

April 2, 2013

BY COURIER & RESS

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
Suite 2700, 2300 Yonge Street  
Toronto, Ontario  
M4P 1E4

Dear Ms. Walli:

**RE: EB-2013-0074 – Union Gas Limited (“Union”)  
Brantford-Kirkwall/Parkway D Project**

Enclosed please find two copies of Union’s Application and pre-filed evidence in relation to the above-noted project.

Please note, the Environmental Reports are not included in the electronic filing. The Environmental Reports (CD and hardcopy) will be sent by courier. The Environmental Reports will be available on Union’s website.

The NEB issued the TCPL Toll Decision (RH-003-2011) on March 27<sup>th</sup>, 2013. This Decision may impact the evidence submitted in this filing. Once the full impact is known, Union will file updated evidence, if necessary.

In the event that you have any questions on the above or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5473.

Yours truly,

Karen Hockin  
Manager, Regulatory Initiatives  
:mjp  
Encl.

cc: Neil McKay, Manager Facilities Applications  
Zora Crnojacki, Project Advisor  
Crawford Smith, Torys

**ONTARIO ENERGY BOARD**

**IN THE MATTER OF** The Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B, and in particular, S. 36 thereof;

**AND IN THE MATTER OF** The Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B, and in particular, S.90.(1) thereof;

**AND IN THE MATTER OF** The Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B, and in particular, S.91 thereof

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders for pre-approval of recovery of the cost consequences of all facilities associated with the development of the proposed Brantford-Kirkwall/Parkway D Compressor Station project;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders for pre-approval of the cost consequences of two long term short haul transportation contracts;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the City of Cambridge and City of Hamilton.

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**UNION GAS LIMITED**

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1. Union Gas Limited (the “Applicant” or “Union”) hereby applies to the Ontario Energy Board (the “Board”), pursuant to Section 36 of the Ontario Energy Board Act (the “Act”) for an Order or Orders granting:
  - a) pre-approval of recovery of the cost consequences of all facilities associated with the development of the proposed Brantford-Kirkwall pipeline and Parkway D Compressor Station project from ratepayers;

- b) approval of an accounting order to establish the Brantford-Kirkwall/Parkway D Deferral Account.
  - c) pre-approval of the cost consequences of two long term transportation contracts
2. The Applicant also hereby applies to the Board, pursuant to Section 90(1) of the Act, for an Order or Orders granting leave to construct 13.9 kilometres of NPS48 pipeline from the Brantford Valve Site to the Kirkwall Custody Transfer Station (“Proposed Pipeline”).
  3. The Applicant also hereby applies to the Board, pursuant to Section 91 of the Act, for an Order or Orders granting leave to construct the Parkway D Compressor, including measurement and associated facilities (“Proposed Parkway D Compressor”).
  4. Attached hereto as Schedule ‘A’ are two maps showing the general location of the proposed pipelines, and associated facilities and the municipalities, highways, railways and utility lines through, under, over, upon or across which the pipeline will pass.
  5. Attached hereto as Schedule ‘B’ is an Executive Summary describing the proposed project.
  6. The parties affected by this Application are the owners of lands over which the pipeline will be constructed, and Union’s transportation and wholesale customers with respect to quality of service and security of supply. The persons affected by this application are the customers resident or located in the Municipalities, Police Villages and First Nations Reserves served by Union, together with those to whom Union sells gas, or on whose behalf Union distributes, transmits or stores gas. It is impractical to set out in this application the names and addresses of such persons because they are too numerous.

7. The Applicant now therefore applies to the Board for an Order or Orders for pre-approval of recovery of the cost consequences, pre-approval of two long term transportation contracts and granting leave to construct the Proposed Pipeline as described above, as well as the Proposed Parkway D Compressor.
8. The address for service for Union is:

Union Gas Limited  
P.O. Box 2001  
50 Keil Drive North  
Chatham, Ontario N7M 5M1  
Attention: Karen Hockin  
Manager, Regulatory Initiatives  
Telephone: 519-436-5473  
Fax: 519-436-4671  
Email: [khockin@uniongas.com](mailto:khockin@uniongas.com)

**-and-**

Torys LLP  
Suite 300, Maritime Life Tower  
P.O. Box 270, Toronto Dominion Centre  
Toronto, Ontario M5K 1N2  
Attention: Crawford Smith  
Telephone: 416-865-8209  
Fax: 416-865-7380  
Email: [csmith@torys.com](mailto:csmith@torys.com)

Dated: April 2<sup>nd</sup>, 2013

UNION GAS LIMITED

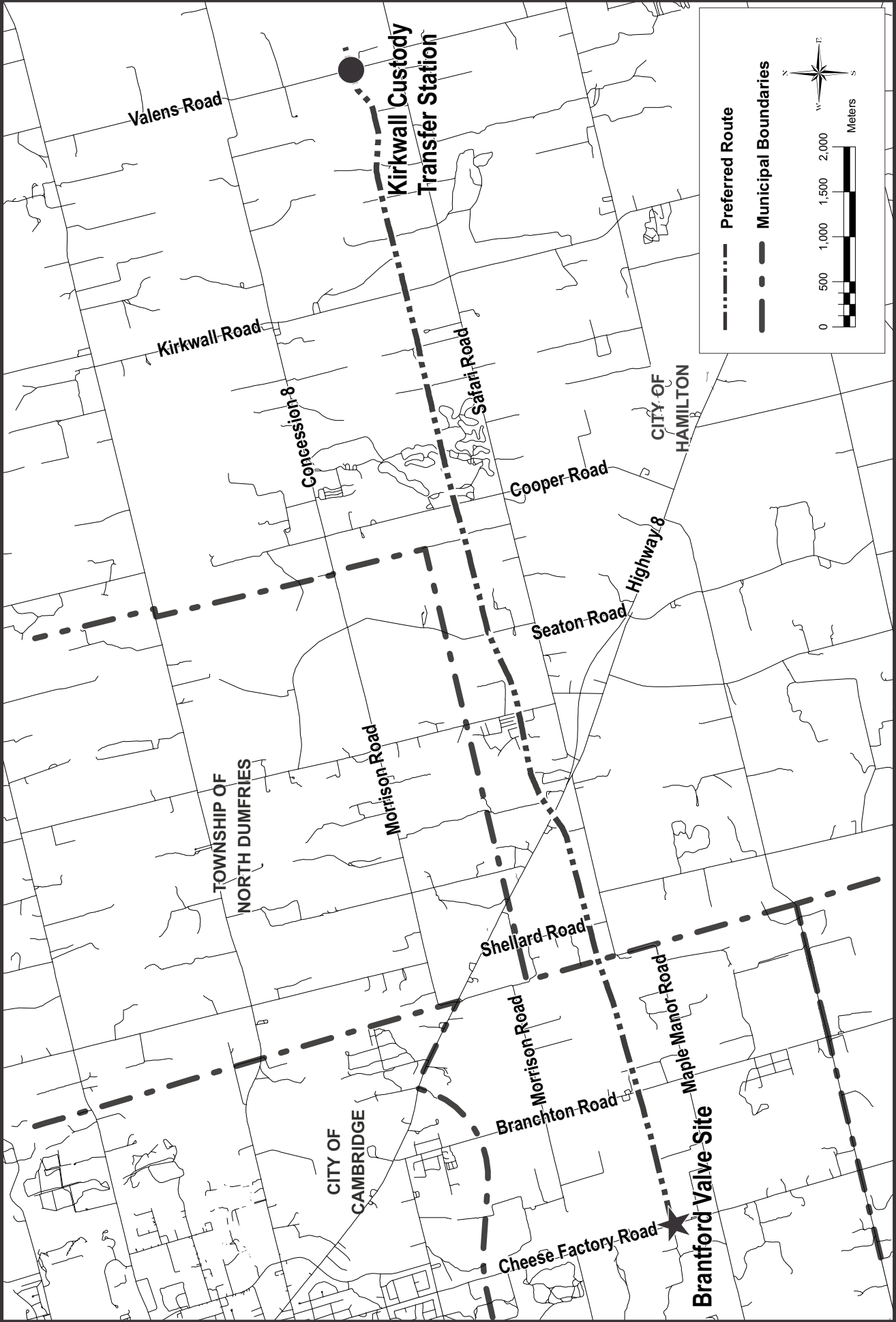
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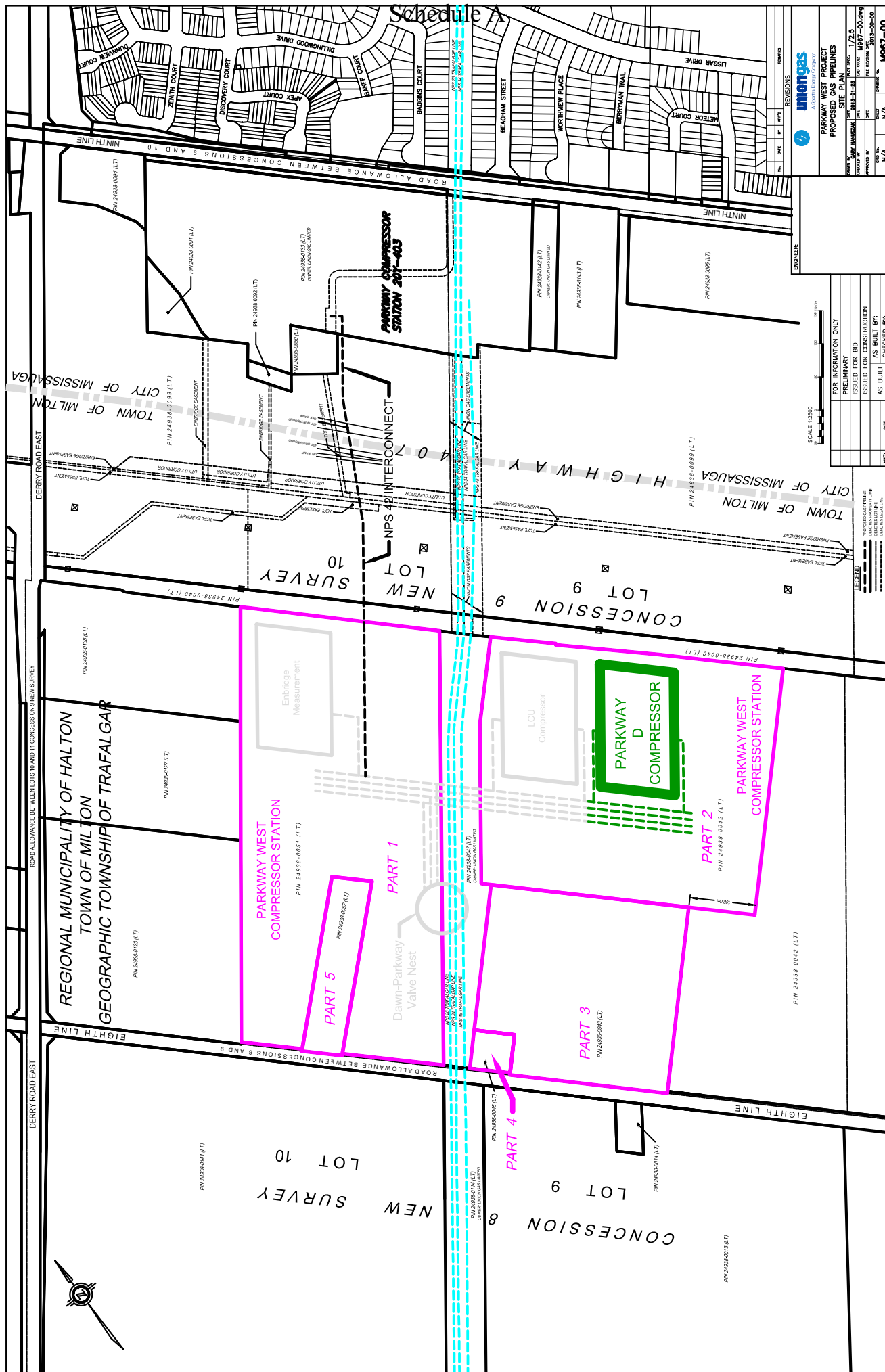
Karen Hockin, Manager Regulatory Initiatives



Union Gas Limited Proposed Brantford-Kirkwall Pipeline

Schedule A





## SCHEDULE “B”

**EXECUTIVE SUMMARY**

1. North American natural gas markets are experiencing dramatic changes. Production from mature natural gas basins such as the Western Canadian Sedimentary Basin is in decline while new production basins like Marcellus and Utica have emerged. Marcellus shale gas production alone has increased by nearly 7 PJ/d since the beginning of 2007, with supply expected to more than triple by 2035.
2. The increase in shale and other non-traditional gas supply has put downward pressure on natural gas prices and reduced price volatility. It has also changed the price differentials across North America and impacted market behavior. Market participants are moving away from long haul transportation. They are contracting short haul transportation to move supply purchased at liquid hubs located closer to market areas. This has increased demand for transportation on the Dawn-Parkway System and created an opportunity for Union Gas Limited (“Union”) to diversify its natural gas supply portfolio for Union North.
3. This application by Union is brought in response to these fundamental market changes. The application consists of the following five requests:
  - (1) Section 90 Application for leave to construct a NPS48 pipeline from the existing Brantford Valve Site to the Kirkwall Custody Transfer Station (“Proposed Pipeline”);
  - (2) Section 91 Application for leave to construct the Parkway D compressor, including measurement, and associated facilities (“Proposed Parkway D Compressor”);together the “Project”
  - (3) Section 36 Application for pre-approval for recovery of the cost consequences of all facilities associated with the development of the Project from ratepayers, effective January 1, 2015;

## SCHEDULE “B”

- (4) Section 36 Application for approval of an accounting order to establish the Brantford-Kirkwall/Parkway D Deferral Account; and
  - (5) Section 36 Application for pre-approval of the cost consequences of two long term short haul transportation contracts on the TransCanada Pipelines Limited (“TCPL”) Mainline;
- 4. The facilities and new short haul transportation contracts described in the application will produce significant benefit for Union’s in-franchise customers, particularly in Union North. The gas supply savings to the Union North sales service and bundled direct purchase customers are expected to be between \$180 million and \$280 million over the next ten years.
- 5. The facilities proposed by Union were determined in consultation with Enbridge Gas Distribution (“Enbridge”), TCPL and Gaz Métro Limited Partnership (“Gaz Métro”). The proposed facilities complement Union’s Parkway West Project and projects being developed by Enbridge and TCPL. The further benefits of the Project include: diversity and security of supply for Union, Enbridge, and Gaz Métro; and, an affordable source of natural gas for the proposed Enbridge and TCPL expansions. Between Union, Enbridge, and Gaz Métro up to \$2.0 billion in gas supply cost savings is possible between 2015 and 2025 should the Project proceed.
- 6. By building the Project, Union is pro-actively addressing the impacts of future turn back. Union will be better positioned to re-purpose or re-sell turn back capacity provided market opportunities exist. The ability to re-purpose or re-sell turn back capacity would help mitigate future rate risk for Union’s customers. In addition, the Project supports continued growth of the Dawn Hub, which increases depth, liquidity and price competitiveness of gas supply options for Ontario customers over the long term.

## SCHEDULE "B"

7. The total estimated capital cost of the Project is \$204 million. The largest revenue requirement associated with the Project increases to approximately \$15.9 million over the 2015 to 2018 period. The Project will result in: (i) an increase of costs of approximately \$1.6 million, allocated to Union North in-franchise rate classes, (ii) an increase of costs of approximately \$16.0 million allocated to ex-franchise rate classes and (iii) a reduction in costs of approximately \$1.7 million, allocated to Union South in-franchise rate classes. The ex-franchise customers that will bear the majority of the costs associated with the Project are supportive
8. Total residential bill impacts were calculated to include the combined impacts of the gas cost savings associated with Union's long term contracting proposal and the Project. Total residential bill impacts were calculated to reflect the combined impact of the gas cost savings associated with Union's long term contracting proposal and the Project. For the average Rate 01 residential customer in Union North consuming 2,200 m<sup>3</sup> per year, the total bill impact is a reduction of (\$42.00 to \$43.00) per year as compared to Union's current approved rates (per EB-2011-0210). For the average Rate M1 residential customer in Union South consuming 2,200 m<sup>3</sup>, the total bill impact is a reduction of approximately (\$1.12) per year.
9. For ex-franchise customers, and others that use the Dawn-Parkway System, the M12 rate will increase from \$0.078/GJ/d to \$0.091/GJ/d upon completion of the Parkway West Project and this Project. Union's M12 rate has traditionally ranged from \$0.07/GJ/d to \$0.10/GJ/d. This increased rate of \$0.091/GJ/d is within this historic range.
10. Union proposes to start construction in the summer of 2014 with a target in-service date of the fall of 2015. Given that Union is required to order the long lead delivery items in 2013, Union is seeking a Board decision by September 15, 2013.

## SCHEDULE "B"

11. In summary, the Project addresses the increase in demands on the Dawn-Parkway System; results in significant benefits for Ontario energy consumers, Union's in-franchise and ex-franchise customers; and represents rational development of Union's facilities. Accordingly, the Project should be approved by the Board.

**BRANTFORD-KIRKWALL/PARKWAY D PROJECT**

**APPLICATION**

SCHEDULE “A” - Maps  
SCHEDULE “B” – Executive Summary

**INDEX**

**GLOSSARY OF TERMS**

**EXECUTIVE SUMMARY**

**SECTION 1 APPLICATION SUMMARY**

**SECTION 2 ROLE OF NATURAL GAS IN ONTARIO ECONOMY**

**SECTION 3 UNION GAS SYSTEM OVERVIEW**

**SECTION 4 CHANGING NORTH AMERICAN NATURAL GAS SUPPLY DYNAMICS**

*Declining Western Canadian Sedimentary Basin Supply*  
*Emerging Shale Gas Supply*  
*ICF International Report on Changing Gas Supply Dynamics*

**SECTION 5 CHANGING NATURAL GAS TRANSPORTATION DYNAMICS**

*Gaz Métro*  
*Alberta North East Group*  
*Enbridge*  
*Centra Manitoba*  
*Union Gas*

**SECTION 6 CHANGES TO UNION’S DAWN-PARKWAY SYSTEM**

*Declining Deliveries at Kirkwall*  
*Increasing Deliveries at Parkway*

## **SECTION 7 NEW DAWN-PARKWAY SYSTEM DEMANDS**

*Binding Open Season*  
*Reverse Open Season*  
*Binding Contracts for Dawn to Parkway Capacity*  
*Related Projects*  
*Enbridge Capacity*  
*Gaz Métro Capacity*  
*Vermont Gas Capacity*  
*Union Capacity*  
*Long Term Expectations for Dawn-Parkway System*

## **SECTION 8 PROPOSED FACILITIES**

*Dawn-Parkway System Design*  
*In-franchise Design Day Demand*  
*Ex-Franchise Design Day Demand*  
*Overall System Demand*  
*System Capacity*  
*Alternatives Considered*  
*Proposed Facilities*  
*Compression Alternatives*

## **SECTION 9 PROJECT COSTS, CONSULTATIONS, ECONOMICS AND BENEFITS**

*Project Costs*  
*Project Economics*  
*Additional Project Benefits*

## **SECTION 10 PRE-APPROVAL OF THE COST CONSEQUENCES OF THE BRANTFORD-KIRK WALL PIPELINE AND PARKWAY D COMPRESSOR FACILITIES**

*Brantford-Kirkwall Pipeline and Parkway D Compressor Revenue Requirement  
and Cost Allocation Methodology*  
*Rate Impacts of the Brantford-Kirkwall and Parkway D Compressor Project*  
*Rate Implementation*



## **SECTION 11 PRE-APPROVAL OF THE COST CONSEQUENCES OF TWO LONG TERM TRANSPORTATION CONTRACTS**

*Introduction*

*The Guidelines*

*The Guidelines Apply to this Application*

*Union Gas Upstream Transportation Portfolio for Union South and Union North*

*TCPL Contracting Process and Implications on Union's System*

*Significant Infrastructure Investment Required*

*Rationale for the Contracts (Benefits and Risk Assessment)*

*Impact of Union's Contract Changes on TCPL tolls and Union Customers*

*Cost Allocation, Rate Design and Rate Impacts*

*Summary*

## **SECTION 12 SECTION 90 AND SECTION 91 APPLICATIONS**

*Facilities Design and Construction*

*Environmental Matters*

*Land Matters*

*First Nations and Métis Consultations*

## **SCHEDULES**

Schedule 1-1	Location Maps
Schedule 4-1	ICF Report – Impact of Changing Supply Dynamics on Ontario Natural Gas Market
Schedule5-1	Gaz Métro Decision – R-3809-2012; D-2012-175
Schedule 6-1	Summary of M12 Dawn-Kirkwall Contracts (Turn back/Active) and Summary of M12-X and C1 Kirkwall to Parkway Contracts
Schedule 7-1	Open Season Package for Parkway to Maple Pipeline
Schedule 7-2	Revised Open Season Package
Schedule 7-3	Reverse Open Season Letter
Schedule 8-1	Dawn-Parkway System Winter Design Day – Winter 2014/2015

Schedule 8-2	Dawn-Parkway System Winter Design Day – Winter 2015/2016
Schedule 8-3	Dawn-Parkway System Design Day Demands and Capacity
Schedule 8-4	All Stakeholder Meeting Presentation
Schedule 9-1	Total estimated NPS48 pipeline costs
Schedule 9-2	Total estimated Station costs
Schedule 9-3A	DCF Analysis
Schedule 9-3B	DCF Sensitivity Analysis
Schedule 9-4	Calculation of Incremental M12 Transportation Revenues
Schedule 9-5	Listing of Key Input Parameters for DCF Analysis
Schedule 10-1	Annual Revenue Requirement
Schedule 10-2	Cost Allocation Impact by Rate Class
Schedule 10-3	General Service (Rate M1, Rate 01) Bill Impacts Brantford-Kirkwall Parkway D
Schedule 10-4	General Service (Rate M1, Rate 01) Bill Impacts Brantford-Kirkwall Parkway D Parkway West
Schedule 10-5	Historically M12 Rates Dawn to Parkway and Dawn to Kirkwall
Schedule 10-6	M12 Rate Impacts for all Tranportations Paths
Schedule 10-7	Annual Rate Adjustment by Rate Class

Schedule 10-8	Draft Accounting Order
Schedule 11-1	TCPL Standard Firm Transportation Service Contract
Schedule 11-2	TCPL Standard Firm Transportation Tariff and General Terms and Conditions
Schedule 11-3	Landed Cost Analysis – Current Approved 2012 TCPL Tolls
Schedule 11-4	Land Cost Analysis – Proposed 2013 TCPL Tolls (June 29, 2012)
Schedule 11-5	Reconciliation of the Gas Transport, Storage and Commodity Cost Savings
Schedule 11-6	2013 Board Approved Allocation of Union North Gas Supply Firm Transportation Demand and Diversion Costs
Schedule 11-7	Calculation of Rate 01 Gas Supply Transportation by Zone
Schedule 11-8	Gas Transport and Storage Savings Detail
Schedule 11-9	Union North Gas Transport, Storage and Commodity Cost Savings by Rate Class
Schedule 11-10	Rate 01 Gas Transportation and Storage Rate Impacts Including Brantford-Kirkwall/Parkway D, Parkway West and Long Term Contracting Proposal
Schedule 11-11	General Service Bill Impacts including Brantford-Kirkwall/Parkway D and Long Term Contracting Proposal

Schedule 11-12	General Service Bill Impacts including Brantford-Kirkwall/Parkway D, Parkway West and Long Term Contracting Proposal
Schedule 12-1	Project and Construction Schedule
Schedule 12-2	General Techniques and Methods of Construction
Schedule 12-3	Brantford-Kirkwall Environmental Report
Schedule 12-4	Brantford-Kirkwall Environmental Report Addendum
Schedule 12-5	Parkway West Compressor Station Environmental Report
Schedule 12-6	Estimated Environmental Costs
Schedule 12-7	Brantford-Kirkwall Pipeline Location Map
Schedule 12-8	Parkway D Compressor Location Map
Schedule 12-9	Brantford-Kirkwall Pipeline Line List
Schedule 12-10	Proposed Form of Easement
Schedule 12-11	Complaint Resolution System
Schedule 12-12	Correspondence with First Nations and Métis

**SECTION 1**

**APPLICATION SUMMARY**

In response to the request for additional transportation services on the Dawn-Parkway System as result of the changing North American gas supply dynamics, Union is proposing to build an additional section of NPS48 pipeline on the Dawn-Parkway System and a new compressor at the proposed Parkway West Compressor Station.

In 2011, Union became aware of interest in incremental demand for Dawn-Parkway transportation capacity and for transportation capacity downstream of Parkway for eastern markets to support:

- 1) increased access to the liquid market, diverse natural gas supplies and premium storage facilities at the Dawn Hub;
- 2) the continued shift from long haul transportation to short haul transportation; and
- 3) growing demand in central, eastern and northern Ontario as well as Québec and the U.S. Northeast.

Union held an open season and a reverse open season in 2012 which resulted in net incremental demands of 687,346 GJ/d.

To meet this demand Union is proposing to construct:

- 1) the Brantford-Kirkwall section of the Dawn-Parkway System; and

- 1           2)     the Parkway D Compressor at the proposed Parkway West Compressor Station  
2                     and associated facilities.

3     The Project is required for Union to deliver the new contracted volumes to Enbridge Gas  
4     Distribution (“Enbridge”), Gaz Métro Limited Partnership (“Gaz Métro”), Vermont Gas Systems  
5     Inc. (“Vermont”) and provide Dawn based natural gas supply to Union North customers, in a  
6     cost effective and reliable manner.

7     The Project is predicated on the completion of TCPL’s proposed expansion to relieve the current  
8     transportation capacity constraint on the TransCanada Pipelines Limited (“TCPL”) system  
9     between Parkway and Maple, and on the completion of Enbridge’s proposed GTA project.

10    In Union’s Parkway West Project application (EB-2012-0433), Union identified that there would  
11    be a connection to the Enbridge GTA project as part of this application. Since the time of the  
12    Parkway West Project filing, Enbridge has revised its evidence in its GTA application (EB-2012-  
13    0451) such that natural gas will flow on the TCPL system from Parkway to a new Brampton  
14    interconnect, which is the new western terminus for the GTA project. Accordingly, Union will  
15    flow natural gas supply for the GTA project to TCPL who will in turn deliver these volumes to  
16    Enbridge at the new interconnect.

17    Union is seeking an Order or Orders from the Board pursuant to:

- 18           1)     Section 90 (a) of the Ontario Energy Board Act (the “Act”), granting leave to  
19                     construct approximately 14 kilometres of NPS48 pipeline (“Proposed Pipeline”)  
20                     and associated valving facilities from the Brantford Valve Site (“Brantford”) to  
21                     the Kirkwall Custody Transfer Station (“Kirkwall”);

1           2)     Section 91 application of the Act for leave to construct a new compressor  
2                     ("Proposed Parkway D Compressor") including measurement; and associated  
3                     facilities necessary at the proposed Parkway West Compressor Station;  
4           together the "Project"

5           3)     Section 36 of the Act granting pre-approval of the recovery of cost consequences  
6                     associated with the Project;

7           4)     Section 36 of the Act granting an approval of an accounting order to establish the  
8                     Brantford to Kirkwall /Parkway D Deferral Account;

9           5)     Section 36 of the Act granting pre-approval of the cost consequences of two long  
10                    term short haul transportation contracts on the TCPL system.

