2014). [A61375]

³⁵ ANE Revised Evidence Q&As 32-33, 45, and 55.

³⁶ See ANE Revised Evidence, Q&A 14, page 8.

1 Table 1 below, the tolls proposed in the Application are generally lower than the
2 illustrative 2013 *status quo* tolls in the RH-003-2011 proceeding.³⁷

Table 1: Comparison of Proposed Tolls and Illustrative 2013 Status Quo Tolls

Path	Proposed Tolls for 2015-2020 (\$/GJ)	RH-003-2011 2013 Illustrative Status Quo Toll (\$/GJ)	Difference (\$/GJ)
Empress to Southwest Zone or Union SWDA	1.6787	2.5777	-0.8990
Union Dawn to Iroquois ¹	0.6765	0.7231	-0.0466
Union Parkway Belt to Iroquois ¹	0.4937	0.4984	-0.0047
Note: 1. Includes the Delivery Pressure and Dawn Receipt Surcharge tolls where applicable.			

3 In addition to being incorrect, ANE's claim is also irrelevant due to the different
4 circumstances that applied to the *status quo* tolls for 2013 prior to implementation of
5 the RH-003-2011 Decision and the 2015-2020 period. For example, the 2013 *status*
6 *quo* tolls were based on a different throughput forecast than the one the Board
7 adopted to establish Compliance Tolls, and did not reflect the toll design changes
8 approved by the Board in RH-003-2011. Adding to the irrelevance of this comparison
9 is the fact that some of the Board's approved Compliance Tolls for very short paths
10 are higher than the corresponding illustrative 2013 *status quo* tolls.

2.3.2 TransCanada's Forecast of Firm BD is Reasonable

11 The forecast of Firm BD reflected in the Application has been criticized by ANE as
12 being too conservative and unrealistic given current contract levels on the Mainline
13 since the RH-003-2011 Decision was implemented.³⁸ TransCanada submits that its
14 Firm BD forecast is reasonable, unlike the forecast firm billing determinants
15 recommended by ANE.

16 The Application billing determinant forecast is supported by, and is consistent with,
17 the throughput study conducted by TransCanada³⁹ and the expected market evolution
18 due to the increasing Marcellus and Utica production. Specifically, TransCanada's
19 forecast reflects that Firm BD will be reduced going forward as a result of the
20 increasing northeastern U.S. production, resulting in less long-haul service and more
21 short-haul service, and the anticipated decline in export flows to the U.S. Northeast.

³⁷ For the latest status quo illustrative tolls provided in the RH-003-2011 proceeding, please refer to Attachment 2 of Exhibit B40 of the Application for Approval of the Business and Services Restructuring Proposal and Mainline Final Tolls for 2012 and 2013, NEB Hearing Order RH-003-2011, Revision to Reflect TransCanada's 2012 Throughput Forecast, filed June 29, 2012.

³⁸ ANE Revised Evidence, page 36 - 40.

³⁹ See TransCanada's NEB 1.25 (revised June 27, 2014).

1 TransCanada’s forecast was also informed by the contracting expectations over this
2 period of the three largest Mainline shippers.

3 In contrast, the ANE forecast of Firm BD relies solely on a one-year snapshot based
4 on existing 2014 contracts. Not only is ANE’s forecast incompatible with
5 expectations for the 2015 – 2017 period for which ANE proposes to establish tolls, it
6 is also incompatible with actual known Firm BD for 2015. For example, ANE’s
7 proposed Firm BD to Emerson are unreasonably high and fail to reflect known
8 contract information at that location.

9 Neither is the ANE Firm BD forecast reflective of anticipated evolving market trends.
10 As such, ANE’s forecast of Firm BD does not account for the shift of Mainline
11 contracting from long-haul to short-haul and the declining (and reversal) of export
12 flows to the U.S. northeast.

13 Table 2 below provides a comparison of Firm BD information for both the
14 Application and ANE’s forecast for the years 2015 – 2017, and the percentage by
15 which ANE’s forecast is above that of the Application.

Table 2: Comparison of Firm BD Outlook – 2015-2017

		ANE	Application	Difference	ANE % Above Application	% Total Difference
2015	Energy (PJ/day)	6.32	6.01	0.32	5%	11%
	Energy-Distance (10 ¹² GJ-km/yr)	2.91	2.60	0.31	12%	
2016	Energy (PJ/day)	6.32	5.45	0.88	16%	69%
	Energy-Distance (10 ¹² GJ-km/yr)	2.91	1.62	1.28	79%	
2017	Energy (PJ/day)	6.32	5.56	0.76	14%	101%
	Energy-Distance (10 ¹² GJ-km/yr)	2.91	1.34	1.56	116%	

Source: Appendix 2.1 to this Reply Evidence

16 The ANE forecast of Firm BD for 2015 exceeds the Application forecast by
17 approximately 5% in terms of Energy billing determinants (PJ/d) and by
18 approximately 12% in terms of Energy-Distance billing determinants
19 (10¹² GJ-km/Year). All else equal, the ANE 2015 Firm BD forecast is overstated by
20 11%.⁴⁰

⁴⁰ The Total difference was determined by taking the % difference in ANE’s proposed energy and energy-distance relative to that of the Application and allocating those percentage differences using Compliance Toll

1 As recognized by CAPP, the majority of the FT contracts forecast in the settlement
2 agreement for 2015 and 2016 are currently in place.⁴¹ While contract renewal
3 decisions for November 2016 have not occurred yet, the expectation is for a further
4 transition from long-haul to short-haul service and thus a reduction in Energy-
5 Distance billing determinants. Since the ANE Firm BD forecast for 2015-2017 is
6 fixed at the existing 2014 contracting level, as shown in Table 2, the gap between the
7 ANE Firm BD forecast and TransCanada's Firm BD forecast widens over time,
8 particularly in terms of energy-distance billing determinants. This illustrates the
9 magnitude of the issues associated with ANE's failure to reflect expected contract
10 evolution over the 2015-2017 period. All else equal, ANE's forecast of billing
11 determinants for 2016 and 2017 relative to those reflected in the Application are
12 overstated by 69% and 101%, respectively.

13 The effect of implementing ANE's proposal is substantial. The anticipated Mainline
14 revenues over the 2015-2017 period that would result from implementing the ANE
15 proposed tolls, using the Application forecasts of BD and costs, would be an under-
16 recovery of almost \$2 billion in the period, as summarized in Table 3.

Table 3: Revenue Shortfall Resulting from the ANE Proposed Toll

(\$ million)	2015	2016	2017	Total
Revenue ¹	1257.2	905.3	693.4	
Revenue Requirement ²	<u>1597.0</u>	<u>1608.0</u>	<u>1605.0</u>	
Revenue Surplus/(Shortfall)	(339.8)	(702.7)	(911.6)	(1954.1)
Note:				
1. revenue under ANE proposed tolls and TransCanada forecast billing determinants and DMR				
2. Application Revenue Requirement (excluding Annual Bridging Amount)				
Source: Appendix 2.2 to this Reply Evidence.				

17 Also of relevance is the currently known contract information. Known information on
18 billing determinants for 2015, for which the deadline for contract renewal decisions
19 has already passed, points to the ANE Firm BD forecast being too high whereas
20 TransCanada's is reasonable. Table 4 provides a comparison of the 2015 Firm BD
21 reflected in the Application to currently known 2015 BD.⁴²

energy and energy-distance components of 16.1% and 83.9% respectively to determine the overall percentage in which ANE tolls are understated, all else equal.

⁴¹ Mikkelsen Evidence on behalf of CAPP, Q&A6, page 4. [A61511]

⁴² The detailed information shown in Table 4 is summarized from Appendix 2.1 to this Reply Evidence.

Table 4: Summary of 2015 Firm BD and Revenue Outlook

Service	2015 Firm BD (PJ/d)		2015 Energy-Distance (10 ¹² GJ-km/Year)		2015 Revenue (\$ Millions)	
	Currently Known Contracts	Application	Currently Known Contracts	Application	Currently Known Contracts	Application
FT	3.95	4.48	1.59	2.19	1184	1561
FT-NR	0.71	0.27	0.79	0.30	506	196
FT + FT-NR	4.67	4.75	2.38	2.49	1691	1757
FT-SN + EMB	0.47	0.47	0.01	0.01	33	33
STS	<u>0.79</u>	<u>0.79</u>	<u>0.10</u>	<u>0.10</u>	<u>115</u>	<u>115</u>
Total Firm	5.93	6.01	2.49	2.60	1839	1905
% difference to currently known	-	1.3%	-	4.4%	-	3.6%

Source: Appendix 2.1 to this Reply Evidence.

1 Table 4 demonstrates that TransCanada’s Firm BD forecast generally aligns with
2 known contract demand both on an Energy and Energy-Distance basis. Revenue
3 based on known contract demand also aligns with the revenue outlook from the
4 Application.⁴³ This confirms that the ANE Firm BD forecast for 2015 billing
5 determinants is overstated.

6 ANE questioned the expected reduction in firm contracts to East Hereford and
7 Iroquois, which it views as “inconsistent with the region’s need for incremental
8 capacity, even considering the potential Constitution Pipeline project.”⁴⁴ While
9 demand is expected to grow in the US Northeast, it is not expected to outpace the
10 enormous growth in supply in the area or the infrastructure proposed to transport it,
11 including infrastructure that would provide an opportunity for shippers to bypass the
12 Mainline.⁴⁵ TransCanada forecasts that Marcellus and Utica supply is expected to
13 grow to at least 504 10⁶m³/d (18 Bcf/d) by 2020, up from a 2013 level of about
14 245 10⁶m³/d (9 Bcf/d). In fact, the evidence of Mr. Fleck on behalf of MAS⁴⁶ has the
15 Marcellus and Utica production growing to approximately 25 Bcf/d by 2020, up from
16 a 2013 level of about 10 Bcf/d.

17 It is also noteworthy that ANE declined to provide information related to market
18 growth in the franchise areas of ANE members, or of its members’ contracting plans
19 on Constitution or other pipelines. The fact is that a large percentage of Mainline

⁴³ The revenue for both the currently known contracts and the Application were derived using the Application proposed tolls.

⁴⁴ ANE Revised Evidence, page 3.

⁴⁵ See TransCanada’s information request to ANE 1.13(g) for a list of projects and associated capacity in the US Northeast.

⁴⁶ Evidence of Mr. Fleck on behalf of MAS, pages 4-7.

1 contracts held by ANE members will expire before the end of 2017 and none has an
2 expiry beyond 2019; therefore, it is undeniable that the ability for ANE members to
3 reduce their contract demand on the Mainline during the 2015-2020 period will be
4 present.⁴⁷ Further, publicly-available information suggests ANE members or their
5 affiliates are, in fact, underpinning new infrastructure that would reduce their reliance
6 on the Mainline.⁴⁸

7 Recent throughput trends at Iroquois show declining levels of export to the U.S. See
8 Figure 1 below:

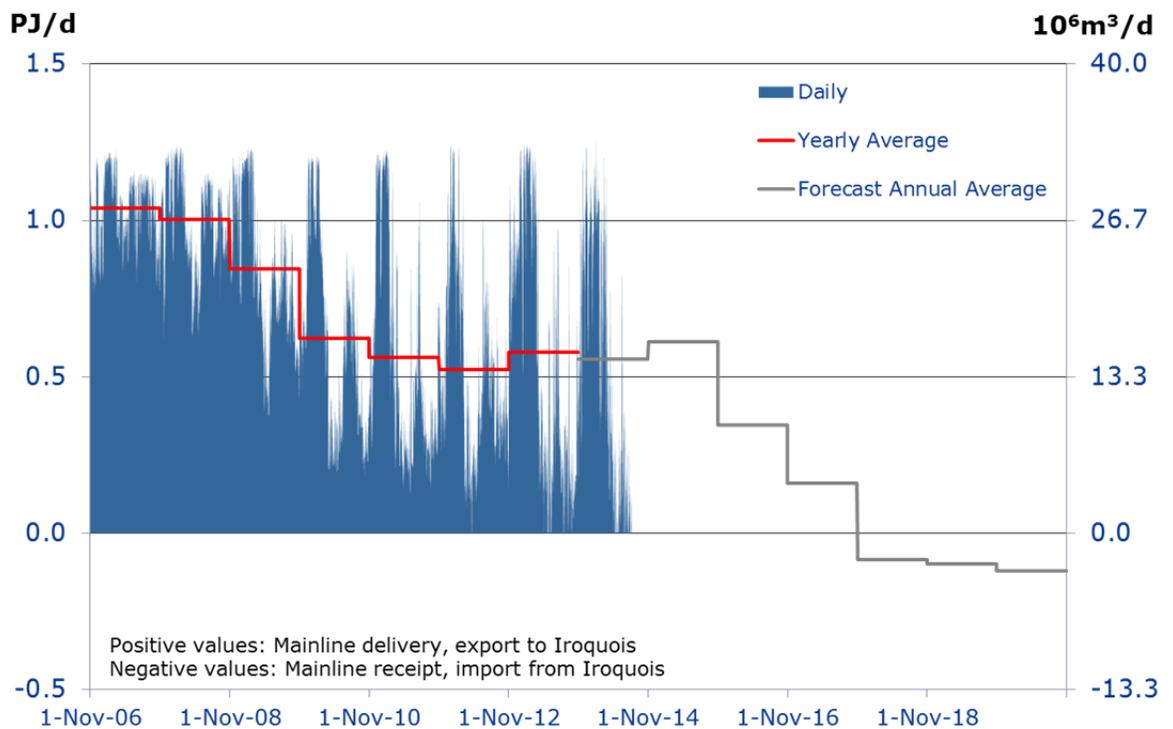


Figure 1: Throughput at Iroquois

9 This figure illustrates how throughput at Iroquois has changed from being fairly
10 constant throughout the year to having become highly seasonal. Between January 1
11 and mid-August 2014, deliveries to Iroquois from the Mainline have been less than

⁴⁷ See ANE's response in Attachment TransCanada-ANE 1.11(a).

⁴⁸ See, for example, the press release from Kinder Morgan Energy Partners issued on July 30, 2014 announcing that it has reached an agreement with LDCs throughout New England to transport approximately 500,000 dekatherms per day (Dth/d) of long-term firm transportation on the market path component of Tennessee Gas Pipeline Company's (TGP) Northeast Energy Direct Project that has a proposed in-service date of November 2018. The press release is attached to TransCanada's Motion for Further and Better Responses to ANE 1.13.

1 100 TJ/d for 64 days, with no deliveries occurring on 36 days. Further illustrating the
 2 market pressure towards flow reversal at this point, receipt nominations at Iroquois
 3 have been restricted on 41 days this year, which has never happened in the past.
 4 These are signals that Iroquois is trending toward becoming a physical receipt point
 5 into the Mainline system.

6 Similar patterns were previously observed at Niagara Falls/Chippawa. As shown in
 7 Figure 2, Niagara/Chippawa were once large export delivery locations which had a
 8 combined annual average export of about 1000 TJ/d, with peaks near 1,400 TJ/d. In
 9 aggregate, these points have now reversed to importing an average of just over 400
 10 TJ/d of gas into Canada, which is approximately the Mainline’s current receipt
 11 capacity at these locations.

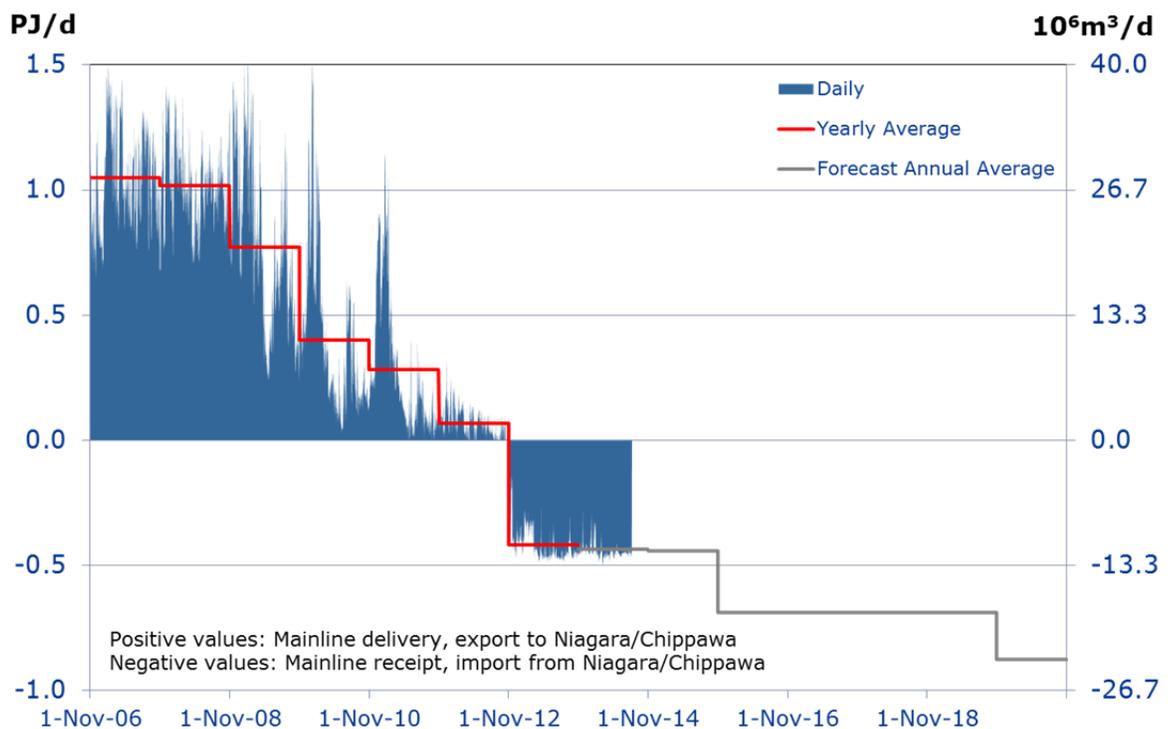


Figure 2: Combined Throughput at Niagara/Chippawa

12 As shown in Figure 2, import quantities at Niagara/Chippawa are forecast to grow,
 13 starting in November 2015 with the addition of capacity associated with the 2015
 14 NCOS. The period preceding reversal from primarily an export point to an import
 15 point was marked with high flow variability that corresponded to more seasonal
 16 peaking delivery flow, which is the flow pattern currently observed at Iroquois. As
 17 new infrastructure underpinned by long-term firm contracts is constructed in the US
 18 Northeast to transport vast and growing Marcellus and Utica gas supply to market, it

1 is reasonable to expect that Iroquois will also become primarily an import point in the
2 next few years, just as Niagara/Chippawa did starting in 2012.

3 ANE also criticizes the Application forecast of Firm BD to Emerson 1 and 2 (jointly
4 Emerson), and has presented a forecast that includes Empress to Emerson Firm BD of
5 636 TJ/d, based primarily on results experienced in the 2013-2014 winter. In contrast,
6 the Application forecast reflects Firm BD to Emerson of 115 TJ/d. TransCanada
7 submits that it is not reasonable to expect Firm BD to Emerson to be maintained at
8 levels caused by abnormal weather conditions. The reasonableness of the forecast is
9 also consistent with the level of currently known BD for 2015 to Emerson of 131
10 TJ/d.

2.3.3 TransCanada's DMR Forecast is Reasonable

11 The forecast of DMR reflected in the Application has been criticized by ANE as
12 being too conservative given recent DMR earnings since the RH-003-2011 Decision
13 was implemented. To the contrary, TransCanada believes that the DMR forecast used
14 in the Application is reasonable and reflective of anticipated developments over the
15 period for which tolls are proposed to be set, and that there is no basis to rely on 2013
16 Compliance Filing levels of DMR when future circumstances are expected to be
17 significantly different. In particular, ANE's DMR forecast of \$417 million per year
18 fails to account for the impact of the abnormally cold 2013-2014 winter or the
19 interaction between firm contract levels and discretionary service revenues. This is
20 despite ANE clearly understanding that:

21 ...the unlimited pricing discretion and other changes adopted by the
22 Board in RH-003-2011 improved the FT contracting situation
23 dramatically prior to the beginning of the winter. Further, the changes
24 allowed TransCanada to substantially increase the firm revenues
25 generated by the Mainline during a colder winter as shippers found it
26 economic to acquire additional FT service to meet market demands. The
27 majority of incremental contracting originated at Empress. Shippers
28 across the system and at key export points acquired incremental FT
29 Service substantially reversing the trend experienced in recent years.⁴⁹

30 The market dynamics and associated contracting practises have and continue to
31 evolve. This evolution is ignored in the ANE DMR Forecast, which is both overstated
32 and static through 2017. This evolution is, however, reflected in the DMR forecast in
33 the Application, which includes \$180 million/year for 2015 and 2016 and then \$60
34 million/year for the 2017 – 2020 period.

⁴⁹ ANE Revised Evidence, Q&A49, page 31.

1 The ANE forecast is based on the DMR amount that TransCanada included for the
2 year 2013 in its RH-003-2011 Compliance toll filing. That filing included Firm BD of
3 4.84 PJ/d (FT, FT-NR, FT-SN and STS included) for the year 2013, which is well
4 below the level of firm billing determinants reflected in both TransCanada's forecast
5 and in ANE's forecast in this proceeding (see Table 2 above). The ANE forecast,
6 therefore, ignores that, as more of the market is expected to be served under contracts
7 for firm services, less of the market will be served through discretionary services,
8 equating to less DMR revenue. Also, higher firm contracting levels result in higher
9 use of diversions, which also tend to reduce IT sales and DMR revenues.⁵⁰ The
10 Application forecast of DMR accounts for, and is consistent with, the anticipated
11 level of Firm BD.

12 The unreasonableness of the ANE DMR forecast can also be observed by comparing
13 it to the actual achieved DMR through July 2014, as well as the expected DMR
14 through the remainder of 2014. Table 5 below shows the actual and projected
15 monthly DMR values for the year 2014. TransCanada is expecting 2014 DMR to be
16 approximately \$347 million, driven mostly from the \$322 million generated in the
17 January – March period. This largely resulted from the abnormally cold weather
18 experienced this last winter. Since this past winter, DMR has been averaging
19 approximately \$2 million per month, and only \$25 million is expected for the last 3
20 quarters of 2014. ANE's forecast of DMR for 2015-2017 is about \$70 million greater
21 than the DMR projected to be generated in 2014, which included the coldest weather
22 in many decades across northern North America. This is unrealistic. ANE has
23 provided no evidence to suggest that such weather is likely to reoccur, the market
24 dynamics are likely to be the same, or how TransCanada will have an opportunity to
25 generate substantially greater DMR levels going forward.

26 As previously noted and acknowledged by ANE, another effect of the cold winter has
27 been to encourage shippers who require access to the Mainline to contract for
28 additional firm service. While the increase in FT contract levels began in late 2013,
29 additional firm contracts of 1.4 PJ/d were entered into during the January-March
30 period.⁵¹ As such, even if similar weather occurred in the 2014-2015 winter,
31 opportunities for DMR levels would, all else equal, be lower given the increase in FT
32 already experienced.

⁵⁰ See TransCanada's Additional Written Evidence, Section 3.1, pages 20 – 21.

⁵¹ Extracted from the CDE Tables provided in attachment to TransCanada's response to ANE 1-41(d).

Table 5: 2014 DMR (\$ million)

January	83	April	2	July	2	October ¹	2
February	141	May	2	August ¹	2	November ¹	2
March	98	June	3	September ¹	2	December ¹	8
Q1	322	Q2	7	Q3	6	Q4	12
2014 Total: 347							
Note: 1. Forecast							

1 Also, in recent years, much of the DMR has been realized on long-haul paths from
2 Empress. In the future, it is expected that a growing share of DMR will be realized on
3 short-haul paths as a result of the addition of new facilities in the Eastern Triangle
4 and the related increase in short-haul capacity that will be available day-to-day to
5 provide short-haul discretionary service but could not be sold as FT.⁵² This transition
6 also points to lower DMR revenues in the future.

7 It is not reasonable to expect the 2014 level of DMR to be sustained in 2015 and
8 beyond, let alone increased by \$70 million as reflected in the ANE forecast, and then
9 maintained at that level to the end of 2017.

2.3.4 TransCanada's Forecast of Revenue Requirement is Reasonable

10 ANE criticized the forecast for certain components of the revenue requirement, such
11 as pipeline integrity costs, claiming that TransCanada's forecast of these elements is
12 overstated, and recommended a downward toll adjustment.⁵³

13 The ANE evidence inappropriately focuses on certain individual components of the
14 revenue requirement, while ignoring other components, and thus fails to consider the
15 overall aggregate level of the revenue requirement utilized to derive tolls for the
16 2015-2020 period. There are many variables in play over this time period, and some
17 costs are likely to be higher and others lower than forecast. For example, as noted in
18 the response to information request ANE 1-32, TBO costs are now expected to
19 exceed the initial forecast by \$47 million per year for 2016 to 2020. In addition,
20 capital costs, and Operations, Maintenance and Administrative (OM&A) costs are
21 also now expected to exceed the initial forecast. Specifically:

- 22 • Capital Costs – Costs to acquire land rights, materials and construction services
23 have increased substantially relative to the initial forecast. For example, the Kings
24 North project was initially estimated to cost \$126 million, but is now expected to
25 increase by approximately \$100 million, primarily due to higher land costs. This

⁵² For example, as a result of ambient conditions that may allow higher throughput on a short term basis or through the use of capacity not available for firm service in light of TransCanada's loss of critical unit design criteria.

⁵³ ANE Revised Evidence, Q&As 66-67, pages 40-41.

1 additional capital cost will add another \$9.5 million to the annual revenue
2 requirement in 2016-2020.

- 3 • OM&A Costs – The current estimate of OM&A costs in 2015 is \$191 million
4 compared to \$180 million included in the Settlement Application in 2015, leaving
5 at least an \$11 million/year short-fall that would need to be offset elsewhere.

6 With regard to the pipeline integrity costs focused on by ANE, these costs depend on
7 the scope of work required each year and by changes in regulations. The scope of
8 work is periodic and depends on the results of the work completed during the year. If
9 the inspection results identify areas of concern, additional unplanned work may be
10 required. These costs vary from year-to-year and therefore, costs that were incurred in
11 2013 are not necessarily a good predictor of costs for future years. TransCanada is
12 committed to ensuring public safety and will invest in pipeline integrity in order to
13 maintain the safety of all its pipeline segments. The Application forecast of \$100 million
14 per year is in line with the current forecasts for 2014 – 2016, which are in the range of
15 \$90 to \$110 million, and is a reasonable estimate of annual pipeline integrity costs.

16 Clearly, there are components of the revenue requirement that will be higher than the
17 costs included in Settlement Application and TransCanada will be challenged to
18 manage the aggregate costs to the levels reflected in the Settlement forecast.

19 TransCanada submits that on balance, the forecast of Mainline costs reflected in the
20 derivation of Settlement tolls is reasonable such that there is no basis for any
21 downward adjustments.

2.4 Conclusion on Tolling Matters

22 The tolling methodology proposed for the 2015-2020 period and the tolling
23 parameters proposed for 2021-2030 period as part of the Application are consistent
24 with the evolution of the market recognized tolling principles, and the transition from
25 the historical long-haul use of the system to increased short-haul use of the system.
26 The proposed transition period from an integrated toll design to segmented tolling is
27 also appropriate and consistent with cost responsibility, in the context of the overall
28 Application. As further discussed in the reply evidence of Mr. Reed, there is no
29 definitive method or timeframe in which transition should occur; however, such
30 transition should reflect a balance of interests and it is common to assign cost
31 responsibility for transition costs across a broad customer base. TransCanada submits
32 that such a balance has been achieved through the proposed transition from the
33 historical toll design and use of the system to a new segmented toll design and use of
34 the system. The toll method and tolling parameters proposed in the Application are
35 responsive to the current and expected future use of the system and will contribute to
36 improving cost accountability while promoting toll certainty and stability.

1 The tolls for the 2015-2020 period reflect this appropriate allocation of costs and the
2 reasonable forecast for Firm BD, DMR and Revenue Requirement used to derive
3 them, resulting in tolls that are just and reasonable and should be approved by the
4 Board.

5 In contrast, the tolling proposal put forth by ANE relies on unrealistic assumptions
6 and forecasts based on 2014 Mainline Firm BD, 2013 Compliance Filing DMR, and
7 costs that would result in a drastic under-collection of revenues over the 2015-2017
8 period. As shown in Table 3 above, TransCanada estimates that implementation of
9 the ANE tolling model would result in an under-recovery of almost \$2 billion over
10 the 2015 – 2017 period, assuming ANE’s unrealistically low tolls are implemented
11 and the Application forecast of Firm BD, DMR and costs materialize. Such an
12 outcome would have dramatic negative impacts on TransCanada and parties
13 contracting on the Mainline in 2018 and beyond. This is not a matter to ignore and
14 record in the LTAA for disposition in 2018 or beyond. Accordingly, the Board should
15 reject the ANE tolling proposal as it results in tolls that are neither just nor
16 reasonable. In addition, any conclusions drawn by ANE based on its toll proposal,
17 including comparisons to TransCanada’s proposal, should also be rejected.

3.0 SERVICE AND SERVICE FEATURES

18 In this section, TransCanada addresses intervenor positions related to specific
19 services and service features, including the proposed Term Up Provision, long-haul to
20 short-haul conversion, a minimum term for STFT, and the offering of non-renewable
21 firm transportation service. Pricing discretion associated with IT and STFT services is
22 addressed separately in Section 4.0.

3.1 ANE Position on the Term-Up Provision should be Rejected

23 Only ANE opposes the proposed Term-Up Provision, arguing that the provision
24 “exposes ANE to commercial uncertainty,”⁵⁴ “would require contract extension
25 decisions to be undertaken under unreasonable time constraints,”⁵⁵ and “exposes ANE
26 shippers to an overly-long contract renewal; an unreasonable outcome that shifts the
27 risks of operating a pipeline onto shippers.”⁵⁶ ANE also states that “[w]hile
28 TransCanada’s renewal proposal is different than that proposed in RH-003-2011, it
29 suffers from the same flaws and should be rejected. The changes recently adopted by
30 the Board provide TransCanada with substantial advance notice regarding renewals
31 compared with the previous six-month notice period.”⁵⁷

⁵⁴ ANE Revised Evidence, Q&A13, page 8, lines 3 and 4. [A62000]

⁵⁵ ANE Revised Evidence, Q&A13, page 8, lines 5 and 6. [A62000]

⁵⁶ ANE Revised Evidence, Q&A57, page 54, lines 19 and 20. [A62000]

⁵⁷ ANE Revised Evidence, Q&A101, page 57, lines 34 to 37. [A62000]

1 In fact, the Term-Up Provision establishes clear and transparent criteria, including a
2 defined threshold when the provision would be invoked, a 5 year minimum contract
3 term to maintain renewal rights, and a 60-day election period. The codification of
4 these transparent criteria is responsive to concerns that had been expressed by
5 stakeholders in relation to the Early Long Term Renewal Option (ELTRO) provision
6 considered and rejected by the Board in RH-001-2013. ANE's position on the
7 Term-Up Provision is also surprising since identical features to those criticized by
8 ANE in this proceeding were included in the right of first refusal (ROFR) proposal
9 that ANE advanced in RH-001-2013. Like the proposed Term-Up Provision, the ANE
10 ROFR proposal contemplated that shippers could lose renewal rights if they did not
11 term-up for 5 years or more (for a total contract term of 7 years or more) and shippers
12 were required to make a renewal decision 30 days after receiving a request.⁵⁸

13 TransCanada previously recognized that the Term-Up Provision might result in some
14 shippers having to formally communicate their renewal decisions earlier than they
15 otherwise would, particularly those who have the opportunity to pursue non-Mainline
16 alternatives.⁵⁹ But this is precisely the objective. TransCanada believes that the
17 Canadian public interest is best served by ensuring the rational development of
18 Mainline infrastructure for the benefit of those who will continue to rely on the
19 Mainline over the long-term, such as the LDCs, who have committed to rely on the
20 Mainline exclusively to meet their gas supply requirements, with some narrowly
21 defined exceptions, until at least December 31, 2030.⁶⁰ In other words, TransCanada
22 submits that the interests of the Mainline and of its long-term shippers far outweigh
23 the individual interests of ANE with respect to the Term-Up Provision.

24 The Term-Up Provision will assist TransCanada in understanding the level of existing
25 shipper commitment and associated longer-term firm contractual requirements on the
26 system in situations where certain expansion facilities are required. This will promote
27 the rational development of the Mainline, minimize impacts associated with new
28 facilities construction, and contribute to reducing Mainline costs.

3.2 ANE Phased Approach to LH to SH Conversion should be Rejected

29 ANE provides the following views with respect to contract conversion opportunities:

30 ...long-haul shippers be afforded the opportunity to convert up to 20% of
31 long-haul volumes to short-haul per year effective on November 1st of 2016,
32 2017 and 2018. The remaining 40% could be converted if TransCanada
33 repurposes assets and sufficient net benefits are available to more than offset
34 the revenue impacts of additional conversions.⁶¹

⁵⁸ RH-001-2013 proceeding; ANE response to NEB 1.1(b).

⁵⁹ TransCanada's Additional Written evidence, page 25. [A60096]

⁶⁰ See TransCanada's Additional Written Evidence, Section 3.3, pages 25-26. [A60096]

⁶¹ ANE Revised Evidence, Q&A 90, page 52. [A62000]

1 ANE suggests that such a transition could “be accommodated within the Board’s
2 existing tolling framework without toll increases.” However, a phased transition
3 would not meet the market demand for more short-haul transportation. The
4 conversion from long haul to short haul is a key component of the Settlement that
5 goes to the core issues that gave rise to the need for the Settlement. As such,
6 implementation of the ANE proposal to limit conversion would negatively impact the
7 toll and tariff terms described in the Settlement, thus putting into jeopardy the
8 commitments made by the LDCs and the balance achieved in the Settlement.

3.3 CAPP STFT Minimum Term Proposal should be Rejected

9 Through the evidence of Dr. Ren Orans, CAPP suggests the minimum term of STFT
10 should be increased from 7 days to 30 days. To justify this request, Dr. Orans states:

11 I am concerned that the product can be too easily substituted for FT service at
12 the expense of significant amounts of revenue to TransCanada. I believe that
13 limiting the minimum term of STFT to one month provides a stronger
14 mechanism for cost recovery through this service, forcing shippers to pay a
15 larger share of the Mainline’s costs if they elect to use STFT.

16 The CAPP proposal to increase the minimum contract term would put into jeopardy
17 the majority of STFT revenues to the detriment of all shippers. From July 1, 2013 to
18 June 30, 2014 period, the first year during which PD has been in effect, the sale of
19 STFT capacity for terms shorter than 30 days represented 61% of total STFT sales.
20 This includes sales for 7-day terms and for remaining monthly capacity after the
21 commencement of a month. It is, therefore, clear that the ability to contract for firm
22 capacity for terms shorter than 30 days is valued by shippers and that imposing the
23 restrictions proposed by CAPP would reduce demand for STFT service.

24 CAPP provides no assessment of the impact of its proposal, such as the extent to
25 which shippers who bid for STFT capacity of 7 days would be prepared to bid for
26 terms of 30 days or more, and if so, at what price. TransCanada submits that shippers
27 who currently prefer the existing minimum 7 day term STFT service over monthly
28 STFT service or FT service under the existing tolling regime are not likely to rely on
29 FT as an alternative if the minimum term was increased to 30 days, as suggested by
30 CAPP. It is much more likely that, absent the availability of 7-day STFT service,
31 these shippers would instead rely on IT service or secondary market capacity such as
32 diversions that would have a higher priority over IT.

33 The CAPP proposal to increase the minimum term for STFT to 30 days would make
34 STFT a less viable service, and reduce the quantities and revenues associated with the
35 sale of discretionary services.

3.4 FT-NR has been Properly Offered in Accordance with the Mainline Tariff

1 In its evidence and responses to information requests, ANE suggests that
2 TransCanada has acted inappropriately by offering capacity for Non-Renewable Firm
3 Transportation (FT-NR) service, as opposed to FT service.⁶² The offering of FT-NR,
4 which other than being non-renewable, is identical to FT service and is offered at the
5 firm recourse rate.

6 ANE's position is summarized in its response to information request TransCanada-
7 ANE-1.3(a)(b), which states:

8 It is ANE's position that Board approval is required prior to
9 transferring, selling or leasing Mainline natural gas assets to another
10 entity. The conditions imposed on the existing capacity open seasons
11 following the RH-003-2011 Decision effectively removed from
12 service a portion of the Mainline's natural gas capacity prior to
13 TransCanada obtaining required Board approval.

14 Despite ANE being specifically asked in information request TransCanada-ANE-1.3
15 to identify which provision(s), if any, of the tariff that TransCanada contravened in
16 offering FT-NR, ANE fails to point to any tariff provision that TransCanada would
17 have contravened by offering FT-NR. In fact, FT-NR service was specifically
18 designed to address situations where existing capacity may not be available at a future
19 date, and therefore cannot be offered on a renewable basis. Section 1.2 of the FT-NR
20 Toll Schedule relates to availability of capacity for FT-NR service and explicitly
21 states:

1.2 Capacity Available for FT-NR

22 Capacity made available for Shippers under this Toll Schedule is capacity that
23 is available on a firm basis for a specific period of time as a result of:

24 (a) such capacity being previously contracted to other Shippers to commence
25 on a future specified date; or

26 (b) TransCanada determines in its sole discretion that such capacity may not
27 be available after such future specified date.
28

29 The offering of FT-NR service in light of the possible transfer of Mainline assets is
30 clearly in accordance with the tariff requirement. The prospect of Mainline assets
31 being transferred, if such transfer is approved by the Board, means that the associated
32 capacity may not be available after such transfer. Contrary to ANE's assertion, there

⁶² See ANE's response to TransCanada-ANE-1.3, which includes references to related claims made by ANE in its evidence.

1 has been no portion of Mainline natural gas capacity that has been effectively
2 removed prior to TransCanada obtaining required Board approval. All existing
3 capacity has been made available pursuant to the availability provisions for FT and
4 FT-NR services contained in the Tariff.

4.0 PRICING FLEXIBILITY FOR DISCRETIONARY SERVICES

5 The Application proposes the continuation of the PD that was granted by the Board to
6 TransCanada in the RH-003-2011 Decision with respect to discretionary (STFT and
7 IT) services.

8 The vast majority of Mainline shippers have not opposed the continuation of PD,
9 understanding the contribution that PD has made, and will make, to increasing annual
10 firm contracting and Mainline revenues overall,⁶³ and recognizing that PD is a
11 fundamental part of the balance achieved in the Settlement.

12 Only two intervenors, CAPP and Centra, have provided evidence opposing
13 continuation of the existing PD, with both CAPP and Centra requesting that
14 TransCanada's PD be limited (or capped) to a set percentage over the FT tolls.
15 CAPP's pricing discretion proposal also includes, for IT and STFT services, that
16 TransCanada provide annual advance notice of monthly maximum bid floors, that
17 TransCanada select, daily, a bid floor up to the monthly maximum, and that capacity
18 be allocated by way of an auction. In addition, CAPP proposes that the Board require
19 that TransCanada report certain price, spread, offer and transport data not currently
20 reported by TransCanada. CAPP and/or Centra ground these requests on the
21 following assertions in their evidence:

- 22 • PD allowed TransCanada to set bid floors for discretionary services which
23 amounted to an "economic withholding" of capacity from IT and STFT shippers.
24 Because TransCanada's discretionary services did not face sufficient competitive
25 constraints, this alleged "economic withholding" reduced CAPP members'
26 netbacks to NIT in the July 1–October 1, 2013 time period (and may again in the
27 future) and caused a disconnection between gas prices at certain downstream
28 trading hubs connected to the Mainline and other North American trading hubs,
29 resulting in "inefficient" utilization of the Mainline and "disruptive" tolls;
- 30 • Regardless, PD is no longer justified as the proposed settlement returns the
31 Mainline to a cost of service model (eliminating TransCanada's risk of cost
32 recovery) and is not consistent with regulatory objectives of price stability and
33 predictability;

⁶³ See, for example, ANE Revised Evidence, Q&A 48, pages 30-33. [A62000]

- 1 • CAPP’s and Centra’s proposed caps on TransCanada's discretionary pricing will
2 not prompt migration from FT to discretionary services or unreasonably reduce
3 Mainline revenues; and
- 4 • CAPP’s proposal to provide notice by February 15 of the previous gas year of the
5 monthly maximum bid floors and additional data reporting related to
6 TransCanada's discretionary services will further enhance competition for
7 TransCanada’s discretionary services.

8 TransCanada, Mr. Reed and Dr. Carpenter demonstrate through reply evidence that
9 the CAPP and Centra proposals are without merit and not in the public interest. The
10 reply evidence establishes that:

- 11 • TransCanada’s use of pricing discretion did not result in “economic withholding”
12 or exercise of market power
- 13 • the secondary market, including diversions, and firm recourse tolls, provide
14 sufficient economic discipline
- 15 • TransCanada’s use of pricing discretion did not determine netbacks to NIT
- 16 • TransCanada’s use of pricing discretion did not impact downstream commodity
17 prices
- 18 • TransCanada’s use of pricing discretion is to the benefit of Mainline shippers, and
19 is consistent with the public interest and applicable tolling principles.
- 20 • the continuation of pricing discretion is warranted in light of the risks that will be
21 assumed by TransCanada under the Settlement
- 22 • intervenor proposed limits on pricing discretion should be rejected
- 23 • CAPP's data reporting proposals are unjustified and unnecessary
- 24 • continuation of pricing discretion is in the Public Interest.

4.1 **TransCanada’s Use of Pricing Discretion Did Not Result in “Economic Withholding” or Exercise of Market Power**

25 CAPP asserts that TransCanada’s use of PD amounts to an “economic withholding”
26 of discretionary gas transportation capacity. CAPP’s expert witness, Dr. Orans,
27 defines “economic withholding” as follows:

28 Efficient use of a pipeline occurs when short-term prices are set at levels
29 to maximize the flow of gas from low to high cost markets; a pipeline thus
30 encourages economically efficient flows if it offers interruptible
31 transportation service at a cost between its variable cost and value of
32 transportation in a competitive market. Whenever short-term prices for

1 transmission services are set at levels that restrict efficient flows, the pipe
2 is performing a form of economic withholding.⁶⁴

3 The CAPP Evidence sheds some further light on this allegation in the following
4 statement:

5 TransCanada priced its discretionary services in a way that was
6 inconsistent with the goal of prompting economically efficient usage of
7 the Mainline system and so securing incremental revenues. Instead,
8 TransCanada priced its discretionary services to increase FT contracting.
9 The period of July 1, 2013 to October 1, 2013 saw the lowest flows of the
10 last five years from Empress on the Mainline.⁶⁵

11 Dr. Carpenter and Mr. Reed will principally address this issue on behalf of
12 TransCanada. However, TransCanada offers a number of comments and observations
13 from the pipeline's perspective.

14 If one were to accept Dr. Orans' definition of "economic withholding", TransCanada
15 would be required to post its discretionary services at a discount to FT the substantial
16 majority of time, even though that would lead to a migration away from firm services
17 realized over the last year, significantly reduce revenues for the Mainline, and
18 undermine the long run efficiencies the Board sought to achieve by granting PD in the
19 RH-003-2011 Decision. In fact, based on the definition of economic efficiency
20 pursued by Dr. Orans, maintaining RAM would have been in the best interest of the
21 Mainline, a view rejected by the Board in its RH-003-2011 Decision. TransCanada's
22 PD was and is intended to optimize overall Mainline revenues, including
23 discretionary revenues, over the long-term, and it is over the long term that economic
24 efficiency of TransCanada's PD (and its Application) must be assessed.

25 Further, evaluation of flows from Empress since the implementation of PD shows
26 clearly that economic efficiency has been enhanced. The average flows from Empress
27 during October 1, 2013 to June 30, 2014 were 3,122 TJ/d. This is significantly higher
28 relative to the similar period of the previous year when the average flows were
29 1,981 TJ/d. PD clearly encouraged shippers who required firm service to contract for
30 annual capacity, an objective Dr. Orans supports.⁶⁶ By contrast, if TransCanada were
31 to price IT service based on Dr. Orans' view of economic efficiency (maximizing
32 flow by offering IT above variable cost), shippers who require service throughout the
33 year would not contract for firm capacity but, rather, seek to rely on discretionary
34 services, as they did prior to PD previously approved.