11    Union is seeking an order from the Board, pursuant to Section 36 of the Act, for pre-approval of  
12    recovery of the costs consequences of all facilities associated with the development of the Project  
13    from ratepayers. Union is seeking pre-approval of the recovery of the cost consequences of the  
14    Project because:

15           1)     the Project is an important growth project requiring a significant capital outlay;

16           2)     it is more efficient for the Board to address all known impacts from the Project at  
17                    once, and provide a predictable rate impact to Union's customers and other  
18                    stakeholders;

19           3)     the ex-franchise customers who will pay for the majority of the Project are  
20                    supportive;

1           4)     a finding on the rate impacts from the Project will help inform the parameters of  
2                 Union's next regulatory framework; and

3           5)     Union's ability to re-contract Dawn-Kirkwall turn back transportation as Dawn-  
4                 Parkway capacity is contingent on the construction of the Proposed Parkway D  
5                 Compressor, as well as the new infrastructure proposed by Enbridge and TCPL.  
6                 Without timely approval and construction of the infrastructure, Union may require  
7                 a deferral account to capture any lost revenue as a result of turn back.

8     Union is seeking an Order from the Board, pursuant to Section 36 of the Act, for pre-approval of  
9     the cost consequences of two long term short haul transportation contracts on the TCPL system  
10    as:

11          1)     the significant construction planned by TCPL, Enbridge and Union, along with  
12                 the long term contracting for transportation capacity, supports a fundamental  
13                 change in how the Union North operating area will be served;

14          2)     the long term TCPL contracts are directly related to and support the construction  
15                 of new facilities planned by Enbridge and TCPL;

16          3)     there are significant economic benefits of \$18 million to \$28 million annually to  
17                 the ratepayers in Union North that would otherwise not occur;

18          4)     the contracts represent significant financial and term commitments by Union;



- 1           5)     there is no other forum for the Board to review the prudence of this fundamental  
2                   change to Union's gas supply portfolio prior to Union making the contractual  
3                   commitment to the change.

4     The total estimated costs for the Project are \$204 million, consisting of:

- 5           1)     Construction of the Proposed Pipeline at a cost of \$96 million;  
6           2)     Construction of the Proposed Parkway D Compressor and associated facilities at a  
7                   cost of \$108 million.

8     In accordance with the requirements of the OEB report on system expansion E.B.O. 134, Union  
9     has completed an economic analysis. This analysis shows a positive PI of 1.46.

10    The Project also delivers access to diverse and secure supply basins for Union North customers,  
11    as well as other energy consumers in Ontario and downstream of Ontario. For Union, this  
12    access results in savings of \$18 million to \$28 million per year; for Enbridge and Gaz Métro, this  
13    will save their customers as much as \$171 million per year.

14    By building the Project, Union is also positioning Ontario for future growth. By seeking  
15    opportunities to improve asset utilization over the long term, Union is proactively addressing  
16    possible turn back and rate risk on behalf of its customers. In addition, the Project supports  
17    continued growth of the Dawn Hub, which increases depth, liquidity, and price competitiveness  
18    of gas supply options for Ontario customers.

1 While in-franchise ratepayers will realize benefits as a result of the Project and the two long term  
2 short haul transportation contracts, Union is seeking advance approval of the delivery rate  
3 impacts in light of the magnitude of the Project.

4 Union completed environmental reviews for both the Proposed Pipeline and the Proposed  
5 Parkway D Compressor. The results of these reviews conclude that if the proposed mitigation  
6 measures are implemented there will be no long term significant environmental impacts as a  
7 result of the Project. Union intends to implement these measures.

8 Union has contacted all of the Landowners along the route of the Proposed Pipeline and provided  
9 them with information regarding the Project. Although, Union does not have any signed  
10 Landowner agreements in place, no Landowners have expressed any significant concerns with  
11 the Project. As described in Section 12, Union has options to purchase the land required for the  
12 Parkway West Compressor Station.

13 Discussions have been held with shippers and ratepayer representatives. These discussions  
14 provided a description of the proposed facilities and associated rate impacts.

15 The in-service date for the proposed facilities is fall of 2015.

16 The maps showing the location of the Proposed Pipeline and the Proposed Parkway D  
17 Compressor Station are at Schedule 1-1.

18 To ensure timely delivery of essential components of the Project, Union is required to order the  
19 long lead delivery items in early fall of 2013. Union respectfully requests the above Orders and  
20 approvals from the Board by September 15, 2013.

1 This application has 12 sections with information set out as follows:

1	Application Summary	Provides a summary of the applications
2	Role of Natural Gas in Ontario Economy	Provides information about the supply and growth of natural gas usage in Ontario.
3	Union Gas System Overview	Provides an overview of Union's transmission, storage and distribution systems
4	Changing North American Natural Gas Supply Dynamics	Explains how gas supply to Ontario has changed in the last few years and the need for new supply to Ontario
5	Changing Natural Gas Transportation Dynamics	Explains the trend from long haul contracts to short haul contracts and how it has impacted flow in North America
6	Changes to Union's Dawn-Parkway System	Describes changes that have occurred over the last decade on the Dawn-Parkway System
7	New Dawn-Parkway System Demands	Identifies the new contract demands on the Dawn-Parkway System
8	Proposed Facilities	Describes the facilities proposed to meet the new contract demands as well as the alternatives considered
9	Projects Costs, Economics and Benefits	Provides the cost estimates for the proposed facilities, the economic evaluation for these facilities and additional Project benefits
10	Pre-approval of Cost Consequences of the Proposed Brantford-Kirkwall Pipeline and Parkway D Compressor Facilities	Provides the revenue requirements, rate impacts and other specific details related to the Section 36 application.
11	Pre-approval of the Cost Consequences of Two Long Term Transportation Contracts	Provides the rationale for Union's request for pre-approval of two long term short haul transportation contracts with TCPL
12	Section 90 and Section 91 Applications	Provides the detailed Engineering, Environmental, Lands, First Nations and Métis information relating to the Section 90 and 91 facilities applications.

**SECTION 2**

**ROLE OF NATURAL GAS IN ONTARIO ECONOMY**

Natural gas in Ontario is a key energy source relied on for generating electricity, providing heat and hot water to homes and institutions, and fueling manufacturing plants. It is now being considered as a transportation fuel for long haul vehicles as well as fleet vehicles like refuse trucks and buses. In 2011 alone, almost 900 Bcf was consumed in residential, commercial, industrial and power generation markets in Ontario.

There are 28 natural gas-fired generation facilities in Ontario. Collectively these plants represent 27.9% of Ontario's natural gas supply mix, generating 15% of the electricity consumed in Ontario on an annual basis. With the closing of the coal fired plants, natural gas-fired generation facilities have become the source that enables the integration of renewable generation into the Ontario market. Their ability to ramp up and down enables these natural gas-fired generators to assist the Independent Electricity System Operator ("IESO") in managing the ongoing challenge of changing weather that quickly impacts Ontario's wind and solar production facilities.

Industrial manufacturing in Ontario consumes over 200 Bcf of natural gas annually, supporting the production of steel, petro-chemicals, automotive, and food and beverage operations. Natural gas not only provides a reliable and affordable source of heat for these processes, in some cases, natural gas is the feedstock to the process making the requirement for dependable supply especially critical to operations.

1 Approximately, 70% of homes in Ontario rely on natural gas to heat their homes and hot  
2 water heaters. Both of these applications operate on demand, meaning that consumers expect  
3 the energy to be readily available when needed.

4 Natural gas is required by Ontarians for their daily activities, by manufacturers for cost  
5 effective production, and by electric generators to keep the lights on. The infrastructure  
6 supporting it needs to be managed and maintained in a manner reflective of the critical role it  
7 plays in the province, and by proactively taking into account changes within the integrated  
8 North American natural gas market.

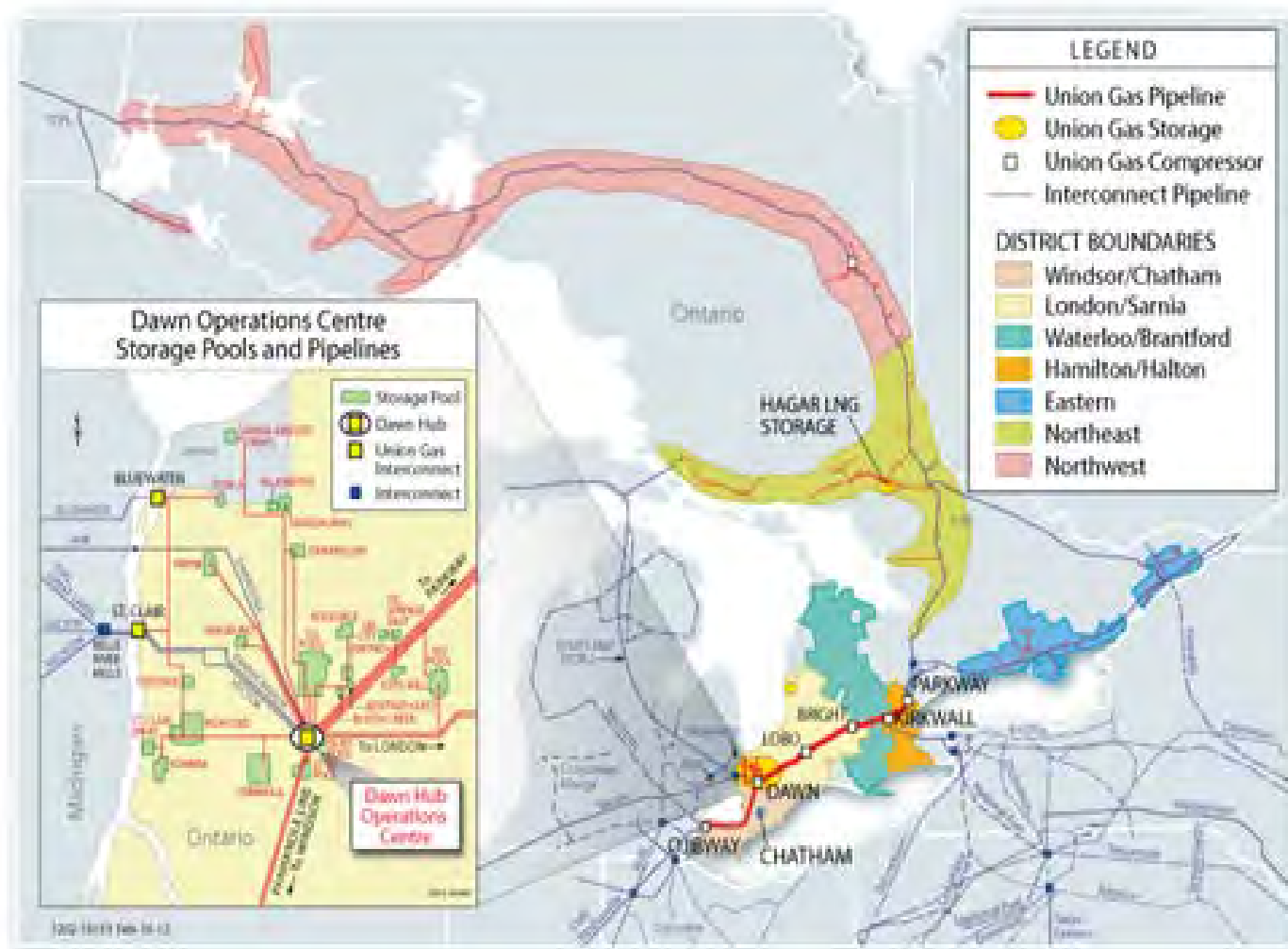
**SECTION 3**

**UNION GAS SYSTEM OVERVIEW**

Union serves approximately 1.4 million customers in northern, eastern and southern Ontario through an integrated network of over 67,000 kilometres of natural gas pipelines. Union operates storage and transmission assets that include 163 Bcf of underground natural gas storage at the Dawn Hub and the Dawn-Parkway System, which connects the Dawn Hub to consuming markets in Ontario, Québec and the U.S. Northeast. Throughput serving Union's in-franchise customers during 2011 was almost 500 Bcf. Throughput serving Union's ex-franchise storage and transmission customers during 2011 was over 830 Bcf. In total, Union transported in excess of 1.3 Tcf of natural gas in 2011, which is slightly greater than all of the natural gas consumed in Ontario and Québec or approximately 5% of North American demand.

Union divides its service territory areas into Union North and Union South. Union South includes customers located west of Mississauga and south of Georgian Bay (Windsor/Chatham, London/Sarnia, Waterloo/Brantford and Hamilton/Halton Districts). Union North includes customers located north of Barrie and north and west of North Bay (Northeast and Northwest Districts). Union North also includes customers located east of Bowmanville and west of the Québec border (Eastern District). A map of Union's service territory and districts as well as the Dawn-Parkway System is provided as Figure 3-1 below.

**Figure 3-1**



Union North is almost exclusively off of the TCPL Mainline system, with no other option for the transportation or physical delivery of natural gas. These customers are therefore reliant upon the TCPL pipeline system.

In Union South, Union operates the Dawn-Parkway System which includes an integrated network of natural gas transmission pipelines and compressors. The Dawn-Parkway System transports natural gas between the Dawn Compressor Station (“Dawn”), near Sarnia at the

1 west end of Union South and Parkway, located in Mississauga at the east end of Union  
2 South. Between the Dawn and Parkway Compressor Stations, Union operates two additional  
3 compressor stations on the Dawn-Parkway System: i) the Lobo Compressor Station (“Lobo”)  
4 located near London; and ii) the Bright Compressor Station (“Bright”) located between  
5 Woodstock and Kitchener.

6 The Dawn-Parkway System connects with other pipeline systems at three locations:

- 7 1) At Parkway, the Dawn-Parkway System connects to the TCPL Mainline and to  
8 the Enbridge system. Union connects to the TCPL Mainline within the existing  
9 Parkway site at a delivery point referred to as Parkway(TCPL). Union also  
10 connects to the Enbridge system within the existing Parkway site at a delivery  
11 point referred to as Parkway(Consumers), and at a second location two kilometres  
12 east at a delivery point referred to as the Lisgar Custody Transfer Station  
13 (“Lisgar”).
- 14 2) Near Hamilton, the Dawn-Parkway System connects to the TCPL Mainline at  
15 Kirkwall Custody Transfer Station. The TCPL Mainline then connects to the  
16 import/export points at Niagara and Chippawa at the Ontario/New York border  
17 (known as TCPL’s Niagara Line).
- 18 3) At Dawn, near Sarnia, the Dawn-Parkway System connects to a number of  
19 pipelines: Vector Pipeline, Panhandle Eastern Pipeline, Great Lakes Gas  
20 Transmission (“GLGT”) via TCPL, Michigan Consolidated, Bluewater Gas  
21 Storage and ANR via the NiagaraLink and the Enbridge (Tecumseh) system.



1 The majority of Union South customers are served via the Dawn-Parkway System. Some  
2 customers in the Hamilton/Oakville area are served off of a portion of the TCPL system  
3 known as the Domestic Line.

4 Union provides transportation services on the Dawn-Parkway System to ex-franchise  
5 customers, including Enbridge, TCPL, Gaz Métro and U.S. Northeast natural gas utilities.

6 Union also uses its Dawn-Parkway System (and also TCPL services from Parkway) to ship  
7 natural gas from Dawn storage to Union North. Union is accountable to its in-franchise  
8 customers and its ex-franchise firm transportation customers for the reliable delivery of  
9 natural gas under firm transportation contracts.

10 Union operates one of the largest and most important North American market hubs, the  
11 Dawn Hub. The Dawn Hub is the main source of supply for the Dawn-Parkway System.  
12 The Board recognized in its Natural Gas Electricity Interface Review (“NGEIR”) Decision  
13 (EB-2005-0551, November 7, 2006, page 44) that the development of the Dawn Hub has  
14 brought substantial benefits to consumers in Ontario and to other market participants. As  
15 noted above, Union receives natural gas at Dawn from a number of interconnecting pipelines  
16 which connect the Dawn Hub to most of North America’s major supply basins. In addition  
17 to the pipelines directly connected to Dawn, Dawn is connected via the TCPL Niagara Line  
18 (from Niagara to Kirkwall) and the Dawn-Parkway System interconnect at Kirkwall to  
19 Tennessee Gas Pipeline, Dominion Transmission, National Fuel Gas Supply Corporation  
20 (“National Fuel Gas”) and Empire State Pipeline at the Niagara and Chippawa import/export  
21 points.

1 The Dawn Hub is also connected to the most significant amount of underground natural gas  
2 storage within the Great Lakes region. In Ontario, Union operates 163 Bcf of natural gas  
3 storage in 24 pools that are all connected to the Dawn Hub. All of this storage is either  
4 owned by Union or contracted from other Ontario storage operators. In addition, Enbridge  
5 operates 103 Bcf of natural gas storage (Tecumseh facilities) that is connected to Dawn.  
6 Dawn is also connected through various upstream pipelines to approximately 675 Bcf of  
7 underground natural gas storage in Michigan. A map of the Dawn Hub storage is provided at  
8 Figure 3-1.

9 Dawn is one of the most physically traded, liquid hubs in North America. The liquidity of  
10 Dawn is the result of the combination of:

- 11 1) access to underground storage;
- 12 2) interconnections with upstream pipelines;
- 13 3) take away capacity to growth markets;
- 14 4) a large number of buyers and sellers of natural gas; and
- 15 5) price transparency.

16 In its NGEIR Decision, the Board concluded that: “it is in the public interest to maintain and  
17 enhance the depth and liquidity of the market at the Dawn Hub as a means of facilitating  
18 competition” (EB-2005-0551 Decision November 7, 2006, page 45). By providing depth and  
19 liquidity, the market at Dawn provides value to all Ontario customers by way of competitive  
20 natural gas commodity prices.

1 Ontario's natural gas-fired generation market relies on a healthy, liquid Dawn Hub. Power  
2 generation contracts are commercially structured based on the price of natural gas at Dawn  
3 for approximately 5,400 MW of Ontario's electricity production capacity. Natural gas-fired  
4 generators have access to unique services at the Dawn Hub that provide operational  
5 flexibility through firm all day storage and transportation services that allow natural gas-fired  
6 generators to match natural gas supply needs to the electricity market that is priced hourly  
7 and dispatched every five minutes. The price of natural gas at Dawn has a direct impact on  
8 the price of power generated from natural gas in Ontario.

9 The Board further identified the importance of the Dawn Hub in its NGEIR Decision (EB-  
10 2005-0551, November 7, 2006, page 7-8):

11 "The storage facilities are an integral part of what is commonly referred to as the Dawn  
12 Hub, which is widely recognized as one of the more important market centres in North  
13 America for the trading, transfer and storage of natural gas. In its Natural Gas Forum  
14 Report, the Board stated "The large amount of nearby storage, combined with the  
15 convergence of pipelines linking the U.S. and Ontario gas markets, have made Dawn the  
16 most liquid trading location in Ontario. The Federal Energy Regulatory Commission  
17 (FERC), in its assessment of energy markets in the United States in 2004, made similar  
18 comments about the significance of Dawn:

19 The Dawn Hub is an increasingly important link that integrates gas produced from  
20 multiple basins for delivery to customers in the Midwest and Northeast.

1 ...Dawn has many of the attributes that customers seek as they structure gas  
2 transactions at the Chicago Hub: access to diverse sources of gas production;  
3 interconnection to multiple pipelines; proximity to market area storage; choice of  
4 seasonal and daily peak and load services; liquid trade markets; and opportunities  
5 to reduce long haul pipeline capacity ownership by purchasing gas at downstream  
6 liquid hubs.”

7 Union’s Dawn-Parkway System is an integral part of the natural gas delivery system for  
8 Ontario, Québec and U.S. Northeast residents, businesses and industry. The Dawn-Parkway  
9 System connects these consuming markets to most of North America’s major supply basins,  
10 to the largest area of underground natural gas storage in North America and to the liquid  
11 Dawn Hub.

**SECTION 4**

**CHANGING NORTH AMERICAN NATURAL GAS SUPPLY DYNAMICS**

North American natural gas markets are experiencing dramatic change. Production from mature North American natural gas basins is in decline while new production basins have emerged. It is noted that while natural gas reserves still exist in mature natural gas basins, the economics of natural gas production favours new emerging production basins. This shift in terms of where natural gas is being produced is changing the way natural gas has been traditionally transported in North America, impacting the flow of natural gas on the pipeline grid.

Below is an overview of the key changes in North American natural gas supply. Impacts of these changes on natural gas transportation dynamics and the Dawn-Parkway System are discussed in Sections 5 and 6, respectively. More detail with respect to North American natural gas supply was filed in EB-2012-0433 (Parkway West Project, Section 4).

***Declining Western Canadian Sedimentary Basin Supply***

The majority of Ontario's natural gas supply needs for the past five decades were met through the large resources of the Western Canadian Sedimentary Basin ("WCSB"). Natural gas from Alberta was supplied to Ontario on the TCPL Mainline either across northern Ontario or through GLGT. Starting in the 1980s, other pipelines, such as the Northern Border Pipeline, the Foothills Pipeline, the Alliance Pipeline and the Vector Pipeline, were built to transport natural gas from the WCSB to markets east of Alberta, enhancing security

1 of supply and reliability and providing diversity in the delivery of natural gas from Alberta to  
2 Ontario.

3 Over the past ten years, two key trends have been occurring in Alberta: i) Alberta production  
4 has matured and is in decline; and ii) domestic use of natural gas in Alberta has increased.

5 An independent government review completed by Alberta's Energy Research and  
6 Conservation Board ("ERCB"), focusing on mature Alberta production, forecasts that as a  
7 result of these trends, Alberta currently has less than 5 Bcf/d available to sell outside of the  
8 province of Alberta to other markets. The ERCB forecasts that by 2021, Alberta will have  
9 less than 2 Bcf/d available to sell to markets outside of Alberta (EB-2012-0433, Section 4,  
10 Figure 4-4, page 20). The major pipelines that export natural gas to markets outside of  
11 Alberta, including the TCPL Mainline, the Alliance Pipeline and the Foothills Pipeline,  
12 compete to move Alberta supply to eastern, western and southern markets and have a  
13 combined capacity of approximately 13.4 Bcf/d.

14 With a number of markets inside and outside of Alberta competing for declining WCSB  
15 supply, less natural gas has become available to flow east from Alberta. As a result, eastern  
16 markets have responded by decreasing reliance on WCSB natural gas supply and the  
17 associated long haul transportation paths. Market participants have adjusted their portfolios  
18 to include more natural gas supply purchased closer to the market combined with short haul  
19 transportation paths. The result has been a significant decrease in natural gas delivered to  
20 Ontario through the TCPL Mainline and a significant increase in long haul transportation  
21 tolls. This is evident as:

- 1) Flow east on the TCPL Mainline has significantly declined since 2005 from an average daily send out at Empress of almost 5.5 Bcf/d to approximately 2.1 Bcf/d in 2012 (EB-2012-0433, Section 4, Figure 4-6, page 23);
- 2) The utilization rate of the Northern Ontario Line segment of the TCPL Mainline has decreased from 84% in 2001 to approximately 38% in 2012 (RH-003-2011: Exhibit C4-27-4, Additional Evidence of Mr. Bernard Otis, September 21, 2012).
- 3) Daily deliveries on the GLGT path to Dawn averaged 1.1 Bcf/d from November 1, 2003 to October 31, 2009 and in calendar year 2012 have dramatically decreased to less than 0.1 Bcf/d. In winter 2013 (from January 1, 2013 to February 28, 2013), Union has consistently delivered gas into GLGT (via TCPL at Dawn) averaging 0.2 Bcf/d and at a maximum was 0.39 Bcf/d, reversing flow of a pipeline that has been a fundamental supply source for Ontario since the late 1960s (EB-2012-0433, Section 4, Figure 4-7, page 25);
- 4) TCPL Mainline tolls from Alberta to eastern markets (Empress to TCPL's Eastern Zone) ranged from \$1.00 - \$1.20/GJ/d from 2003 to 2007 and have increased to \$1.64/GJ/d in 2010 and further to \$2.24/GJ/d in 2011.

The recent emergence of Horn River and Montney shale production in British Columbia and the development of shale gas resources in Alberta may help stabilize WCSB production levels. However many significant markets are competing for the new Western Canadian shale production, including domestic Western Canadian markets, traditional U.S. Pacific Northwest and U.S. Midwest markets, west coast liquefied natural gas ("LNG") export

1 terminals and eastern North American markets (EB-2012-0433, Section 4, Figure 4-5, page  
2 22). The pace of western shale gas production is predicted to be directly linked to the  
3 development and growth of LNG export markets in Western Canada. For eastern North  
4 American customers, this westward diversion of WCSB supply is predicted to have further  
5 impacts on the amount of natural gas available to flow to eastern markets.

6 Western Canadian natural gas has and continues to be an important source of supply for  
7 Ontario. With the declining amount of supply available to flow east to Ontario, the TCPL  
8 Mainline and other pipelines connected to the WCSB are increasingly challenged. The lower  
9 amount of WCSB supply available requires new supply sources to support Ontario's natural  
10 gas supply portfolio. To feed Ontario's energy-intensive industry, natural gas-fired  
11 generators, businesses and homes, new supply will be required. Union, like other eastern  
12 LDCs, is proactively looking to diversify its supply portfolio with natural gas sourced from  
13 other production basins, including emerging gas supply.

#### 14 ***Emerging Shale Gas Supply***

15 Recent advances in horizontal well drilling and hydraulic fracturing have facilitated the  
16 development of significant amounts of natural gas from shale formations, coal bed methane  
17 and tight gas formations in many regions of North America, including Appalachia, the U.S.  
18 Rockies, the Gulf Coast, the mid-continent and Western Canada. Combined with declining  
19 mature (conventional) production, this has resulted in a fundamental change in North  
20 American natural gas supply dynamics and a shift in market behavior. These natural gas  
21 supply changes will continue to fundamentally change how natural gas flows in North  
22 America.



1 Shale gas has increased from 10% of U.S. natural gas reserves in 2007 to about 32% in 2010.  
2 Today shale gas comprises almost one-third of all natural gas production in the U.S. In 2012,  
3 shale gas production in the U.S. was approximately 10 Bcf/d and is forecast to increase to  
4 more than 27 Bcf/d by 2035. In its “2012 Annual Energy Outlook” the U.S. Energy  
5 Information Administration forecasts shale gas to constitute 49% of U.S. domestic  
6 production in 2035 with the U.S. Northeast (Marcellus/Utica) providing almost 15 Bcf/d of  
7 production (EB-2012-0433, Section 4, Figure 4-8, page 27).

8 The Appalachian basin has been one of the most prolific natural gas supply growth areas in  
9 North America. This emerging and abundant supply is located within the Great Lakes region  
10 in close proximity to Ontario and other eastern North American consuming markets.