⁶⁴ Dr. Orans Evidence on behalf of CAPP, Q&A 25, page 27. [A61511]

⁶⁵ CAPP Evidence, Q&A 11, page 9. [A61511]

⁶⁶ Dr. Orans Evidence on behalf of CAPP, Q&A 46, page 47. [A61511]

1 In addition to its “economic withholding” allegations, CAPP also seems to claim that
2 there is a risk that TransCanada will *physically* withhold STFT capacity.⁶⁷ However,
3 CAPP has provided no evidence that this has ever occurred. In fact, TransCanada has
4 offered STFT in accordance with its Tariff, as acknowledged by CAPP.⁶⁸ Aside from
5 some prescribed summer and winter posting requirements, TransCanada must post
6 STFT by the 7th day of the month or if it determines that additional capacity has
7 become available. While TransCanada has some discretion in the term of the STFT
8 offering (weekly, monthly, seasonal), TransCanada posts all available STFT capacity
9 in its open season offerings. TransCanada has posted STFT for various terms on
10 virtually every business day since the implementation of PD. As a result, there is no
11 basis for CAPP to claim that TransCanada has physically withheld STFT capacity.

12 In essence, CAPP’s assertions with respect to “economic withholding” allege that
13 TransCanada is, through PD, exercising market power to the detriment of CAPP’s
14 members through reduction in the prices received for the commodity that they
15 produce. Presumably, CAPP equates this impact on the netbacks of its members with
16 a detriment to the public interest. With respect to the evidence presented by CAPP
17 and Dr. Orans in support of these contentions, Dr. Carpenter demonstrates in his reply
18 evidence that:

- 19 • Dr. Orans’ assertion that “economic withholding” occurs whenever a pipeline
20 offers short term services at a price above the short run value of transportation is
21 neither correct as a matter of economics or competition policy, nor an
22 economically meaningful way to evaluate TransCanada’s exercise of PD as there
23 are compelling reasons for the efficiency of a pipeline, and its regulation, to be
24 considered over the long term (Qs.8-9, Carpenter Reply Evidence);
- 25 • “economic withholding”, even as misdefined by Dr. Orans, can only result in
26 economic inefficiency when the firm engaging in the conduct has market power
27 (firms in highly competitive markets refrain from making products or services
28 available every day) and neither CAPP nor Centra have analyzed whether
29 TransCanada has market power for the provision of discretionary services (Q.13
30 and Q.17, Carpenter Reply Evidence);
- 31 • even where economic withholding, properly defined, is established, it is only an
32 issue for competition policy or the public interest in efficient markets where the
33 conduct is part of a strategy that both weakens existing or potential competitive
34 constraints on the party’s pricing and there is no legitimate business justification
35 for the conduct, neither of which is alleged by CAPP or Centra. (Qs.14-15,
36 Carpenter Reply Evidence)

⁶⁷ See, for example: CAPP’s Evidence Q&A13, page 10; Dr. Orans Evidence on behalf of CAPP: Q&A10, pages 9-10 Q&A12, pages 11-12, Q&A25, pages 27-28, Q&A 33, pages 35-36, Q&A 34, pages 36-37, Q&A 35, page 38, Q&A48, 48, page Q&A58, page 60, and Q&A65, page 8. [A61511]

⁶⁸ See CAPP’s response to TransCanada-CAPP 1.13(c).

- 1 • TransCanada does not have market power over discretionary services, PD does
2 not, in any way, impede the constraints that exist on TransCanada’s pricing of
3 discretionary services, and there are clearly legitimate business justifications for
4 PD as previously recognized by the Board in the RH-003-2011 Decision (Q.18,
5 Carpenter Reply Evidence); and
- 6 • while Dr. Orans references “physical withholding” in his evidence and speculates
7 that it may occur in the future on page 61 at answer 58, he never testifies that
8 TransCanada has physically withheld short-term capacity nor does he present any
9 evidence that TransCanada’s alleged “economic withholding” has led to physical
10 constraints on the pipeline (Q.11, Carpenter Reply Evidence).

11 With respect to this issue, Mr. Reed shows that Dr. Orans’ narrow definition of
12 economic efficiency is misplaced and is inconsistent with Mr. Reed’s definition of
13 economic efficiency because Dr. Orans’ definition is solely focused on maximizing
14 throughput on the Mainline and not, as it should be, on both allocative and productive
15 efficiency (Q.42, Reed Reply Evidence).

16 TransCanada endorses the reply evidence of Dr. Carpenter and Mr. Reed.
17 TransCanada has not physically withheld capacity nor has it engaged in economic
18 withholding as properly defined. TransCanada also acted in accordance with its Tariff
19 and the Board’s authorizations and directives in offering discretionary services.

4.2 The Secondary Market, including Diversions, and Firm Recourse Tolls Provide Sufficient Economic Discipline

20 CAPP, through the evidence of Dr. Orans, argues that TransCanada's STFT and IT
21 prices are not always, or sufficiently, subject to competitive discipline, allowing
22 TransCanada to exert “monopolistic pricing”. The evidence of Dr. Carpenter
23 addresses this issue in detail, and TransCanada is also providing its perspective on the
24 CAPP allegations below.

25 The NEB clearly provided TransCanada with PD as a tool to be used in an
26 increasingly competitive environment. Nothing has changed since the Decision to
27 suggest that TransCanada faces any less competition for the sale of Mainline
28 discretionary services than the Board properly recognized in the RH-003-2011
29 Decision. TransCanada’s discretionary services face competition in the secondary
30 market, including the increased use of diversions, and from holders of pipeline and
31 storage capacity. The recourse to FT tolls continues to act as a further constraint on
32 discretionary services, as the Board found in Decision RH-003-2011.

33 The secondary market, including diversions, disciplines pricing discretion in a
34 number of ways. First, the increased amount of firm contracting (for which PD has
35 played a significant role) has resulted in significantly more capacity being available in
36 the secondary market to compete against TransCanada’s discretionary services. If the

1 value of a specific path increases, parties holding that capacity have a substantial
2 incentive to resell capacity in the secondary market. Second, to the extent there is
3 value in a downstream market, a shipper is able to capture the value by utilizing
4 diversions. In fact, diversions have proven to be very effective for shippers in
5 capturing market opportunities, as is demonstrated by the growth in diversions with
6 the commensurate reduction in discretionary sales in most markets. Evidence that
7 these competitive constraints have been effective can be observed in the forward
8 markets. These forward markets, which are the best predictor of future prices, have
9 not experienced a step change since the implementation of PD. In summary, the
10 combination of increased capacity in the secondary market and the increased use of
11 diversions has successfully imposed competitive discipline on TransCanada's sales
12 and pricing of IT and STFT services as envisioned by the Board in the RH-003-2011
13 Decision.

14 Further, shippers' access to the firm recourse rate also provides a constraint on
15 TransCanada's PD. While existing firm capacity is generally available on most
16 Mainline paths, where FT service is not immediately available on a given path
17 because such path is fully contracted, the secondary market including diversions,
18 provides sufficient constraints on TransCanada's discretionary services pricing
19 flexibility. Also, as noted in response to information request NEB 2.13,
20 approximately 90% of IT revenues since implementation of PD relate to deliveries to
21 Emerson 1, Emerson 2, and Union SWDA, where capacity has consistently been
22 available for FT service.

23 In any event, when a certain path has limited or no available existing firm capacity,
24 there is a corresponding increase in the value of capacity in the secondary market.
25 This situation provides an efficient signal that additional capacity may be required,
26 prompting requests for new FT service. Such requests have been pursued as part of
27 the 2015 New Capacity Open Season (NCOS) and the 2016 NCOS. Thus, while the
28 constraints in place ensure that TransCanada has no, nor can it exercise, market
29 power for the sale of discretionary services, maintaining the existing level of pricing
30 discretion for such services will ensure proper market signals remain.

31 Of course, TransCanada readily acknowledges that there were instances where it was
32 able to set high bid floors and successfully sell capacity due to the market conditions
33 at that time. TransCanada provided examples of such situations in its response to
34 information request NEB IR 1.22, explaining that, in these situations, shippers were
35 willing to pay high transportation rates as the basis differentials were extremely wide.
36 TransCanada's pricing of discretionary services was simply capturing a portion of the
37 value dictated by the market (at that time) and the decision of the shippers to rely on
38 discretionary services, as the NEB had envisioned TransCanada would do:

39 We recognize that giving TransCanada the flexibility to increase and
40 decrease bid floors may give it the opportunity to charge very high tolls in
41 certain markets and at certain times, for example, during significant

1 weather events. We are of the view, however, that it is important to
2 provide TransCanada with the necessary tools to capture market
3 opportunities, if and when they arise, and to recover costs associated with
4 its system from those who use it.⁶⁹

5 TransCanada also provided other examples in response to information request NEB
6 1.22 where shippers chose not to bid for discretionary capacity but instead contract at
7 the recourse rate, or found an alternative by transacting in the secondary market
8 including the use of diversions to access a specific market. These examples amply
9 illustrate how the market is operating efficiently, completely absent of any exercise of
10 market power for discretionary services by TransCanada.

11 With respect to the competitive constraints on TransCanada's pricing of discretionary
12 services, the Carpenter Reply Evidence on behalf of TransCanada establishes that:

- 13 • the market for short term services at Dawn or other major delivery points on the
14 Mainline is not concentrated, such that the risk of TransCanada having or
15 exercising market power is low (Q.23, Carpenter Reply Evidence);
- 16 • because the delivery points at Emerson and Iroquois are not characterized by the
17 same type of competition as at Dawn, standard market concentration measures
18 will fail to capture the competition offered by the diversions and the firm recourse
19 tolls. Therefore, one must look to the constraints imposed by the secondary
20 market, including diversions, and to firm recourse tolls at these points (Q.24,
21 Carpenter Reply Evidence).
- 22 • a review of all the available evidence for all of the above-referenced delivery
23 points strongly suggests that the competitive constraints provided by the
24 secondary market, including diversions, and recourse tolls were sufficient to
25 prevent TransCanada from affecting the gas markets upstream and downstream on
26 the Mainline, i.e., TransCanada was not in a position to exercise market power,
27 nor did it engage in the exercise of market power in commodity markets served by
28 the Mainline by virtue of PD (Qs.26-31, Carpenter Reply Evidence).

4.3 TransCanada's Use of Pricing Discretion Did Not Determine Netbacks to NIT

29 CAPP and its expert Dr. Orans are primarily concerned with the disconnect between
30 Alberta natural gas prices (NIT) and those at Henry Hub in the summer of 2013, but
31 reference, obliquely, a concern with the effect of TransCanada's "aggressive"
32 discretionary pricing on downstream "eastern markets" (the latter will be addressed in
33 Section 4.4, below). CAPP has attributed the "disconnect" in NIT prices during the
34 July 1 2013 to October 1, 2013 time period to TransCanada's PD.

⁶⁹ RH-003-2011 Decision, page 126.

1 Dr. Carpenter will principally address CAPP’s evidence on this issue, but
2 TransCanada also provides additional information supporting the conclusion that the
3 CAPP positions are incorrect. As indicated in the graph below, NIT has experienced a
4 negative disconnect – meaning the spot basis differential between NIT and other
5 market hubs widens relative to historical norms – with downstream hubs on several
6 occasions prior to the implementation of PD, clearly suggesting NIT negatively
7 disconnecting from other hubs is nothing new and that there is no logical relationship
8 between PD and any “disconnection” experienced at NIT.

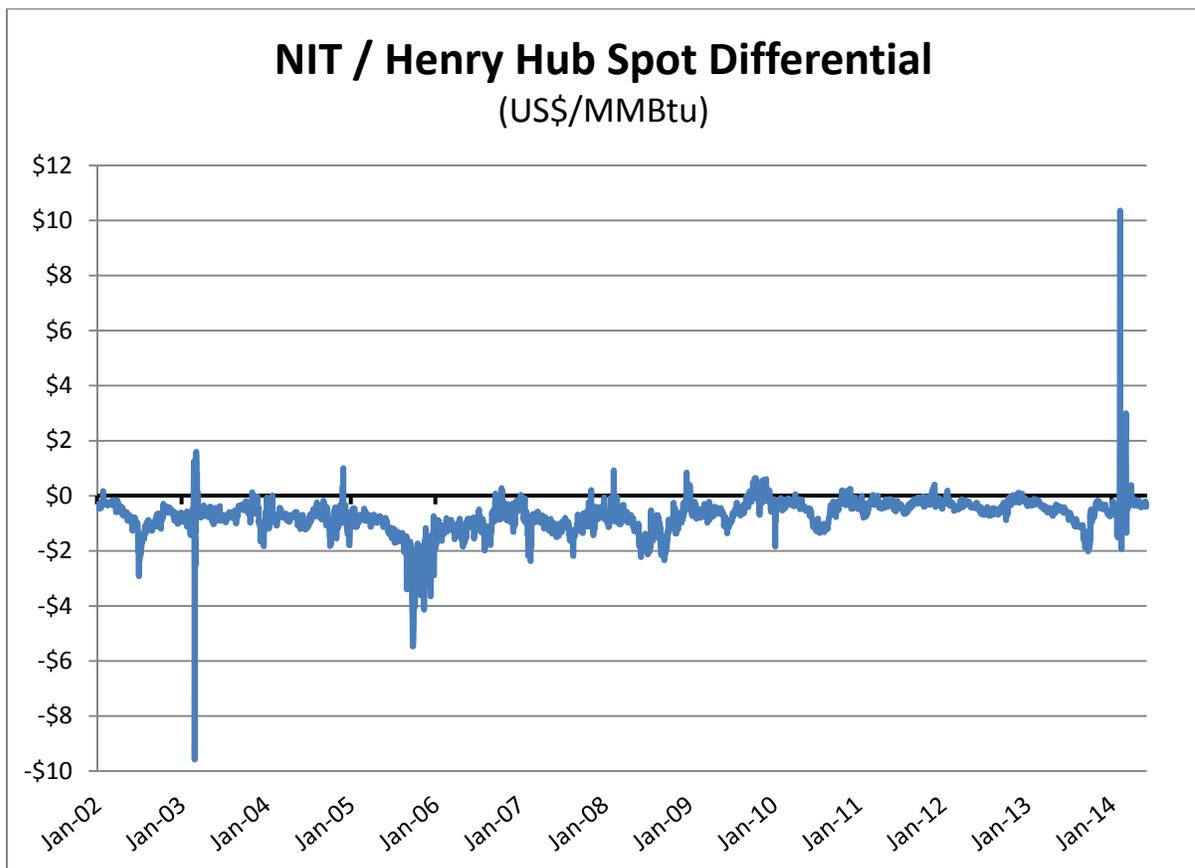


Figure 3: NIT – Henry Hub Spot Differential

9 Many factors other than PD played a role in the above historic price disconnects at
10 NIT and it is clear that many factors other than PD are likely to have led to the
11 disconnect at NIT in the summer of 2013.

12 The July 1-October 1, 2013 time period experienced a number of factors and tolling
13 and services changes in addition to the implementation of PD. These factors included
14 storage levels in Alberta, capacity constraints in Alberta and on downstream pipelines,
15 and the elimination of RAM. Exiting the winter of 2013 Alberta gas storage balances

1 were well above the historic average. By the end of June 2013, Alberta gas storage
2 levels were 395 Bcf, which was 34% higher than the ten year average of 295 Bcf.⁷⁰
3 Second, the southern Alberta floods of June 2013 constrained gas pipeline export
4 capacity out of the province. Third, Northern Border had a planned four day outage,
5 impacting 8 Bcf of supply that would normally flow on Northern Border during the
6 four day period.⁷¹ Finally, the elimination of RAM had a significant impact on WCSB
7 export volumes as RAM credits were predominately utilized to transport gas from
8 Empress to Emerson. Thus, removal of RAM effectively eliminated free Mainline
9 transport and reduced Mainline flows in the short term. All of these factors
10 contributed to a higher gas balance in the WCSB, putting downward pressure on the
11 price of gas at NIT.

12 Lower NIT prices during the July 1-October 1, 2013 time period likely resulted from
13 factors other than PD is confirmed by a review of the time frame following this
14 period. Beginning in October 2013, with market participants adapting to the RH-003-
15 2011 Decision and increased contracting for firm capacity, the NIT price began to rise
16 and differentials tightened. Table 6 below shows the historic spot price differential
17 between NIT and Henry Hub for various periods.

Table 6: NIT versus Henry Hub Spot Differential

Differential	NIT versus Henry Hub (US\$/MMBtu)
Jul-13	(0.87)
Aug-13	(1.11)
Sep-13	(1.63)
Oct-13	(0.58)
Nov-13	(0.38)
Dec-13	(0.57)
Jan-14	(0.69)
Feb-14	0.52
Mar-14	0.06
Apr-14	(0.24)
May-14	(0.33)
Jun-14	(0.18)
Jul-14	(0.15)
13 month Average (July 13– July 14)	(0.47)
3 year average	(0.39)
5 year average	(0.38)
10 year average	(0.72)

⁷⁰ TransCanada estimate based on storage activity information reported in NGTL Gas Day Summary Report.

⁷¹ See NBPL notice dated May 8, 2013 re. Pipeline Class Location Change Outage and notice of Force Majeure anticipated to occur on October 1, 2013 through October 4, 2013.

1 Table 6 confirms that the NIT price was significantly below the Henry Hub price
2 during the July 1 to October 1, 2013 time period after the RH-003-2011 Decision,
3 where the factors discussed above, were in play. Table 6 further confirms, however,
4 that after this transition period, the differential normalized. Indeed, even including the
5 transition period, the average differential over the July 2013 to July 2014 period was
6 $(\$0.47)/\text{MMBtu}$, well below the ten-year average. If the transition period is excluded,
7 the average differential is $(\$0.25)/\text{MMBtu}$, well below the three, five, and ten-year
8 averages. So while NIT may have been "disconnected" for a brief period in the
9 summer of 2013, CAPP and its members have benefited from the narrowing of the
10 differential since October 2013 to below historic averages.

11 The data presented above establishes that CAPP's claim that PD caused the
12 disconnect in NIT prices in the summer of 2013 is not only entirely unsupported, but
13 also manifestly incorrect. TransCanada's PD remains in effect today, as it did last
14 summer, yet basis differentials between NIT and other locations have narrowed
15 significantly and are well below historic levels even though the bid floors posted by
16 TransCanada for discretionary services this summer are not materially different from
17 those posted last summer. In contrast, the other factors noted above have changed.
18 Alberta storage balances at the end of June 2014 were 207 Bcf, or 35% below the ten
19 year average. WCSB export facility capabilities have been restored after the floods of
20 last summer. Northern Border has not required a further sustained maintenance
21 outage. The market has become accustomed to the elimination of RAM. All these
22 factors have changed, while PD has not. Based on these facts alone, it is impossible
23 for the Board to conclude that PD caused the disconnect at NIT in the summer of
24 2013.

25 In addition, the forward market, as shown in Figure 4 below, indicates the differential
26 has returned to levels observed prior to the implementation of PD. Three and five
27 year forward NIT versus Henry Hub basis differentials were approximately
28 $(\$0.50)/\text{MMBtu}$ prior to the introduction of PD. As of July 2014, the three and five
29 year forward differentials are in the $(\$0.40)/\text{MMBtu}$ to $(\$0.45)/\text{MMBtu}$ range.
30 Therefore, NIT forward prices relative to Henry Hub are higher today than they were
31 prior to implementation of PD.

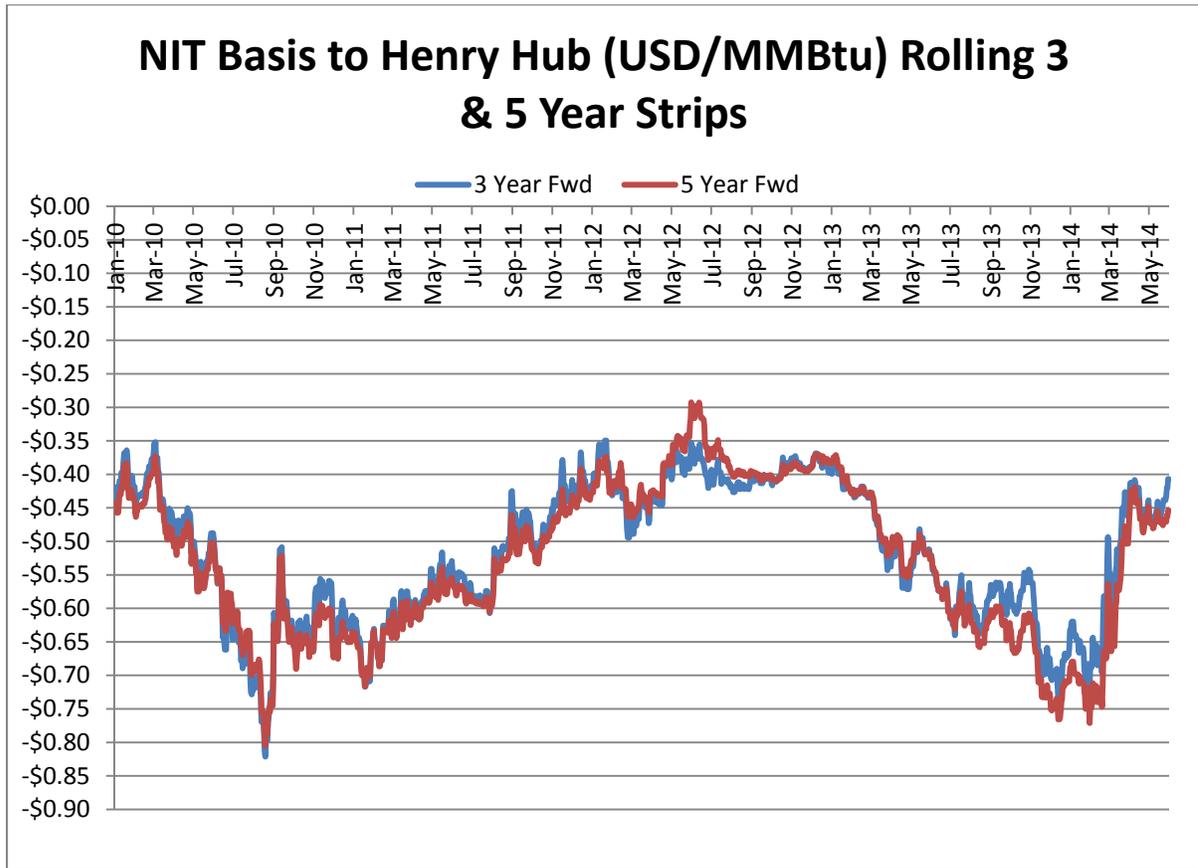


Figure 4: NIT– Henry Hub Basis Rolling 3 and 5 Year Strips

- 1 A similar observation occurs when looking at the forward NIT to Dawn spread. As
- 2 shown in Figure 5 below, the forward NIT versus Dawn differential has narrowed as
- 3 at the end of July 2014 (\$0.60)/MMBtu relative to where it was at the time of
- 4 introduction of pricing flexibility (\$0.70)/MMBtu.

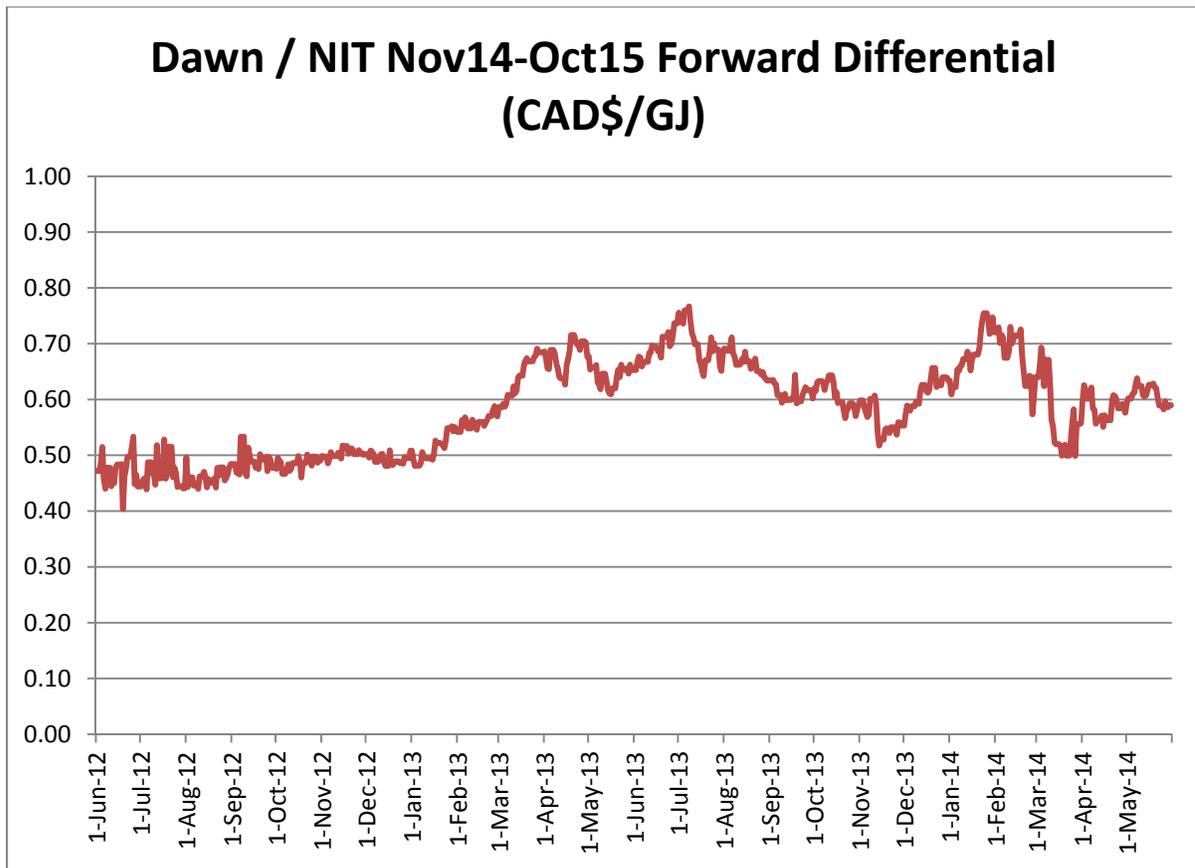


Figure 5: NIT-Dawn Forward Differential (Nov 2014-Oct 2015)

- 1 With respect to CAPP's and Dr. Orans' assertion that TransCanada's PD affected the
2 netback to NIT, Dr. Carpenter's evidence demonstrates that:
- 3 • Dr. Orans' concerns regarding the NIT pricing are limited to only one time
4 period—July 1 – October 1, 2013—immediately following the RH-003-2011
5 Decision (Qs.50-51, Carpenter Reply Evidence)
 - 6 • Dr. Orans' reliance on correlations to support his concerns with NIT pricing
7 should be given no weight, as comparing correlation coefficients over very
8 different time periods and observations is inappropriate particularly where it is
9 clear that historically there have been many disconnects at NIT, absent the
10 existence of PD (Q.52, Carpenter Reply Evidence)
 - 11 • Dr. Orans' focus on the Empress to Emerson spot price spread is inappropriate
12 and, more importantly, his emphasis on spot price differentials is misplaced as
13 spot price differentials are not forward looking; a review of the data available
14 with respect to forward spreads gives no indication of a sustained increase in the
15 forward spread that corresponds to the time period of concern to Dr. Orans (Q.53,
16 Carpenter Reply Evidence)

- 1 • Dr. Orans presents no evidence, and there is no evidence on the record, to suggest
2 that PD allows TransCanada to “disconnect the NIT hub from the North American
3 markets” (Q.54, Carpenter Reply Evidence)
- 4 • Even if Dr. Orans could establish that NIT prices were affected by PD, which he
5 cannot, CAPP members would only be harmed if they chose not to mitigate or
6 eliminate such risks and, unlike many producers elsewhere in North America have
7 the advantage of an existing pipeline with FT capacity available that provides
8 guaranteed access to eastern markets. (Q.55, Carpenter Reply Evidence)

4.4 TransCanada’s Use of Pricing Discretion Did Not Impact Downstream Commodity Prices

9 Centra’s primary concern with TransCanada’s proposal to maintain PD relates to the
10 high natural gas prices Centra experienced at certain locations, notably Emerson, this
11 past winter. Centra claims that in spite of widespread coincidental cold weather and
12 low late winter storage inventory levels across the continent, locations either served
13 directly off of the Mainline or off of pipeline systems interconnected to the Mainline
14 (those “connected” to the Mainline, hereafter “Mainline Points”) had higher natural
15 gas prices, and that this was caused by TransCanada's PD.

16 While Dr. Carpenter will address this issue in substantial part, TransCanada has a
17 number of comments and observations.

18 First, price spikes were not limited to Mainline Points and in fact, price spikes
19 experienced in Mainline market areas were highly correlated with price spikes
20 realized in many other market areas further removed from the Mainline. The winter of
21 2013/14 was one of the coldest on record in the past thirty-five years, and there was
22 also sustained cold over a large portion of the winter, and for much of the central and
23 eastern continental market.⁷² As a result of colder than normal temperatures, prices
24 were higher than previously experienced. Locations with less liquidity may see their
25 prices react more during such periods. Emerson, the location for which Centra
26 appears to be most concerned, is relatively less liquid than other points such as Dawn
27 and may therefore be susceptible to higher volatility. Figures 6 and 7 below are
28 separate graphs of the gas price at various supply areas and various market areas
29 during the winter of 2013/14. Of the locations shown in these figures, only NIT,
30 Emerson and Dawn are connected to the Mainline. Yet, these graphs clearly establish
31 that Centra’s claims that price spikes were isolated to the Mainline Points, and
32 therefore a result of PD, are unfounded. Other locations removed from the Mainline
33 clearly also exhibited price spikes.

⁷² See TransCanada’s response to Ontario 1.5.

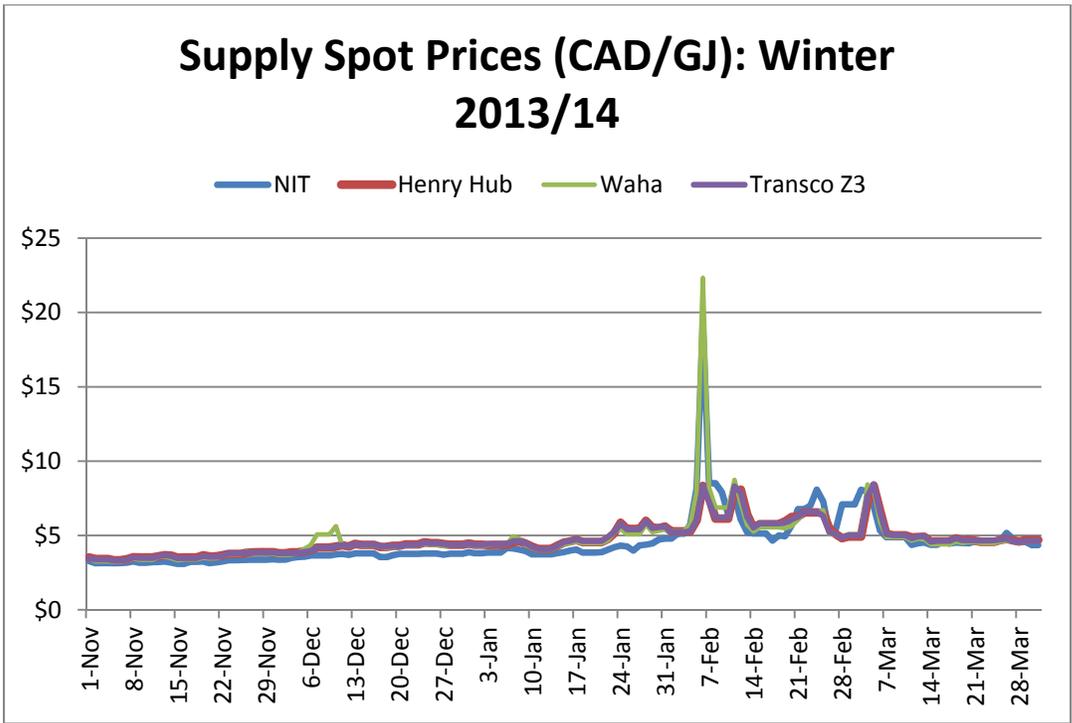


Figure 6: Supply Spot Prices (CAD/GJ): Winter 2013/14

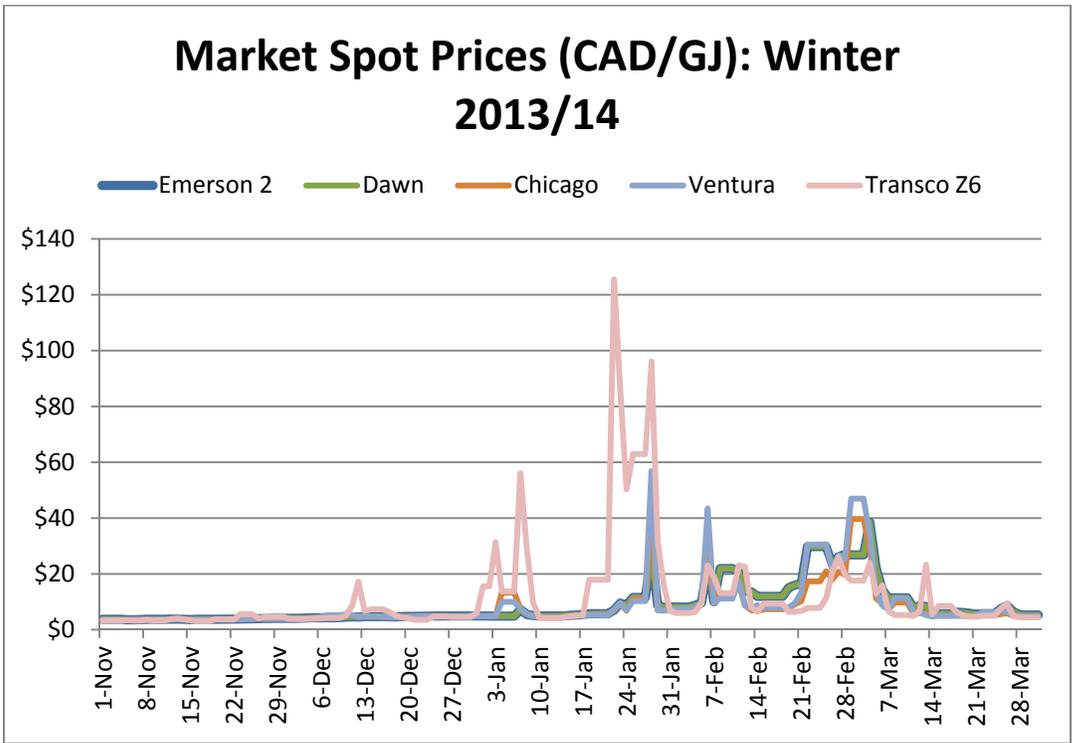


Figure 7: Market Spot Prices (CAD/GJ): Winter 2013/14

1 The intensity of the 2013-2014 winter across the continent can also be observed in
2 Figure 8 that presents information from the National Climatic Data Centre and shows
3 that most of the central and Eastern US experienced below, or much below, average
4 weather, while the West experienced abnormally warm weather.

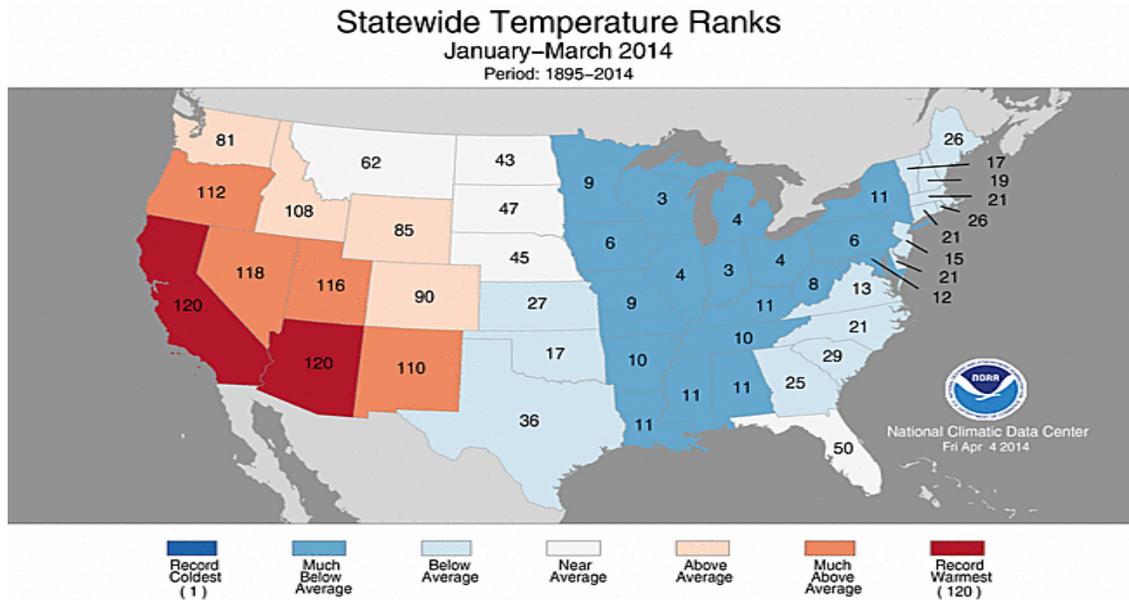


Figure 8: Statewide Temperature Ranks – 2013-2014 Winter

5 In its evidence, Centra states that it determined that winter 2013/2014 prices at
6 downstream Mainline hubs relative to the rest of the continent, were unprecedented
7 based on the following:

8 Centra posed this question and pondered whether such pricing
9 behavior had occurred previously during years with similarly cold
10 weather and depleted storage inventories. Centra searched the
11 historical record for a year that was analogous to the April 2013
12 through March 2014 period in terms of North American weather and
13 resultant natural gas demand, as well as storage inventory depletion.
14 April 2002 through March 2003 was found to similarly represent this
15 past year. An additional similarity is that in 2002/03 the Mainline did
16 not feature FT - RAM, which was introduced in 2004 and eliminated
17 as of July 1, 2013.⁷³

18 Centra also states:

⁷³ Centra Evidence, Q&A 33, pages 34-36.

1 In spite of the close similarity of the various broad macro factors
2 impacting North American natural gas supply and demand between the
3 two winters, and therefore pricing, Centra could find no evidence of
4 similar price dislocations during the 2002/03 winter.⁷⁴

5 Contrary to Centra's assertion that the 2013-2014 was similar to the 2002-2003
6 Winter, the 2002-2003 winter, although cold, was not nearly as cold as the winter of
7 2013/2014. Comparing Figure 9, which provides Statewide Temperature Ranks for
8 2002-2003 to Figure 8, it can be observed that the entire mid-continent area was
9 considerably colder in the winter of 2013/2014 versus 2002/2003: Minnesota (9th
10 versus 86th), Wisconsin (3rd versus 78th), Illinois (4th versus 39th), Indiana (3rd
11 versus 16th), and Michigan (4th versus 35th). Canada also experienced one of the
12 coldest winters in decades as described in TransCanada's response to information
13 request Ontario 1.5.

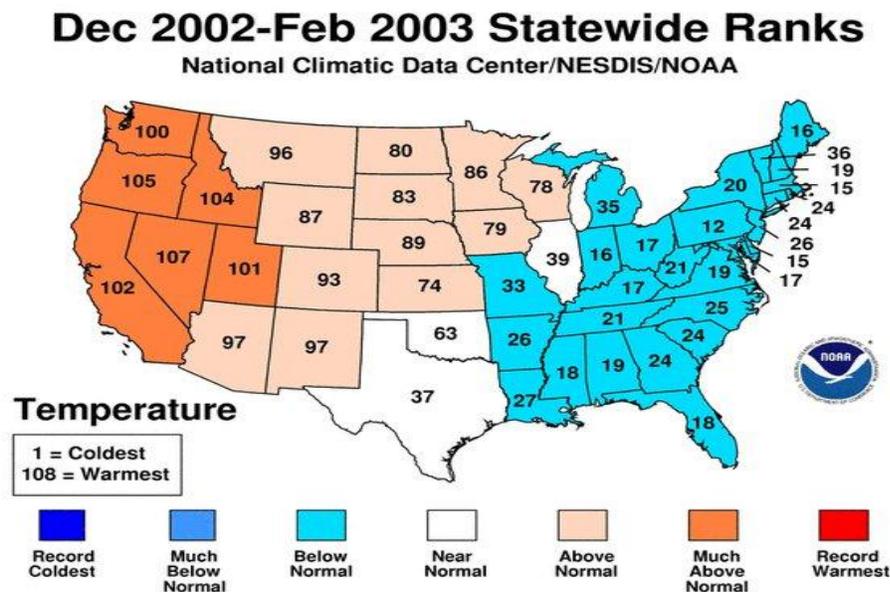


Figure 9: Statewide Temperature Ranks – 2002-2003 Winter

14 Although the winter of 2002/2003 was not as cold as this past winter, there was still a
15 significant impact on gas prices as well as significant disconnects between supply and
16 market areas. As shown in the following figures, the market areas of Chicago,
17 Ventura and Dawn, all very liquid hubs, experienced significant price increases. This
18 information contradicts Centra's claims that no similar disconnects occurred in the
19 winter of 2002/2003. In addition, as indicated in the figures, there were several other

⁷⁴ Centra Evidence, Q&A 37.

1 instances in which disconnects occurred between supply and market areas since 2002.
2 These previous disconnects occurred due to many factors as did the disconnect
3 experienced this past winter. Therefore, Centra's claim that high market area prices
4 were isolated to Mainline Points or those interconnected with the Mainline, and a
5 result of PD, are unfounded.