11 Appalachian shale gas is produced mainly from the Marcellus formation in Pennsylvania,  
12 Ohio and West Virginia and more recently from the Utica formation in eastern Ohio and  
13 Western Pennsylvania (EB-2012-0433, Section 4, Figures 4-9 and 4-10, page 28). Marcellus  
14 shale gas is widely described as “the game changer” and includes both dry gas and wet gas  
15 production areas. The dry gas areas in north-central Pennsylvania were brought to market  
16 quickly due to the quality of gas produced (no significant processing facilities required) and  
17 proximity to existing pipeline systems. The liquids-rich regions in southwest Pennsylvania  
18 and West Virginia, along with the liquids-rich Utica in southeastern Ohio, have taken longer  
19 to develop given the requirement to separate and process the natural gas and natural gas  
20 liquids. The liquids-rich regions have the economic benefit of producing both natural gas  
21 (methane) and high value natural gas liquids, such as condensates, ethane, butane and  
22 propane, from the same well. Supply from the Marcellus and Utica is expected to continue to  
23 increase as midstream infrastructure continues to be built to gather, separate and process the

1 liquids-rich gas and as additional infrastructure is built to move natural gas and natural gas  
2 liquids to markets.

3 North American shale gas production is expected to continue to grow in a low-price  
4 commodity environment as: i) technology improvements continue to decrease production  
5 costs and increase well performance; and ii) some of the most prolific shale basins have the  
6 economic advantage of producing natural gas liquids and/or oil. The economics to drill wells  
7 that can produce both natural gas as well as natural gas liquids and/or oil is enhanced by the  
8 ability to sell multiple commodities.

9 The rapid increase in natural gas supply has put downward pressure on North American  
10 natural gas prices and volatility.

11 Natural gas basis (the difference in price between two supply points) in North America has  
12 been transformed. Prior to shale gas development in the U.S. Northeast, Appalachian trading  
13 points historically traded above the Henry Hub reflecting the cost to move natural gas from  
14 Henry Hub<sup>1</sup> to Appalachia. Today, natural gas at Appalachian trading points trades at a  
15 discount relative to the Henry Hub (EB-2012-0433, Section 4, Figure 4-11, page 29). The  
16 growing production in Appalachia provides economic natural gas supply in close proximity  
17 to eastern markets. For the mature production of the WCSB, the basis between Western  
18 Canada and eastern markets has decreased well below tolls on pipeline systems transporting  
19 supply to eastern markets, further challenging production economics.

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<sup>1</sup> NYMEX is priced at Henry Hub, making Henry Hub the primary natural gas pricing reference point in North America.

1 With abundant natural gas supply, prices are currently in the \$3-\$4/GJ range compared to  
2 prices only four to five years ago in the \$7-\$8/GJ range. Residents, industry and businesses  
3 are paying some of the lowest prices for natural gas in the last decade. In an Ontario market  
4 that consumes nearly 1 Tcf of natural gas annually, this decrease in commodity cost results in  
5 reduced energy costs in Ontario of up to \$3 to \$4 billion annually. These energy savings can  
6 be invested back into the Ontario economy.

7 The change in the regional pricing of natural gas has impacted market behavior and has  
8 driven eastern North American customers to increase the amount of shale gas supply and  
9 decrease the amount of supply from traditional supply basins requiring long haul  
10 transportation in their portfolios (i.e. shale gas purchased and transported to eastern markets  
11 is now much less expensive than purchasing WCSB natural gas and shipping on long haul  
12 transportation paths to eastern markets). For eastern customers that have a choice, these  
13 fundamental changes in supply economics will mean that natural gas supply will increasingly  
14 be sourced from cost competitive shale gas in closer proximity to the market and less from  
15 traditional sources.

16 Marcellus and Utica shale gas present Ontario consumers, including power, industrial,  
17 commercial and residential, with an opportunity to diversify their natural gas supply portfolio  
18 and replace declining WCSB supply. Accessing this new supply will be essential to  
19 providing diversity of supply and affordable energy prices to fuel Ontario's economic  
20 competitiveness. With new infrastructure, access to these new, proximate and abundant  
21 sources of supply can increase reliability and security for the Ontario natural gas supply  
22 portfolio.

1 ***ICF International Report on Changing Gas Supply Dynamics***

2 ICF International completed a report that was submitted to the Board in EB-2012-0433  
3 (Parkway West Project) entitled “Impact of Changing Supply Dynamics on the Ontario  
4 Natural Gas Market”. In its report, ICF International provides an analysis of the gas supply  
5 dynamics across North America and the impact that these changing gas supply dynamics  
6 have on the delivery of natural gas to Ontario customers including landed cost of gas from  
7 various supply points. A copy of the ICF International report is included as Schedule 4-1.

8 The main conclusions of the ICF International report are:

- 9 1) Natural gas consumption in Ontario is expected to grow, led by expanding use in  
10 the power sector;
- 11 2) The decline in Ontario’s natural gas availability from Western Canada is expected  
12 to continue in the future due to a combination of declines in conventional WCSB  
13 natural gas production and growth in Western Canadian demand (led by LNG  
14 exports and Alberta oil sands development);
- 15 3) Growth in LNG exports and natural gas consumption from oil sands production,  
16 which use natural gas in the production process, will create significant  
17 requirements for natural gas produced in Western Canada. This growth creates  
18 new consumption options closer to production for natural gas use, which lessens  
19 the amount of natural gas available to move to markets in the east;

- 1           4)     ICF International is projecting continued growth in U.S. supplies of natural gas  
2                   into Ontario to meet growth in Ontario and Québec demand, as well as to replace  
3                   declines in natural gas supply from the WCSB;
- 4           5)     Policies and regulatory approval for the development of infrastructure to access  
5                   unconventional natural gas supplies from the Marcellus and Utica formations  
6                   offer the potential to lower delivered natural gas costs for households and  
7                   businesses in Ontario; and,
- 8           6)     Ontario's ability to expand its access to U.S. shale supplies remains a serious  
9                   concern.

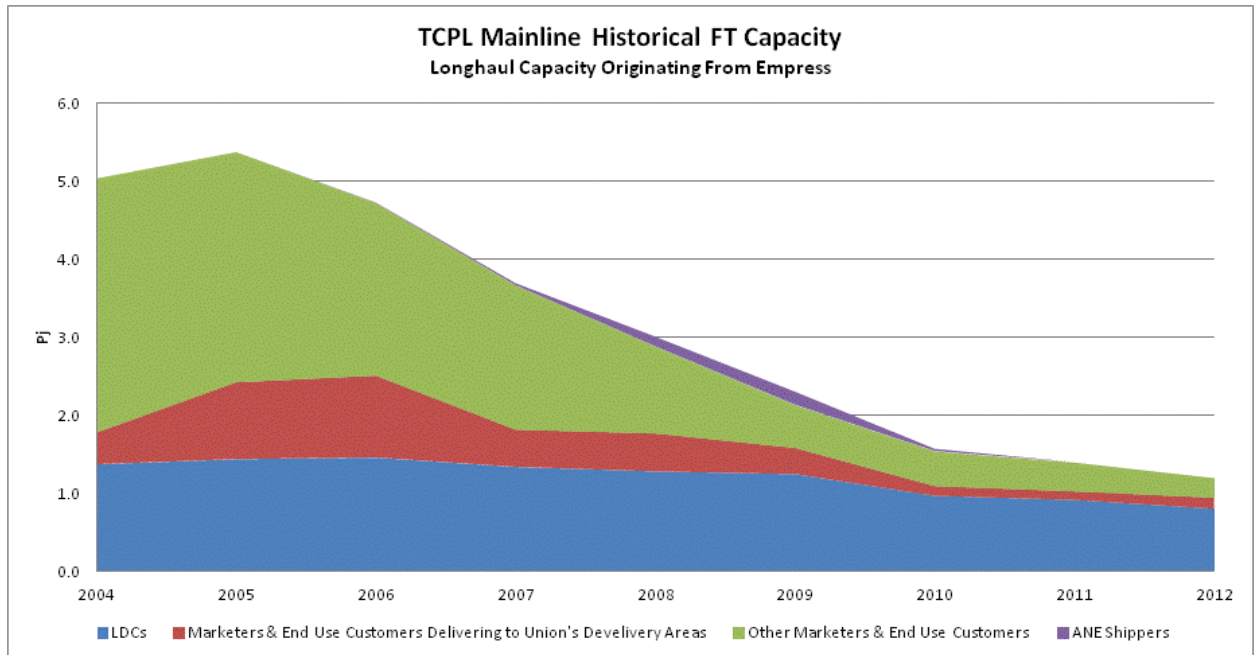
**SECTION 5**

**CHANGING NATURAL GAS TRANSPORTATION DYNAMICS**

With the dramatic changes in North American natural gas supply, market participants in Ontario, Québec, Manitoba and the U.S. Northeast have restructured their natural gas supply portfolios, purchasing less WCSB natural gas supply and more supply from production basins and liquid market centres located closer to their end-use markets. Consequently, less long haul transportation from the WCSB is being held and more short haul transportation to the markets has been contracted. This trend has been occurring in the natural gas markets since the mid 2000's.

The graph in Figure 5-1 below shows the long haul firm transportation (FT capacity) contracts held on TCPL by customer category starting in 2004. Since 2005, there has been a continuous decline in the amount of long haul firm transportation contracts on TCPL. Marketers and end use customers have de-contracted the greatest amount of long haul capacity. The amount of capacity de-contracted by marketers and end use customers is almost 4 PJ/d over the last eight years.

**Figure 5-1**



Marketers held a significant portion of the TCPL Mainline firm transportation capacity in 2005. Marketers will only hold pipeline capacity if it is profitable. As tolls from Empress to eastern markets increase above the difference in commodity price between Empress and the trading points in eastern markets, the consequence is that marketers de-contract as they seek more economic alternatives.

In addition to the marketers and end use customers, natural gas utilities have also been adjusting their natural gas supply portfolios and de-contracting long haul transportation services.

1    ***Gaz Métro***

2       Since 2003, Gaz Métro has been actively shifting its base load system supply purchases from  
3       Empress to the Dawn Hub, decreasing long haul TCPL Mainline transportation in favour of  
4       Dawn to Parkway and TCPL short haul transportation. Today, Gaz Métro holds 285,000  
5       GJ/d of Dawn to Parkway transportation capacity with Union. Since October 1, 2011,  
6       approximately 85% of the Gaz Métro system supply has been sourced from the Dawn Hub.

7       In May 2012, Gaz Métro participated in open seasons held by Union and TCPL. Gaz Métro  
8       contracted a further 257,784 GJ/d of Dawn to Parkway transportation capacity with Union to  
9       support direct purchase customers shifting their supply source from Empress to the Dawn  
10      Hub.

11      In 2012, Gaz Métro applied to the Régie de l'énergie (the "Régie") for approval to shift its  
12      supply source for direct purchase customers from Empress to the Dawn Hub (R-3809-2012;  
13      D-2012-175). On December 18, 2012, the Régie approved Gaz Métro's request. In its  
14      decision, the Régie noted a number of reasons to support the shift of natural gas supply from  
15      Empress to the Dawn Hub. The reasons were:

- 16           1)     Continuing to purchase natural gas supply at Empress would leave Gaz Métro's  
17                   customers captive to TCPL's long haul firm transportation tolls whereas supply  
18                   purchased at the Dawn Hub would require Gaz Métro's customers to hold less  
19                   expensive firm Dawn to the GMi EDA short haul transportation capacity;



- 1           2)     The Dawn Hub provides Gaz Métro customers with more choice and flexibility to  
2                 adjust to their needs, including access to new sources of U.S. Northeast  
3                 production;
- 4           3)     Significant savings would be achieved by purchasing natural gas supply at the  
5                 Dawn Hub, the annual value of which would vary between \$88 million and \$120  
6                 million depending upon future TCPL Mainline tolls;
- 7           4)     Should the economics of WCSB supply improve, Gaz Métro customers can  
8                 access natural gas supply from Empress delivered at the Dawn Hub; and
- 9           5)     It is logical to prefer sourcing natural gas from a location that is close to Gaz  
10                Métro's territory versus a supply location located over 3,000 kilometres away.

11   A copy of the translated Régie's decision is included as Schedule 5-1.

12   ***Alberta North East Group***

13   Alberta Northeast Gas Limited ("ANE") represents a consortium of sixteen natural gas  
14   utilities located in six states in the northeast region of the United States, including New York,  
15   Massachusetts and Connecticut. These natural gas utilities serve approximately seven  
16   million customers. ANE was formed in 1986 and began purchasing natural gas directly from  
17   Canadian suppliers in 1992. In 2006, ANE started to shift supply away from the WCSB and  
18   long haul transportation on the TCPL Mainline to supply purchased at the Dawn Hub which  
19   is located closer to ANE markets. ANE de-contracted long haul TCPL Mainline  
20   transportation, which was contracted by marketers on their behalf (Empress to Waddington),

1 and contracted for over 685,000 GJ/d of Dawn to Parkway and Dawn to Kirkwall  
2 transportation to in the 2006 to 2008 timeframe and in 2011. ANE also contracted short haul  
3 transportation on the TCPL Mainline from Parkway to Waddington to complement the Dawn  
4 to Parkway transportation capacity. The ANE incremental Dawn to Parkway capacity was a  
5 significant part of the support for Union's Dawn-Parkway System expansions in 2006  
6 through 2008.

7 ***Enbridge***

8 In 2012, Enbridge proposed its GTA Project (EB-2012-0451). In its application, Enbridge  
9 indicated that the proposed GTA Project would allow Enbridge to:

- 10 1) alter its natural gas supply portfolio to access new supplies from Dawn and Niagara,  
11 reducing reliance on less secure peaking supplies that currently utilize short-term firm  
12 (STFT) and interruptible (IT) long haul transportation contracts on the TCPL  
13 Mainline;
- 14 2) potentially provide Enbridge direct purchase customers with the option to deliver gas  
15 at Dawn for transportation to Parkway; and
- 16 3) access new supplies at Dawn and Niagara to reduce distance of haul from purchase  
17 point to serve the peak demands of its heat sensitive customers (EB-2012-0451,  
18 Exhibit A, Tab 3, Schedule 5, pages 17 and 18).

19 In May 2012, Enbridge participated in an open season held by Union and contracted a further  
20 400,000 GJ/d of Dawn to Parkway transportation capacity with Union to supply the proposed

1       GTA Project. Overall, the economics of sourcing supply from Dawn and Niagara compared  
2       to Empress and third party purchases results in savings of approximately \$511 million over  
3       the 2015 to 2025 timeframe (EB-2012-0451, Exhibit A, Tab 3, Schedule 5, page 19).

4       ***Centra Manitoba***

5       Centra Gas Manitoba Inc. (“Centra Manitoba”) has reduced its firm long haul transportation  
6       capacity on the TCPL Mainline by 20,000 GJ/d effective November 1, 2012. In 2012, the  
7       Manitoba Public Utilities Board (“PUB”) approved Centra Manitoba’s request to reduce the  
8       amount of firm long haul transportation capacity Centra Manitoba holds on the TCPL  
9       Mainline providing substantial cost savings to Centra Manitoba’s customers (Order No.  
10      112/12). The PUB recognized that while Centra Manitoba could rely solely on WCSB  
11      supply and TCPL firm long haul transportation capacity to meet its requirements, that would  
12      not be the most economic option. Significant cost savings would be achieved by combining  
13      short haul transportation with supply and balancing services purchased in Michigan and the  
14      U.S Midwest. Centra Manitoba estimated that this portfolio adjustment would reduce  
15      transportation costs by \$3 million per year. The PUB noted that Manitoba is currently  
16      captive to the TCPL Mainline and was supportive of other options for the supply of natural  
17      gas to Manitoba that would provide diversity and economic alternatives to WCSB-sourced  
18      gas transported on the TCPL Mainline.

19      ***Union Gas***

20      Like most eastern natural gas utilities, Union has diversified its natural gas supply portfolio  
21      as new supply options have developed and continually seeks a natural gas supply portfolio

1 that is secure, reliable and reasonably priced. From 1988 to 1999, Western Canadian natural  
2 gas made up between 84% and 90% of Union's system supply portfolio. This is significantly  
3 higher than Union's forecast for system supply in 2013 which will on average consist of  
4 approximately 55% Western Canadian natural gas (combined Union North and Union  
5 South).

6 While diversification of the natural gas supply portfolio has been more readily achievable in  
7 Union South, diversification of supply has been more difficult for Union North where  
8 Western Canadian natural gas historically made up 100% of the supply portfolio. In 2013,  
9 Union's forecast WSCB supply for TCPL Northern delivery and Eastern delivery area for  
10 Union North supply is 95% and 100%. respectively. Through new Union and TCPL  
11 transportation capacity and access to supply at the Dawn Hub, Union is expanding the level  
12 of diversity in Union North supply portfolios by reducing reliance on declining WCSB  
13 supply. The overall net cost reduction to Union North, including Northern direct purchase  
14 customers, is estimated to be \$18 million to \$28 million per year. This shift in portfolio  
15 reflects the changes in the North American natural gas markets and, like Enbridge, Gaz  
16 Métro, ANE, marketers and other industry participants, is in response to the decline in supply  
17 in Western Canada. Market participants are re-balancing with new supply sources and  
18 replacing long haul transportation contracts with shorter haul transportation contracts. In  
19 Section 11, Union details these changes and the request for pre-approval of the costs  
20 associated with two new long-term short haul transportation contracts on the TCPL Mainline.

**SECTION 6**

**CHANGES TO UNION'S DAWN-PARKWAY SYSTEM**

Like other natural gas pipeline systems in North America, Union's Dawn-Parkway System has seen a number of significant changes since 2006 due to changing natural gas supply and transportation dynamics. Specifically, over the 2006 to 2013 period, Kirkwall throughput has declined while Parkway throughput has increased.

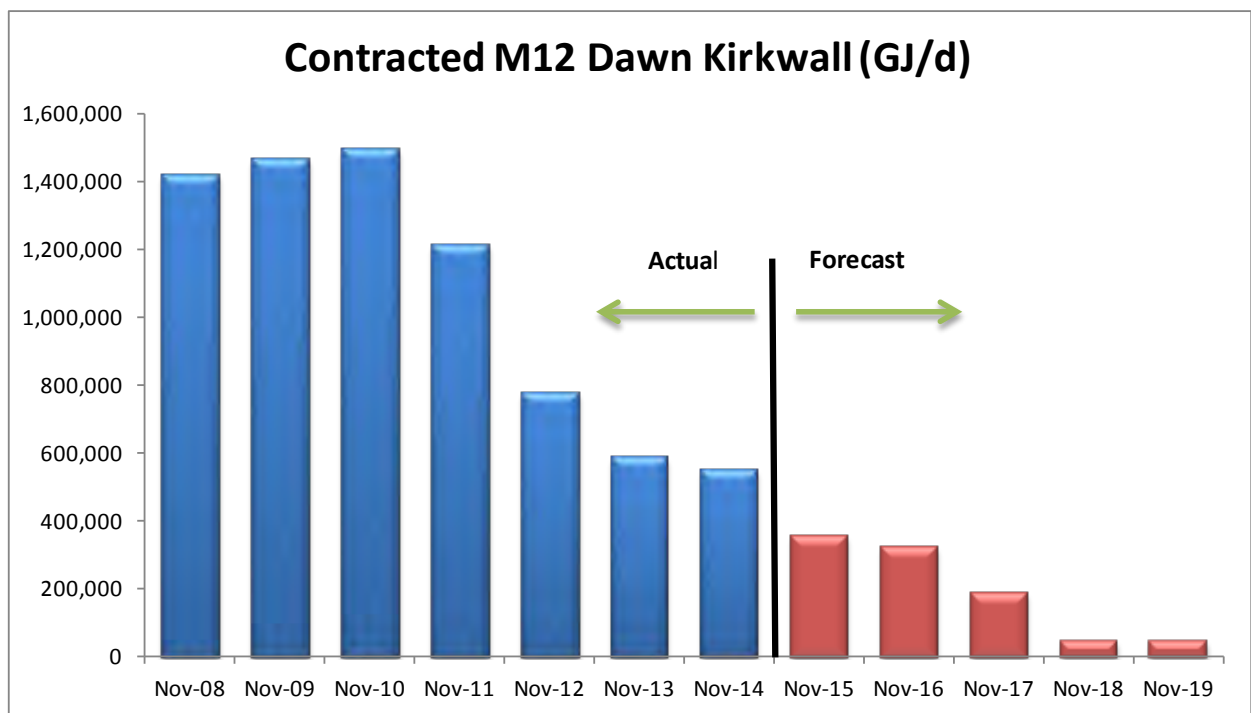
***Declining Deliveries at Kirkwall***

The Dawn to Kirkwall path connects supply at Dawn, and supply upstream of Dawn, to pipeline systems in New York State via the portion of the TCPL Mainline (the Niagara Line) that connects the Niagara and Chippawa export points at the New York/Ontario border to Kirkwall. Historically, TCPL held large amounts of Dawn to Kirkwall transportation capacity (in excess of 1,175,000 GJ/d) to provide an Empress to Niagara or Empress to Chippawa transportation service exporting WCSB natural gas to U.S. Northeast customers.

Since 2008, Union has received notice of termination for 978,809 GJ/d of Dawn to Kirkwall transportation capacity at contract term expiry, including notice received as recently as October 2012 to terminate approximately 37,000 GJ/d of Dawn to Kirkwall capacity starting November 1, 2014. A summary of the firm Dawn to Kirkwall transportation contracts terminated since 2008 is provided as Schedule 6-1. TCPL has noted that similar decontracting has occurred on its system (EB-2011-0210, Exhibit K9.3, page 9, line 14 to 15). Further notices of contract termination for Dawn to Kirkwall capacity are expected in the future. A summary of the remaining firm Dawn to Kirkwall transportation contracts is

also provided in Schedule 6-1. A graph showing the firm Dawn to Kirkwall transportation contracts held since 2008, including actual and forecast turn back, is provided in Figure 6-1 below.

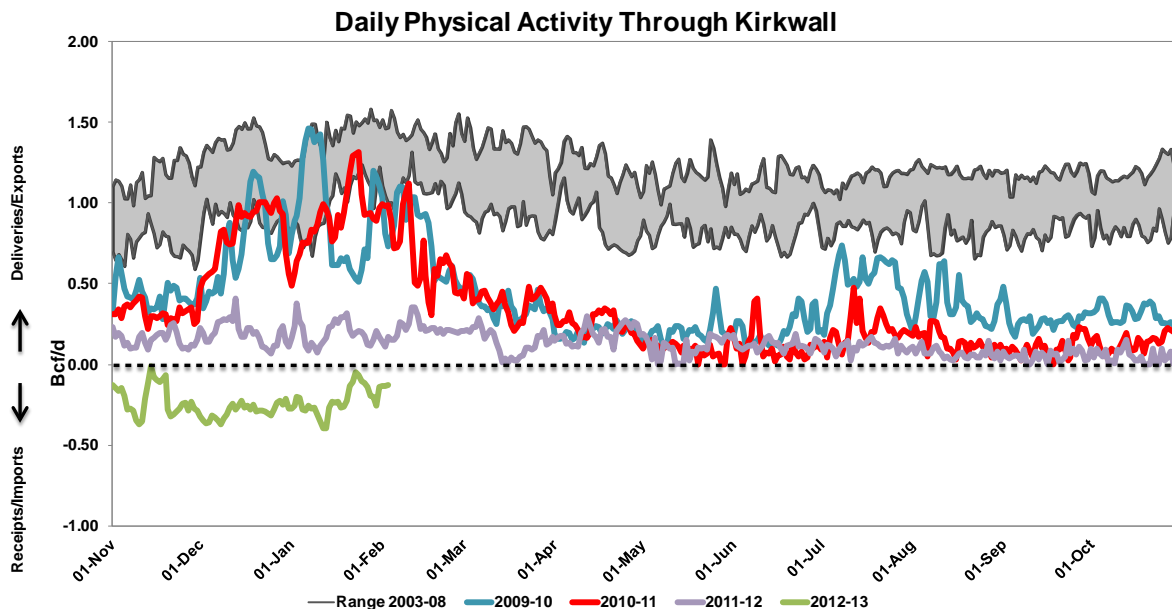
**Figure 6-1**



Today, given the decline in WCSB supply and increase in TCPL tolls, the Empress to Niagara and Empress to Chippawa paths, have become uneconomic for U.S. Northeast customers. U.S. Northeast customers can purchase natural gas in more proximate supply basins, such as the Marcellus, and transport this gas to market more economically. The Empress to Niagara and Empress to Chippawa paths to the U.S. Northeast require access to U.S. pipeline systems passing directly through the Marcellus shale gas production zone. As a result, Union has experienced a corresponding decrease in the utilization of Dawn to Kirkwall transportation.

From 2003 to 2009, Union's deliveries to TCPL at Kirkwall peaked at 1.7 PJ/d (1.6 Bcf/d) with an average annual flow of approximately 1.1 PJ/d (1.0 Bcf/d). From 2009 to 2012, the average annual flow at Kirkwall decreased to 132,000 GJ/d (0.12 Bcf/d). A graph showing the decline in Kirkwall deliveries from Union to TCPL is provided in Figure 6-2 below. As a result, the export of Canadian natural gas to the U.S Northeast through Kirkwall has diminished to the point where Union now receives natural gas at Kirkwall from TCPL that is imported at Niagara.

**Figure 6-2**



To mitigate the lost revenue associated with the turn back of the Dawn to Kirkwall transportation contracts, Union has resold capacity with Parkway deliveries. Driven by increased demands at Parkway, from 2011 to 2013, Union sold approximately 313,000 GJ/d of Dawn to Parkway transportation capacity and approximately 300,000 GJ/d of Kirkwall to Parkway capacity. These demands were accommodated in part by capacity created by Dawn

1 to Kirkwall turn back. The increased demand for deliveries at Parkway is currently limited  
2 by the amount of take away capacity available downstream of Parkway on the TCPL  
3 Mainline.