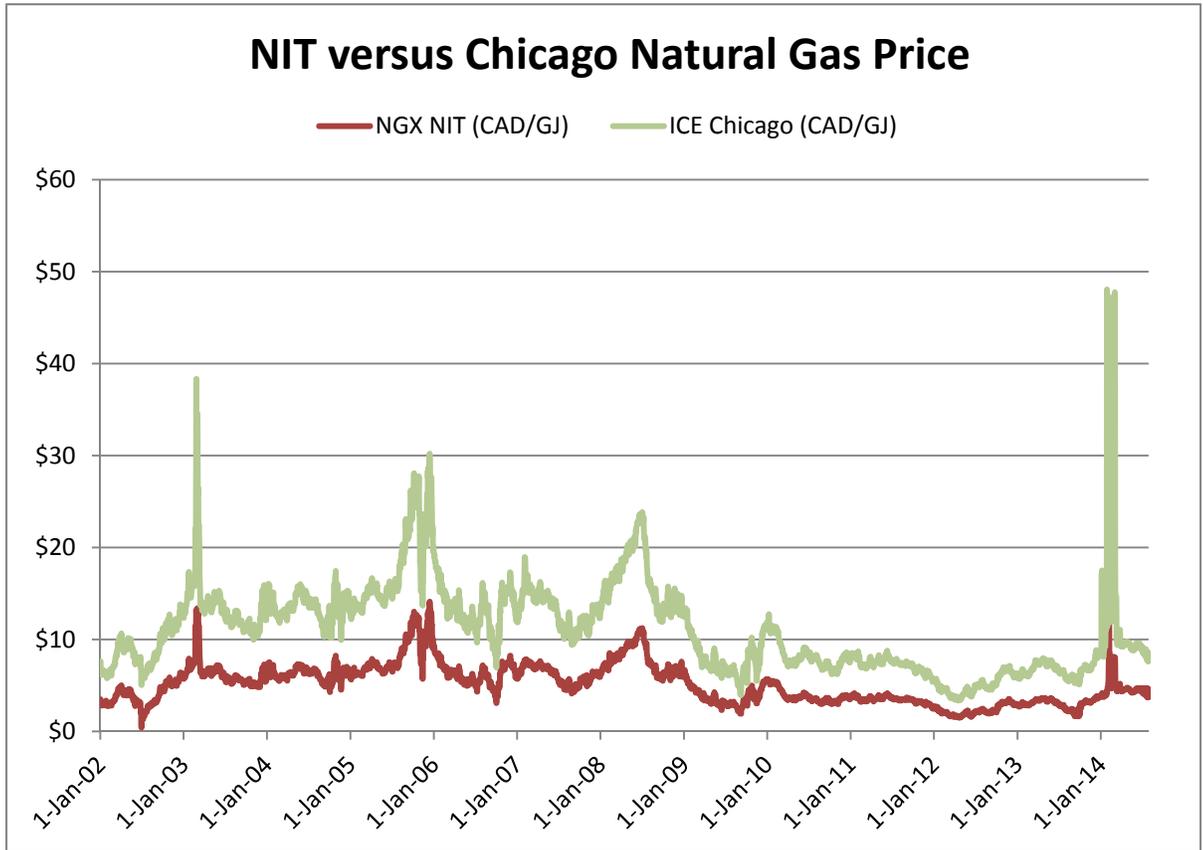


Figure 10: NIT – Chicago Basis Differential – 2002-2003 Winter

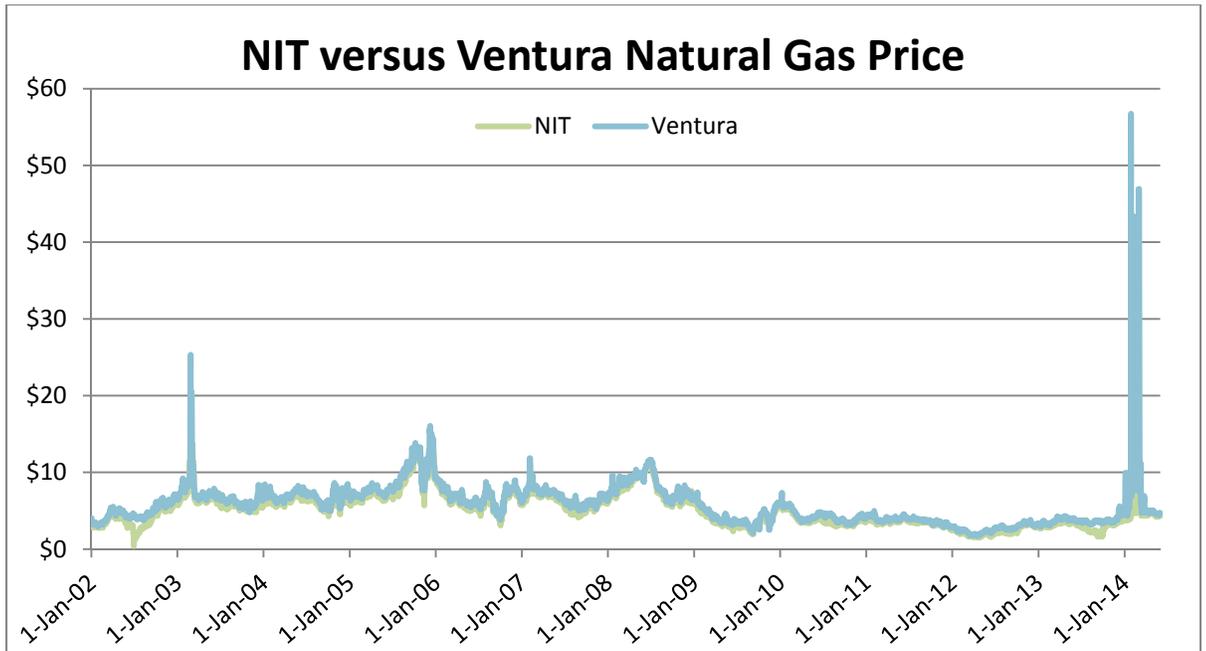


Figure 11: NIT – Ventura Basis Differential – 2002-2003 Winter

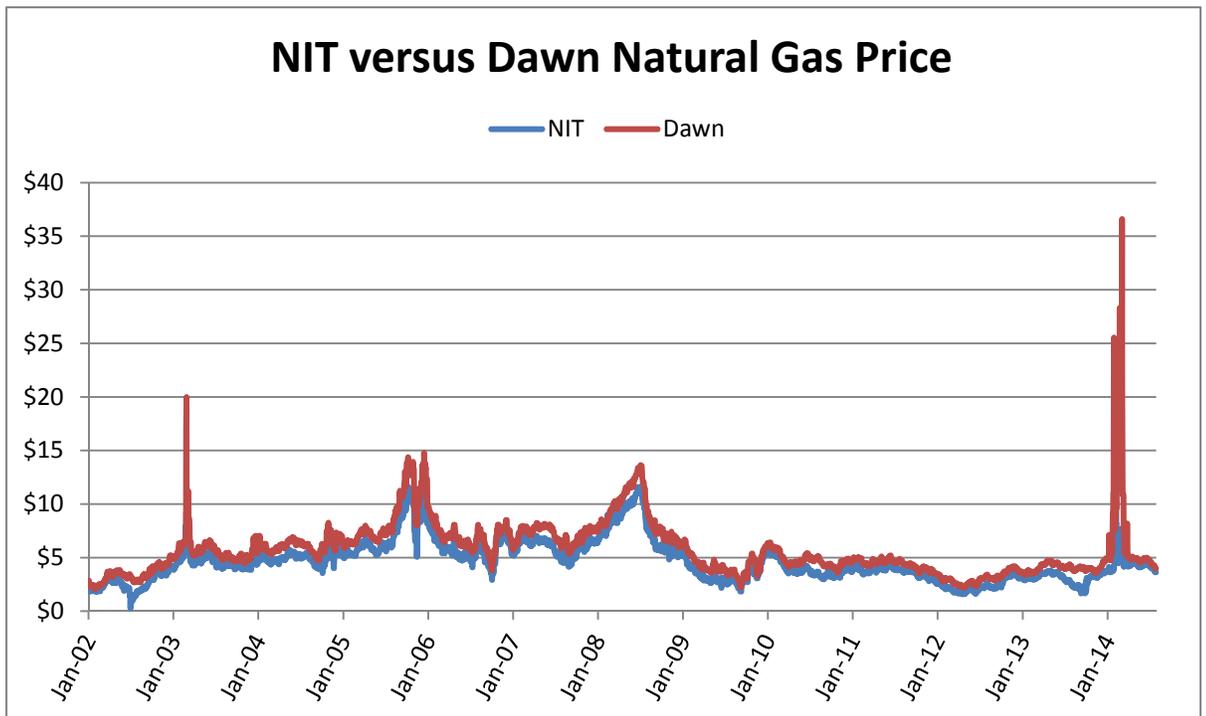


Figure 12: NIT – Dawn Basis Differential – 2002-2003 Winter

1 With respect to TransCanada’s bid floors during the January to March 2014 period,
2 Dr. Orans (for CAPP) noted that during this period the Mainline had unused capacity
3 yet “...bid floors on some days were set at levels above the price spreads.” On this
4 basis, Dr. Orans suggests that “TransCanada’s aggressive pricing behaviour
5 throughout this period contributed to the extreme prices in eastern markets.”⁷⁵ Again,
6 while TransCanada will principally rely on Dr. Carpenter’s evidence on this issue,
7 there are other factors that TransCanada believes show that this suggestion is without
8 merit.

9 Second, if not all capacity was utilized during this period, it suggests that the market
10 was able to find an appropriate alternative, an indication that the market was
11 operating efficiently. As indicated in TransCanada’s Additional Written Evidence,
12 TransCanada sets bid floors in advance of the nomination windows and prior to
13 secondary trading, and it is not unusual for realized spreads to be lower than the
14 posted bid floors as that is a sign of an efficient secondary market. As demonstrated
15 above, high market prices existed in all eastern markets, not just those supplied by the
16 Mainline.

17 With respect to Centra’s and Dr. Cicchetti’s evidence on this issue, the Carpenter
18 Reply Evidence shows that:

- 19 • Dr. Cicchetti’s “hypothesis” that “higher IT bid floor prices on the Mainline
20 would cause commodity prices to increase at inter-connected hubs” is not a
21 reasonable hypothesis writ large, nor is it borne out by any evidence on the record,
22 including any regression analysis undertaken. Moreover, while the better
23 hypothesis is that TransCanada’s IT pricing behavior was not determining the
24 market but was following the market, as the Board intended it to in granting PD.
25 (Qs.35-37, Carpenter Reply Evidence)
- 26 • Dr. Cicchetti’s regression analysis suffers from a number of flaws related, *inter*
27 *alia*, to his choice of pricing locations, his regression specifications (explanatory
28 variables), and the auto-correlation problem manifest in his analysis, each (and
29 all) of which render Dr. Cicchetti’s regression analysis of no support for the
30 “hypothesis”, above, which Dr. Cicchetti purports to test (Qs.40-43, Carpenter
31 Reply Evidence)
- 32 • A correction to account for the auto correlation problem alone fundamentally
33 changes Dr. Cicchetti’s regression results, such that Dr. Cicchetti’s conclusion
34 that TransCanada’s PD caused commodity prices to increase at hubs “connected”
35 to the Mainline can fairly be described as spurious and unreliable (Qs.44-47,
36 Carpenter Reply Evidence).

⁷⁵ Dr. Orans Evidence on behalf of CAPP, Q&A 29, page 31. [A61511]

1 With respect to Dr. Orans' assertions that TransCanada's "aggressive pricing
2 behavior throughout this [transition] period contributed to the extreme prices in
3 eastern markets,"⁷⁶ Dr. Carpenter observes that Dr. Orans, perhaps due to his work's
4 focus on electricity markets, fails to appreciate the kind of day-to-day frictions that
5 occur in the markets of relevance to the Application, that TransCanada established its
6 bid floors in advance and in anticipation of uncertain market outcomes, or that "bid-
7 ask spreads" are to be expected, particularly where markets are volatile. This is even
8 more the case where the time period at issue exhibited large day-to-day price
9 variations as was the case for the time period referenced by Dr. Orans. In short, there
10 is no evidence on the record of this proceeding to suggest that TransCanada's
11 discretionary pricing "contributed to extreme prices in eastern markets" (Q.30,
12 Carpenter Reply Evidence).

4.5 TransCanada's Use of Pricing Discretion is to the Benefit of Mainline Shippers, and is Consistent with the Public Interest and Applicable Tolling Principles

13 As expressly envisioned by the Board, pricing flexibility provides TransCanada the
14 tools to compete, maximize net revenues and mitigate risk. The reasons provided in
15 the Board's RH-003-2011 Decision for granting such discretion have not changed
16 with the presentation of TransCanada's application:

17 The pricing discretion proposed by TransCanada under the
18 Restructuring Proposal did not go far enough. In our view, conferring
19 greater discretion on TransCanada to set bid floors for IT and STFT
20 service will provide TransCanada the opportunity to recover the costs
21 of its capacity, during the period of time in which its capacity is used,
22 from those who use it.⁷⁷

23 Moreover, the majority of the benefits achieved from PD are to the account of
24 shippers, not only through the allocation of discretionary revenues to reduce future
25 tolls but also through the promotion of FT contracting, both of which enhance the
26 longer-term economic viability of the Mainline by lowering and stabilizing tolls and
27 lowering deferrals.

28 It is clear that CAPP and Centra's opposition to PD is based on fundamental
29 disagreement with the Board's conclusion in the RH-003-2011 Decision that costs
30 should be recovered from those that use the pipeline. Indeed, Centra's position, at its
31 core, is that a shipper with firm contracting needs should be able to contract for
32 several months of STFT service that, over the term, costs less than the annual FT.
33 This is an argument akin to that made by Centra in the RH-003-2011 proceeding

⁷⁶ Dr. Orans Evidence on behalf of CAPP, Q&A 29, page 31. [A61511]

⁷⁷ RH-003-2011 Decision, page 2.

1 when it proposed a winter only service. The Board rejected Centra's proposal in the
2 RH-003-2011 Decision, stating:

3 We share TransCanada's concern that seasonal firm service with
4 renewal rights could prevent FT capacity from being sold on an annual
5 basis. Therefore, we do not approve a seasonal firm service with
6 renewal rights.⁷⁸

7 While TransCanada's bid floors often encourage those shippers that require firm
8 service to contract for firm annual capacity, TransCanada has also offered
9 discretionary services at levels below the equivalent of an annual toll. For example,
10 during last winter, shippers could have contracted to the MDA for STFT in January
11 and February at a floor of 385%, which would have resulted in the recovery of 62%
12 of the full-year FT toll at that location.

13 In summary, TransCanada has effectively utilized PD to achieve the goal of
14 optimizing revenues for the benefit of all shippers. Absent PD, there would be less
15 incentive for shippers to use FT service and less opportunity for TransCanada to
16 capture increased discretionary revenue. PD's continuation is a key contributor in
17 determining the Application tolls, and a fundamental aspect of the Settlement.

18 TransCanada relies on the evidence of its experts, Dr. Carpenter and Mr. Reed, with
19 respect to PD's consistency with applicable tolling principles.

20 On these issues, the Reed Reply Evidence shows that:

- 21 • TransCanada's express objective in seeking pricing discretion for discretionary
22 services in the RH-003-2011 proceeding was to optimize revenues from all
23 Mainline services, and the Board both recognized and supported this objective by
24 providing TransCanada with the existing PD notwithstanding the express
25 acknowledgment that tolls for discretionary services may be very high at times
26 and that throughput could either increase or decrease (Q.43, Reed Reply
27 Evidence)
- 28 • Dr. Orans completely fails to acknowledge the user-pay principle in the tolling
29 principles he recommends that the Board consider in evaluating whether to
30 continue PD, even though the Board concluded that the use of PD was consistent
31 with cost causation. Moreover, while predictability and stability are important
32 considerations for FT tolls, they are not an important nor required objective for
33 the pricing of discretionary services because a shipper wanting tolling stability
34 and predictability can elect FT service (Q.44, Reed Reply Evidence)
- 35 • Dr. Orans' reliance on the FERC model as a basis to support his alternative
36 pricing approach is inappropriate for the Mainline because of the important and

⁷⁸ RH-003-2011 Decision, page 146.

1 fundamental difference between the regulatory approach utilized by FERC versus
2 the manner in which TransCanada has proposed retention of PD pursuant to the
3 Application. Specifically, FERC-regulated pipelines can retain all revenues in
4 excess of costs and thus earn returns well above their authorized annual ROE (for
5 many years in certain instances). By contrast, TransCanada cannot earn more than
6 the defined ROE in the Settlement, as any amount earned over that level (net of
7 the impact of the narrowly-defined, symmetrical incentive sharing mechanism) is
8 required to be returned to shippers and contributes to lower tolls. TransCanada's
9 PD, coupled with its Incentive Sharing Mechanism, provides substantial
10 protection for shippers and comfort to the Board that is not present in the United
11 States (Q.45, Reed Reply Evidence)

- 12 • FERC policy does not, as Dr. Orans suggests, permit only downward pricing
13 flexibility for short term services; it allows pipelines to negotiate rates with
14 shippers at levels above or below firm service rates assuming shippers have
15 access to a cost-based recourse rate (Q.46, Reed Reply Evidence)
- 16 • contrary to the assertions of Dr. Cicchetti, Mr. Reed has considered the full costs
17 of PD to shippers in light of all the evidence on the record, including that related
18 to the alleged effect of PD on downstream commodity prices, and concludes that
19 there is no evidence to suggest that PD should not be maintained. (Q.47, Reed
20 Reply Evidence).

21 Further, the Carpenter Reply Evidence demonstrates that:

- 22 • PD does not present producers or shippers with unreasonable uncertainty or
23 volatility in relation to commodity markets upstream or downstream of the
24 Mainline and, regardless, producers and shippers have numerous means to address
25 any such uncertainty or volatility (Q.56, Carpenter Reply Evidence)
- 26 • contrary to Dr. Orans' claims, CAPP's proposal to limit TransCanada's pricing
27 discretion would not reduce any volatility inherent to commodity prices (Q.57,
28 Carpenter Reply Evidence)
- 29 • contrary to CAPP's claims, PD does not contravene the principles of toll stability
30 or lead to "inefficient" utilization of the Mainline or "disruptive" tolls (Q.58,
31 Carpenter Reply Evidence).

4.6 The Continuation of Pricing Discretion is Warranted in Light of the Risks that Will Be Assumed by TransCanada under the Settlement

32 TransCanada addresses this issue below, as supplemented by the expert evidence of
33 Mr. Reed and Dr. Carpenter.

34 CAPP has claimed that the terms of the Settlement result in reduced risk to
35 TransCanada's shareholders and thus, justifies a more conservative framework for
36 pricing flexibility. While TransCanada agrees that risk is reduced for all stakeholders

1 under the Settlement, including TransCanada, there are several important reasons why
2 TransCanada's existing PD must be retained.

3 First, the reduced risk resulting from the Settlement is reflected in the reduction of
4 ROE from the current 11.5% to 10.1%. The reduction in risk is therefore explicitly
5 accounted for in the Application.

6 Second, the Mainline's business risk will remain relatively high, including the
7 fundamental risk that PD and other aspects of the Application are designed to prevent.
8 Although cost recovery is a key component of the Settlement, there is significant risk
9 related to future cost recovery, particularly post-2020 in the Western Mainline, but
10 also in the Eastern Triangle. A new toll design for the Western Mainline will not be
11 implemented prior to 2020. The remaining rate base of the Prairies Line will be
12 approximately \$1 billion. The NEB will set tolls that it determines are just and
13 reasonable at that time. Thus, a considerable amount of uncertainty as to cost
14 recovery of the Prairies Line rate base remains. In addition, while the LDCs have
15 committed in the Settlement to not bypassing the Mainline through 2030, there is no
16 such commitment by other shippers, and there is a risk that billing determinants will
17 be reduced in the future should planned infrastructure in the Northeast U.S.
18 materialize.

19 Third, variability risk measures the risk of having tolls set for a period of time versus
20 the uncertainty of collecting these revenues, since tolls will remain fixed for a multi-
21 year period. Variability risk cannot be lower as Centra claims even if the tolls in the
22 Application are higher. Variability risk will be slightly impacted as a result of the
23 proposed incentive sharing mechanism. Although the RH-003-2011 Decision
24 implemented an incentive agreement, it was one-directional whereby TransCanada
25 benefits from exceeding the forecasted revenue requirement, but does not have its
26 effective ROE reduced should there be a revenue shortfall. Under the terms of the
27 Settlement, the incentive agreement is symmetric, meaning TransCanada's effective
28 ROE can vary both negatively and positively from 10.1% within a designated band.

29 In addition, Mr. Reed testifies that, while the settlement reduces overall risk relative
30 to retaining the model established by Decision RH-003-2011, it does not skew the
31 risk/reward balance in favour of TransCanada or the shippers, nor does it reduce
32 TransCanada's future risk of cost recovery post-2020 particularly on the Western
33 Mainline. Further, contrary to Dr. Cicchetti's suggestion (p. 3, Cicchetti Evidence),
34 TransCanada has not stated, nor is it the case, that TransCanada "bears no principal or
35 fundamental cost recovery risk" under the Settlement (Qs.31-33, Reed Reply
36 evidence).

37 Dr. Carpenter testifies that Dr. Orans' suggestion that the Settlement results in a
38 "material reduction in the risk faced by TransCanada's shareholders" and
39 "necessitates a more conservative framework for pricing flexibility" is unsupported
40 by any evidence and reflects a misunderstanding of the effect of the Settlement on

1 TransCanada's business risk. He also testifies that PD was directed by the Board for
2 reasons that go beyond risk mitigation, including TransCanada's ability to maintain
3 lower and more stable FT tolls in future (Q.60 Carpenter Reply Evidence)

4 In summary, the Board approved PD in the RH-003-2011 Decision as a mechanism to
5 assist the Mainline in managing its risk. While the risks to the Mainline are lower
6 under the Settlement, such reduction has been reflected in the balance of the
7 Settlement components. Retaining TransCanada's current level of pricing discretion
8 is required to appropriately optimize overall revenues to the benefit of both shippers
9 and TransCanada.

4.7 Intervenor Proposed Limits on Pricing Discretion should be Rejected

10 CAPP has proposed an alternative to TransCanada's existing PD. For IT, CAPP's
11 alternative would include the following elements:

- 12 a) on an annual basis, the average maximum bid floors for each path would not be
13 permitted to exceed 160% of the FT toll;
- 14 b) by February 15 of each year, TransCanada would select a maximum bid floor for
15 each month of the following gas year whose average would not exceed 160% of
16 the FT toll;
- 17 c) prior to each day, TransCanada would select a bid floor for IT services up to that
18 month's corresponding maximum; and
- 19 d) available capacity would be allocated to shippers in an auction, through which the
20 ultimate price of interruptible services might be increased if capacity is limited.

21 While indicating that limiting bid floors for IT is the most important change required,
22 CAPP also proposes similar changes to STFT whereby TransCanada would establish
23 monthly maximum bid floors that do not exceed 160% on average by February 15
24 prior to each gas year.

25 In its evidence, Centra recommends that limits be placed on TransCanada's PD, but
26 did not indicate any specific limits. However, in response to information request
27 NEB 1.11, Centra suggests discretionary prices between 160% and 300% of the
28 applicable FT toll would be appropriate.

29 TransCanada has numerous concerns with CAPP's pricing discretion proposal. Most
30 importantly, the discretionary pricing model that CAPP proposes (supported by
31 Centra) would not discourage migration from FT as the NEB intended in its RH-003-
32 2011 Decision:

33 We are of the view that it is just and reasonable for shippers who need
34 guaranteed access to the Mainline throughout the year to pay for the full
35 annual costs related to the capacity they need. Shippers that truly require

1 Mainline service can cap their exposure to discretionary tolls by opting to
2 contract for FT service. In this way, FT tolls act as a recourse rate to protect
3 shippers from high tolls for discretionary services. (p 127, decision RH-003-
4 2011)

5 CAPP's Dr. Orans agrees with the Board's statement above:

6 To the extent that a shipper's needs are firm, I agree that discretionary
7 services should be priced in a way that encourages that shipper not to meet his
8 needs with STFT or IT services.⁷⁹

9 Under existing PD, shippers who require firm service throughout the year are
10 encouraged to contract for annual service or face the risk of potentially high
11 discretionary prices. The risk that discretionary services prices could increase is a
12 major deterrent to their use of such services over the long term. Yet the CAPP
13 proposal does not encourage shippers who require firm service to contract for annual
14 firm capacity. Shippers that require guaranteed service would be made aware of the
15 IT and STFT maximum bid floors well in advance of the gas year. Knowing that
16 those bid floors could not be increased (but could be lowered) provides them the
17 luxury of waiting to contract as long as possible without facing the risk that those bid
18 floors will increase in the future when they may require additional service.

19 In response to information request NEB 2.17, TransCanada evaluated the impact on
20 revenues to the Iroquois delivery point assuming discretionary flows were tolled at
21 160% of the FT toll. While discretionary contracting and revenue would increase,
22 there would be an overall decline in Mainline revenue in the amount of \$100 million
23 for the year arising from lower firm contracting for the Iroquois delivery point alone.

24 Dr. Orans suggests that, based on illustrative STFT bid floors in Figure 14 of the
25 CAPP Evidence, if a shipper contracts for STFT in the three highest value
26 transportation months (December – February), that would represent 75% of the
27 annual FT cost and the pipeline would be left with a full nine months to recover the
28 additional 25% of revenue of an FT contract.⁸⁰ In response, TransCanada would
29 comment that given that those are the highest value months, there may be little
30 opportunity to capture the additional 25% during the balance of the year. In fact, as
31 shown in Table 5 of this reply evidence, the total discretionary revenue that has been,
32 and is projected to be, generated for the nine months April 2014 through December
33 2014 represents only 7% of the total annual discretionary revenue for 2014.

34 The opportunity to recoup the additional 25% of revenue as suggested by CAPP is
35 also particularly challenged with diversions accessing the majority of discretionary

⁷⁹ Dr. Orans Evidence on behalf of CAPP, Q&A 46, page 47. [A61511]

⁸⁰ Dr. Orans Evidence on behalf of CAPP, Q&A56, page 59. [A61511]

1 market opportunities. In TransCanada's Additional Written Evidence, and in response
2 to a number of information requests, TransCanada has confirmed that the use of
3 diversions has increased substantially, representing 21% of system demand from July
4 1, 2013 to March 31, 2014, and effectively limits the amount of discretionary services
5 being sold. Moreover, as TransCanada indicated in response to information request
6 NEB 2.14, shippers are no longer simply using diversions to mitigate unutilized
7 demand charges (UDCs), but are also looking to capture market opportunities
8 downstream, and backfill requirements, when they exist, with IT service.

9 The following example helps illustrate how the CAPP proposal would encourage a
10 migration to discretionary service.

11 Assume a shipper has a daily requirement of 50 TJ/d, but has peaking requirements
12 throughout the winter totaling 100 TJ/d and the shipper's path has a toll of \$1/GJ. The
13 shipper has a choice to contract for base requirements of 50 TJ/d and assume the risk
14 associated with pricing discretion to meet any peak requirements that may
15 materialize. This results in a cost of \$18.5 million plus the cost of any discretionary
16 services utilized. If the shipper chose to contract for his peak requirements during a
17 cold winter, either to ensure supply and / or a desire to not be exposed to existing PD,
18 he would contract for 100 TJ/d of annual firm capacity for a cost of \$36.5 million and
19 ensure the cost of providing the service is covered.

20 Under the CAPP proposal, using the bid floors outlined in CAPP's evidence (Figure
21 11 for IT bid floors and Figure 14 for STFT bid floors), and assuming an extremely
22 cold winter, the shipper may choose to contract for STFT and IT. The most cost
23 effective combination of STFT and IT would be STFT in November and March at
24 150% and IT in December, January, and February at 240%. Assuming peak
25 requirements every day during the winter, the total transportation cost would be \$33.6
26 million or 92% of what that shipper would have paid had existing PD been in place.

27 Even in the example, during an extremely cold winter where the shipper requires
28 service every single day, the cost of using discretionary services results in a cheaper
29 solution to contracting for firm service. Should cold weather not materialize during
30 any winter month, the revenue generated from the shipper would be even less. This is
31 a clear indication that the CAPP proposal does not do what CAPP claims it will – in
32 fact it does the opposite – it promotes migration from firm contracting to
33 discretionary services as it is a cheaper solution to meeting their requirements.

34 Dr. Orans also suggests that “[b]ecause CAPP's proposal does limit TransCanada's
35 ability to set bid floors above the market value of transportation, I would expect the
36 auction mechanism to result in prices above the bid floor more frequently than it has

1 since RH-003-2011."⁸¹ TransCanada believes that this expectation is unrealistic and
2 misguided for a number of reasons.

3 First, while CAPP claims that its proposal limits TransCanada's ability to set bid
4 floors above the market value of transportation, in fact, having the caps in place
5 would often limit TransCanada from setting bid floors even close to the market value,
6 let alone above the market value, which would be detrimental to FT shippers. During
7 the winter of 2013/2014, TransCanada was able to sell discretionary capacity at levels
8 well above those proposed by CAPP (up to 5,500% for IT and 3,300% for STFT). In
9 fact, 57% of IT sales over this period occurred at levels in excess of the annual
10 average of 160% above FT proposed by CAPP. With a 160% cap in place, IT
11 revenues this past winter would have been reduced by \$133 million. While
12 TransCanada does not anticipate the weather experienced this past winter will occur
13 on a regular basis, PD allows TransCanada to capture such opportunities when they
14 arise, which is consistent with the Board's findings in the RH-003-2011 Decision.
15 CAPP's proposal would not only preclude TransCanada from capturing these
16 opportunities, they would fail to discourage those shippers who require firm service
17 to contract for annual capacity.

18 Second, the auction mechanism would not result in prices above the bid floor more
19 frequently than the current environment. With PD, shippers are uncertain of what
20 future prices will be and are, therefore, more likely to bid up for capacity. Under the
21 CAPP proposal, shippers have certainty as to what the future prices will be and will
22 not likely be willing to bid up prices on any given day. What would result under the
23 CAPP proposal is very similar to the environment prior to the RH-003-2011
24 Decision. At that time, IT was set at 110% and very seldom did shippers bid up for
25 the capacity, as they knew they could access the capacity the following day at the
26 same price.

27 Third, setting bid floor levels by February 15 of the previous gas year will also
28 impede TransCanada's opportunity to capture market opportunities. For example,
29 under the CAPP proposal, TransCanada could set IT and STFT bid floors for
30 February at 300%, and correspondingly reduce the bid floor levels for March to
31 150%. If the weather in February were warmer than expected, but extremely cold in
32 March, TransCanada would need to lower IT bid floors in February to capture
33 demand, but have no ability to increase IT or STFT bid floors in March to capture the
34 increase in demand. The flexibility to set different bid floors from time to time is a
35 key factor that allows the PD to work, as intended by the Board.

36 Mr. Reed also testifies that CAPP's and Centra's proposed limits on TransCanada's
37 PD must be considered in the context of the very real benefits PD has achieved for the
38 Mainline and Mainline shippers. The existing pricing flexibility has allowed

⁸¹ Dr. Orans Evidence on behalf of CAPP, Q&A54, page 56. [A61511]

1 TransCanada to capture a portion of the economic rent that exists from time to time
2 for the benefit of all Mainline shippers, instead of that rent being captured by
3 individual parties. Mr. Reed further testifies that this transfer of rents does not, in any
4 way, represent an exercise of market power or is an unjust or unreasonable result. To
5 the contrary, TransCanada's ability to capture a portion of this economic rent through
6 PD is highly consistent with economic efficiency and cost causation, produces just
7 and reasonable tolls, and promotes the public interest by ensuring that the Mainline
8 remains viable, provides an outlet for Western Canadian production, and can be
9 reasonably expected to meet the market's requirements in future. (Q.39, Reed Reply
10 Evidence). Finally, Mr. Reed testifies that TransCanada's proposal to retain PD is
11 consistent with the Board's RH-003-2011 Decision and a reasonable element of
12 TransCanada's Application (Q.41, Reed Reply Evidence). Conversely, CAPP's
13 proposal would both unnecessarily and severely limit TransCanada's ability to
14 capture economic rent for the benefit of lowering FT tolls and significantly remove
15 the incentive of shippers to utilize FT instead of discretionary services (Q.40, Reed
16 Reply Evidence).

17 In addition, Dr. Carpenter testifies that CAPP's proposal simply serves to limit
18 TransCanada's ability to effectively compete in the secondary market to the benefit of
19 other, unregulated secondary market participants, with no efficiency rationale for
20 doing so. He testifies that TransCanada, while subject to regulated FT tolls, does not
21 have market power with respect to discretionary services and should thus be on an
22 equal footing with competitors in respect of those services (Q.59, Carpenter Reply
23 Evidence).

4.8 CAPP's Data Reporting Proposals are Unjustified and Unnecessary

24 TransCanada opposes CAPP's request that it be directed to provide additional
25 information to enhance transparency in relation to discretionary services pricing.
26 While there is no doubt that providing additional information would add to existing
27 transparency, it would also substantially undermine the effectiveness of PD and
28 impose an unnecessary burden on TransCanada to the detriment of its shippers. As
29 stated by the NEB in its June 11, 2013 letter regarding TransCanada's Compliance
30 Filing:

31 The Board recognizes that a balance is required between providing enough
32 information to ensure transparency and to assist the market (so that it can
33 function effectively and efficiently), while not unreasonably burdening
34 TransCanada in the exercise of the discretion conferred upon it in the Decision.

35 After a consultation process prior to the Compliance Filing and a comment process
36 established by the Board on the Compliance Filing, the Board found that the reporting
37 which is now in place was appropriate given the existing PD. The current reporting
38 practices are described in TransCanada's response to NEB 2.12.

1 The Board also directed TransCanada to again consult with shippers at a later date,
2 based on experience with this reporting in the context of PD. TransCanada believes
3 that this consultation process should first occur before it can be determined whether
4 any change to the current reporting is warranted, and before any change is
5 contemplated by the Board.

4.9 Continuation of Pricing Discretion is in the Public Interest

6 The TransCanada Reply Evidence, the Carpenter Reply Evidence and the Reed Reply
7 Evidence show clearly that the continuation of PD as authorized in the RH-003-2011
8 Decision is in the public interest and will result in just and reasonable tolls.
9 Acceptance of the CAPP or Centra proposals would reduce the Mainline's ability to
10 optimize overall revenues and to capture value (when present) to the benefit of all
11 Mainline shippers, neither of which is justified by the public interest as a whole.

5.0 CONCLUSION

1 The conclusion that the Board should draw from TransCanada's evidence is that the
2 criticisms of the Settlement and the Application that are advanced in the intervenor
3 evidence are irrelevant, are without merit, and are unpersuasive. Further, the
4 proposals advanced by the intervenors should be rejected.

5 The TransCanada Reply Evidence, viewed in the light of the other evidence filed in
6 this proceeding, should lead the Board to recognize that the tolls and tariff terms
7 sought in the Application will provide the stability and predictability such that
8 shippers can have timely access on agreeable terms to the services that the market
9 demands, including services that require investments by the Mainline, without
10 negatively impacting revenues generated on the Mainline. The terms sought in the
11 Application will facilitate both the growth and rationalization of Mainline capacity
12 while providing TransCanada with a reasonable prospect that it will recover its
13 investment, with a risk/reward return incentive mechanism that aligns the interests of
14 the Mainline and its stakeholders. The Board should conclude that approval of the
15 Application will maintain the careful balance achieved, support these important
16 public interest considerations, and will result in just and reasonable tolls.

Appendix 2.1

Tab 1 for 2015

Appendix 2.1, Tab 1: 2015 Firm Billing Determinants and Revenue			2015 Firm Billing Determinants (GJ/d)		2015 Energy Distance (GJ*km/year)		2015 Revenue (\$)		
Path	km Post	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Variance	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
FT									
1	Chippawa to Enbridge Parkway CDA	135	33,425	0	1.65E+09	0.00E+00	\$2,873,710	\$0	\$2,873,710
2	Emerson 2 to Centram MDA	143	69,750	69,750	3.64E+09	3.64E+09	\$4,515,364	\$4,515,364	\$0
3	Empress to Centram MDA	881	122,183	186,640	3.93E+10	6.00E+10	\$26,747,390	\$40,857,810	-\$14,110,420
4	Empress to Centram SSDA	612	3,200	1,200	7.14E+08	2.68E+08	\$520,251	\$195,094	\$325,157
5	Empress to Centrat MDA	1,002	4,696	11,500	1.72E+09	4.21E+09	\$1,146,528	\$2,807,540	-\$1,661,011
6	Empress to Cornwall	3,046	12,156	12,156	1.35E+10	1.35E+10	\$8,617,364	\$8,617,558	-\$194
7	Empress to East Hereford	3,402	0	39,373	1.46E+05	4.89E+10	\$0	\$31,006,214	-\$31,006,214
8	Empress to Emerson 1	1,023	11,682	86,928	4.36E+09	3.25E+10	\$2,903,518	\$21,605,037	-\$18,701,519
9	Empress to Emerson 2	1,023	88,875	27,634	3.32E+10	1.03E+10	\$22,088,944	\$6,868,139	\$15,220,804
10	Empress to Enbridge CDA	2,895	297,132	476,338	3.14E+11	5.03E+11	\$200,757,583	\$321,838,709	-\$121,081,126
11	Empress to Enbridge CDA (Amended)	2,900	0	10,578	0.00E+00	1.12E+10	\$0	\$7,158,933	-\$7,158,933
12	Empress to Enbridge EDA	2,992	197,421	287,579	2.16E+11	3.14E+11	\$137,611,459	\$200,455,492	-\$62,844,033
13	Empress to GMIT EDA	3,215	167,512	175,963	1.97E+11	2.06E+11	\$124,997,480	\$131,303,631	-\$6,306,151
14	Empress to GMIT NDA	2,461	19,337	12,939	1.74E+10	1.16E+10	\$10,610,929	\$7,100,298	\$3,510,631
15	Empress to Iroquois	3,012	26,956	121,638	2.96E+10	1.34E+11	\$18,911,724	\$85,338,244	-\$66,426,520
16	Empress to KPUC EDA	3,126	4,000	9,090	4.56E+09	1.04E+10	\$2,906,714	\$6,605,508	-\$3,698,794
17	Empress to Napierville	3,199	8,580	50,233	1.00E+10	5.87E+10	\$6,373,496	\$37,313,833	-\$30,940,337
18	Empress to Philipsburg	3,217	18,500	18,500	2.17E+10	2.17E+10	\$13,813,319	\$13,813,319	\$0
19	Empress to Spruce	1,002	6,151	4,220	2.25E+09	1.54E+09	\$1,501,617	\$1,030,245	\$471,372
20	Empress to TCPL NDA	2,247	0	9,402	0.00E+00	7.71E+09	\$0	\$4,738,636	-\$4,738,636

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		Application	Application	Application	Application	Application	Variance		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	Empress to TCPL WDA	1,656	6,900	6,484	4.17E+09	3.92E+09	\$2,626,040	\$2,467,716	\$158,324
2	Empress to Transgas SSSA	434	16,031	50,000	2.54E+09	7.92E+09	\$2,011,417	\$6,273,620	-\$4,262,203
3	Empress to Union CDA	2,845	67,327	68,000	6.99E+10	7.06E+10	\$44,753,587	\$45,200,943	-\$447,356
4	Empress to Union EDA	3,060	73,131	139,023	8.17E+10	1.55E+11	\$52,080,271	\$99,005,675	-\$46,925,404
5	Empress to Union NCDA	2,757	11,556	11,000	1.16E+10	1.11E+10	\$7,456,179	\$7,097,436	\$358,743
6	Empress to Union NDA	2,408	137,468	109,571	1.21E+11	9.63E+10	\$73,911,218	\$58,912,079	\$14,999,139
7	Empress to Union SSMDA	2,169	9,143	21,000	7.24E+09	1.66E+10	\$4,458,693	\$10,240,900	-\$5,782,207
8	Empress to Union WDA	1,507	52,636	50,575	2.90E+10	2.78E+10	\$18,398,848	\$17,678,284	\$720,564
9	Iroquois to GMIT EDA	221	26,952	0	2.17E+09	0.00E+00	\$2,972,886	\$0	\$2,972,886
10	Kirkwall to Chippawa	114	198,207	198,226	8.23E+09	8.23E+09	\$15,839,327	\$15,840,841	-\$1,514
11	Kirkwall to Niagara Falls	111	31,651	31,651	1.29E+09	1.29E+09	\$2,507,611	\$2,507,611	\$0
12	Lachenaie to Iroquois	191	6,900	0	4.80E+08	0.00E+00	\$702,410	\$0	\$702,410
13	Niagara Falls to Enbridge CDA	173	255,618	213,015	1.61E+10	1.34E+10	\$24,705,058	\$20,587,548	\$4,117,510
14	Niagara Falls to Enbridge CDA (Amended)	176	0	42,603	0.00E+00	2.74E+09	\$0	\$4,163,227	-\$4,163,227
15	Niagara Falls to Enbridge Parkway CDA	133	0	33,333	0.00E+00	1.61E+09	\$0	\$2,843,228	-\$2,843,228
16	Niagara Falls to GMIT EDA	771	82,000	82,000	2.31E+10	2.31E+10	\$21,881,524	\$21,881,524	\$0
17	Niagara Falls to Kirkwall	111	97,747	73,062	3.97E+09	2.97E+09	\$7,744,227	\$5,788,476	\$1,955,751
18	Niagara Falls to KPUC EDA	437	2,000	2,000	3.19E+08	3.19E+08	\$343,480	\$343,480	\$0
19	SS. Marie to Union SSMDA	11	49,843	36,368	1.96E+08	1.43E+08	\$1,852,016	\$1,351,338	\$500,678
20	St. Clair to Chippawa	326	210,936	103,452	2.51E+10	1.23E+10	\$29,604,823	\$14,519,421	\$15,085,402

Appendix 2.1, Tab 1: 2015 Firm Billing Determinants and Revenue			2015 Firm Billing Determinants (GJ/d)		2015 Energy Distance (GJ*km/year)		2015 Revenue (\$)		
Path	km Post	Currently Known Contracts ¹		Currently Known Contracts ¹		Currently Known Contracts ¹			
		Application	Application	Application	Application	Application	Variance		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	St. Clair to Union SWDA	20	80,269	140,125	5.93E+08	1.03E+09	\$4,278,435	\$7,468,796	-\$3,190,361
2	Suffield 2 to Empress	2	7,397	0	5.48E+06	0.00E+00	\$261,333	\$0	\$261,333
3	Union Dawn to East Hereford	1,052	52,753	52,753	2.03E+10	2.03E+10	\$18,298,457	\$18,298,457	\$0
4	Union Dawn to Enbridge CDA	293	164,416	137,013	1.76E+10	1.47E+10	\$21,541,250	\$17,951,042	\$3,590,208
5	Union Dawn to Enbridge CDA (Amended)	300	0	27,403	0.00E+00	3.00E+09	\$0	\$3,638,718	-\$3,638,718
6	Union Dawn to Enbridge EDA	687	114,000	120,667	2.86E+10	3.03E+10	\$27,693,119	\$29,312,600	-\$1,619,481
7	Union Dawn to GMIT EDA	865	210,000	210,000	6.63E+10	6.63E+10	\$61,661,859	\$61,661,859	\$0
8	Union Dawn to Iroquois	654	40,000	10,000	9.55E+09	2.39E+09	\$9,340,204	\$2,335,051	\$7,005,153
9	Union Dawn to Niagara Falls	300	10,265	10,265	1.12E+09	1.12E+09	\$1,364,145	\$1,364,145	\$0
10	Union Dawn to Union CDA	232	147,129	122,532	1.25E+10	1.04E+10	\$16,707,793	\$13,914,615	\$2,793,177
11	Union Dawn to Union EDA	549	1,510	0	3.03E+08	0.00E+00	\$307,779	\$0	\$307,779
12	Union Parkway Belt to Enbridge CDA	76	8,072	6,727	2.25E+08	1.87E+08	\$558,850	\$465,709	\$93,142
13	Union Parkway Belt to Enbridge CDA (Amended)	83	0	1,345	0.00E+00	4.09E+07	\$0	\$95,882	-\$95,882
14	Union Parkway Belt to GMIT EDA	638	104,967	104,858	2.45E+10	2.44E+10	\$24,047,555	\$24,022,538	\$25,017
15	Union Parkway Belt to GMIT NDA	501	2,561	2,555	4.68E+08	4.67E+08	\$486,528	\$485,198	\$1,329
16	Union Parkway Belt to Iroquois	427	483,905	483,905	7.54E+10	7.54E+10	\$81,766,928	\$81,766,928	\$0
17	Union Parkway Belt to Philipsburg	640	30,000	30,000	7.01E+09	7.01E+09	\$6,890,726	\$6,890,726	\$0
18	Union Parkway Belt to Union CDA	30	16,000	16,000	1.75E+08	1.75E+08	\$897,258	\$897,258	\$0
19	Union Parkway Belt to Union EDA	323	49,534	49,500	5.83E+09	5.83E+09	\$6,900,413	\$6,895,642	\$4,771
20	Union Parkway Belt to Union NCDA	177	0	4,247	0.00E+00	2.75E+08	\$0	\$424,260	-\$424,260