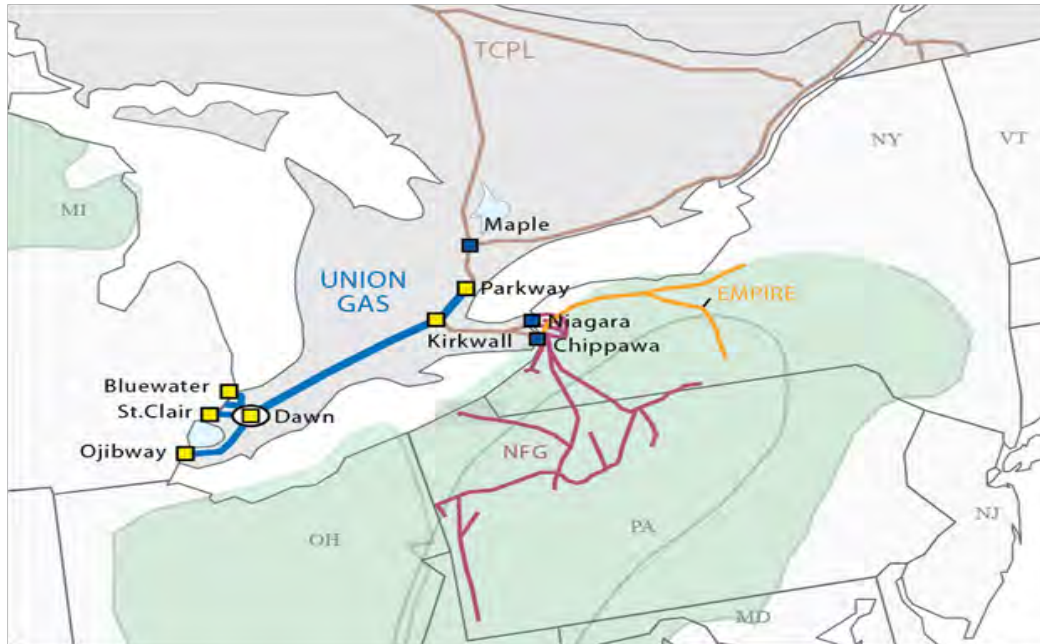
4 In 2010 and 2011, Union, TCPL, National Fuel Gas and Empire State Pipeline explored  
5 opportunities to introduce emerging Appalachian natural gas supply to Ontario markets by  
6 jointly marketing a path from the Marcellus shale gas producing regions to Ontario. This path  
7 to Ontario markets required:

- 8 1) transportation on the TCPL Mainline from Niagara or Chippawa to Kirkwall;
- 9 2) transportation on Union's Dawn-Parkway System from Kirkwall to either Dawn  
10 or Parkway; and
- 11 3) to reach markets in Eastern and Northern Ontario, transportation on the TCPL  
12 Mainline downstream of Parkway.

13 As a result of these joint efforts, long term transportation contracts to support the movement  
14 of natural gas from the Marcellus to Niagara/Chippawa total approximately 0.9 PJ/d (0.8  
15 Bcf/d) on National Fuel Gas, Tennessee Gas Pipeline and Empire State Pipeline. Empire  
16 State Pipeline has proposed further system expansion to Chippawa for up to 0.3 PJ/d (0.25  
17 Bcf/d). A map showing these pipeline systems is included as Figure 6-3 below.



**Figure 6-3**



To date, TCPL has executed long-term contracts starting November 1, 2012 for transportation from Niagara to the Enbridge CDA (GTA area) for approximately 211,000 GJ/d and from Niagara to Kirkwall for approximately 200,000 GJ/d (TCPL Contract Energy Demand – Mainline Report as of February 1, 2013). Starting November 1, 2013, 126,607 GJ/d of Niagara to Kirkwall transportation will be converted to Niagara to Enbridge CDA transportation.

For system supply, Union has contracted with TCPL, starting November 1, 2012, for 21,101 GJ/d of Niagara to Kirkwall transportation to move system supply purchased at Niagara to Union's Dawn-Parkway System.

1 To facilitate the reversal of the Niagara to Kirkwall portion of the TCPL Mainline, TCPL  
2 made modifications in 2012 to its facilities at Niagara and between Niagara and Kirkwall,  
3 providing approximately 439,000 GJ/d of capacity (XG-T211-008-2012: 2012 Eastern  
4 Canadian Mainline Expansion, Section 58 Application, Appendix 3-4, page 7 of 7). Union  
5 also made modifications to the facilities at Kirkwall to accommodate for this new flow to  
6 occur.

7 To meet TCPL's incremental market demand between Kirkwall and the Enbridge CDA,  
8 effective November 1, 2012, TCPL placed its 2012 Eastern Canadian Mainline Expansion  
9 (XG-T211-008-2012) into commercial service to serve the new contracts. This expansion  
10 consisted of approximately 13 kilometres of NPS42 pipeline looping spread out over two  
11 locations in the Parkway to Maple corridor as well as modifications to various compressors  
12 to make the Maple to North Bay path bi-directional.

13 TCPL is proposing a 2013 Eastern Canadian Mainline Expansion (XG-T211-015-2012)  
14 which consists of the relocation of compressors to Maple from elsewhere within the TCPL  
15 system. Together these Eastern Canadian Mainline Expansions will increase transportation  
16 capacity between Parkway and Maple by approximately 400,000 GJ/d to achieve a design  
17 day capacity of 2.4 PJ/d immediately downstream of Parkway (T211-2012-02 01, IR NEB  
18 1.2, October 15, 2012, August 2012 Application, Appendix E1 – Engineering and Technical  
19 Description).

20 On the Dawn-Parkway System, Union completed modifications at Kirkwall to enable natural  
21 gas from Niagara and, eventually, Chippawa to access Dawn and Parkway. Union's facility  
22 modifications were complemented by the introduction of new services to transport natural

1 gas from Kirkwall to Dawn and/or Parkway using the bi-directional M12-X service as well as  
2 point-to-point Kirkwall to Dawn and Kirkwall to Parkway services. Union was able to  
3 contract approximately 300,000 GJ/d of Kirkwall to Parkway capacity and converted existing  
4 M12 transportation contracts (including Dawn to Parkway, Parkway to Dawn, Parkway to  
5 Kirkwall and Dawn to Kirkwall capacity) of approximately 391,000 GJ/d to M12-X  
6 transportation service. A summary of Union's M12-X and Kirkwall to Parkway contracts is  
7 included in Schedule 6-1.

8 Since the completion of the facility modifications and commercial in-service of contracts  
9 necessary to move Appalachian natural gas into Ontario on November 1, 2012, flow at  
10 Kirkwall has seen a dramatic change. Union has consistently received demand for receipts at  
11 Kirkwall (i.e. imports from Niagara) with average daily nominations from November 1, 2012  
12 to February 28, 2013 of approximately 328,000 GJ/d (see Figure 6-2). In winter 2012/2013,  
13 Union physically received natural gas at Kirkwall from TCPL for a total of 120 days (up to  
14 February 28, 2013). Niagara, which had been an export point for natural gas leaving Ontario  
15 for previous decades, is now importing natural gas to supply Ontario customers. This is a  
16 significant change that has occurred over a very short period of time.

### 17 ***Increasing Deliveries at Parkway***

18 Continued expansion of the pipeline capacity at and downstream of Parkway is critical:

- 19 1) to allow markets in Ontario, Québec and the U.S. Northeast to diversify gas
- 20 supply portfolios and access natural gas from the Dawn Hub, Niagara, Chippawa
- 21 and the growing production of the Appalachian basin; and,

1           2)     for Union to have the ability to resell Dawn to Kirkwall turn back capacity as  
2                 Dawn to Parkway capacity.

3           Due to increasing Marcellus and Utica supply, Union sees no future market opportunity to  
4           sell or resell Dawn to Kirkwall capacity for natural gas exports to the United States.

5           While flow from Dawn through Kirkwall has been in decline, there has been a dramatic  
6           increase in flow through Parkway into the TCPL Mainline. This has occurred mainly due to  
7           the changing North American supply dynamics and the resulting market shift from long haul  
8           transportation to short haul transportation. Historically the connection between Union's  
9           Dawn-Parkway System and the TCPL Mainline at Parkway operated bi-directionally.

10          During the winter period, natural gas flowed east from Dawn into the TCPL Mainline at  
11          Parkway. Conversely, in the summer period gas flowed west from the TCPL Mainline into  
12          the Dawn-Parkway System for customers filling storage at Dawn or requiring deliveries at  
13          Kirkwall. For winter 2005/2006, flow through the Parkway interconnection with TCPL was  
14          less than 0.54 PJ/d on a design day.

15          As more natural gas for eastern markets was sourced at or transported through Dawn, flow  
16          east through the Parkway interconnection with the TCPL Mainline increased significantly.  
17          From 2006 to 2008, the capacity of the Dawn-Parkway System expanded by over 1 Bcf/d,  
18          including 53 kilometres of NPS48 pipeline looping and an additional 89,500 HP of  
19          compression. The expansion of the Dawn-Parkway System during that period was largely  
20          supported by:

- 1           1)     U.S. Northeast utilities (ANE) and Gaz Métro adjusting natural gas supply
- 2                 portfolios, increasing Dawn-Parkway transportation capacity; and
- 3           2)     incremental Dawn-Parkway transportation capacity contracted by Ontario gas-
- 4                 fired power generators and interconnecting pipelines.

5     As a result, flow east through the Parkway interconnection with the TCPL Mainline has  
6     significantly increased since 2005. For winter 2014/2015, Union forecasts flow east through  
7     the Parkway interconnection with the TCPL Mainline to be 2.3 PJ/d on a design day,  
8     growing to 3.3 PJ/d for winter 2015/2016, representing more than a six fold increase since  
9     2005.

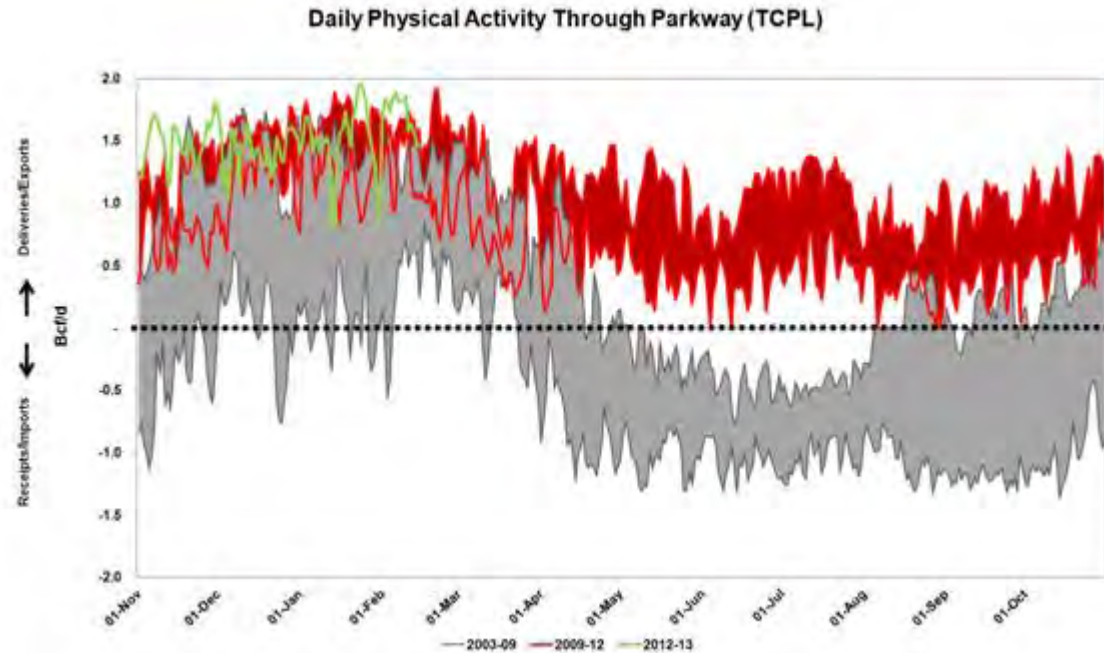
10    To put into perspective the importance of this change, on an hourly basis, flow through the  
11    Parkway interconnection with the TCPL Mainline on a design day in winter 2015/2016 will  
12    be the energy equivalent of nearly 40,000 MW of electrical generation.<sup>2</sup> This is  
13    approximately 50% greater than the highest historical peak electricity demand in Ontario  
14    (27,005 MW in August 2006) and is greater than the installed power generation in the  
15    Province of approximately 35,000 MW.

16    In addition to the significant increases in flow at Parkway, another fundamental change has  
17    been that deliveries into the TCPL Mainline are now made on a year-round basis to serve  
18    downstream markets. Union has not physically flowed westerly from Parkway on the Dawn-  
19    Parkway System since November 2009. Daily flows at the connection between Parkway and  
20    the TCPL Mainline are shown in Figure 6-4 below.

---

<sup>2</sup> When combined with deliveries to Enbridge at the Parkway(Consumers) and Lisgar delivery points, total deliveries at Parkway (including to TCPL) exceed the energy equivalent of over 50,000 MW.

**Figure 6-4**

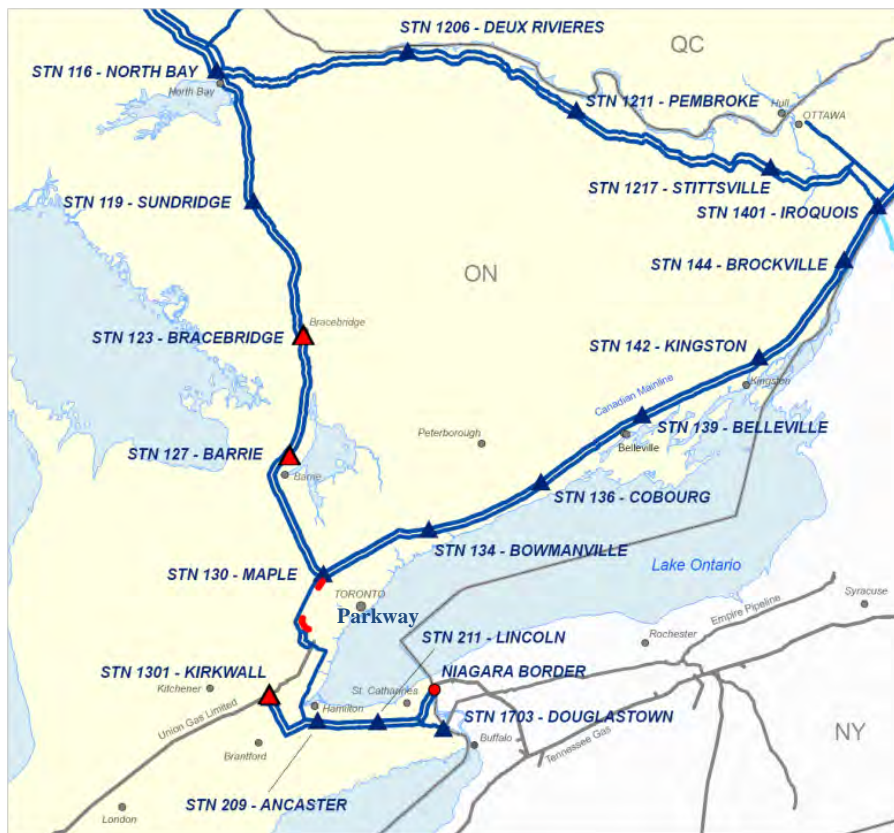


This change in throughput at Parkway has increased Union's reliance on Parkway compression to provide firm deliveries into the TCPL Mainline for Ontario, Québec and U.S. Northeast customers. By winter 2015/2016, Parkway will be the second largest point of natural gas throughput in Ontario next to the Dawn Hub. Parkway has increasingly become a very significant and critical infrastructure point in the delivery of natural gas to customers in Ontario and eastern North America.

Union expects that increased deliveries at Parkway will contribute to continued high utilization of TCPL's Eastern Triangle (the portion of the TCPL Mainline located in Ontario east and south of North Bay and between Parkway and Québec). Union, Enbridge and Gaz Métro will continue to rely solely on transportation on the Eastern Triangle to serve customers in Ontario and Québec. The Eastern Triangle is critical to eastern Canadian

1 natural gas utilities. The competitiveness of TCPL short haul tolls is critical to ensure the  
2 availability of economic supplies for customers served using the Eastern Triangle. TCPL's  
3 Eastern Triangle is shown in Figure 6-5 below.

4 **Figure 6-5**



5  
6 While some expansion has been undertaken, the portion of the Eastern Triangle between  
7 Parkway and Maple (near Canada's Wonderland in Vaughan) will remain at capacity.  
8 Further growth of the Dawn-Parkway System will require expansion of the pipeline capacity  
9 downstream of Parkway to remove the existing capacity constraint between Parkway and  
10 Maple. TCPL is currently working on an expansion for 2015 that corresponds to the growth  
11 being brought forward in this Application.

**SECTION 7**

**NEW DAWN-PARKWAY SYSTEM DEMANDS**

Demand for transportation on the Dawn-Parkway System continues to grow. Customers interested in contracting on the Dawn-Parkway System are generally driven by:

- 1) increased access to the liquid market, diverse natural gas supplies and premium storage facilities at the Dawn Hub;
- 2) the continuing trend from long haul transportation to short haul transportation; and
- 3) growing demand in central, eastern and northern Ontario as well as Québec and the U.S. Northeast.

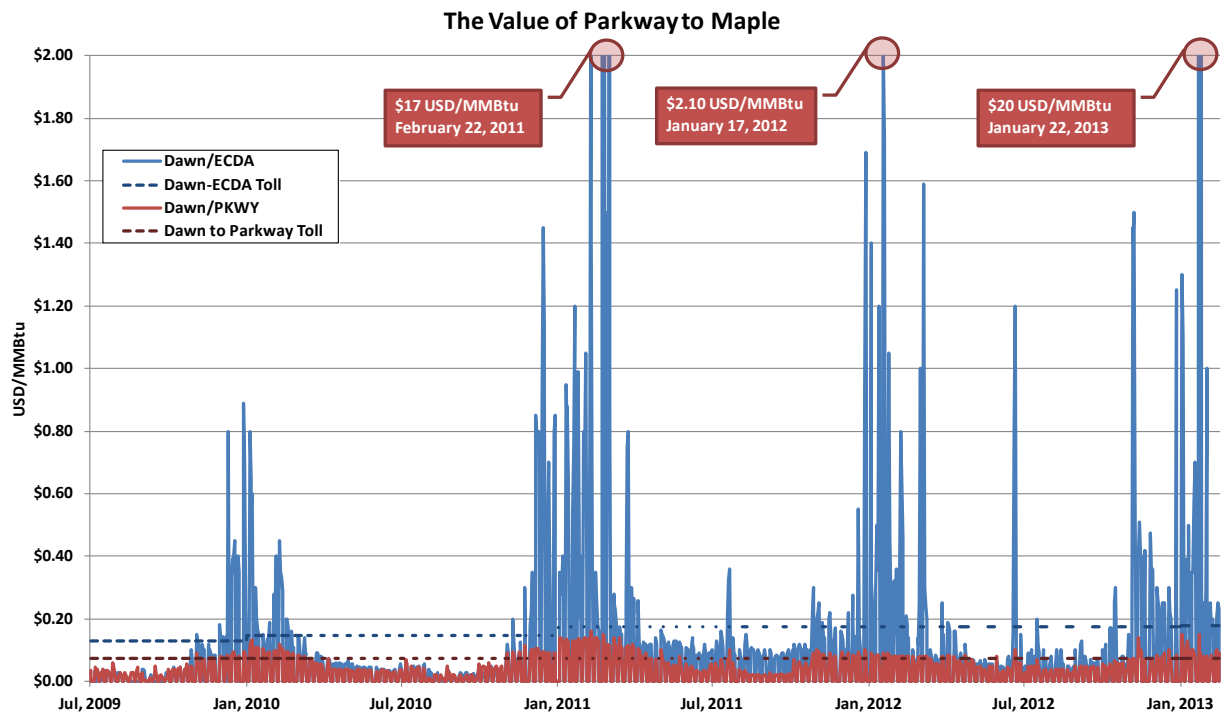
Enbridge and Gaz Métro expressed interest in new transportation capacity to provide increased diversity of supply and competitive energy options for Ontario and Québec. In addition, Union identified a requirement for incremental Dawn to Parkway transportation capacity to diversify the natural gas supply portfolio for Union North customers.

To serve these markets, incremental pipeline capacity is required on the Dawn-Parkway System as well as pipeline systems downstream of Parkway, including the TCPL Mainline between Parkway and Maple.



1 Pipeline capacity on the path between Parkway and Maple is constrained. This is evident  
2 when comparing the market value of the Dawn to Enbridge CDA transportation path against  
3 the posted pipeline transportation rates as shown in Figure 7-1. Over the past four years  
4 there has been a significant premium between the next day cash market value of Dawn to  
5 Enbridge CDA transportation (jagged blue line) and the posted TCPL tolls (dashed blue line).  
6 This has occurred consistently during the winter period and occasionally during the summer  
7 period. However, the next day cash market value of Dawn to Parkway transportation (jagged  
8 red line) over that same period has not exceeded Union's posted transportation rates (dashed  
9 red line) to the same extent. This indicates that the constraint driving volatility in the market  
10 is downstream of the Dawn-Parkway System. This market valuation adds significant cost to  
11 consumers in Ontario looking to transport natural gas to the Enbridge CDA (GTA area).  
12 Expansion through the Parkway to Maple corridor would allow more gas to flow downstream  
13 of Parkway to meet market demand, to allow markets to access more diverse and cost  
14 effective supply options, and to reduce future price volatility for Ontario energy consumers.

Figure 7-1



TCPL has proposed expansions of the Parkway to Maple corridor in both 2012 and 2013.

The 2012 Eastern Canadian Mainline Expansion was constructed and was commercially placed into service. It is expected that TCPL will complete the 2013 Eastern Canadian Mainline Expansion and place it into service during 2013. Union continues to see further interest for transportation capacity east of Parkway.

To determine market interest in Dawn to Parkway and Parkway to Maple transportation capacity, Union conducted a binding open season (the “Open Season”).

1        ***Binding Open Season***

2        On March 13, 2012, Union announced the Open Season for transportation capacity between  
3        Dawn and Maple. Service on the Dawn-Parkway System would commence as early as  
4        November 1, 2014 and service on the Parkway Extension Project between Parkway and  
5        Maple would commence as early as November 1, 2015.

6        Publication of Union's Open Season was as broad as possible to encourage all market  
7        participants the opportunity to bid. Communication included: direct e-mails to over 400  
8        current and potential customers; a posting on the Spectra Energy Twitter account; posting of  
9        the notice and Open Season package on Union's web-site; and a press announcement issued  
10       to various industry trade publications. Union sent interested parties a binding Open Season  
11       package for service.

12       The Open Season package and process followed the Standards for Transportation Open  
13       Seasons under the Storage and Transportation Access Rule ("STAR"). The package included  
14       the following:

- 15           1)       a description of Union's transportation offering;
- 16           2)       a description of the Open Season process;
- 17           3)       a link to the M12 Rate Schedule, General Term and Conditions M12 Standard  
18                   Contract, Pro-forma Precedent Agreement and a Pro-forma Financial  
19                   Backstopping Agreement; and
- 20           4)       a transportation bid form.

1 The press announcement, Open Season package and Pro-forma Precedent and Financial  
2 Backstopping Agreements are attached as Schedule 7-1.

3 The Open Season was scheduled to close April 25, 2012. Subsequent to Union's Open  
4 Season announcement, TCPL initiated a concurrent open season offering transportation  
5 capacity between Parkway and Maple. On April 24, 2012, Union extended the date for the  
6 closing of the Open Season to May 4, 2012 to align with the concurrent open season for  
7 transportation services being held by TCPL. The TCPL open season, which ran from March  
8 30, 2012 to May 4, 2012 also solicited bids for transportation services from Parkway to  
9 eastern and northern markets that utilizes the path between Parkway and Maple.

10 Union sent a revised Open Season package by direct e-mail to over 400 current and potential  
11 customers and posted the revised Open Season package on Union's web-site. A copy of the  
12 revised Open Season package is attached as Schedule 7-2.

13 In the revised Open Season package, Union offered the transportation services shown in  
14 Figure 7-2 below. Transportation service on the Parkway Extension Project was offered  
15 commencing November 1, 2014 to align with the TCPL open season. Shippers were asked to  
16 provide their bids for a term of not less than ten years.

17

**Figure 7-2**

<b>Transportation Service Offered</b>	<b>Start Date</b>	<b>Capacity (PJ/d)</b>	<b>Receipt Point</b>	<b>Delivery Point</b>
Dawn to Parkway	01-Nov-14	0.4	Dawn	Parkway
	01-Nov-15	0.4	Dawn	Parkway
Kirkwall to Parkway	01-Nov-14	0.3	Kirkwall	Parkway
	01-Nov-15	0.2	Kirkwall	Parkway
Parkway Extension Project	01-Nov-14	0.5 - 0.7	Dawn, Kirkwall, Parkway	Maple
	01-Nov-14	0.3	Maple	Parkway, Dawn

Union received interest of over 995,000 GJ/d of capacity with 786,000 GJ/d starting in 2014 or earlier and 209,000 GJ/d starting in 2015. Capacity requests that met the respective service parameters were awarded as per Union's Allocation Procedures in Section XVI of the M12 Transportation Rate Schedule. Union awarded capacity to three shippers (Enbridge, Gaz Métro and Vermont Gas) totaling incremental Dawn to Parkway capacity of 665,884 GJ/d. In addition, Union required 70,157 GJ/d of incremental Dawn to Parkway transportation capacity to serve in-franchise demand. This requirement is described in more detail in Section 11. In total, 736,041 GJ/d of incremental Dawn to Parkway transportation capacity was awarded.

1 Bids for transportation capacity on the Parkway Extension Project were not awarded as  
2 Union did not receive enough interest to support the Parkway Extension Project. As a result,  
3 Union is no longer pursuing the Parkway Extension Project. Union bid into the concurrent  
4 TCPL open season to provide Parkway to the Union EDA and Parkway to the Union NDA  
5 capacity for Union North customers, which will support the TCPL Mainline expansion  
6 through the Parkway to Maple corridor for November 2015 (further detail on these contracts  
7 can be found at Section 11).

8 Based on available Dawn to Parkway System capacity, incremental facilities will be required  
9 to meet the long-term market demand expressed in the Open Season for Dawn to Parkway  
10 transportation. Union also held a reverse open season.

11 ***Reverse Open Season***

12 Under STAR, Section 2.2.1 (iii), Union is required to conduct a reverse open season in order  
13 to ensure efficient expansion of the Dawn-Parkway System. All firm M12 transportation  
14 contract holders on the Dawn-Parkway System received a reverse open season letter by e-  
15 mail on May 18, 2012 requesting that they confirm their interest in maintaining their current  
16 firm M12 transportation contracts. The reverse open season letter was also posted on  
17 Union's web-site. A copy of the reverse open season letter is provided as Schedule 7-3.

18 Union conducted the reverse open season from May 18, 2012 through June 4, 2012 and  
19 solicited turn back of Dawn to Parkway and Dawn to Kirkwall capacity starting November 1,  
20 2014 and/or November 1, 2015. Only three firm M12 transportation holders provided a  
21 request to turn back capacity. All turn back requests are conditional upon Union executing

contracts for new capacity with all conditions within those new transportation contracts being satisfied or waived.

Each shipper and Union agreed to the turn back of Dawn-Parkway System capacity effective on October 31, 2014, as listed below in Figure 7-3. The National Fuel Gas turn back is conditional upon National Fuel Gas management approval.

**Figure 7-3**

<b><u>Shipper</u></b>	<b><u>Path</u></b>	<b><u>Turn back Capacity (GJ/d)</u></b>
Greenfield Ethanol	Dawn to Parkway	2,000
BP Canada Energy Group	Dawn to Parkway	20,000
National Fuel Gas	Dawn to Kirkwall	26,695
<b>Total</b>		<b>48,695</b>

The turn back received in the reverse open season will be used to reduce the requirements for incremental Dawn-Parkway System facilities. The reverse open season bids will be awarded once all shipper and Union conditions precedent have been waived or satisfied in binding transportation agreements, with the exception of Union placing the facilities into service.

***Binding Contracts for Dawn to Parkway Capacity***

Union has moved to execution of binding contracts with Enbridge, Gaz Métro and Vermont Gas as listed in Figure 7-4 below.

**Figure 7-4**

<b><u>Shipper</u></b>	<b><u>Start Date</u></b>	<b><u>Term (years)</u></b>	<b><u>Path</u></b>	<b><u>Awarded Quantity (GJ/d)</u></b>
Vermont Gas	01-Nov-2014	10	Dawn to Parkway	8,100
Enbridge	01-Nov-2015	10	Dawn to Parkway	400,000
Gaz Métro	01-Nov-2015	10	Dawn to Parkway	257,784
Union Gas	01-Nov-2015	N/A	Dawn to Parkway	<u>70,157</u>
<b>Total</b>				<b>736,041</b>

The Open Season requested that binding transportation contracts be executed, including precedent agreements and financial backstopping agreements, thirty days after the close of the Open Season. This date was extended in order to allow parties to negotiate related downstream transportation agreements concurrently. Union now has binding transportation agreements with Enbridge, Gaz Métro and Vermont Gas subject to conditions precedent.

***Related Projects***

In addition to their new Dawn to Parkway System capacity, Enbridge, Gaz Métro and Union require downstream transportation to reach the intended market area.



1 Gaz Métro and Union require transportation on the TCPL Mainline, downstream of Parkway,  
2 to move 367,784 GJ/d of natural gas (257,784 GJ/d and 110,000 GJ/d respectively) to the  
3 intended markets. Therefore, the Gaz Métro and Union Dawn to Parkway capacity is  
4 dependent upon a further TCPL Eastern Canadian Mainline Expansion for November 1,  
5 2015, which TCPL is committed to pursue.

6 According to information submitted by TCPL in EB-2011-0210, the TCPL open season held  
7 concurrently with the Union Open Season resulted in TCPL receiving bids for service in  
8 excess of 0.5 PJ/d (EB-2011-0210, Exhibit K9.4, Union-TCPL 3). Union entered into this  
9 TCPL open season for transportation starting November 1, 2014 to support natural gas  
10 deliveries to Union North. Union expects that TCPL will expand capacity between Parkway  
11 and Maple to serve this incremental interest. In September 2012, Union was informed by  
12 TCPL that the incremental capacity to serve the TCPL open season bids would not be  
13 available for November 1, 2014 as provided in the TCPL open season. TCPL informed open  
14 season participants that this incremental capacity would be available November 1, 2015.

15 The Enbridge Dawn to Parkway capacity is dependent upon completion of its proposed GTA  
16 Project to reach the intended delivery area within its GTA pipeline system. In its February  
17 12, 2013 correspondence with the Board, Enbridge indicated that it has redesigned its  
18 proposed GTA Project and will:

- 19 1) connect to TCPL at a point approximately five kilometers downstream of  
20 Parkway;

1           2)     share usage of the segment from the TCPL connection point to Enbridge's Albion  
2                 Road Station with TCPL; and

3           3)     will increase the pipe size in that segment from NPS36 to NPS42.

4     Enbridge proposes that the GTA Project will be in-service by November 1, 2015.

5     As a result of the timing of the related projects, Union allowed shippers who were awarded  
6     capacity in its Open Season to adjust the starting date of the contract term to November 1,  
7     2015. Union will inform respondents to the reverse open season that the turn back requested  
8     will be fulfilled, subject to the conditions, starting November 1, 2015.

9     Clearly, the expansion to provide new capacity downstream of Parkway remains critical for  
10    Ontario, Québec and U.S. Northeast consumers to access: the liquidity and diversity of  
11    competitively priced supply of the Dawn Hub; the flexible storage services available at the  
12    Dawn Hub; and new, cost-competitive supply from the nearby Marcellus and Utica shale  
13    formations.

14    ***Enbridge Capacity***

15    Enbridge has executed contracts with Union for 400,000 GJ/d of Dawn to Parkway  
16    transportation capacity starting November 1, 2015. This incremental transportation capacity  
17    is in addition to approximately (2.15 PJ/d) of Dawn to Parkway transportation capacity and  
18    approximately 68,000 GJ/d of Dawn to Kirkwall transportation capacity currently contracted  
19    with Union.

1 Enbridge has executed an M12 transportation contract, a precedent agreement and a financial  
2 backstopping agreement. Enbridge has waived or satisfied all conditions precedent with the  
3 exception of government and regulatory approvals. These conditions precedent are required  
4 to be satisfied before September 30, 2013.

5 Enbridge is the largest shipper on the Dawn-Parkway System which links the Enbridge  
6 delivery area to Dawn and its storage at the Tecumseh facilities near Sarnia, Ontario.

7 Enbridge currently holds a 1.7 PJ/d Dawn to Parkway transportation contract as part of their  
8 Dawn-Parkway System transportation portfolio which represents approximately 25% of the  
9 total Dawn-Parkway transportation capacity. The primary term of that contract expires  
10 March 31, 2014. Union and Enbridge have negotiated an extension of the primary term to  
11 October 31, 2022 and increased the termination notice period from the standard two years to  
12 five years.

13 In addition to the new Dawn to Parkway transportation capacity of 400,000 GJ/d from Union,  
14 Enbridge has also requested a shift of 400,000 GJ/d of Dawn to Parkway capacity from a  
15 delivery point on the suction side of Parkway (i.e. at prevailing line pressure) to a delivery  
16 point on the discharge side (i.e. flows through compression). The total 800,000 GJ/d will  
17 flow through Parkway on the TCPL Mainline to the interconnection of the proposed GTA  
18 Project with the TCPL Mainline, driving an increase in horsepower required at Parkway.

#### 19 *Gaz Métro Capacity*

20 Gaz Métro has executed contracts with Union for 257,784 GJ/d of Dawn to Parkway  
21 transportation capacity starting November 1, 2015. This incremental transportation capacity

1 is in addition to 285,000 GJ/d of Dawn to Parkway transportation capacity currently  
2 contracted with Union. As previously noted, Gaz Métro requires incremental transportation  
3 capacity on the TCPL Mainline east of Parkway to alleviate the current capacity constraint  
4 between Parkway and Maple on the TCPL Mainline to facilitate its intended markets.

5 Gaz Métro has executed an M12 transportation contract, a precedent agreement and a  
6 financial backstopping agreement. As stated earlier, Gaz Métro has received Régie approval  
7 of this Dawn Hub commitment and has waived or satisfied all conditions precedent.

8 ***Vermont Gas Capacity***

9 Vermont Gas has executed contracts with Union for 8,100 GJ/d of Dawn to Parkway  
10 transportation capacity starting November 1, 2014. This incremental transportation capacity  
11 is in addition to 20,500 GJ/d of Dawn to Parkway transportation capacity currently held by  
12 Vermont Gas, representing a 40% increase in their Dawn to Parkway transportation capacity.  
13 This transportation capacity will provide Vermont Gas with increased access to the liquidity  
14 and supply diversity of the Dawn Hub. Vermont Gas does not require incremental  
15 downstream transportation on the TCPL Mainline to complement this new Dawn to Parkway  
16 System capacity.

17 Vermont Gas has executed an M12 transportation contract, a precedent agreement and a  
18 financial backstopping agreement. All shipper conditions precedent have been satisfied.

19

1     ***Union Capacity***

2     Union will require incremental Dawn to Parkway System capacity for 70,157 GJ/d to serve  
3     Union North. This requirement is described further in Section 11. As previously noted,  
4     Union requires transportation service on TCPL, including Parkway to Union NDA and  
5     Parkway to Union EDA, to alleviate the capacity constraint on the TCPL Mainline between  
6     Parkway and Maple to facilitate serving its intended markets. Union is applying for pre-  
7     approval from the Board for these contracts.

8     ***Long Term Expectations for Dawn-Parkway System***

9     Although Union expects future growth opportunities on the Dawn-Parkway System, Union is  
10    also faced with trying to manage significant turn back risk. Turn back risk exists on both the  
11    Dawn to Parkway and Dawn to Kirkwall paths, where parties who currently hold service  
12    contracts may not renew those contracts at the end of their term. This turn back risk was  
13    discussed in EB-2011-0210<sup>3</sup>. The greatest risk of turn back begins in 2016 and represents  
14    the capacity held by certain U.S. Northeast utilities. As Union receives notice of that turn  
15    back capacity, it will attempt to re-sell the capacity to other customers. Union's ability to re-  
16    sell or re-purpose turn back capacity will depend on the market conditions at the time, and in  
17    some cases, may rely on other third parties, such as TCPL, expanding their system. In the  
18    event that Union is unable to fully mitigate this risk, it may apply to the OEB for a deferral  
19    account to capture the lost revenue as a result of turn back for the cost of the unused capacity.

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<sup>3</sup> Exhibit A, Tab 2, Schedule 1, pp. 11-12, Exhibit C1, Tab 3, p. 6, Schedules 1-5  
Interrogatories: J.B-1-7-7, J.B-1-13-4, J.C-4-2-1

**SECTION 8**

**PROPOSED FACILITIES**

In order to meet increasing system demands, Union is proposing to construct the Proposed Pipeline, along with the associated valving facilities. In addition to the Proposed Pipeline, Union also requires additional compression and associated facilities at the Parkway West Compressor Station, the Proposed Parkway D Compressor. These facilities are required to serve the incremental demands identified in Section 7.

Facility requirements are determined based on Union's system design, as described below.

***Dawn-Parkway System Design***

The Dawn-Parkway System transports natural gas to delivery locations along the pipeline to meet energy demands and pressure requirements of Union's customers. The primary functions of the Dawn-Parkway System include:

- 1) Transportation of natural gas to meet in-franchise demands. Volumes are delivered to i) take off points along the pipeline system between Dawn and Parkway for customers in Union South; ii) TCPL at Parkway for redelivery to Union North; iii) TCPL at Parkway for redelivery to Union South customers in Oakville and Burlington; and iv) TCPL at Kirkwall for redelivery to Union South customers in Hamilton and Nanticoke.
- 2) Transportation of natural gas easterly for ex-franchise storage and transportation customers from i) Dawn with deliveries to TCPL at Kirkwall and Parkway and

1 deliveries to Enbridge at Parkway and Lisgar; and ii) receipts at Kirkwall with  
2 deliveries to TCPL at Parkway and deliveries to Enbridge at Parkway and Lisgar.

3 3) Transportation of natural gas westerly for ex-franchise storage and transportation  
4 customers from i) Kirkwall with deliveries to Dawn; and ii) Parkway with  
5 deliveries to Dawn and to TCPL at Kirkwall.

6 Union models the capacity of the Dawn-Parkway System to meet in-franchise and ex-franchise  
7 firm demand on the design day. The design day weather condition for Union South is 44 Degree  
8 Days (44DD), which represents an average daily temperature of minus 26 degrees centigrade.  
9 This temperature was derived from recorded temperature and wind speeds from 1953 to 2011 as  
10 measured at the London International Airport. Union North is modeled based on multiple  
11 distinct design days to reflect the colder temperatures experienced in those regions.

12 The design day model of the Dawn-Parkway System includes the following assumptions:

- 13 1) All in-franchise interruptible customers have been curtailed;
- 14 2) All ex-franchise customers require their full firm contracted volumes;
- 15 3) All in-franchise customers consume volumes equivalent to design day estimates,  
16 which are derived from historical consumption and forecast growth;
- 17 4) There are no supply failures and all obligated deliveries arrive at Parkway;
- 18 5) A critical unit compressor outage has occurred at either Lobo or Bright;
- 19 6) All compression at Parkway is available and online;

- 1           7)     Required pressure and supply are available from Dawn;
- 2           8)     Maximum Operating Pressure of 6,160 kPag (894 psig);
- 3           9)     Minimum pressures for laterals supplying in-franchise customers are met;
- 4           10)    Minimum suction pressures for Dawn-Parkway System compressor units are met;
- 5                and
- 6           11)    Minimum contractual delivery pressures at Kirkwall of 4,480 kPag (650 psig), at
- 7                Parkway (TCPL) of 6,450 kPag (935 psig) and at Parkway (Consumers) and
- 8                Lisgar of 3,450 kPag (500 psig) are met.

9     Some Union in-franchise direct purchase customers have an obligation to deliver their Daily  
10    Contract Quantity (“DCQ”) to the discharge side of Parkway which reduces the amount of gas  
11    required to physically flow through the Parkway compressors. Parkway obligated deliveries for  
12    the 2015/2016 gas-year total 638,626 GJ/d.

### 13    ***In-franchise design day Demand***

14    The Dawn-Parkway System total projected in-franchise design day demand for Union South is  
15    1,646,924 GJ/d for the 2014/2015 and 2015/2016 winters.

16    A portion of the in-franchise design day demand in Union North is also served by the Dawn-  
17    Parkway System. The total Union North deliveries on the Dawn-Parkway System for winter  
18    2014/2015 is 262,587 GJ/d and for the 2015/2016 winter is 332,744GJ/d. The increase of 70,157  
19    GJ/d is supporting a portion of the 110,000 GJ/d short haul firm transportation contracts with



1 TCPL for Parkway to the Union EDA and Parkway to the Union NDA. The details of the  
2 changes to the TCPL capacity for the Union North portfolio are detailed in Section 11.

3 There is a small decrease of 6,887 GJ/d for in-franchise design day demands between winter  
4 2012/2013 and winter 2015/2016, which provides a slight offset to the ex-franchise growth  
5 detailed below. The decrease is not significant enough to impact facility requirements.

### 6 ***Ex-franchise design day Demand***

7 The design day demand for ex-franchise customers is determined by their transportation service  
8 contracts. Design day demand for these customers is the sum of the existing contract demands  
9 plus any additional volumes contracted during the open season process less any volumes  
10 returned to Union by existing customers.

11 Firm ex-franchise design day demand in winter 2014/2015 is 4,733,583 GJ/d. The additional  
12 demands beginning November 1, 2015 are 657,784 GJ/d. This growth is offset by turn back and  
13 contract non-renewals of 217,532, for a net increase of 440,252 GJ/d. This increases the total  
14 transportation capacity demand for 2015/2016 to 5,173,835 GJ/d. Union will shift 400,000 GJ/d  
15 of Enbridge's capacity from suction to discharge at Parkway.

### 16 ***Overall System Demand***

17 The growth of 70,157 GJ/d of in-franchise demand, combined with the additional 440, 252 GJ/d  
18 of net ex-franchise demand creates a net overall Dawn-Parkway System demand increase of  
19 510,409 GJ/d.

Total Dawn-Parkway System demand (in-franchise and ex-franchise) is 6,643,094 GJ/d for 2014/2015 and 7,153,503 GJ/d for 2015/2016. More detail on the Dawn-Parkway System demands and capacity can be found in Figure 8-1 below and in Schedules 8-1, 8-2, and 8-3.

**Figure 8-1**

2014/2015 System Demand	6,643,094 GJ/d
in-franchise Demand Increase	70,157 GJ/d
Transportation Services Demand Increase	657,784 GJ/d
Dawn-Parkway and Dawn-Kirkwall Turn back	-217,532 GJ/d
2015/2016 System Demand	7,153,503 GJ/d
<b>Total Demand Change</b>	<b>510, 409 GJ/d</b>

### ***System Capacity***

Union has experienced significant turn back of capacity since 2011. Figure 8-2 shows the changes to the system since 2011.

**Figure 8-2**

	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
in-franchise Demand Change	35,632	-33,258	-9,089	-1,711	70,157
ex-franchise Growth	211,548	386,819	0	8,100	657,784
ex-franchise Parkway Turn back	0	0	-75,067	0	-22,000
ex-franchise Kirkwall Turn back	-317,000	-375,188	-186,564	-37,262	-195,532
<b>Total Demand Change</b>	<b>-69,820</b>	<b>-21,627</b>	<b>-270,720</b>	<b>-30,873</b>	<b>510,409</b>

For winter 2014/2015, the Dawn-Parkway System has a total capacity of 6,800,934 GJ/d prior to constructing the facilities. This capacity is comprised of the physical design day capacity of 6,162,308 GJ/d, plus the projected Parkway obligated deliveries of 638,626 GJ/d. There is a surplus system capacity in winter 2014/2015 of 157,840 GJ/d relative to the demand of 6,643,094 GJ/d.

For winter 2015/2016, Dawn to Kirkwall turn back and the shift of a portion of Enbridge volumes from suction to discharge, reduce the overall system capacity by 203,994 GJ/d. The additional facilities planned to meet the increase in ex-franchise demand on November 1, 2015 are the NPS48 Brantford-Kirkwall pipeline and new Proposed Parkway D Compressor. These facilities increase the system capacity by 433,000 GJ/d, creating a total capacity of 7,029,940 GJ/d. This is comprised of the physical design day capacity of 6,391,314 GJ/d, plus the projected Parkway obligated deliveries of 638,626 GJ/d. After the implementation of the proposed facilities, there remains a system short fall of 123,563 GJ/d which will be met by purchasing a service at Parkway.

The capacity gains/losses and purchased services, required to meet the incremental 510,409 GJ/d of demand in 2015/2016 are shown in Figure 8-3 below:

**Figure 8-3**

System Capacity Surplus (2014/2015)	157,840 GJ/d
System changes	-203,994 GJ/d
Brantford-Kirkwall & Parkway D	433,000 GJ/d
System Capacity Shortfall (2015/2016)	123,563 GJ/d
<b>Total Capacity Change</b>	<b>510,409 GJ/d</b>

System Capacity short fall is typically managed through a purchased service. For example, a purchased service may be Winter Peaking Service or other services purchased from energy marketers.

#### ***Alternatives Considered***

The proposed facilities for 2015 construction were assessed against both facility and non-facility alternatives.

Non-facility alternatives are services purchased from third parties at Parkway to meet design day demand. Winter Peaking Service purchased from a gas marketer is an example of a non-facility alternative. The forecast capacity short fall for 2015/2016 without the additional new capacity resulting from the proposed facilities is forecast to be 556,563 GJ/d (433,000 GJ/d + 123,563 GJ/d). Non-facility alternatives cannot be used to meet this short fall because of the short fall size, the fact that the incremental demands are associated with firm long term contracts and market uncertainty.

The facility options considered for 2015 in-service include pipeline looping between Bright and Parkway and compression at Lobo, Bright or Parkway. The following facilities were included in the capacity analysis:

- 1) Lobo C Compression (44,500 ISO HP)
- 2) Bright C Compression (44,500 ISO HP)
- 3) Parkway D Compression (44,500 ISO HP)
- 4) Brantford- Kirkwall NPS 48 Pipeline (13.8 km)

- 5) Kirkwall- Hamilton NPS 48 Pipeline (10.4 km)
- 6) Hamilton- Milton NPS 48 Pipeline (18.6 km)
- 7) Milton- Parkway NPS 48 Pipeline (9.1 km)
- 8) Kirkwall-Parkway NPS 48 Pipeline (38.5 km)
- 9) Brantford-Parkway NPS 48 Pipeline (51.9 km)

Each of the above facilities were analyzed separately and in combination. The proposed facilities and the three next best alternatives below in Figure 8-4, ranked by lowest cost per unit of capacity.

**Figure 8-4**

Alternative	Additional Capacity (GJ/d)	Capital Cost (\$ Million)	Cost per Unit of Capacity (\$/GJ/d)
NPS48 Brantford-Kirkwall and Parkway D	433,000	204	471
NPS48 Hamilton-Milton and Parkway D	370,000	236	638
NPS48 Brantford-Parkway	440,000	343	780
NPS48 Kirkwall-Parkway and Lobo C	352,000	344	977

### ***Proposed Facilities***

The proposed facilities are the Brantford-Kirkwall NPS48 pipeline and the Proposed Parkway D Compressor located at the Parkway West Compressor Station. These proposed facilities provide the lowest capital cost per unit of capacity.

1    ***Compression Alternatives***

2    While Union continues project development activities, it is discussing the potential of purchasing  
3    and installing a used compressor unit from the TCPL compressor fleet. Union has determined  
4    that a used compressor unit may be feasible but has not determined the costs that would be  
5    required to complete the significant modifications and overhaul required to meet Union's design  
6    and operating requirements. Union will continue to discuss this option with TCPL and evaluate  
7    feasibility. In order to modify station design and complete engineering by the original  
8    equipment manufacturer, Union will need to complete the evaluation of the feasibility of a used  
9    compressor by the end of April 2013.

10   ***Consultations***

11   Union has continued consultative discussions with stakeholders to provide information regarding  
12   the Parkway West Project and this Project. Union, Enbridge and TCPL have continued  
13   discussions regarding infrastructure development at or near Parkway seeking efficient solutions.  
  
14   On March 27, 2013, Union held an all-stakeholder meeting in Toronto at the Board's offices.  
15   The purpose of this meeting was to describe the Parkway West Project and this Project, the  
16   relationship of these projects with the related pipeline projects (Enbridge GTA Project and TCPL  
17   Eastern Canadian Mainline Expansion), new Dawn-Parkway System demands, rate impacts and  
18   regulatory applications. A copy of the presentation that was used in these discussions is attached  
19   as Schedule 8-4.

1 Union also held teleconferences and meetings with shippers and stakeholders as follows:

- 2 1) Canadian Manufacturers and Exporters – March 22, 2013
- 3 2) TCPL – March 25, 2013
- 4 3) Gaz Métro – March 25, 2013
- 5 4) Association of Power Producers of Ontario – March 25, 2013
- 6 5) Industrial Gas Users Association – March 25, 2013
- 7 6) Enbridge – March 26, 2013

**SECTION 9**

**PROJECT COSTS, ECONOMICS AND BENEFITS**

***Project Costs***

Union is proposing to construct the following facilities at a total cost of \$204 million:

- 1) The proposed Brantford-Kirkwall pipeline at an estimated capital cost of \$96 million (see Schedule 9-1).
- 2) Proposed Parkway D Compressor Station at an estimated capital cost of \$108 million (see Schedule 9-2).

The amounts shown in Schedules 9-1 and 9-2 cover all costs related to materials, construction and labour, environmental protection measures, contingencies, and interest during construction (“IDC”) of the Brantford-Kirkwall/Parkway D Project. The Proposed Parkway D Compressor station also includes the costs related to measurement and new associated facilities.

***Project Economics***

**Economic Feasibility Tests**

Union employs a three-stage analysis to assess the economic feasibility of projects in accordance with OEB recommendations from the E.B.O. 134 Report on System Expansion. This methodology is consistent with Union’s past Trafalgar facilities applications.

Stage 1 consists of a discounted cash flow (“DCF”) analysis specific to Union. All incremental cash inflows and outflows resulting from a project are identified. The net present value (“NPV”) of the cash inflows is divided by the NPV of the cash outflows to arrive at a profitability index



1 (“PI”). If the NPV of the cash inflows is equal to or greater than the NPV of the cash outflows,  
2 the PI is equal to or greater than one and a project is considered economic based on current  
3 approved rates.

4 If a project NPV is less than \$0 or the PI is less than 1.0, a Stage 2 benefit/cost analysis may be  
5 undertaken in order to quantify benefits and costs accruing to Union’s customers as a result of  
6 the Project. The NPV of quantified benefits to customers resulting from a project is added to a  
7 project NPV from Stage 1 and then discounted at a social discount rate in order to calculate the  
8 direct net benefit of a project to Union’s customers. A project is considered to be in the public  
9 interest if the net benefit is greater than \$0.

10 The Stage 3 analysis considers other quantifiable benefits and costs related to the construction of  
11 the proposed facilities that are not included in the Stage 2 analysis, and other non-quantifiable  
12 public interest considerations.

13 In addition to these three stages, the Board recently issued a new requirement to the Filing  
14 Guidelines on the Economic Tests for Transmission Pipeline Applications with respect to EBO  
15 134 (EB-2012-0092). This new requirement is as follows:

16 “Any project brought before the Board for approval should be supported by an  
17 assessment of the potential impacts of the proposed natural gas pipeline(s) on the existing  
18 transportation pipeline infrastructure in Ontario, including an assessment of the impacts  
19 on Ontario consumers in terms of cost, rates, reliability and access to supplies.”

20 These impacts have been addressed throughout this application. Figure 9-1 summarizes the  
21 impacts and provides references where more detailed analysis can be found.

1

**Figure 9-1**

2

**Assessment of Potential Impacts**

<b>Entity Impacted</b>		<b>Summary of Impact</b>	<b>Reference</b>
Existing Infrastructure	Union	Union's proposal is to construct the NPS48 Brantford-Kirkwall pipeline section and additional compression facilities at Parkway West Compressor Station.	The facilities are described in Section 8 and Section 12.
	Enbridge	Construction of the Brantford - Kirkwall/Parkway D project is required to support Enbridge's proposed GTA Project and vice versa. Union's proposed Project does not impact Enbridge's existing infrastructure.	Section 7
	TCPL	Completion of the Brantford-Kirkwall/Parkway D Project is required to support expansion of the TCPL Mainline between Parkway and Maple and vice versa. In addition to generating more flow on the Parkway to Maple path, this project will also result in reduced long haul flow on the TCPL mainline.	Section 7
Impacts to Ontario consumers	Costs and Rates	<p>The cost of this project is \$204 million.</p> <p>Conversion of long haul contracts for the Union NDA and Union EDA will result in natural gas cost savings for Union's customers of \$18 million to \$28 million annually.</p> <p>The combined impact of this project and the conversion of long haul contracts is discussed in Section 10 and 11.</p> <p>Union is not in a position to evaluate the possible related effects of this Project on costs and rates for other Ontario energy consumers. However, Union does note that in Enbridge's proposed GTA project natural gas costs savings of \$511.1 million from 2015-2025 were identified. (EBO 2012-0451, Exhibit A, tab 3, Schedule 5, page 19, par. 42).</p>	<p>Section 10</p> <p>Section 11</p>
	Reliability and Access to Supplies	This Project supports conversion of WCSB long haul supplies to Dawn for Union and for Enbridge. The conversion of these supplies to Dawn reflects changes in the North American natural gas markets and provides greater reliability and diversity of supply over the long term. Enbridge noted in their GTA Project evidence that purchasing gas supply closer to market provides for more secure gas delivery.	<p>Section 4,</p> <p>Section 5</p>

Stage 1 – Project Specific Discounted Cash Flow (DCF) Analysis

Stage 1 economics were completed for the proposed facilities including both the Proposed Pipeline looping and the Proposed Parkway D Compressor. The results of the Stage 1 DCF analysis on Schedule 9- 3A indicate a cumulative NPV of \$94.0 million and a PI of 1.46.

Incremental cash inflows have been estimated based on that portion of revenues from incremental M12 transportation service demands that can be served by the additional facilities and anticipated gas supply cost savings realized from Contracts with TCPL proposed to serve existing Union EDA and Union NDA in-franchise markets from Dawn. Operating and maintenance expenses and taxes are deducted from incremental revenues/cost savings benefits to arrive at net incremental cash inflows.