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Path	km Post	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Variance	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	Union Parkway Belt to Union NDA	533	1,671	67,188	3.25E+08	1.31E+10	\$332,786	\$13,378,761	-\$13,045,976
2	Welwyn to Centram MDA	270	1,332	1,332	1.31E+08	1.31E+08	\$121,526	\$121,526	\$0
3	FT Total		3,953,385	4,481,438	1.59E+12	2.19E+12	\$1,184,203,947	\$1,561,262,661	-\$377,058,714
4	FT-NR								
5	Empress to Centram MDA	881	2,425	0	7.80E+08	0.00E+00	\$530,863	\$0	\$530,863
6	Empress to Cornwall	3,046	6,290	294	6.99E+09	3.27E+08	\$4,459,069	\$208,243	\$4,250,825
7	Empress to East Hereford	3,402	156,892	22,859	1.95E+11	2.84E+10	\$123,553,925	\$18,002,006	\$105,551,919
8	Empress to Emerson 2	1,023	30,756	0	1.15E+10	0.00E+00	\$7,644,079	\$0	\$7,644,079
9	Empress to Enbridge CDA	2,895	19,386	93,125	2.05E+10	9.84E+10	\$13,512,827	\$64,911,897	-\$51,399,069
10	Empress to Enbridge EDA	2,992	138,016	0	1.51E+11	0.00E+00	\$96,203,245	\$0	\$96,203,245
11	Empress to GMIT EDA	3,215	163,021	128,664	1.91E+11	1.51E+11	\$121,646,653	\$96,009,068	\$25,637,585
12	Empress to Iroquois	3,012	189,010	23,299	2.08E+11	2.56E+10	\$132,605,154	\$16,346,170	\$116,258,984
13	Empress to KPUC EDA	3,126	2,000	0	2.28E+09	0.00E+00	\$1,453,357	\$0	\$1,453,357
14	Empress to Napierville	3,199	2,082	0	2.43E+09	0.00E+00	\$1,546,541	\$0	\$1,546,541
15	Empress to Union EDA	3,060	4,677	1,052	5.22E+09	1.17E+09	\$3,330,733	\$748,946	\$2,581,787
16	FT-NR Total		714,555	269,293	7.94E+11	3.05E+11	\$506,486,446	\$196,226,330	\$310,260,116
17	FT-SN								
18	Kirkwall to Thorold CDA	95	49,500	49,500	1.72E+09	1.72E+09	\$4,065,007	\$4,065,007	\$0
19	Union Parkway Belt to Goreway CDA	28	140,000	140,000	1.44E+09	1.44E+09	\$8,559,761	\$8,559,761	\$0

Appendix 2.1, Tab 1: 2015 Firm Billing Determinants and Revenue			2015 Firm Billing Determinants (GJ/d)		2015 Energy Distance (GJ*km/year)		2015 Revenue (\$)		
Path	km Post	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Variance	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	Union Parkway Belt to Schomberg #2 CDA	61	87,654	87,654	1.96E+09	1.96E+09	\$6,265,968	\$6,265,968	\$0
2	Union Parkway Belt to Victoria Square #2 CDA	64	185,000	185,000	4.30E+09	4.30E+09	\$13,358,471	\$13,358,471	\$0
3	FT-SN Total		462,154	462,154	9.42E+09	9.42E+09	\$32,249,207	\$32,249,207	\$0
4	STS								
5	Centram MDA	143	54,000	54,000	2.82E+09	2.82E+09	\$3,495,766	\$3,495,766	\$0
6	Cornwall	469	10,300	10,300	1.76E+09	1.76E+09	\$1,864,524	\$1,864,524	\$0
7	Enbridge CDA	76	283,892	236,577	7.90E+09	6.58E+09	\$19,654,752	\$16,378,960	\$3,275,792
8	Enbridge CDA (Amended)	83	0	47,315	0.00E+00	1.44E+09	\$0	\$3,372,159	-\$3,372,159
9	Enbridge EDA	460	80,611	80,611	1.35E+10	1.35E+10	\$14,380,793	\$14,380,793	\$0
10	GMIT EDA	638	216,174	216,174	5.04E+10	5.04E+10	\$49,524,577	\$49,524,577	\$0
11	KPUC EDA	304	13,342	13,342	1.48E+09	1.48E+09	\$1,787,715	\$1,787,715	\$0
12	Philipsburg	640	20,279	20,279	4.74E+09	4.74E+09	\$4,657,901	\$4,657,901	\$0
13	Union EDA	323	61,473	61,600	7.24E+09	7.25E+09	\$8,563,493	\$8,581,243	-\$17,751
14	Union NDA	533	49,100	47,429	9.55E+09	9.23E+09	\$9,777,074	\$9,444,368	\$332,706
15	Union WDA	1,476	3,150	3,150	1.70E+09	1.70E+09	\$1,471,772	\$1,471,772	\$0
16	STS Total		792,321	790,777	1.01E+11	1.01E+11	\$115,178,366	\$114,959,777	\$218,588
17	EMB								
18	EMB Union Parkway Belt to Union EDA	323	4,178	4,167	4.92E+08	4.91E+08	\$640,241	\$638,491	\$1,749
19	EMB Total		4,178	4,167	4.92E+08	4.91E+08	\$640,241	\$638,491	\$1,749

Appendix 2.1, Tab 1: 2015 Firm Billing Determinants and Revenue			2015 Firm Billing Determinants (GJ/d)		2015 Energy Distance (GJ*km/year)		2015 Revenue (\$)		
Path	km Post		Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Currently Known Contracts ¹	Application	Variance
(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Grand Total		5,926,593	6,007,828	2.49E+12	2.60E+12	\$1,838,758,206	\$1,905,336,466	-\$66,578,260

¹ Current contracts based on data compiled August 6, 2014

Appendix 2.1

Tab 2 for 2016

Appendix 2.1, Tab 2: 2016 Firm Billing Determinants		2016 Firm Billing Determinants (GJ/d)		2016 Energy Distance (GJ*km/year)		
Path	km Post	ANE	Application	ANE	Application	
(a)	(b)	(c)	(d)	(e)	(f)	
FT						
1	Chippawa to Enbridge Parkway CDA	135	0	0	0.00E+00	0.00E+00
2	Emerson 2 to Centram MDA	143	69,750	69,750	3.64E+09	3.64E+09
3	Empress to Centram MDA	881	164,906	186,640	5.31E+10	6.00E+10
4	Empress to Centram SSDA	612	3,200	1,200	7.14E+08	2.68E+08
5	Empress to Centrat MDA	1,002	5,565	11,500	2.04E+09	4.21E+09
6	Empress to Cornwall	3,046	19,331	12,156	2.15E+10	1.35E+10
7	Empress to East Hereford	3,402	134,907	0	1.68E+11	0.00E+00
8	Empress to Emerson 1	1,023	0	86,928	0.00E+00	3.25E+10
9	Empress to Emerson 2	1,023	636,522	27,634	2.38E+11	1.03E+10
10	Empress to Enbridge CDA	2,895	285,805	0	3.02E+11	0.00E+00
11	Empress to Enbridge CDA (Amended)	2,900	0	63,468	0.00E+00	6.72E+10
12	Empress to Enbridge EDA	2,992	384,421	336,440	4.20E+11	3.67E+11
13	Empress to GMIT EDA	3,215	394,400	120,250	4.63E+11	1.41E+11
14	Empress to GMIT NDA	2,461	12,397	1,000	1.11E+10	8.98E+08
15	Empress to Iroquois	3,012	372,694	22,463	4.10E+11	2.47E+10
16	Empress to KPUC EDA	3,126	4,000	9,090	4.56E+09	1.04E+10
17	Empress to Napierville	3,199	11,080	50,233	1.29E+10	5.87E+10
18	Empress to Philipsburg	3,217	18,500	18,500	2.17E+10	2.17E+10
19	Empress to Spruce	1,002	0	4,220	0.00E+00	1.54E+09
20	Empress to TCPL NDA	2,247	0	9,402	0.00E+00	7.71E+09
21	Empress to TCPL WDA	1,656	5,400	6,484	3.26E+09	3.92E+09
22	Empress to Transgas SSDA	434	0	50,000	0.00E+00	7.92E+09
23	Empress to Union CDA	2,845	67,327	39,463	6.99E+10	4.10E+10
24	Empress to Union ECDA	2,852		1,833		1.91E+09
25	Empress to Union EDA	3,060	85,508	77,667	9.55E+10	8.68E+10
26	Empress to Union NCDA	2,757	10,756	11,000	1.08E+10	1.11E+10
27	Empress to Union NDA	2,408	134,326	92,053	1.18E+11	8.09E+10
28	Empress to Union SSMDA	2,169	3,000	21,000	2.37E+09	1.66E+10
29	Empress to Union WDA	1,507	59,587	52,000	3.28E+10	2.86E+10

Appendix 2.1, Tab 2: 2016 Firm Billing Determinants			2016 Firm Billing Determinants (GJ/d)		2016 Energy Distance (GJ*km/year)	
Path	km Post		ANE	Application	ANE	Application
(a)	(b)		(c)	(d)	(e)	(f)
FT						
1	Iroquois to GMIT EDA	221	26,952	0	2.17E+09	0.00E+00
2	Kirkwall to Chippawa	114	163,650	163,650	6.80E+09	6.80E+09
3	Kirkwall to Niagara Falls	111	31,651	26,376	1.29E+09	1.07E+09
4	Kirkwall to Union CDA (Amended)	33		22,500		2.69E+08
5	Lachenaie to Iroquois	191	0	0	0.00E+00	0.00E+00
6	Niagara Falls to Enbridge CDA	173	255,618	0	1.61E+10	0.00E+00
7	Niagara Falls to Enbridge CDA (Amended)	176	0	255,618	0.00E+00	1.65E+10
8	Niagara Falls to Enbridge Parkway CDA	133	0	200,000	0.00E+00	9.69E+09
9	Niagara Falls to GMIT EDA	771	82,000	82,000	2.31E+10	2.31E+10
10	Niagara Falls to Kirkwall	111	73,062	73,062	2.97E+09	2.97E+09
11	Niagara Falls to KPUC EDA	437	2,000	2,000	3.19E+08	3.19E+08
12	SS. Marie to Union SSM DA	11	55,986	72,000	2.21E+08	2.84E+08
13	St. Clair to Chippawa	326	107,541	0	1.28E+10	0.00E+00
14	St. Clair to Union SWDA	20	0	140,125	0.00E+00	1.03E+09
15	Suffield 2 to Empress	2	0	0	0.00E+00	0.00E+00
16	Union Dawn to East Hereford	1,052	52,753	52,753	2.03E+10	2.03E+10
17	Union Dawn to Enbridge CDA	293	164,416	0	1.76E+10	0.00E+00
18	Union Dawn to Enbridge CDA (Amended)	300	0	164,416	0.00E+00	1.80E+10
19	Union Dawn to Enbridge EDA	687	114,000	154,000	2.86E+10	3.86E+10
20	Union Dawn to GMIT EDA	865	210,000	210,000	6.63E+10	6.63E+10
21	Union Dawn to Iroquois	654	40,000	0	9.55E+09	0.00E+00
22	Union Dawn to Niagara Falls	300	10,265	10,265	1.12E+09	1.12E+09
23	Union Dawn to Union CDA	232	147,129	64,250	1.25E+10	5.44E+09
24	Union Dawn to Union EDA	549	1,510	0	3.03E+08	0.00E+00
25	Union Parkway Belt to Enbridge CDA	76	8,072	0	2.25E+08	0.00E+00
26	Union Parkway Belt to Enbridge CDA (Amended)	83	0	8,072	0.00E+00	2.46E+08
27	Union Parkway Belt to Enbridge EDA	460		27,648		4.64E+09
28	Union Parkway Belt to GMIT EDA	638	65,000	325,198	1.51E+10	7.58E+10
29	Union Parkway Belt to GMIT NDA	501	0	15,327	0.00E+00	2.80E+09

Appendix 2.1, Tab 2: 2016 Firm Billing Determinants		2016 Firm Billing Determinants (GJ/d)		2016 Energy Distance (GJ*km/year)		
Path	km Post	ANE	Application	ANE	Application	
(a)	(b)	(c)	(d)	(e)	(f)	
FT						
1	Union Parkway Belt to Iroquois	427	483,905	483,905	7.54E+10	7.54E+10
2	Union Parkway Belt to Philipsburg	640	30,000	30,000	7.01E+09	7.01E+09
3	Union Parkway Belt to Union CDA	30	16,000	13,333	1.75E+08	1.46E+08
4	Union Parkway Belt to Union EDA	323	37,000	130,333	4.36E+09	1.53E+10
5	Union Parkway Belt to Union NCDA	177	0	4,167	0.00E+00	2.69E+08
6	Union Parkway Belt to Union NDA	533	0	96,833	0.00E+00	1.88E+10
7	Welwyn to Centram MDA	270	1,332	1,332	1.31E+08	1.31E+08
8	FT Total		5,063,224	4,211,537	2.79E+12	1.52E+12
FT-NR						
9	FT-NR					
10	Empress to Centram MDA	881	0	0	0.00E+00	0.00E+00
11	Empress to Cornwall	3,046	0	0	0.00E+00	0.00E+00
12	Empress to East Hereford	3,402	0	0	0.00E+00	0.00E+00
13	Empress to Emerson 2	1,023	0	0	0.00E+00	0.00E+00
14	Empress to Enbridge CDA	2,895	0	0	0.00E+00	0.00E+00
15	Empress to Enbridge EDA	2,992	0	0	0.00E+00	0.00E+00
16	Empress to GMIT EDA	3,215	0	0	0.00E+00	0.00E+00
17	Empress to Iroquois	3,012	0	0	0.00E+00	0.00E+00
18	Empress to KPUC EDA	3,126	0	0	0.00E+00	0.00E+00
19	Empress to Napierville	3,199	0	0	0.00E+00	0.00E+00
20	Empress to Union EDA	3,060	0	0	0.00E+00	0.00E+00
21	FT-NR Total		0	0	0.00E+00	0.00E+00
FT-SN						
22	FT-SN					
23	Kirkwall to Thorold CDA	95	49,500	49,500	1.72E+09	1.72E+09
24	Union Parkway Belt to Goreway CDA	28	140,000	140,000	1.44E+09	1.44E+09

Appendix 2.1, Tab 2: 2016 Firm Billing Determinants			2016 Firm Billing Determinants (GJ/d)		2016 Energy Distance (GJ*km/year)	
Path	km Post	ANE	Application	ANE	Application	
(a)	(b)	(c)	(d)	(e)	(f)	
1 Union Parkway Belt to Schomberg #2 CDA	61	185,000	87,654	4.14E+09	1.96E+09	
2 Union Parkway Belt to Victoria Square #2 CDA	64	87,654	185,000	2.04E+09	4.30E+09	
3 FT-SN Total		462,154	462,154	9.34E+09	9.42E+09	
4 STS						
5 Centram MDA	143	54,000	54,000	2.82E+09	2.82E+09	
6 Cornwall	469	10,300	10,300	1.76E+09	1.76E+09	
7 Enbridge CDA	76	68,520	0	1.91E+09	0.00E+00	
8 Enbridge CDA (Amended)	83	0	283,892	0.00E+00	8.64E+09	
9 Enbridge EDA	460	216,174	80,611	3.63E+10	1.35E+10	
10 GMIT EDA	638	80,611	216,174	1.88E+10	5.04E+10	
11 KPUC EDA	304	283,892	13,342	3.15E+10	1.48E+09	
12 Philipsburg	640	20,279	20,279	4.74E+09	4.74E+09	
13 Union EDA	323	13,342	27,000	1.57E+09	3.18E+09	
14 Union NDA	533	49,100	37,667	9.55E+09	7.33E+09	
15 Union WDA	1,476	3,150	3,150	1.70E+09	1.70E+09	
16 STS Total		799,368	746,415	1.11E+11	9.55E+10	
17						
18 EMB						
19 EMB Union Parkway Belt to Union EDA	323	0	25,000	0.00E+00	2.94E+09	
20 EMB Total		0	25,000	0.00E+00	2.94E+09	
21						
22 Grand Total		6,324,746	5,445,105	2.91E+12	1.62E+12	

Appendix 2.1

Tab 3 for 2017

Appendix 2.1, Tab 3: 2017 Firm Billing Determinants		2017 Firm Billing Determinants (GJ/d)		2017 Energy Distance (GJ*km/year)	
Path	km Post	ANE	Application	ANE	Application
(a)	(b)	(c)	(d)	(e)	(f)
FT					
1	Chippawa to Enbridge Parkway CDA	135	0	0	0.00E+00
2	Emerson 2 to Centram MDA	143	69,750	69,750	3.64E+09
3	Empress to Centram MDA	881	164,906	186,640	5.31E+10
4	Empress to Centram SSDA	612	3,200	1,200	7.14E+08
5	Empress to Centrat MDA	1,002	5,565	11,500	2.04E+09
6	Empress to Cornwall	3,046	19,331	12,156	2.15E+10
7	Empress to East Hereford	3,402	134,907	0	1.68E+11
8	Empress to Emerson 1	1,023	0	86,928	0.00E+00
9	Empress to Emerson 2	1,023	636,522	27,634	2.38E+11
10	Empress to Enbridge CDA	2,895	285,805	0	3.02E+11
11	Empress to Enbridge CDA (Amended)	2,900	0	63,468	0.00E+00
12	Empress to Enbridge EDA	2,992	384,421	201,532	4.20E+11
13	Empress to GMIT EDA	3,215	394,400	85,000	4.63E+11
14	Empress to GMIT NDA	2,461	12,397	1,000	1.11E+10
15	Empress to Iroquois	3,012	372,694	0	4.10E+11
16	Empress to KPUC EDA	3,126	4,000	9,090	4.56E+09
17	Empress to Napierville	3,199	11,080	50,233	1.29E+10
18	Empress to Philipsburg	3,217	18,500	18,500	2.17E+10
19	Empress to Spruce	1,002	0	4,220	0.00E+00
20	Empress to TCPL NDA	2,247	0	9,091	0.00E+00
21	Empress to TCPL WDA	1,656	5,400	6,303	3.26E+09
22	Empress to Transgas SSDA	434	0	45,833	0.00E+00
23	Empress to Union CDA	2,845	67,327	0	6.99E+10
24	Empress to Union ECDA	2,852		11,000	1.14E+10
25	Empress to Union EDA	3,060	85,508	1,000	9.55E+10
26	Empress to Union NCD A	2,757	10,756	11,000	1.08E+10
27	Empress to Union NDA	2,408	134,326	67,000	1.18E+11
28	Empress to Union SSMDA	2,169	3,000	21,000	2.37E+09
29	Empress to Union WDA	1,507	59,587	52,000	3.28E+10

Appendix 2.1, Tab 3: 2017 Firm Billing Determinants		2017 Firm Billing Determinants (GJ/d)		2017 Energy Distance (GJ*km/year)		
Path	km Post	ANE	Application	ANE	Application	
(a)	(b)	(c)	(d)	(e)	(f)	
FT						
1	Iroquois to GMIT EDA	221	26,952	0	2.17E+09	0.00E+00
2	Kirkwall to Chippawa	114	163,650	161,867	6.80E+09	6.72E+09
3	Kirkwall to Niagara Falls	111	31,651	0	1.29E+09	0.00E+00
4	Kirkwall to Union CDA (Amended)	33		135,000	0.00E+00	1.62E+09
5	Lachenaie to Iroquois	191	0	0	0.00E+00	0.00E+00
6	Niagara Falls to Enbridge CDA	173	255,618	0	1.61E+10	0.00E+00
7	Niagara Falls to Enbridge CDA (Amended)	176	0	255,618	0.00E+00	1.65E+10
8	Niagara Falls to Enbridge Parkway CDA	133	0	200,000	0.00E+00	9.69E+09
9	Niagara Falls to GMIT EDA	771	82,000	82,000	2.31E+10	2.31E+10
10	Niagara Falls to Kirkwall	111	73,062	73,062	2.97E+09	2.97E+09
11	Niagara Falls to KPUC EDA	437	2,000	2,000	3.19E+08	3.19E+08
12	SS. Marie to Union SSMDA	11	55,986	72,000	2.21E+08	2.84E+08
13	St. Clair to Chippawa	326	107,541	0	1.28E+10	0.00E+00
14	St. Clair to Union SWDA	20	0	140,125	0.00E+00	1.03E+09
15	Suffield 2 to Empress	2	0	0	0.00E+00	0.00E+00
16	Union Dawn to East Hereford	1,052	52,753	52,753	2.03E+10	2.03E+10
17	Union Dawn to Enbridge CDA	293	164,416	0	1.76E+10	0.00E+00
18	Union Dawn to Enbridge CDA (Amended)	300	0	164,416	0.00E+00	1.80E+10
19	Union Dawn to Enbridge EDA	687	114,000	154,000	2.86E+10	3.86E+10
20	Union Dawn to GMIT EDA	865	210,000	210,000	6.63E+10	6.63E+10
21	Union Dawn to Iroquois	654	40,000	0	9.55E+09	0.00E+00
22	Union Dawn to Niagara Falls	300	10,265	10,265	1.12E+09	1.12E+09
23	Union Dawn to Union CDA	232	147,129	0	1.25E+10	0.00E+00
24	Union Dawn to Union EDA	549	1,510	0	3.03E+08	0.00E+00
25	Union Parkway Belt to Enbridge CDA	76	8,072	0	2.25E+08	0.00E+00
26	Union Parkway Belt to Enbridge CDA (Amended)	83	0	8,072	0.00E+00	2.46E+08
27	Union Parkway Belt to Enbridge EDA	460		165,889		2.79E+10
28	Union Parkway Belt to GMIT EDA	638	65,000	430,448	1.51E+10	1.00E+11
29	Union Parkway Belt to GMIT NDA	501	0	15,327	0.00E+00	2.80E+09