Schedule 9-3B is a DCF sensitivity analysis to assess the impact of removing the gas supply cost savings. The result is a cumulative NPV of \$(59.0) million and the PI is 0.71. Schedule 9-3A is the appropriate data for the purpose of the economic test. The sensitivity analysis demonstrates that customers receive a significant economic benefit by utilizing proposed facilities as an alternative route to serve existing demands in the Union EDA and Union NDA market area. Schedule 9-3B has been provided for illustrative purposes because the gas supply savings are attributable to the Union North in-franchise markets only.

Schedule 9-4 shows the calculation of the incremental M12 transportation revenues included in the DCF analysis based on current rates approved per EB-2011-0210. The gas supply cost savings associated with the Contracts are provided in Section 11, Figure 11-7 (\$28.2 million).

Incremental cash outflows include the cost of the Proposed Pipeline facilities as shown in Schedule 9-1 and the proposed compression facilities shown in Schedule 9-2. The capital costs exclude general overheads, which would be incurred whether or not the Project proceeds. Interest during construction is included for capital costs incurred prior to the in-service date of November 1, 2015.

All cash flows are discounted using Union's after tax incremental weighted average cost of capital. The average cost of capital is the weighted average of the expected incremental cost of each of the components of the capital structure in the same proportions as approved in Union's EB-2011-0210 rate application.

The Project economics have been evaluated over a 30-year period. These Project economics are conservative given that Union maintains its pipeline system in a manner that the actual life is much longer than 30 years.

A summary of the key input parameters used in the economic analysis are shown on Schedule 9-5.

#### Stage 2 – Benefit/Cost Analysis

A Stage 2 analysis may be undertaken when the Stage 1 NPV is less than zero. This analysis was not completed in this case because the Stage 1 NPV is positive. Stage 2 under the sensitivity analysis (Schedule 9-3B project excluding gas cost savings) was not completed because under that scenario the proposed facilities would be used to serve Union's ex-franchise customers only.

1 Energy cost savings are also available to other customers in Ontario that will be served as a  
2 result of additional transportation services on Union's Dawn-Parkway system. Enbridge has  
3 estimated in their GTA project filing that savings will be approximately \$51 million per year.  
4 These customers select transportation services on Union's system based on their own assessment  
5 of the most economical way to meet increases in energy requirements. This is described in  
6 Section 4 of the evidence.

7 Stage 3 – Other Public Interest Considerations

8 There are a number of other public interest factors for consideration as a result of the addition of  
9 the proposed facilities that are not readily quantifiable, such as security of supply, contribution to  
10 a competitive market and environmental benefits.

11 Enhanced Security

12 As Union adds additional pipeline sections on the Dawn-Parkway System, security, reliability  
13 and diversity of supply for all customers will be enhanced. The proposed facilities improve the  
14 diversity of supply to all customers by enabling the movement of additional natural gas supplies  
15 away from Dawn. The Brantford-Kirkwall section of the Dawn-Parkway system is the only  
16 section without an NPS48 pipeline therefore this Project will provide additional security to the  
17 system. The proposed facilities provide all customers with enhanced access to alternative  
18 sources of supply in the event of insufficient capacity or disruptions to other pipeline systems.  
19 When approving previous expansions of the Dawn-Parkway System, the Board has consistently  
20 recognized these benefits.

21 Competitive Market Impacts

1 Construction of the proposed facilities will enhance and improve the competitive market. As  
2 capacity away from Dawn increases, including downstream of Parkway, trading activity at the  
3 Dawn Hub increases, which results in increased price diversity, liquidity and competitiveness.  
4 All natural gas customers benefit from increased access to competitively priced gas supply.

#### 5 Environmental Effects

6 Natural gas, because of its clean-burning properties, has an increasingly important role to play in  
7 reducing the environmental impacts of energy use. The use of natural gas, either with or in place  
8 of other fossil fuels, in residential, commercial, industrial and transportation applications reduces  
9 the environmental impact in two key areas. First, the process is frequently more efficient thereby  
10 reducing total energy use. Secondly, natural gas pollutant release per unit of energy is less than  
11 other fossil fuels.

#### 12 Employment

13 The construction of this Project will result in additional direct and indirect employment. There  
14 will be additional employment of persons directly involved in the construction of the Project. In  
15 addition there is a trickledown effect on employment.

1           Utility Taxes

2   A decision to proceed with this Project will result in Union paying taxes directly to various levels  
3   of government. These taxes include income and municipal taxes paid by Union as a direct result  
4   of the Project and are included as costs in the Stage 1 analysis. These taxes are not true  
5   economic costs of the Project since they represent transfer payments within the economy that are  
6   available for redistribution by the federal, provincial and municipal governments.

7           Employer Health Taxes

8   The additional employment that will result from the construction of this Project will generate  
9   additional employer health tax payments to aid in covering the cost of providing health services  
10   in Ontario.

11    ***Additional Project Benefits***

12   The proposed facilities deliver many benefits to Union's customers, Ontario, and energy  
13   consumers in Québec and the U.S. Northeast.

- 14           1)   Expansion is required - The expansion of Union's Dawn-Parkway System is  
15                required to meet incremental demand for Union North and ex-franchise  
16                customers. Through their incremental capacity, Enbridge and Gaz Métro have  
17                increased their long term commitments to the Dawn Hub and Union's Dawn-  
18                Parkway System. A Dawn-Parkway System that remains as fully contracted as  
19                possible benefits both in-franchise and ex-franchise customers.

1           2)     Cost benefits for Union South and Union North - Allocating the costs of the  
2                   proposed facilities using the Board-approved allocation of Dawn to Parkway  
3                   costs, adjusted to include the increase in Union North and M12 demands, results  
4                   in a cost reduction of approximately \$1.7 million for Union South in-franchise  
5                   rate classes. For Union North in-franchise rate classes, there is a cost increase of  
6                   approximately \$1.6 million associated with the proposed facilities. However, for  
7                   Union North sales service and bundled direct purchase customers in all zones the  
8                   cost increases resulting for the proposed facilities are more than offset by the \$18  
9                   million to \$28 million in gas cost savings that are expected to accrue to these  
10                  customers as a result of Union's long-term TCPL contracting proposal.

11          3)     Enbridge and Gaz Métro customers benefit - Enbridge and Gaz Métro's  
12                  customers will also benefit from the competitive supplies available at Dawn  
13                  delivered in part by the proposed expansion facilities of the Project. Annual  
14                  savings are estimated to be up to \$51 million and \$120 million, respectively.  
15                  Combined with the estimated gas cost savings of up to \$28 million for Union  
16                  North customers, results in savings for Ontario and Québec energy consumers of  
17                  approximately \$200 million per year, or \$2.0 billion between 2015 and 2025.  
18                  These savings are also contingent upon the completion of Enbridge's GTA project  
19                  and TCPL's Eastern Canadian Mainline Expansion in 2015.

20  
21          4)     Diversity and security of supply – Gaining access to Dawn provides customers in  
22                  Union North, Enbridge's franchise, Québec and the U.S. Northeast long-term



1 access to multiple supply basins. This diversity supports competitively priced  
2 choices for customers, while at the same time ensuring secure sources of supply  
3 over the long term.

4 5) Long-term growth and rate stability - Continued growth on the Dawn-Parkway  
5 System is critical for managing long-term usage of existing assets resulting in  
6 more predictable and stable rates in the future. Union expects future turn back on  
7 the Dawn-Parkway System, especially for the Dawn to Kirkwall path. It is in the  
8 best interest of ratepayers if the Dawn to Kirkwall capacity that is turned back can  
9 be re-purposed or re-sold, mitigating rate increases to all rate classes. Building  
10 the Proposed Parkway D Compressor allows for the opportunity to re-sell or re-  
11 purpose turned back Dawn to Kirkwall capacity as Dawn to Parkway  
12 transportation. The ability to do so will continue to be contingent upon other  
13 factors, such as market need, expansion through the Parkway to Maple corridor,  
14 regulatory frameworks, and tolls. It is certain, however, that a prerequisite to  
15 managing any or all of these factors is the expansion of Union's Dawn-Parkway  
16 System as proposed.

17 6) Continued growth of the Dawn Hub - Continued expansion on the Dawn-  
18 Parkway System is driven by, and will drive, a robust Dawn Hub. The gas cost  
19 savings noted above for Union, Ontario, and Québec energy consumers are a  
20 direct result of the ability to access supplies coming into, or stored at, Dawn.  
21 Being connected, either directly or indirectly, to most North American supply  
22 basins allows for a deep, liquid, and competitive market at Dawn. This depth

1 offers Union's customers, and customer downstream of Parkway, security and  
2 diversity of supply at great cost effectiveness.

3 The expansion proposed by the Project will continue to ensure growth of the  
4 Dawn Hub. Increased transportation capacity to take natural gas away from  
5 Dawn will encourage more market participants to bring gas into or transact at  
6 Dawn. Increased market participants contribute to the liquidity and depth of the  
7 market at Dawn, which benefits customers and Ontario over the long term.

8

**SECTION 10**

**PRE-APPROVAL OF THE COST CONSEQUENCES OF THE BRANTFORD-  
KIRKWALL PIPELINE AND PARKWAY D COMPRESSOR FACILITIES**

As indicated above, Union is seeking an order from the Board, pursuant to section 36 of the Act, for pre-approval of recovery of the cost consequences of all facilities associated with the development of the Project from ratepayers. Union notes that rate increases associated with the Project will affect ex-franchise ratepayers and Union North in-franchise ratepayers, with small rate decreases for Union South in-franchise ratepayers. These rate impacts are described in this Section of evidence. Union notes there are significant gas cost savings that will accrue to Union North sales service and bundled direct purchase customers as a result of Brantford-Kirkwall and the Parkway D Compressor Project that will more than offset the delivery rate increases. The rate and bill impacts associated with the gas cost savings are described in Section 11 of this evidence.

Specifically, the facilities for which Union is seeking recovery pre-approval are: a new NPS 48 pipeline from the existing Brantford Valve Site to the Kirkwall Custody Transfer Station and associated valving facilities; an additional compressor (Parkway D) and associated facilities at the Parkway West Compressor Station. These facilities are described in Section 8. Compressor station construction will begin in the summer of 2014 with an in-service date of the fall of 2015. Construction of the Proposed Pipeline facilities will begin in the spring of 2015 with an in-service date of the fall of 2015.

1 The total capital cost of the facilities associated with the Project is approximately \$204 million,  
2 comprised of:

- 3 1) The Brantford-Kirkwall section of NPS 48 pipeline at an estimated capital cost of  
4 \$96 million;
- 5 2) Proposed Parkway D Compressor Station at an estimated capital cost of \$108  
6 million.

7 Union is seeking pre-approval of the recovery of the cost consequences of the Project as part of  
8 this application because:

- 9 1) The Project is an important growth project requiring a significant capital outlay.  
10 At \$204 million, the Project is comparable to Union's entire annual maintenance  
11 capital budget. The largest full year revenue requirement associated with the  
12 Project increases to approximately \$15.9 million from 2015 to 2018; in  
13 comparison, the materiality level used by Union's external auditors for the annual  
14 financial statement audit is less than \$5 million. Given the magnitude of this  
15 Project, Union is not able to proceed with the development of the Project without  
16 reasonable certainty of cost recovery;
- 17 2) It is more efficient for the Board to address all known impacts from the Project at  
18 once, and provide a predictable rate impact to Union's customers and other  
19 stakeholders. Union has provided detailed evidence in support of the Project in  
20 this application. The evidence addresses the need, the alternatives considered, the  
21 capital costs, the revenue requirement, the cost allocation and the rate impacts.

1 Accordingly, the Board will have the information and processes necessary to  
2 support the approval of the facilities and recovery of the cost consequences in this  
3 proceeding. If the Board determines that the recovery of the cost consequences  
4 are to be the subject of a future proceeding, the vast majority of the evidence  
5 presented in this proceeding would need to be re-introduced and re-tested in that  
6 future proceeding. Thus, the Board's determination of the appropriateness of the  
7 cost consequences in this proceeding represents an efficient use of regulatory time  
8 and resources, and will benefit future Board panels as they incorporate the rate  
9 and operational impacts of the Project into Union's prospective rates and other  
10 applications;

11 3) There is no reason to delay the final determination of the rate impacts. The ex-  
12 franchise customers who will pay for the majority of the Project are supportive.  
13 Furthermore, an early finding by the Board will allow those ex-franchise  
14 customers, who are primarily utilities, to incorporate the service and rate impacts  
15 into their future regulatory filings;

16 4) A finding on the rate impacts from the Project will help inform the parameters of  
17 Union's next regulatory framework; and

18 5) Beyond 2015, Union is exposed to turn back risk of Dawn to Parkway and Dawn  
19 to Kirkwall capacity. Union's ability to remarket Dawn to Kirkwall capacity is  
20 dependent on market need. Assuming market need exists, re-contracting is  
21 contingent on the construction of the Proposed Parkway D Compressor facilities  
22 and TCPL downstream facilities. In the absence of the Proposed Parkway D

1 Compressor, Union will not have the transmission compression horsepower  
2 required to be able to re-contract Dawn to Kirkwall transportation as Dawn to  
3 Parkway. Similarly, without the facility expansion as proposed by Enbridge and  
4 TCPL, Union will be unable to market this capacity to customers downstream of  
5 Parkway. This will result in unutilized transmission capacity on the Dawn-  
6 Parkway System and represents a significant revenue risk to Union.

7 A delay in the construction of the Proposed Parkway D Compressor facilities could arise from  
8 two possible sources. The first possible cause is a delay, by either Enbridge or TCPL, in  
9 constructing their proposed facilities downstream of Parkway in order to provide new  
10 transportation capacity through to Maple. The second possible cause is a delay in the regulatory  
11 approvals needed from the OEB or the National Energy Board (“NEB”).

12 The Board’s timely approval of Union’s Leave to Construct application for the Proposed  
13 Brantford-Kirkwall and Parkway D Compressor facilities, and pre-approval of recovery of the  
14 cost consequences of the Project is critical to ensuring Union can eliminate one of the possible  
15 causes of its inability to mitigate Dawn to Kirkwall turn back. In addition, all shippers who bid  
16 into TCPL’s open season will continue to work with TCPL to support their proposed expansion  
17 and ensure that TCPL’s infrastructure is expanded on a timely basis to allow the contracts and  
18 associated benefits to be realized for Ontario ratepayers.

19 In the event there is any delay in the planned construction of the facilities, Union may request a  
20 deferral account to recover from ratepayers the costs associated with the unutilized Dawn to  
21 Parkway transmission capacity.

The following section provides the revenue requirement, cost allocation methodology and rate impacts associated with the Project.

***Brantford-Kirkwall Pipeline and Parkway D Compressor Revenue Requirement and Cost Allocation Methodology***

The annual revenue requirement associated with the Project ranges from approximately (\$0.1 million) in 2015 to \$15.9 million in 2018. The revenue requirements represent the costs associated with the Project facilities deemed to be in service in each year from 2015 to 2018. The calculation of the annual revenue requirement from 2015 to 2018 and the underpinning assumptions are provided at Schedule 10-1.

In Union's 2013 Board-approved cost allocation study, the costs associated with the Dawn-Parkway System are allocated between in-franchise and ex-franchise rate classes using distance weighted Dawn-Parkway design day demands. This cost allocation methodology recognizes that the Dawn to Parkway transmission system is designed to meet easterly design day requirements and that a rate class' use of the Dawn-Parkway System depends on that rate class' design day demands and the distance those design day demands are required to be transported on the system. The current Board-approved method for allocating Dawn-Parkway transmission costs was most recently reviewed and approved by the Board in EB-2011-0210.

Union is not proposing any changes to the allocation methodology of Dawn-Parkway transmission costs as a result of the Project. In Union's view, the current Board-approved cost allocation method is appropriate because it recognizes that both in-franchise and ex-franchise customers benefit from the current Dawn-Parkway System and the development of the Project.

Based on the current Board-approved allocation of Dawn-Parkway costs, adjusted to include the increase in Union North demands of approximately 70,000 GJ/d and M12 demands of 363,000 GJ/d associated with the Project (for a total of 433,000 GJ/d), in-franchise rate classes are allocated approximately 16% of the costs directly attributable to the Project. The remaining 84% of costs directly attributable to the Project are allocated to ex-franchise rate classes.

***Rate Impacts of the Brantford-Kirkwall Pipeline and Parkway D Compressor Project***

To calculate rate impacts, Union added the largest revenue requirement directly attributable to the Project (rate base, return, interest, tax, depreciation and O&M) between 2015 and 2018 of \$15.9 million to Union's 2013 Board-approved cost allocation study. Using the allocation of Dawn-Parkway costs per the 2013 Board-approved cost allocation study, adjusted to include the increase in Union North and M12 demands described above, results in: (i) an increase of approximately \$1.6 million, allocated to Union North in-franchise rate classes, (ii) an increase of approximately \$16.0 million allocated to ex-franchise rate classes and (iii) a reduction of approximately \$1.7 million, allocated to Union South in-franchise rate classes. The cost allocation impact by rate class is provided at Schedule 10-2, column (a).

The increase in Union North in-franchise and M12 demands on the Dawn-Parkway System results in a shift of existing Dawn-Parkway costs from Union South in-franchise rate classes to Union North and ex-franchise rate classes. Specifically, Union North in-franchise rate classes are allocated approximately \$1.4 million in existing Dawn-Parkway costs and the M12 rate class is allocated approximately \$0.1 million. For Union South in-franchise rate classes, the allocation of existing Dawn-Parkway costs decreases by approximately \$1.5 million. The cost allocation



1 impact by rate class associated with the increase in Union North and M12 Dawn-Parkway  
2 demands is provided at Schedule 10-2, column (b).

3 Adding the rate base and operating costs associated with the Project as Dawn-Parkway  
4 transmission costs to the 2013 Board-approved cost allocation study results in the re-allocation  
5 of cost components that are functionalized based on rate base and O&M. As a result of the  
6 additional transmission rate base and operating costs associated with the Project, indirect costs  
7 (general plant, administrative and general expenses, and general operations and engineering  
8 costs), and taxes (income taxes, deferred taxes and property taxes) are re-allocated from  
9 distribution, storage and other transmission-related functional classifications to the Dawn-  
10 Parkway functional classification. The shift in indirect costs to the Dawn-Parkway functional  
11 classification is approximately \$3.3 million, as provided at Schedule 10-2, column (f).

12 The Project costs of \$15.9 million and the shift in indirect costs of \$3.3 million to the Dawn-  
13 Parkway functional classification (for a total of \$19.2 million) are allocated between in-franchise  
14 and ex-franchise rate classes using distance weighted Dawn-Parkway design day demands. The  
15 cost allocation impact by rate class to the Dawn-Parkway functional classification is provided at  
16 Schedule 10-2, column (d).

17 The impact on Union South in-franchise rate classes is a small rate reduction as a result of a) the  
18 increase in design day demands for Union North in-franchise rate classes and the M12 rate class,  
19 b) the shift in indirect costs and taxes and c) Union's proposal to allocate costs directly  
20 attributable to the Project between in-franchise and ex-franchise rate classes using the current  
21 approved allocation method for Dawn-Parkway transmission costs. That is, while Union South  
22 in-franchise customers will bear 10% (or \$2.0 million) of the costs directly attributable to the

1 Project, those costs are more than offset by a \$3.7 million reduction in the allocation of existing  
2 Dawn-Parkway costs and overhead costs (indirect costs and taxes). Please see Schedule 10-2,  
3 line 11, columns (b), (d) and (f).

4 In comparison to the 2013 Board-approved rates, the bill impact on the average Rate M1  
5 residential customer in Union South consuming 2,200 m<sup>3</sup> per year is a decrease of approximately  
6 (\$1.12) per year. For the average Rate 01 residential customer in Union North consuming 2,200  
7 m<sup>3</sup> per year, the bill impact is an increase of approximately \$2.80 per year. Rate M1 and Rate 01  
8 rate impacts are provided at Schedule 10-3.

9 As described in EB-2012-0433 (Union's Parkway West Project), the rate impacts associated with  
10 the Parkway West Project result in rate decreases for Union South and Union North in-franchise  
11 customers. For the average Rate M1 residential customer in Union South consuming 2,200 m<sup>3</sup>  
12 per year the bill impact is approximately (\$1.25) per year, while for the average Rate 01  
13 residential customer in Union North consuming 2,200 m<sup>3</sup> year the bill impact is approximately  
14 (\$1.00) per year.

15 In its Parkway West Project application, Union is currently proposing to build the first full-year  
16 revenue requirement of \$15.3 million in 2016 into in-franchise delivery rates and ex-franchise  
17 transportation rates effective January 1, 2016. The annual revenue requirement associated with  
18 the Parkway West Project ranges from (\$0.3 million) in 2014 to \$16.6 million in 2018. In the  
19 next several weeks, Union expects to file an update to its Parkway West Project application to  
20 amend its rate implementation proposal.

To calculate rate impacts associated with the Parkway West Project and Brantford-Kirkwall and the Parkway D Compressor Project on a combined basis, Union added the largest annual revenue requirement for Parkway West (\$16.6 million) and the largest annual revenue requirement for the Brantford-Kirkwall and Parkway D Compressor project (\$15.9 million) to its 2013 Board-approved cost allocation study.

For the average Rate M1 residential customer in Union South consuming 2,200 m<sup>3</sup> per year the bill impact of both projects is approximately (\$1.89) per year. For the average Rate 01 residential customer in Union North consuming 2,200 m<sup>3</sup> per year the bill impact of both projects is approximately \$2.92 per year. Rate M1 and Rate 01 rate impacts are provided at Schedule 10-4.

For ex-franchise customers taking M12 Dawn-Parkway transportation service, the Brantford-Kirkwall and Parkway D Compressor Project are expected to increase the M12 rate by approximately \$0.003/GJ/d; from \$0.078/GJ/d to \$0.081/GJ/d.

As described in EB-2012-0433 (Union's Parkway West Project), the rate impacts associated with the Parkway West Project are expected to increase the M12 Dawn-Parkway transportation rate by approximately \$0.010/GJ/d; from \$0.078/GJ/d to \$0.088/GJ/d. Union's planned update to the Parkway West Project application to amend its rate implementation proposal is not expected to change the M12 Dawn-Parkway transportation rate impacts described above.

Including the rate impacts of both the Parkway West Project and Brantford-Kirkwall and Parkway D Compressor Project, Union estimates that the M12 Dawn-Parkway transportation rate will increase by approximately \$0.013/GJ/d; from \$0.078/GJ/d to \$0.091/GJ/d.

1 Despite this proposed M12 rate increase, Union's M12 transportation rates will continue to be  
2 well within the historical range of \$0.07/GJ/d to \$0.10/GJ/d. Schedule 10-5 provides the  
3 historical M12 Dawn to Parkway transportation rate from 1995 to 2013. The M12 rate impacts  
4 for all transportation paths are provided at Schedule 10-6.

#### 5 ***Rate Implementation***

6 Effective January 1, 2015, Union proposes to build the annual costs and the increase in Union  
7 North and M12 demands on the Dawn-Parkway System associated with the Project into Union  
8 South delivery rates, Union North gas supply transportation and storage rates, and ex-franchise  
9 transportation rates based on the cost estimates included in this application.

10 To align with an anticipated 2014 to 2018 Incentive Regulation term, Union also proposes to  
11 adjust in-franchise and ex-franchise rates on an annual basis from 2015 to 2018 in order to  
12 recover the estimated annual costs associated with the Project. Please see Schedule 10-7 for the  
13 proposed annual rate adjustments.

14 Union proposes to track any variance between what is approved in rates for the Project and the  
15 actual annual revenue requirement of the Project in a new deferral account. Union will dispose  
16 of any balance in the deferral account as part of Union's annual non-commodity deferral account  
17 disposition proceeding. The proposed draft accounting order is provided at Schedule 10-8.

18 As noted above, Union expects to file an update to its Parkway West Project application to  
19 amend its rate implementation proposal. Specifically, Union will propose to build the annual  
20 revenue requirement associated with the Parkway West Project into Union South delivery rates,  
21 Union North gas supply transportation and storage rates, and ex-franchise transportation rates

1 effective January 1, 2014. Union will also propose to adjust in-franchise and ex-franchise rates  
2 on an annual basis from 2014 to 2018 in order to recover the costs associated with the Parkway  
3 West Project. With the amendment to the Parkway West Project rate implementation proposal,  
4 Union's rate implementation proposals for the Parkway West and the Brantford -Kirkwall and  
5 Parkway D Compressor projects will be consistent.

6

**SECTION 11**

**PRE-APPROVAL OF THE COST CONSEQUENCES OF TWO LONG-TERM  
TRANSPORTATION CONTRACTS**

***Introduction***

The purpose of this evidence is to request pre-approval of the cost consequences of two long-term transportation contracts in accordance with the Filing Guidelines for Pre-Approval of Long-Term Natural Gas Supply and/or Upstream Transportation Contracts (the “Guidelines”), issued by the Board in EB 2008-0280.

In May, 2012, Union entered a TCPL open season for two new short haul firm TCPL transportation contracts (the “Contracts”) from Union Parkway Belt to the Union Northern Delivery Area and from Union Parkway Belt to the Union Eastern Delivery Area. The volume of these two contracts totals 110,000 GJ/d and will commence November 1, 2015. This capacity, when combined with additional Union Dawn to Parkway transportation capacity of approximately 70,000 GJ/d, will allow Dawn sourced gas to be delivered to the benefit of Union North sales service and bundled direct purchase customers.

The demand charges associated with the Contracts over the 10 year term are in excess of \$110 million. The size of Union’s financial commitment is part of the rationale for seeking pre-approval of the cost consequences from the Board.

These new contracts will deliver benefits for Union’s customers by responding to changes in the North American gas market. The annual gas cost savings to Union North sales service and bundled direct purchase customers are \$18 million to \$28 million. Natural gas plays a significant

1 and growing role in meeting the energy needs of Ontario. From heating homes and businesses,  
2 fueling manufacturing to generating electricity, having access to abundant, reliable and  
3 economically priced natural gas is key to maintaining a competitive economy in Ontario.

4 As discussed in Section 4, gas supply in North America is undergoing fundamental change.  
5 Traditional supply basins like the WCSB are expected to continue to decline while the shale  
6 supply basins, like the Marcellus, continue to grow. This trend has created a shift in the  
7 traditional flows of natural gas in North America and has resulted in movement away from long  
8 haul transportation towards short haul transportation.

9 Union is proactively responding to the changing North American natural gas supply dynamics  
10 and the needs of its customers by making fundamental changes in its portfolio. Union applies its  
11 long-standing gas supply planning principles, ensuring a reliable, secure supply for its customers  
12 at a reasonable cost. The Contracts will result in projected gas cost savings of \$18 million to \$28  
13 million per year for Union North customers based on proposed 2013 TCPL tolls and approved  
14 2012 TCPL tolls, respectively. As detailed in Section 11.5, Union has also assessed the potential  
15 long haul de-contracting impact on TCPL, and, while the gas cost savings are decreased slightly  
16 as a result of de-contracting, the overall benefit remains significant.

### 17 ***The Guidelines***

18 In EB-2008-0280, the Board issued the Guidelines for the pre-approval of long term natural gas  
19 supply and/or upstream transportation contracts. The Guidelines establish the pre-approval  
20 process for long term contracts that support development of new natural gas infrastructure to  
21 connect to new supplies. New infrastructure was defined as new greenfield pipeline facilities to

1 access new natural gas supply sources. Further the Guidelines refer only to the pre-approval of  
2 the cost consequences of contracts, where the cost consequences are material and need to be  
3 committed well in advance of the date on which gas will flow. The process is not a requirement,  
4 and is not to be used for the normal day to day or “business as usual” contracting of the utility.

5 The Guidelines set out the information requirements that an applicant must file when seeking  
6 pre-approval. These information requirements include the contract parameters (as well as the  
7 contract itself), the needs, costs, and benefits. The Guidelines also require the applicant to  
8 address contract diversity within the transportation portfolio, provide a risk assessment and  
9 identify any other relevant considerations.

10 In EB-2010-0300, the Board considered a request by Union for pre-approval of a TCPL Niagara  
11 to Kirkwall contract. This contract was for a volume commitment of 21,101 GJ/d for a 10 year  
12 term commencing November 1, 2012.

13 In its Decision, the Board denied pre-approval of the Niagara to Kirkwall contract, the Board  
14 commented on the importance of evidence pertaining to security of supply and supply portfolio  
15 diversity, and the relationship between the contracts at issue and supporting infrastructure.

16 Natural gas utilities/LDC’s play a key role in developing new natural gas infrastructure. Large  
17 natural gas pipeline infrastructure investments require long term commitments to ensure their  
18 viability. LDC’s have a proven track record of supporting such projects due to their credit  
19 worthiness.

20 The Board acknowledged the role played by LDC’s in the development of natural gas  
21 infrastructure. In EB-2010-0300 the Board stated:



1 “It is the Board’s view that its process for the pre-approval of the costs consequences of  
2 long-term transportation or supply contracts was intended to serve a very specific role in  
3 the development of natural gas infrastructure in the interests of Ontario consumers.  
4 Adoption of the process was recognition by the Board that as a matter of commercial  
5 reality the developers of natural gas infrastructure must in some circumstances require  
6 long-term commitments to support large infrastructure investments. With such assurances  
7 in hand the developer can proceed with the project with confidence and can secure  
8 financing on the strength of such commitments.

9 The Board recognized that the enrolment of regulated utilities for such long term  
10 arrangements would be a necessary and desirable element in new infrastructure  
11 development. It considered that in order to facilitate such developments it was reasonable  
12 to make provision for an extraordinary process wherein the costs consequences of such  
13 long term arrangements could be pre-approved. This was so because regulated utilities  
14 whose sourcing decisions are typically and conventionally subject to ex post facto  
15 prudence review would be reluctant or unwilling to accept very significant long-term  
16 commitments without assurances of costs recovery. The result would be a frustration of  
17 demonstrably needed new natural gas infrastructure.”

18 ***The Guidelines Apply to this Application***

19 Union has reviewed the EB-2010-0300 Decision and it is Union’s view that the Guidelines apply  
20 to the Contracts. There are significant benefits to Union North ratepayers arising from the  
21 Contracts. The Contracts do not represent “business as usual” contracting in Union’s portfolio.  
22 Union acknowledges the new Contracts are primarily related to the expansion of existing

1 pipeline infrastructure and not a new greenfield pipeline. However, the significant infrastructure  
2 planned by TCPL, Enbridge and Union along the path (estimated to be \$600 million to \$700  
3 million), along with the long term contractual transportation commitment, reflect a fundamental  
4 change in how the Union North operating area will be served. There is no other forum for the  
5 Board to review the prudence of this fundamental change to the Union North gas supply  
6 portfolio prior to a long-term contractual commitment being made.

7 Specifically, the Guidelines apply because:

8 (a) The Contracts provide access to new supply basins for Union North. Today, Union  
9 North is predominantly supplied by the WCSB via long haul TCPL transportation.

10 The Contracts, together with the proposed Union facilities and those to be built by  
11 TCPL and Enbridge, will provide access to Dawn and the diverse supply basins that  
12 are connected to Dawn. This represents a fundamental shift in how Union North is  
13 served.

14 (b) There are significant economic benefits of \$18 million to \$28 million per year to  
15 customers as a result of these changes in the Union North portfolio.

16 (c) These Contracts represent significant volume and cost commitments by Union  
17 (110,000 GJ/d of transportation capacity for 10 years). The total cost commitment  
18 exceeds \$110 million.

19 (d) The capacity associated with these Contracts represents a sizeable portion of the  
20 capacity underpinning the significant infrastructure investments by TCPL, Enbridge  
21 and Union along the path of approximately \$600 million to \$700 million. Although

1 not a new greenfield pipeline, these investments are significant and will create new  
2 opportunities for gas to flow in response to changes in the North American gas supply  
3 dynamics providing access to new sources of supply for Union North customers that  
4 would not otherwise be accessible.

5 (e) The gas cost savings for Union North customers as a result of these Contracts will  
6 only materialize with the approval of the Brantford - Kirkwall/Parkway D project and  
7 the approval and construction of the related facilities by Enbridge and TCPL.  
8 Addressing the approval of the long term Contracts and the facilities in a single  
9 application is appropriate and efficient.

10 The evidence in support of this request for pre-approval is organized as follows:

- 11 1. Union Gas Upstream Transportation Portfolio for Union South and Union North
- 12 2. TCPL Contracting Process and Implications for Union's System
- 13 3. Infrastructure Investment
- 14 4. Rationale for the Contracts (Benefits and Risk Assessment)
  - 15 a) Enhanced Security of Supply
  - 16 b) Diversity of Supply
  - 17 c) Economic Benefits
  - 18 d) Risks and Mitigation Measures

5. Impact of Union's Contract changes on TCPL tolls and Union Customers

6. Cost Allocation, Rate Design, and Rate Impacts

7. Summary

**1. Union Gas Upstream Transportation Portfolio for Union South and Union North**

For gas supply planning purposes, Union is divided into two separate operating areas: Union South and Union North. As discussed below, Union South is served using a diversified supply portfolio, while Union North is served almost exclusively using WCSB supplies at Empress via TCPL long haul transportation.

**Union South**

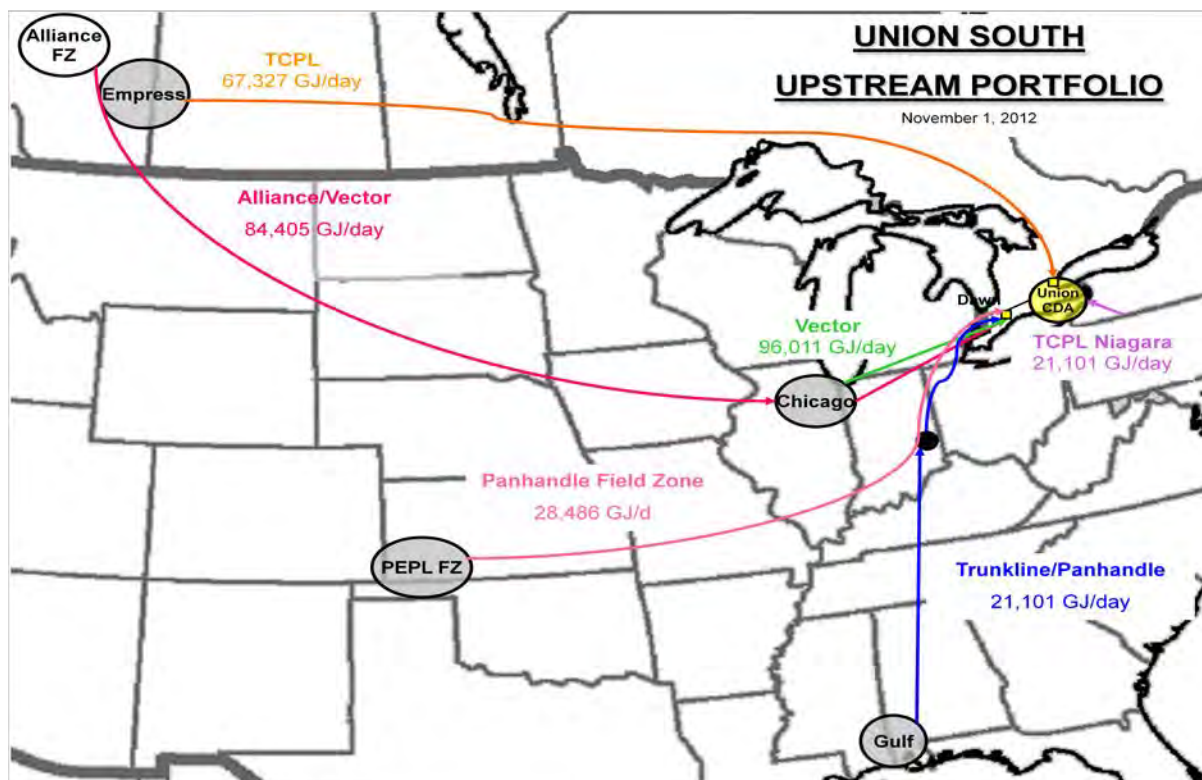
Union South includes customers located west of Mississauga and south of Georgian Bay (Windsor/Chatham, London/Sarnia, Waterloo/Brantford and Hamilton/Halton Districts). Today, the Union South gas supply portfolio relies on the WCSB for less than 40% of its annual supply needs.

To serve Union South, Union contracts for capacity on multiple upstream pipelines to access several supply basins or market hubs. These upstream pipelines provide access to supplies in Western Canada, Gulf of Mexico, Chicago, the U.S. mid-continent and the Marcellus shale basin. Union may also serve Union South by purchasing supply at Dawn.

Effective November 1, 2012, Union increased the diversity of the transportation portfolio serving Union South by contracting on TCPL to move supply from Niagara to Union's interconnect at Kirkwall. This contract provides Union access to gas from the Marcellus shale formation. The

portfolio of supply and transportation assets provides diversity and reduces the exposure to price volatility for Union South customers. The diversity of the portfolio for Union South is shown below in Figure 11-1.

**Figure 11-1**



## Union North

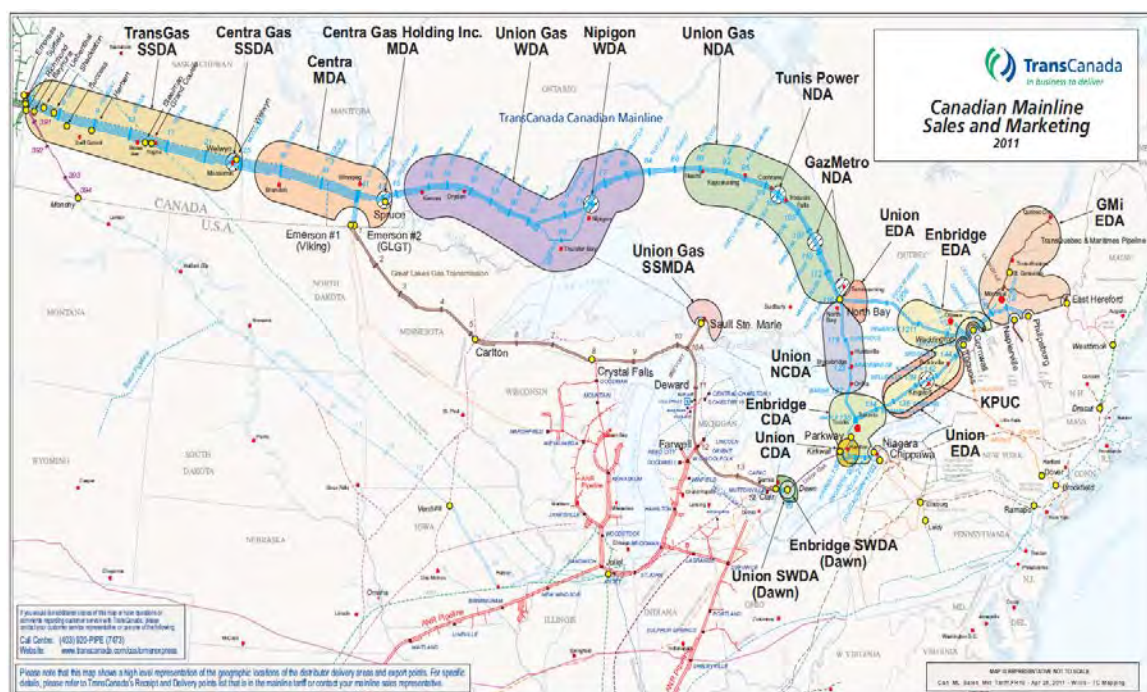
Union North is located throughout Northern and Eastern Ontario, from the Manitoba border in the west, to Cornwall in the east. Union North is further divided into six delivery areas for gas supply planning purposes. Five of the delivery areas align with delivery areas on the TCPL Mainline. Union's Manitoba Delivery Area is connected to the TCPL Mainline at the Spruce interconnect and the Centra MDA by two additional pipelines.

From West (Manitoba border) to East (Cornwall) the delivery areas are:

- (a) Manitoba Delivery Area (“MDA”)
- (b) Union Western Delivery Area (“Union WDA”)
- (c) Union Northern Delivery Area (“Union NDA”)
- (d) Union Sault Ste. Marie Delivery Area (“Union SSMDA”)
- (e) Union North Central Delivery Area (“Union NCDA”)
- (f) Union Eastern Delivery Area (“Union EDA”)

A map of these delivery areas is provided as Figure 11-2 below.

**Figure 11-2**

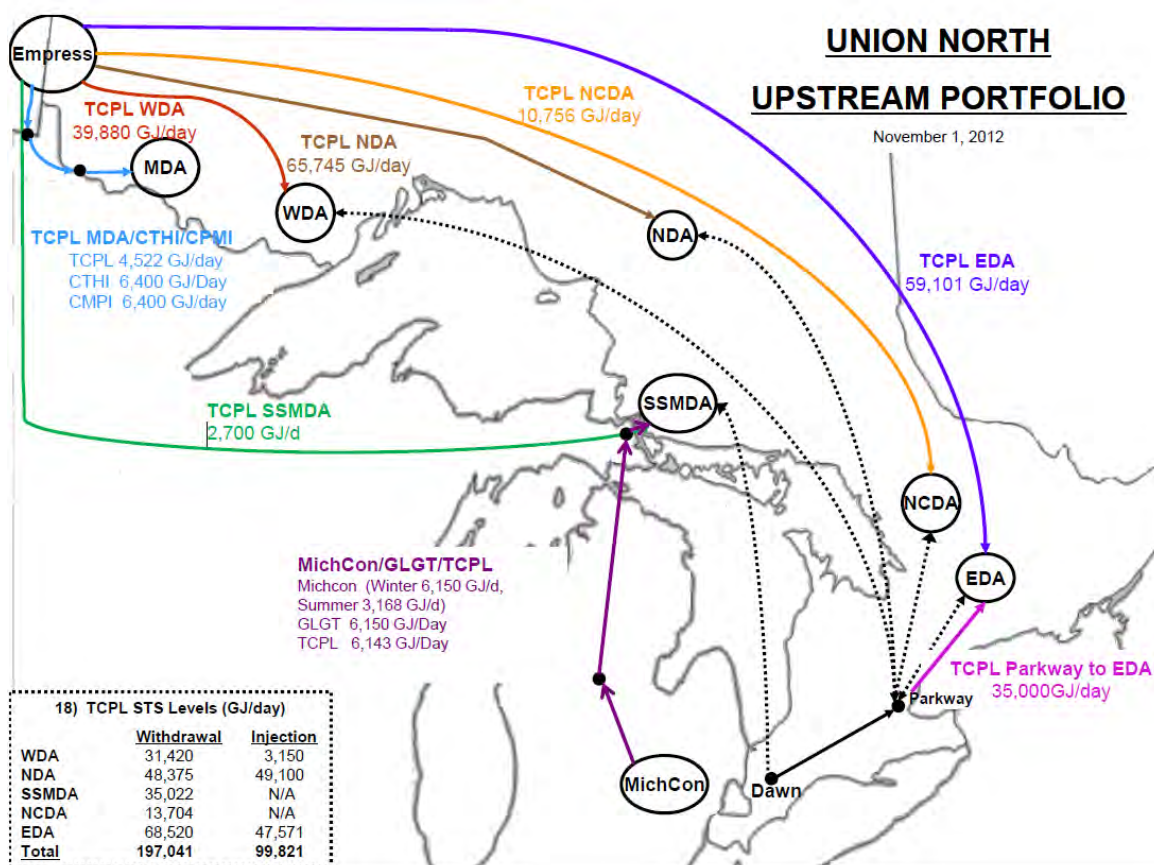


1 All of the customers in Union North are served directly from TCPL interconnects and the vast  
2 majority are served almost exclusively from the WCSB. As is shown in Figure 11-3 below,  
3 Union utilizes a portfolio of contracted firm assets including TCPL long haul firm transportation,  
4 TCPL short haul firm transportation and TCPL Storage Transportation Service (“STS”) firm  
5 service to meet the needs of Union North.

6 STS is only available to TCPL long haul firm shippers. The use of STS allows Union North  
7 customers to access storage at Dawn, reducing the amount of long haul capacity that would  
8 otherwise be required. STS injections allow for excess gas landing in a delivery area, on a given  
9 day, to move to Dawn or Parkway. At Parkway, Union can transport gas to storage on the Dawn-  
10 Parkway System. STS withdrawals allow gas to be withdrawn from storage and transported to  
11 Parkway using the Dawn-Parkway System and then using the TCPL system, transported to the

1 delivery areas in Union North where gas is required.

2 **Figure 11-3**



4 As shown above, Union's North portfolio is primarily dependent on WCSB supply at Empress.

5 In 2011, Union took the first step toward achieving supply diversity in Union North by

6 contracting for firm transportation on the GLGT system from Michigan to the Union SSMDA.

7 This gas is sourced in Michigan on the MichCon system and transported to the Union SSMDA

8 via GLGT and TCPL. This new supply source has reduced the cost of gas for Union North

9 customers, reduced potential transportation toll volatility and enhanced reliability and security of

10 supply. These contracts were identified by Union in EB-2011-0210 (2013 Rebasing proceeding),

11 and EB-2012-0087 (2011 Deferral and Earnings Sharing proceeding). As a result, Union North



1 contracted capacity is now approximately 95% from the WCSB and 5% from Michigan. Union  
2 did not seek pre-approval of these contracts due to the relatively small volume and the fact that  
3 no new infrastructure was required.

4 By increasing the level of diversity in Union North, Union has enhanced security of supply by  
5 reducing supply from the WCSB and the corresponding TCPL long haul transportation contracts.  
6 These two new Contracts will allow Union to replace a portion of long haul TCPL transportation  
7 from Empress with short haul deliveries from Dawn to the Union EDA and Union NDA. This  
8 significant change will afford Union North greater access to Dawn and the multiple supply  
9 basins Dawn connects to. This will provide diversity benefits to Union North that Union South  
10 has enjoyed by reducing Union North supply from the WCSB to about 55%. This is a  
11 fundamental change in how Union North customers are served. These changes result in  
12 significant gas cost benefits to Union North customers.

13 The increased diversity resulting from new Contracts and the associated turn back of TCPL long

14

1 haul transportation in the Union North Portfolio is summarized in Figure 11-4 below.

**Figure 11-4**

**Union North System Sales and Direct Purchase Transportation Portfolio**

	Pre-November 2011 (1)		At November 2011 (2)		At November 2015	
	Annual contracted capacity (TJ)	% of portfolio	Annual contracted capacity (TJ)	% of portfolio	Annual contracted capacity (TJ)	% of portfolio
From Empress	60,594	100%	58,330	96%	33,572	55%
From Michigan	-	0%	2,242	4%	2,242	4%
From Dawn	-	0%	-	0%	24,758	41% (3)
Total	60,594		60,572		60,572	

(1) per EB-2011-0210 Rate Order Working Papers, Schedule 21, page 1 of 9, lines 1-7 (column a)

(2) per EB-2011-0210 Rate Order Working Papers, Schedule 21, page 1 of 9, lines 1-7 (column o)

(3) per Figure 11-5, EDA and NDA long haul proposed turn back - 67,831 GJ/d times 365 days

2

3

**2. TCPL Contracting Process and Implications on Union's System**

A new capacity open season was conducted by TCPL from March 30, 2012 through May 4, 2012. Union bid in the open season and was awarded capacity for two new long term transportation contracts on the TCPL system that originally were to commence service November 1, 2014 (the Contracts).

The Contracts commence at the TCPL "Union Parkway Belt" and terminate in the Union NDA and Union EDA.

In September 2012, TCPL informed Union that it would no longer be able to meet the original November 1, 2014 in service date. TCPL re-issued new Precedent Agreements ("PAs") dated March 7, 2013 for an effective in service date of November 1, 2015. The TCPL PAs outline the contractual terms and the Estimated Liability Limit (in case of cancellation) and expected spend schedules that Union is committing to TCPL. Union is in discussions with TCPL and expects they will be executed shortly.

The Contracts with TCPL are for 100,000 GJ/d of firm short haul transportation capacity between Parkway Belt and the Union EDA, and 10,000 GJ/d of firm short haul transportation capacity between Parkway Belt and the Union NDA. Service will commence on November 1, 2015.

The parameters for the Contracts are set out below:

1    Contract for: Union Parkway Belt to Union EDA

- 2        •    Transportation Provider: TransCanada Pipeline
- 3        •    Quality of Service: FT (Firm Transportation Service)
- 4        •    Primary Term: November 1, 2015 through October 31, 2025
- 5        •    Volume: 100,000 GJ/d
- 6        •    Rate: TCPL NEB approved mainline toll, currently demand is at \$8.15784/GJ/month and
- 7           the commodity toll is \$0.01535/GJ. This equates to annual demand charges of \$9.8
- 8           million or \$98 million over the 10 year term of the contract.
- 9        •    Receipt Point: Union Parkway Belt
- 10       •    Delivery Point: Union EDA
- 11       •    Renewal Notice: Upon expiration of the primary term, Union has the option to renew up
- 12           to the existing volume indefinitely, for further periods of at least one year, on 6 months
- 13           prior notice.

14   Contract for: Union Parkway Belt to Union NDA

- 15       •    Transportation Provider: TransCanada Pipeline
- 16       •    Quality of Service: FT (Firm Transportation Service)
- 17       •    Primary Term: November 1, 2015 through October 31, 2025

- 1       • Volume: 10,000 GJ/d
- 2       • Rate: TCPL NEB approved mainline toll, currently demand is at \$12.3062/GJ/month and
- 3       the commodity toll is \$.02546/GJ. This equates to annual demand charges of \$1.5
- 4       million or \$15 million over the 10 year term of the contract.
- 5       • Receipt Point: Union Parkway Belt
- 6       • Delivery Point: Union NDA
- 7       • Renewal Notice: Upon expiration of the primary term, Union has the option to renew up
- 8       to the existing volume indefinitely, for further periods of at least one year, on 6 months
- 9       prior notice

10   Once in service, the PAs will terminate to be replaced with TCPL's standard FT Service Contract  
11   at NEB approved rates. A copy of TCPL's standard FT service contract<sup>4</sup>, along with the related  
12   FT Toll Schedule and General Terms and Conditions are attached as Schedule 11-1 and Schedule  
13   11-2. The Contracts will replace several other TCPL transportation contracts held by Union.  
14   Although Union does not need to make a final decision on which TCPL transportation capacity it  
15   will de-contract until April 30, 2015, Union will de-contract a portion of both Empress to Union  
16   EDA and Empress to Union NDA long haul transportation capacity, as well as reduce TCPL  
17   Storage Transportation Service (STS) injection and/or withdrawal quantities.

18   The details of the changes in TCPL capacity in the Union North Portfolio for Union NDA and

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<sup>4</sup> Union will file contracts for Parkway to Union EDA and Parkway to Union NDA firm transportation services once executed.

1 Union EDA are summarized in Figure 11-5.

**Figure 11-5**  
**TCPL Capacity Changes (GJ/d)**

	<b><u>Current</u></b>	<b><u>Required</u></b> <b><u>Nov 1, 2015</u></b>	<b><u>Proposed</u></b> <b><u>Change</u></b>
<b><u>Union EDA</u></b>			
Empress to Union EDA (Longhaul)	58,831	1,000	(57,831)
STS Withdrawals	68,520	26,973	(41,547)
Parkway Belt to Union EDA	-	100,000	100,000
STS Injections	47,571	1,000	(46,571)
<b><u>Union NDA</u></b>			
Empress to Union NDA (Long- haul)	49,077	39,077	(10,000)
Parkway Belt to Union NDA	-	10,000	10,000
STS Injections	49,100	39,077	(10,023)

2

3 The Contracts will require incremental Union Dawn to Parkway transportation capacity to

4 transport the necessary volumes from Dawn to Parkway. The Contracts will then transport the

5 gas from Parkway to the respective delivery areas. In the spring of 2012, Union held an Open

6 Season for Dawn to Parkway capacity. Union's requirements for incremental Dawn to Parkway

1 capacity for its system sales and bundled direct purchase customers were incorporated in that  
2 open season.

3 The amount of Dawn-Parkway transportation required is 70,157 GJ/d. This requirement is a  
4 result of 57,831 GJ/d of TCPL Empress to the Union EDA being turned back and 10,000 GJ/D  
5 of TCPL Empress to the Union NDA being turned back and replaced with short haul  
6 transportation from Parkway. These amounts account for 67,831 GJ/d of the total requirement.  
7 The remaining requirement of 2,326 GJ/d is due to further portfolio changes unrelated to these  
8 two new Contracts which allow Union to reduce reliance on other TCPL transportation designed  
9 to serve Union North. The STS withdrawal capacity of 41,547 GJ/d in the Union EDA is also  
10 being de-contracted and replaced with TCPL firm short haul transportation capacity from  
11 Parkway. No additional Dawn-Parkway capacity is required to support this 41,547 GJ/d portion  
12 of incremental TCPL firm short haul transportation capacity. The Dawn-Parkway capacity was  
13 already in place to support this STS withdrawal capacity. Further, STS injection capacity,  
14 transports gas from the delivery area to Dawn directly, or from Parkway to Dawn and therefore  
15 does not impact the Union Dawn-Parkway capacity requirement.

16 The in-franchise Dawn-Parkway transportation requirement is included in the facilities  
17 requirements for the Proposed Pipeline and Parkway D Compressor found at Section 7, Figure 7-  
18 4 of this evidence.

### 19 **3. Significant Infrastructure Investment Required**

20 The Contracts underpin facilities expansions proposed by Union, TCPL and Enbridge, totaling  
21 \$600 to \$700 million. Given the significant and material investments proposed by Union, TCPL

1 and Enbridge and the fact that the Contracts account for a significant portion of the new capacity,  
2 it is Union's view that the Board should review and approve the cost consequences of the  
3 Contracts in the context of Union's facilities application which they support.