Appendix 2.1, Tab 3: 2017 Firm Billing Determinants		2017 Firm Billing Determinants (GJ/d)		2017 Energy Distance (GJ*km/year)		
Path	km Post	ANE	Application	ANE	Application	
(a)	(b)	(c)	(d)	(e)	(f)	
FT						
1	Union Parkway Belt to Iroquois	427	483,905	483,905	7.54E+10	7.54E+10
2	Union Parkway Belt to Philipsburg	640	30,000	30,000	7.01E+09	7.01E+09
3	Union Parkway Belt to Union CDA	30	16,000	0	1.75E+08	0.00E+00
4	Union Parkway Belt to Union EDA	323	37,000	222,000	4.36E+09	2.61E+10
5	Union Parkway Belt to Union NCDA	177	0	5,000	0.00E+00	3.23E+08
6	Union Parkway Belt to Union NDA	533	0	206,000	0.00E+00	4.01E+10
7	Welwyn to Centram MDA	270	1,332	1,332	1.31E+08	1.31E+08
8	FT Total		5,063,224	4,334,158	2.79E+12	1.24E+12
FT-NR						
9	FT-NR					
10	Empress to Centram MDA	881	0	0	0.00E+00	0.00E+00
11	Empress to Cornwall	3,046	0	0	0.00E+00	0.00E+00
12	Empress to East Hereford	3,402	0	0	0.00E+00	0.00E+00
13	Empress to Emerson 2	1,023	0	0	0.00E+00	0.00E+00
14	Empress to Enbridge CDA	2,895	0	0	0.00E+00	0.00E+00
15	Empress to Enbridge EDA	2,992	0	0	0.00E+00	0.00E+00
16	Empress to GMIT EDA	3,215	0	0	0.00E+00	0.00E+00
17	Empress to Iroquois	3,012	0	0	0.00E+00	0.00E+00
18	Empress to KPUC EDA	3,126	0	0	0.00E+00	0.00E+00
19	Empress to Napierville	3,199	0	0	0.00E+00	0.00E+00
20	Empress to Union EDA	3,060	0	0	0.00E+00	0.00E+00
21	FT-NR Total		0	0	0.00E+00	0.00E+00
FT-SN						
22	FT-SN					
23	Kirkwall to Thorold CDA	95	49,500	49,500	1.72E+09	1.72E+09
24	Union Parkway Belt to Goreway CDA	28	140,000	140,000	1.44E+09	1.44E+09

Appendix 2.1, Tab 3: 2017 Firm Billing Determinants		2017 Firm Billing Determinants (GJ/d)		2017 Energy Distance (GJ*km/year)	
Path	km Post	ANE	Application	ANE	Application
(a)	(b)	(c)	(d)	(e)	(f)
1 Union Parkway Belt to Schomberg #2 CDA	61	185,000	87,654	4.14E+09	1.96E+09
2 Union Parkway Belt to Victoria Square #2 CDA	64	87,654	185,000	2.04E+09	4.30E+09
3 FT-SN Total		462,154	462,154	9.34E+09	9.42E+09
4 STS					
5 Centram MDA	143	54,000	54,000	2.82E+09	2.82E+09
6 Cornwall	469	10,300	10,300	1.76E+09	1.76E+09
7 Enbridge CDA	76	68,520	0	1.91E+09	0.00E+00
8 Enbridge CDA (Amended)	83	0	283,892	0.00E+00	8.64E+09
9 Enbridge EDA	460	216,174	80,611	3.63E+10	1.35E+10
10 GMIT EDA	638	80,611	216,174	1.88E+10	5.04E+10
11 KPUC EDA	304	283,892	13,342	3.15E+10	1.48E+09
12 Philipsburg	640	20,279	20,279	4.74E+09	4.74E+09
13 Union EDA	323	13,342	27,000	1.57E+09	3.18E+09
14 Union NDA	533	49,100	31,000	9.55E+09	6.03E+09
15 Union WDA	1,476	3,150	3,150	1.70E+09	1.70E+09
16 STS Total		799,368	739,748	1.11E+11	9.42E+10
17					
18 EMB					
19 EMB Union Parkway Belt to Union EDA	323	0	25,000	0.00E+00	2.94E+09
20 EMB Total		0	25,000	0.00E+00	2.94E+09
21					
22 Grand Total		6,324,746	5,561,060	2.91E+12	1.34E+12

Appendix 2.1

Tab 4 for 2015

Appendix 2.1, Tab 4: ANE 2015 Firm Billing Determinants

Path		km Post	ANE 2015 Firm Billing Determinants (GJ/d)	ANE 2015 Energy Distance (GJ*km/year)
(a)	(b)	(c)	(d)	
FT				
1	Chippawa to Enbridge Parkway CDA	135	0	0.00E+00
2	Emerson 2 to Centram MDA	143	69,750	3.64E+09
3	Empress to Centram MDA	881	164,906	5.31E+10
4	Empress to Centram SSDA	612	3,200	7.14E+08
5	Empress to Centrat MDA	1,002	5,565	2.04E+09
6	Empress to Cornwall	3,046	19,331	2.15E+10
7	Empress to East Hereford	3,402	134,907	1.68E+11
8	Empress to Emerson 1	1,023	0	0.00E+00
9	Empress to Emerson 2	1,023	636,522	2.38E+11
10	Empress to Enbridge CDA	2,895	285,805	3.02E+11
11	Empress to Enbridge CDA (Amended)	2,900	0	0.00E+00
12	Empress to Enbridge EDA	2,992	384,421	4.20E+11
13	Empress to GMIT EDA	3,215	394,400	4.63E+11
14	Empress to GMIT NDA	2,461	12,397	1.11E+10
15	Empress to Iroquois	3,012	372,694	4.10E+11
16	Empress to KPUC EDA	3,126	4,000	4.56E+09
17	Empress to Napierville	3,199	11,080	1.29E+10
18	Empress to Philipsburg	3,217	18,500	2.17E+10
19	Empress to Spruce	1,002	0	0.00E+00
20	Empress to TCPL NDA	2,247	0	0.00E+00

Appendix 2.1, Tab 4: ANE 2015 Firm Billing Determinants

Path	km Post	ANE 2015 Firm Billing Determinants (GJ/d)	ANE 2015 Energy Distance (GJ*km/year)
(a)	(b)	(c)	(d)
1 Empress to TCPL WDA	1,656	5,400	3.26E+09
2 Empress to Transgas SSDA	434	0	0.00E+00
3 Empress to Union CDA	2,845	67,327	6.99E+10
4 Empress to Union EDA	3,060	85,508	9.55E+10
5 Empress to Union NCDA	2,757	10,756	1.08E+10
6 Empress to Union NDA	2,408	134,326	1.18E+11
7 Empress to Union SSM DA	2,169	3,000	2.37E+09
8 Empress to Union WDA	1,507	59,587	3.28E+10
9 Iroquois to GMIT EDA	221	26,952	2.17E+09
10 Kirkwall to Chippawa	114	163,650	6.80E+09
11 Kirkwall to Niagara Falls	111	31,651	1.29E+09
12 Lachenaie to Iroquois	191	0	0.00E+00
13 Niagara Falls to Enbridge CDA	173	255,618	1.61E+10
14 Niagara Falls to Enbridge CDA (Amended)	176	0	0.00E+00
15 Niagara Falls to Enbridge Parkway CDA	133	0	0.00E+00
16 Niagara Falls to GMIT EDA	771	82,000	2.31E+10
17 Niagara Falls to Kirkwall	111	73,062	2.97E+09
18 Niagara Falls to KPUC EDA	437	2,000	3.19E+08
19 SS. Marie to Union SSM DA	11	55,986	2.21E+08
20 St. Clair to Chippawa	326	107,541	1.28E+10

Appendix 2.1, Tab 4: ANE 2015 Firm Billing Determinants

Path	km Post	ANE 2015 Firm Billing Determinants (GJ/d)	ANE 2015 Energy Distance (GJ*km/year)
(a)	(b)	(c)	(d)
1 St. Clair to Union SWDA	20	0	0.00E+00
2 Suffield 2 to Empress	2	0	0.00E+00
3 Union Dawn to East Hereford	1,052	52,753	2.03E+10
4 Union Dawn to Enbridge CDA	293	164,416	1.76E+10
5 Union Dawn to Enbridge CDA (Amended)	300	0	0.00E+00
6 Union Dawn to Enbridge EDA	687	114,000	2.86E+10
7 Union Dawn to GMIT EDA	865	210,000	6.63E+10
8 Union Dawn to Iroquois	654	40,000	9.55E+09
9 Union Dawn to Niagara Falls	300	10,265	1.12E+09
10 Union Dawn to Union CDA	232	147,129	1.25E+10
11 Union Dawn to Union EDA	549	1,510	3.03E+08
12 Union Parkway Belt to Enbridge CDA	76	8,072	2.25E+08
13 Union Parkway Belt to Enbridge CDA (Amended)	83	0	0.00E+00
14 Union Parkway Belt to GMIT EDA	638	65,000	1.51E+10
15 Union Parkway Belt to GMIT NDA	501	0	0.00E+00
16 Union Parkway Belt to Iroquois	427	483,905	7.54E+10
17 Union Parkway Belt to Philipsburg	640	30,000	7.01E+09
18 Union Parkway Belt to Union CDA	30	16,000	1.75E+08
19 Union Parkway Belt to Union EDA	323	37,000	4.36E+09
20 Union Parkway Belt to Union NCDA	177	0	0.00E+00

Appendix 2.1, Tab 4: ANE 2015 Firm Billing Determinants

Path	km Post	ANE 2015 Firm Billing Determinants (GJ/d)	ANE 2015 Energy Distance (GJ*km/year)
(a)	(b)	(c)	(d)
1 Union Parkway Belt to Union NDA	533	0	0.00E+00
2 Welwyn to Centram MDA	270	1,332	1.31E+08
3 FT Total		5,063,224	2.79E+12
4 FT-NR			
5 Empress to Centram MDA	881	0	0.00E+00
6 Empress to Cornwall	3,046	0	0.00E+00
7 Empress to East Hereford	3,402	0	0.00E+00
8 Empress to Emerson 2	1,023	0	0.00E+00
9 Empress to Enbridge CDA	2,895	0	0.00E+00
10 Empress to Enbridge EDA	2,992	0	0.00E+00
11 Empress to GMIT EDA	3,215	0	0.00E+00
12 Empress to Iroquois	3,012	0	0.00E+00
13 Empress to KPUC EDA	3,126	0	0.00E+00
14 Empress to Napierville	3,199	0	0.00E+00
15 Empress to Union EDA	3,060	0	0.00E+00
16 FT-NR Total		0	0.00E+00
17 FT-SN			
18 Kirkwall to Thorold CDA	95	49,500	1.72E+09
19 Union Parkway Belt to Goreway CDA	28	140,000	1.44E+09

Appendix 2.1, Tab 4: ANE 2015 Firm Billing Determinants

Path	km Post	ANE 2015 Firm Billing Determinants (GJ/d)	ANE 2015 Energy Distance (GJ*km/year)
(a)	(b)	(c)	(d)
1 Union Parkway Belt to Schomberg #2 CDA	61	185,000	4.14E+09
2 Union Parkway Belt to Victoria Square #2 CDA	64	87,654	2.04E+09
3 FT-SN Total		462,154	9.34E+09
4 STS			
5 Centram MDA	143	54,000	2.82E+09
6 Cornwall	469	10,300	1.76E+09
7 Enbridge CDA	76	68,520	1.91E+09
8 Enbridge CDA (Amended)	83	0	0.00E+00
9 Enbridge EDA	460	216,174	3.63E+10
10 GMIT EDA	638	80,611	1.88E+10
11 KPUC EDA	304	283,892	3.15E+10
12 Philipsburg	640	20,279	4.74E+09
13 Union EDA	323	13,342	1.57E+09
14 Union NDA	533	49,100	9.55E+09
15 Union WDA	1,476	3,150	1.70E+09
16 STS Total		799,368	1.11E+11
17 EMB			
18 EMB Union Parkway Belt to Union EDA	323	0	0.00E+00
19 EMB Total		0	0.00E+00

Appendix 2.1, Tab 4: ANE 2015 Firm Billing Determinants

Path	km Post	ANE 2015 Firm Billing Determinants (GJ/d)	ANE 2015 Energy Distance (GJ*km/year)
(a)	(b)	(c)	(d)
1 Grand Total		6,324,746	2.91E+12

Appendix 2.2

2015 - 2017 Revenue Forecast Under ANE Proposed Tolls and TransCanada Firm Billing Determinant and DMR Forecast

2015 - 2017 Revenue Forecast Under ANE Proposed Tolls and TransCanada Firm Billing Determinant and DMR Forecast

Firm Transportation

Line No.	Receipt	Delivery	ANE Proposed Toll (\$/Gj)	Energy (Gj/d)			Revenue (\$Millions)		
				2015	2016	2017	2015	2016	2017
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	Emerson 2	Centram MDA	0.13	69,750	69,750	69,750	3.2	3.2	3.2
2	Empress	Centram MDA	0.37	186,640	186,640	186,640	25.4	25.4	25.4
3	Empress	Centram SSDA	0.28	1,200	1,200	1,200	0.1	0.1	0.1
4	Empress	Centram MDA	0.41	11,500	11,500	11,500	1.7	1.7	1.7
5	Empress	Cornwall	1.10	12,156	12,156	12,156	4.9	4.9	4.9
6	Empress	East Hereford	1.22	39,373	-	-	17.5	-	-
7	Empress	Emerson 1	0.42	86,928	86,928	86,928	13.4	13.4	13.4
8	Empress	Emerson 2	0.42	27,634	27,634	27,634	4.2	4.2	4.2
9	Empress	Enbridge CDA	1.05	476,338	-	-	182.4	-	-
10	Empress	Enbridge CDA (Amended)	1.05	10,578	63,468	63,468	4.1	24.3	24.3
11	Empress	Enbridge EDA	1.08	287,579	336,440	201,532	113.5	132.8	79.5
12	Empress	GMT EDA	1.16	175,963	120,250	85,000	74.3	50.7	35.9
13	Empress	GMT NDA	0.90	12,939	1,000	1,000	4.3	0.3	0.3
14	Empress	Iroquois	1.09	121,638	22,463	-	48.3	8.9	-
15	Empress	KPUC EDA	1.13	9,090	9,090	9,090	3.7	3.7	3.7
16	Empress	Napierville	1.15	50,233	50,233	50,233	21.1	21.1	21.1
17	Empress	Nipigon WDA	0.63	6,484	6,484	6,303	1.5	1.5	1.5
18	Empress	Phillipsburg	1.16	18,500	18,500	18,500	7.8	7.8	7.8
19	Empress	Spruce	0.41	4,220	4,220	4,220	0.6	0.6	0.6
20	Empress	Transgas SSDA	0.22	50,000	50,000	45,833	4.1	4.1	3.7
21	Empress	Tunis NDA	0.83	9,402	9,402	9,091	2.9	2.9	2.8
22	Empress	Union CDA	1.03	68,000	39,463	-	25.6	14.9	-
23	Empress	Union ECDA	1.03	-	1,833	11,000	-	0.7	4.2
24	Empress	Union EDA	1.10	139,023	77,667	1,000	56.0	31.3	0.4
25	Empress	Union NCA	1.00	11,000	11,000	11,000	4.0	4.0	4.0
26	Empress	Union NDA	0.89	109,571	92,053	67,000	35.4	29.8	21.7
27	Empress	Union SMDA	0.81	21,000	21,000	21,000	6.2	6.2	6.2
28	Empress	Union WDA	0.58	50,575	52,000	52,000	10.8	11.1	11.1
29	Kirkwall	Chippawa	0.12	198,226	163,650	161,867	8.4	6.9	6.8
30	Kirkwall	Niagara Falls	0.11	31,651	26,376	-	1.3	1.1	-
31	Kirkwall	Union CDA (Amended)	0.09	-	22,500	135,000	-	0.7	4.4
32	Niagara Falls	Enbridge CDA	0.14	213,015	-	-	10.5	-	-
33	Niagara Falls	Enbridge CDA (Amended)	0.14	42,603	255,618	255,618	2.1	12.8	12.8
34	Niagara Falls	GMT EDA	0.34	82,000	82,000	82,000	10.1	10.1	10.1
35	Niagara Falls	Kirkwall	0.11	73,062	73,062	73,062	3.1	3.1	3.1
36	Niagara Falls	KPUC EDA	0.22	2,000	2,000	2,000	0.2	0.2	0.2
37	Niagara Falls	Enbridge Parkway CDA	0.12	33,333	200,000	200,000	1.5	8.9	8.9
38	SS. Marie	Union SMDA	0.08	36,368	72,000	72,000	1.1	2.1	2.1
39	St. Clair	Chippawa	0.19	103,452	-	-	7.1	-	-
40	St. Clair	Union SWDA	0.08	140,125	140,125	140,125	4.3	4.3	4.3
41	Union Dawn	East Hereford	0.43	52,753	52,753	52,753	8.3	8.3	8.3
42	Union Dawn	Enbridge CDA	0.18	137,013	-	-	8.8	-	-
43	Union Dawn	Enbridge CDA (Amended)	0.18	27,403	164,416	164,416	1.8	10.7	10.7
44	Union Dawn	Enbridge EDA	0.31	120,667	154,000	154,000	13.6	17.3	17.3
45	Union Dawn	GMT EDA	0.37	210,000	210,000	210,000	28.2	28.2	28.2
46	Union Dawn	Iroquois	0.30	10,000	-	-	1.1	-	-
47	Union Dawn	Niagara Falls	0.18	10,265	10,265	10,265	0.7	0.7	0.7
48	Union Dawn	Union CDA	0.16	122,532	64,250	-	7.0	3.6	-
49	Union Parkway Belt	Enbridge CDA	0.10	6,727	-	-	0.3	-	-
50	Union Parkway Belt	Enbridge CDA (Amended)	0.11	1,345	8,072	8,072	0.1	0.3	0.3
51	Union Parkway Belt	Enbridge EDA	0.23	-	27,648	165,889	-	2.3	14.0
52	Union Parkway Belt	GMT EDA	0.29	104,858	325,198	430,448	11.2	34.6	45.8
53	Union Parkway Belt	GMT NDA	0.25	2,555	15,327	15,327	0.2	1.4	1.4
54	Union Parkway Belt	Iroquois	0.22	483,905	483,905	483,905	39.0	39.0	39.0
55	Union Parkway Belt	Phillipsburg	0.29	30,000	30,000	30,000	3.2	3.2	3.2
56	Union Parkway Belt	Union CDA	0.09	16,000	13,333	-	0.5	0.4	-
57	Union Parkway Belt	Union EDA	0.19	49,500	130,333	222,000	3.4	8.8	15.1
58	Union Parkway Belt	Union NCA	0.14	4,247	4,167	5,000	0.2	0.2	0.3
59	Union Parkway Belt	Union NDA	0.26	67,188	96,833	206,000	6.3	9.1	19.3
60	Wetwyn	Centram MDA	0.17	1,332	1,332	1,332	0.1	0.1	0.1
61	Total Firm Transportation			4,481,438	4,211,537	4,334,158	860.3	628	538

Firm Transportation - Non Renewable

Line No.	Receipt	Delivery	Compliance Toll (\$/Gj)	Energy (Gj/d)			Revenue (\$Millions)		
				2015	2016	2017	2015	2016	2017
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
62	Empress	Cornwall	1.10	294	-	-	0.1	-	-
63	Empress	East Hereford	1.22	22,859	-	-	10.2	-	-
64	Empress	Enbridge EDA	1.08	93,125	-	-	36.8	-	-
65	Empress	GMT EDA	1.16	128,664	-	-	54.3	-	-
66	Empress	Iroquois	1.09	23,299	-	-	9.3	-	-
67	Empress	Union EDA	1.10	1,052	-	-	0.4	-	-
68	Total Firm Transportation - Non Renewable			269,293	-	-	111.0	-	-

Firm Transportation - Short Notice & Enhanced Market Balancing¹

Line No.	Receipt	Delivery	Compliance Toll (\$/Gj)	Energy (Gj/d)			Revenue (\$Millions)		
				2015	2016	2017	2015	2016	2017
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
69	FT-SN Kirkwall	Thorold CDA	0.12	49,500	49,500	49,500	2.2	2.2	2.2
70	FT-SN Union Parkway Belt	Goreway CDA	0.10	140,000	140,000	140,000	4.9	4.9	4.9
71	FT-SN Union Parkway Belt	Schomberg #2 CDA	0.11	87,654	87,654	87,654	3.5	3.5	3.5
72	FT-SN Union Parkway Belt	Victoria Square #2 CDA	0.11	185,000	185,000	185,000	7.3	7.3	7.3
73	EMB Union Parkway Belt	Union EDA	0.20	4,167	25,000	25,000	0.3	1.9	1.9
74	Total Firm Transportation - Short Notice & Enhanced Market Balancing			466,321	487,154	487,154	18	20	20

Storage Transportation Service

Line No.	Receipt	Delivery	Compliance Toll (\$/Gj)	Energy (Gj/d)			Revenue (\$Millions)		
				2015	2016	2017	2015	2016	2017
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
75	STS Centram MDA		0.13	54,000	54,000	54,000	2.5	2.5	2.5
76	STS Union NDA		0.26	47,429	37,667	31,000	4.4	3.5	2.9
77	STS Cornwall		0.24	10,300	10,300	10,300	0.9	0.9	0.9
78	STS Enbridge CDA		0.10	236,577	-	-	8.9	-	-
79	STS Enbridge CDA (Amended)		0.11	47,315	283,892	283,892	1.8	10.9	10.9
80	STS Enbridge EDA		0.23	80,611	80,611	80,611	6.8	6.8	6.8
81	STS GMT EDA		0.29	216,174	216,174	216,174	23.0	23.0	23.0
82	STS KPUC EDA		0.18	13,342	13,342	13,342	0.9	0.9	0.9
83	STS Phillipsburg		0.29	20,279	20,279	20,279	2.2	2.2	2.2
84	STS Union EDA		0.19	61,600	27,000	27,000	4.2	1.8	1.8
85	STS Union WDA		0.57	3,150	3,150	3,150	0.7	0.7	0.7
86	Total Storage Transportation Service			790,777	746,415	739,748	56.2	53.2	52.6
87	Total Firm Revenues			6,007,828	5,445,105	5,561,060	1,045.7	701.1	610.3

Non Discretionary Miscellaneous Revenue (NDMR)

88	Total NDMR	31.5	24.2	23.1
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Discretionary Miscellaneous Revenue (DMR)²

89	Discretionary Miscellaneous Revenue (DMR)²	180.0	180.0	60.0
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Total System Revenues

90	Total System Revenues	1,257.2	905.3	693.4
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Revenue Requirement Comparison

91	Revenue Requirement (less Annual Bridging Amount)	1597.0	1608.0	1605.0
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Revenue Short Fall

92	Revenue Short Fall	(339.8)	(702.7)	(911.6)
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Cumulative Revenue Short Fall

93	Cumulative Revenue Short Fall	(339.8)	(1,042.5)	(1,954.1)
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¹ Firm Transportation - Short Notice (FT-SN) & Enhanced Market Balancing (EMB) service revenues include a 10% Toll Premium

² DMR includes IT, STFT, and Diversion revenues