4 Sourcing natural gas supply at Dawn rather than from the WCSB to meet market demand east of  
5 Parkway creates the need to expand the Dawn-Parkway System. The capital investment  
6 associated with expanding the Dawn-Parkway System is \$204 million. This investment in the  
7 expansion of the Dawn-Parkway System is in addition to the capital investments proposed by  
8 Union in EB-2012-0433 (Parkway West Project) of \$203 million. The Parkway West facilities  
9 include a new site that will facilitate the growth compression included in this application, as well  
10 as the Loss of Critical Unit (LCU) which will also ensure security of supply for Union North  
11 customers.

12 In addition to Union's proposed capital investments, TCPL and Enbridge must invest in  
13 infrastructure between Parkway and Maple to facilitate the shift from WCSB supplies shipped  
14 via long haul transportation to Dawn based supplies utilizing short haul transportation services.  
15 TCPL and Enbridge have agreed to share usage of Segment "A" of Enbridge's GTA project to  
16 serve Enbridge's distribution needs and TCPL's transportation needs. As a result, Enbridge's  
17 Segment "A" will be upsized from NPS 36 to NPS 42, with TCPL building from the termination  
18 of Segment "A" to the TCPL pipeline. Union estimates that TCPL will invest \$200 million to  
19 \$300 million to accommodate the contractual requirements of Union and other shippers. These  
20 investments require commitments by Union and other shippers to ensure their commercial  
21 viability.



1 **4. Rationale for the Contracts (Benefits and Risk Assessment)**

2 North American natural gas markets are experiencing dramatic changes. Production from  
3 mature natural gas basins such as the WCSB are in decline while new production basins like the  
4 Marcellus and Utica have emerged. These supply changes are causing shifts in gas supply  
5 portfolios in such that new supply basins are being accessed using short haul transportation  
6 capacity rather than traditional long haul transportation capacity associated with the mature  
7 basins. This has allowed market participants to contract for gas supply at liquid hubs located  
8 closer to market areas.

9 The major factors influencing this trend are described in more detail in Sections 4 and 5 and in  
10 Union's EB-2012-0433 (Parkway West Project prefiled evidence). They include:

- 11 • Conventional WCSB supply is in decline, while intra-Alberta consumption is increasing.  
12 This decreases the amount of gas supply available to be exported east to Ontario ( EB-  
13 2012-0433 pages 19 through 21, and Figure 4-4).
- 14 • Although Western shale production in British Columbia and the development of shale gas  
15 resources in Alberta may help stabilize WCSB production levels it is unclear which  
16 national, continental or international markets will access this emerging Western Canadian  
17 shale gas. For example there are multiple Liquefied Natural Gas facilities being proposed  
18 for coastal British Columbia all vying for these new shale supplies. This creates  
19 uncertainty around the availability of WCSB supplies to serve traditional markets (EB-  
20 2012-0433 pages 21 through 22 and Figure 4-5).

- 1       • Declining supplies have reduced volumetric throughput on TCPL resulting in significant  
2       increases in TCPL long haul transportation tolls ( EB-2012-0433 page 22).
  
- 3       • New shale supplies in the U.S. have emerged. One of the most prolific gas supply growth  
4       areas in North America has been in the Appalachian basin. Appalachian shale gas is  
5       produced mainly from the Marcellus in Pennsylvania, Ohio and West Virginia and more  
6       recently from the Utica in eastern Ohio and Western Pennsylvania. Marcellus shale gas  
7       production alone has increased nearly 7 PJ/d since the beginning of 2007. It is located  
8       within the Great Lakes region in close proximity to Ontario and other eastern North  
9       American consuming markets. Supplies from this area are expected to more than triple  
10      by 2035. To put this into perspective, Ontario natural gas demand averages just less than  
11      3 Bcf/d (EB-2012-0433, pages 26 through 30).
  
- 12     • The rapid increase in natural gas supplies has put downward pressure on North American  
13     natural gas prices and reduced pricing volatility. It has also changed the relative price  
14     differences between regions across North America. The change in the regional pricing of  
15     natural gas has impacted market behavior and has allowed eastern North American  
16     customers access to supplies that are in close proximity to their markets this has  
17     decreased the supplies from traditional supply basins requiring long haul transportation  
18     (Section 5).
  
- 19     • With less Western Canadian supply available to move east, many eastern North  
20     American customers have already rebalanced their supply portfolio in order to access  
21     supplies in closer proximity via short haul transportation and de-contracting supplies on  
22     long haul transportation from the WCSB. These customers include Gaz Métro, ANE,

Enbridge, Centra Manitoba, and Union. Significant amounts of TCPL long haul transportation capacity has also been turned back by marketers and End Users.

Union's Gas Supply portfolio is guided by a set of principles. These principles are designed to ensure customers have access to secure and reliable supplies at a prudently incurred cost and are as follows:

- Ensure secure and reliable gas supply to Union's service territory;
- Minimize risk by diversifying contract terms, supply basins and upstream pipelines
- Encourage new sources of supply as well as new infrastructure to Union's service territory;
- Meet planned peak day and seasonal gas delivery requirements: and,
- Deliver gas to various receipt points on Union's system to maintain system integrity

When deciding to acquire the Parkway to Union EDA and Parkway to Union NDA transportation capacities by way of TCPL's new capacity open season, Union considered the following factors:

- (a) Enhanced Security of Supply
- (b) Diversity of Supply
- (c) Economic Benefits
- (d) Risks and Mitigation Measures

1 (a) Enhanced Security of Supply

2 Adjusting and proactively responding to declining supplies in the WCSB is a necessary and  
3 prudent course of action for Union North customers. Union's proposal addresses this  
4 fundamental change in the gas supply environment.

5 As described in Section 4, pages 1-3, the amount of gas supply available from the WCSB to  
6 move east from Empress is currently in decline and is expected to continue to decline into the  
7 future. Natural gas supplies available to be exported out of Alberta have declined from  
8 approximately 10 PJ/d in 2001 to approximately 6.5 PJ/d in 2011 and are forecast to decline to 2  
9 PJ/d by 2021<sup>5</sup>. TCPL receipts at Empress have declined from 5.5 Bcf/d in 2005 to about 2.1  
10 Bcf/d today.

11 This reduction in supply is a risk for Union North customers as it brings into question whether  
12 there will be sufficient supply at competitive prices available on a sustained basis. Union, and  
13 other eastern LDCs, are responding to this competitive supply risk by proactively contracting  
14 transportation to access new supply options in their supply portfolios with natural gas sourced  
15 from other production basins.

16 To date, customers in Union EDA and Union NDA have been served exclusively from WCSB  
17 supplies. The lack of access to other supply basins has limited the benefits of diversification  
18 available to Union North customers and impacted security of supply. The two new short haul  
19 transportation contracts reflect an opportunity to diversify away from sole reliance on the WCSB  
20 and will allow Union North customers to access Dawn and the multiple supply basins connected

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<sup>5</sup> ST98-2012 Alberta's Energy Reserves 2011 and Supply/Demand Outlook 2012-2021", dated June 2012 (Union's prefiled evidence in EB-2012-0433, Page 20, Figure 4.4).

1 to Dawn for a portion of their supply portfolio. This will provide the type of security of supply  
2 benefits to Union North that Union South has enjoyed for many years by allowing access to  
3 secure and reliable sources of supply available at Dawn.

4 (b) Diversity of Supply

5 Accessing supplies at Dawn will increase the diversity and availability of gas supply in the  
6 Union North Portfolio because of the number of sources of supply connected at Dawn.

7 Union receives natural gas at Dawn from a number of interconnecting pipelines which connect  
8 the Dawn Hub to most of North America's major supply basins. Dawn also has significant  
9 storage capacity in close proximity and over 100 counterparties that buy and sell natural gas.  
10 Union's Dawn Hub has been recognized as a key market hub for the Province of Ontario and the  
11 entire Great Lakes region.

12 The Board identified the importance of the Dawn Hub in its NGEIR Decision (EB-2005-0551,  
13 November 7, 2006, page 7-8):

14 "The Dawn Hub is an increasingly important link that integrates gas produced from  
15 multiple basins for delivery to customers in the Midwest and Northeast.

16 ...Dawn has many of the attributes that customers seek as they structure gas transactions  
17 at the Chicago Hub: access to diverse sources of gas production; interconnection to  
18 multiple pipelines; proximity to market area storage; choice of seasonal and daily peak  
19 and loan services; liquid trade markets; and opportunities to reduce long haul pipeline  
20 capacity ownership by purchasing gas at downstream liquid hubs."

1 The availability of competitively and transparently priced natural gas supplies and services that  
2 come with an effective and efficient trading hub has benefitted all Ontarians. It is a point where  
3 Ontario natural gas fired power plants purchase their supply. It is critical that Union North  
4 customers also have access to source gas at Dawn.

5 Union has pursued a diverse supply portfolio in Union South and has achieved considerable  
6 diversity, including buying gas at Dawn. This diversity has created a portfolio that is secure,  
7 reliable and reasonably priced. This has allowed Union South customers access to multiple  
8 supply basins, reduced gas price volatility and increased liquidity and price transparency at  
9 Dawn.

10 By expanding the level of diversity for Union North, Union is better able to balance the Union  
11 North supply portfolio with both WCSB and Dawn supply by reducing TCPL long haul  
12 transportation contracts and replacing them with the Contracts. WCSB supply will continue to  
13 be part of Ontario's natural gas supply portfolio. However the Contracts, in addition to Union's  
14 Dawn- Parkway transportation capacity, will allow Dawn sourced gas (which may include  
15 WCSB sourced gas) to be accessed and provide supply diversity for Union North customers.

16 These changes to the Union North Portfolio adhere to Union's guiding principles to minimize  
17 risk to Union North customers by diversifying supply basins, upstream pipelines and contract  
18 terms. The level of diversity created in the portfolio from the Contracts will reduce the portion  
19 of the Northern portfolio served from the WCSB from approximately 95% to 55% and will  
20 provide significant economic benefit to Union North customers.

1 (c) Economic Benefits

2 Union has determined that there are significant costs savings that will accrue to Union North  
3 customers of \$18 million to \$28 million annually over the 10 year term of the Contracts. The  
4 aggregate level of expected savings is \$180 million to \$280 million over the contract term that  
5 will accrue to Union North sales service and bundled direct purchase customers.

6 In addition to the improvement in security and diversity of supply in the Union North Portfolio  
7 described above, Union has also performed a number of economic analyses to determine the  
8 economic implications of its decision to enter into the Contracts.

9 To determine the economic benefit of the Contracts, Union has performed an analysis of the  
10 overall projected gas cost savings modeled using the SENDOUT<sup>6</sup> application and the standard  
11 landed cost analysis as referenced in the Board's filing Guidelines. For the analyses, Union has  
12 run two TCPL toll scenarios: (i) the base case using current approved 2012 TCPL transportation  
13 tolls; and, (ii) a scenario using TCPL's proposed 2013 tolls (revised June 29, 2012) ("Proposed

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<sup>6</sup> SENDOUT is a program developed by VENTYX, and is a widely recognized gas supply planning tool used by a number of LDC's in North America. Union has used this software for 26 years and it has been presented in a number of rate applications since 1987.

1 2013 TCPL tolls”). The TCPL tolls used in the economic analyses are provided in Figure 11-6  
2 below.

**Figure 11-6**  
**TCPL Toll Scenarios**

<b>100 % LF Tolls (\$/GJ/d)</b>	<b><u>Base Case</u></b>	
	<b>Approved 2012 TCPL Tolls</b>	<b>Proposed 2013 TCPL Tolls</b>
Empress to Union EDA	2.2429	1 .7578
Empress to Union NDA	1.7422	1 .3877
Parkway Belt to Union EDA	0.2836	0 .2466
Parkway Belt to Union NDA	0.4301	0 .3687

3

4 The results of the overall projected gas cost savings analysis using SENDOUT and the standard  
5 landed cost analysis for both TCPL toll scenarios are described below.

6 Calculation of Overall Projected Gas Cost Savings Using SENDOUT

7 Union has analyzed the economic implications of its decision to contract for new short haul  
8 TCPL transportation contracts on behalf of Union North sales service and bundled direct  
9 purchase customers using its gas supply modeling tool SENDOUT to capture all the economic  
10 impacts of the changing components in the Union North supply portfolio. Due to the magnitude  
11 of the changes to the Union North Portfolio, the proposed changes were reflected in SENDOUT



1 along with the TCPL transportation tolls and commodity prices utilized in the standard landed  
2 cost analysis.

3 A summary of the overall projected gas cost savings using SENDOUT for the two TCPL toll  
4 scenarios is provided below.

5 (i) Overall Projected Gas Cost Savings – Base Case Current Approved 2012 TCPL Tolls

6 The overall projected gas cost savings associated with Union's proposed contract changes using  
7 current approved 2012 TCPL tolls are approximately \$28.2 million per year. Accordingly over  
8 the initial 10-year term of the proposed TCPL transportation contracts, the projected gas cost  
9 savings are approximately \$282 million.

10 The analysis assumes the contract changes outlined in Figure 11-5, plus the costs associated with  
11 purchasing gas supply at Dawn versus Empress and also the incremental cost of Dawn-Parkway  
12 transmission capacity for Union North customers.

13 The projected gas cost savings above also include savings for Union North bundled direct  
14 purchase customers. Bundled direct purchase customers in Union North purchase their own gas  
15 supply at Empress, while Union provides the upstream transportation service to the customers'  
16 delivery area. The gas cost savings for the bundled direct purchase customers include the higher  
17 cost of purchasing gas supply at Dawn and the lower transportation costs associated with  
18 Union's proposed TCPL contract changes.

19 Figure 11-7 below provides a summary of the overall projected gas cost savings as a result of the  
20 savings related to Union's proposed TCPL contract changes, the higher commodity costs of

shifting gas purchases from Empress to Dawn and the added cost of incremental Dawn-Parkway transportation capacity required to transport gas from Dawn-Parkway for transportation on TCPL from Parkway to Union EDA and Parkway to Union NDA.

**Figure 11-7**

**Current Approved 2012 TCPL Tolls**

**Summary - Cost of Gas (Average Annual Savings/(Cost))**

**(Cdn \$ Millions)**

Supply Transportation

Demand	43.1	
Commodity/Fuel	5.1	48.2
Supply Commodity		(18.4)
		29.8
Storage - STS and Related Services		1.1
		30.9
Union Dawn-Parkway		(2.7)
<b>Union North - Average Annual Savings</b>		<b>28.2</b>

(ii) Overall Projected Gas Cost Savings – Proposed 2013 TCPL Tolls

The overall projected gas cost savings associated with Union's proposed contract changes using TCPL's proposed 2013 tolls are approximately \$18.1 million per year. Accordingly over the initial 10-year term of the proposed TCPL contracts, the projected gas cost savings under this scenario are therefore approximately \$181 million. The analysis assumes the contract changes

1 outlined in Figure 11-5, plus the costs associated with purchasing gas supply at Dawn versus  
2 Empress and also the incremental cost of Dawn-Parkway transportation capacity for Union North  
3 customers.

4 As noted above, the projected gas cost savings include savings for Union North bundled direct  
5 purchase customers. The gas cost savings for these customers include the higher cost of  
6 purchasing gas supply at Dawn and the lower transportation costs associated with Union's  
7 proposed TCPL contract changes.

8 Figure 11-8 below provides a summary of the overall projected gas cost savings as a result of  
9 Union's proposed contract changes, the higher commodity costs of shifting gas purchases from  
10 Empress to Dawn and the added cost of incremental Dawn to Parkway transportation capacity  
11 required to transport gas supply from Dawn to Parkway for transportation on TCPL from

12

Parkway to the Union EDA and Union NDA using the TCPL proposed 2013 tolls.

**Figure 11-8**

**Proposed 2013 TCPL Tolls**

**Summary - Cost of Gas (Average Annual Savings/(Cost))**

**(Cdn \$ Millions)**

Supply Transportation

Demand	35.6	
Commodity/Fuel	2.5	38.1
Supply Commodity		(18.4)
		<hr/> 19.7
Storage - STS and Related Services		1.1
		<hr/> 20.8
Union Dawn-Parkway		(2.7)
		<hr/>
<b>Union North - Average Annual Savings</b>		<b>18.1</b>
		<hr/> <hr/>

The analyses and associated impacts were completed based on the gas supply portfolio and demand forecast available at the time Union responded to TCPL's open season. This was coincidental to the timing of Union's evidence filed in EB-2011-0210. The rate impacts discussed later in this Section are based on the gas supply portfolio and revised demand forecast that reflected the Board's EB-2011-0210 Decision.

Landed Cost Analysis

1 To evaluate upstream transportation options, Union uses a standard landed cost analysis as  
2 established in EB-2005-0520. This analysis incorporates changes in both gas commodity and  
3 upstream transportation costs.

4 Although the transportation capacity costs are dramatically reduced due to the shorter distance of  
5 travel, the purchase point for the gas supply also changes. The change in transportation cost and  
6 the change in gas supply commodity costs between Empress and Dawn are incorporated in the  
7 analysis. The analysis considers the transportation and commodity costs of existing and  
8 replacement paths. It does not contemplate the changes in other services to serve Union North as  
9 shown at Figure 11-5. The SENDOUT analysis, on the other hand, captures all the economic  
10 impacts of the other changing components in the Union North supply portfolio.

11 Union calculated the landed costs using the base case assumption and the alternate scenario of  
12 2013 TCPL proposed tolls. The landed cost analysis prepared using current approved 2012  
13 TCPL tolls is provided at Schedule 11-3. The standard landed cost analysis prepared using  
14 proposed 2013 TCPL Tolls as revised June 29, 2012 is provided at Schedule 11-4. The results of

1 the standard landed cost analyses in both scenarios are summarized in Figure 11-9

**Figure 11-9**  
**Standard Landed Cost Analysis**  
**\$/GJ**

<b>Delivery Area</b>	<b>TCPL 2012 Approved Tolls</b>			<b>TCPL 2013 Proposed Tolls</b>		
	<b>Dawn</b>	<b>Empress</b>	<b>Impact</b>	<b>Dawn</b>	<b>Empress</b>	<b>Impact</b>
NDA	7.22	7.56	(0.34)	7.09	7.20	(0.11)
EDA	7.07	8.09	(1.02)	6.98	7.60	(0.62)

2

3 Using current approved 2012 TCPL tolls, the standard landed cost analysis indicates that buying  
4 gas supply at Dawn and transporting the supply from Dawn to the Union EDA and Union NDA  
5 using the Dawn-Parkway System and TCPL transportation contracts from Parkway to the  
6 delivery areas results in a net savings of \$1.02/GJ in the Union EDA and \$0.34/GJ in the Union  
7 NDA.

8 Using proposed 2013 TCPL tolls, the standard landed cost analysis indicates that buying gas  
9 supply at Dawn and transporting the supply from Dawn to the Union EDA and Union NDA  
10 using the Dawn-Parkway System and TCPL transportation contracts from Parkway to the  
11 delivery areas results in a net savings of \$0.62/GJ in the Union EDA and \$0.11/GJ in the Union  
12 NDA.

13

1 In addition to the standard landed cost analysis described above, ICF International (“ICF”)  
2 evaluated the cost differences in sourcing Dawn gas versus Empress gas and transporting to the  
3 Union NDA and Union EDA to validate the landed cost analyses performed by Union.

4 ICF performed analyses on the impacts of buying gas from Dawn and transporting it to the  
5 Union EDA and Union NDA versus the traditional Empress long haul TCPL path. The ICF  
6 landed cost analyses are included in Schedule 4-1 at pages 11 and 12. The actual amount of gas  
7 cost savings that will accrue to Union North customers will depend on the actual TCPL tolls in  
8 effect and the actual cost of gas differential between Empress and Dawn.

9 (d) Risks and Mitigation Measures

10 The Guidelines require applicants to identify risks related to pre-approval of the long term  
11 contracts and plans on how these risks are to be minimized. The following are related risks that  
12 Union has identified, and mitigation measures.

13 (i) WCSB Supply Risk

14 Union has identified that the amount of gas available from the WCSB, which currently provides  
15 95% of the Union North supply, is in decline. Under the status quo, Union will continue to face  
16 the risk of the declining supplies of this basin as the major source of supply for Union North. To  
17 mitigate this risk Union is applying for pre-approval of the two TCPL short haul transportation  
18 contracts, to reduce the reliance on the WCSB and gain access to new sources of supply  
19 available at Dawn. Thus, approval of these Contracts will mitigate that risk as discussed.

20 (ii) Shale Basin Supply Risk

1 The new Contracts will obtain supply from the Dawn Hub. Changes in legislation or regulation  
2 might limit the available supply from shale basins. This risk is mitigated by the fact that the  
3 Dawn Hub is connected to many diverse supply basins.

4 (iii) Forecast Risk

5 This application relies on future forecasts of demand as well as commodity price. Future demand  
6 is not a risk in regards to these contracts as they will serve existing demand, not incremental  
7 load.

8 As described in Section 4, the North American natural gas markets are in a period of substantial  
9 change. There is forecast risk surrounding commodity prices and the price differentials between  
10 various supply basins. Union will continue to seek the support of industry leaders, such as ICF,  
11 to provide forecasts of gas prices at various supply basins to allow Union to evaluate the landed  
12 costs of various gas supply alternatives. The actual amount of savings that will be experienced by  
13 Union North customers will depend on the actual TCPL tolls in effect and the actual cost of gas  
14 differential between Empress and Dawn.

15 As noted above, Union uses ICF forecasts for gas supply and basis differential forecasts to  
16 support its gas supply decisions. Although forecasts change over time, there is consensus around  
17 the continued uncompetitive nature of the costs of the WCSB supplies at Empress to serve  
18 Eastern markets. This can be demonstrated by the exodus away from TCPL long haul  
19 transportation contracts as described in Section 5.

20 (iv) Annual Demand Charge Exposure



1 The current TCPL long haul toll demand charge presents a risk to Union North sales service and  
2 bundled transportation customers who face high annual demand charge exposure. Under the  
3 status quo, Union North customers will remain captive to these TCPL long haul tolls for their  
4 upstream transportation needs.

5 Pre-approval of the Contracts will reduce risk for ratepayers as a result of a significant reduction  
6 in annual demand charge exposure of a shorter transportation path. While the execution of a  
7 long term firm transportation contract incorporates a commitment to demand charges for the  
8 entire term of the contract, when the transportation path is dramatically reduced, so is the  
9 associated demand charge exposure on an annual basis.

10 For example, the current demand charge for the Empress to Union EDA path is \$63.84842  
11 /GJ/month (2012 interim TCPL tolls) and this amount must be paid whether or not any volumes  
12 are transported. By way of comparison, the current demand charge on the short haul TCPL path  
13 from Parkway to the Union EDA, is only \$8.15784/GJ/month (2012 interim TCPL tolls). For the  
14 Union EDA this means that the net annual demand charge exposure is reduced by approximately  
15 \$38 million. If it is necessary to leave the transportation capacity empty due to decreased  
16 consumption, the ultimate cost exposure is reduced when the transportation path is shorter.

17 (v) TCPL Toll Volatility Risk

18 TCPL tolls have been unpredictable and have changed dramatically over the last decade as a  
19 result of the significant changes in the North American supply dynamics. Union ratepayers will  
20 continue to experience TCPL toll volatility risk with the proposed short haul transportation  
21 contracts.

1 TCPL Mainline tolls from Alberta to Union North customers in the EDA have changed from a  
2 range of \$1.00 - \$1.20 CAD/GJ during 2003 to 2007, to \$1.64 CAD/GJ in 2010 and further  
3 increased to \$2.24 CAD/GJ in 2011, which remains the current rate. In contrast, Union's  
4 contracts with other transportation providers have been much more stable and predictable over  
5 the same time period. Reducing the amount of natural gas contracted to move on TCPL firm  
6 long haul transportation capacity, will reduce the absolute amount of exposure related to TCPL  
7 toll volatility.

8 (vi) TCPL facilities –commercial, construction and regulatory risk

9 Certain contracts and services that Union will be de-contracting with TCPL have expiry dates of  
10 December 31, 2015 and are not aligned with the November 1, 2015 implementation date of the  
11 Contracts. This potential overlap period of up to 2 months, could result in additional  
12 transportation demand charges due to this temporary surplus of TCPL transportation capacity.  
13 The total cost of the transportation demand charges of the new contracts for this overlap period is  
14 up to \$1.8 million.

15 Union will be working with TCPL to align the renewal dates of these contracts with the start date  
16 of the new contracts to mitigate the overlap period, but also maintain flexibility should the TCPL  
17 facilities and contracted services be delayed.

18 To mitigate regulatory, commercial or construction risk of TCPL and Enbridge, Union will  
19 monitor the regulatory and construction progress related to their facilities. Union intends to  
20 support applications of TCPL and Enbridge to construct their facilities.

Union has worked with TCPL and Enbridge to ensure the commercial arrangements between the parties recognize the unique nature and the interrelationship of these transactions. The commercial relationships including precedent agreements, will recognize these risks and relationships to assist with mitigating risk of the parties. The terms being negotiated between Union and TCPL recognize these factors.

(vii) TCPL toll impact

There are many factors that impact the TCPL Mainline. Whether it is the continued de-contracting of long haul transportation capacity on TCPL or the potential conversion of portions of the Mainline to oil transportation, it is extremely difficult to assess the TCPL toll going forward.

These Contracts and the subsequent de-contracting on TCPL long haul transportation will impact the TCPL long haul tolls. This potential impact was assessed in the analyses and is discussed in Section 11.5 of this evidence. The increased toll impact as a result of de-contracting on TCPL is relatively small and not material.. The potential increase in tolls decreases the savings by approximately \$2.0 million per year. Accordingly there are substantial savings for Union North customers even with a potential toll increase

Overall, the relative risk of pre-approving the proposed contracts is lower than the risks inherent in the status quo. The risks to Union North customers of contracting long term for TCPL short haul transportation capacity are more than offset by the significant economic benefits due to gas cost savings, increased security of supply and diversity of supply.

**5. Impact of Union's Contract changes on TCPL tolls and Union Customers**

1 The Board-approved standard landed costs and SENDOUT analyses use transportation tolls  
2 known at the time the decisions are being contemplated. Union has performed sensitivity  
3 analyses on the potential impact to TCPL tolls, resulting from the contractual changes  
4 summarized in Figure 11-5. These sensitivity analyses identify the impact of potentially higher  
5 TCPL tolls on Union customers due to the remaining TCPL services within the portfolio. These  
6 analyses assume that the change of \$10 million in revenue to TCPL has the impact of one cent  
7 change in Union EDA tolls as discussed in EB-2010-0300. These impacts are described below:

8 *i) Overall Projected Gas Costs Savings – Base Case Current Approved 2012 TCPL Tolls*

9 The impact on the Empress to Eastern Zone toll could be an increase of approximately \$0.05/GJ  
10 (from \$2.24/GJ to \$2.29/GJ). Other TCPL services that Union buys may also increase. The  
11 expected savings to Union North customers of approximately \$28.2 million may be modestly  
12 reduced due to increased TCPL tolls for remaining service contracts. Union estimates this  
13 potential TCPL toll impact could decrease Union North customer savings by approximately \$2.0  
14 million per year. In addition, Union South customers could experience a toll increase on the  
15 TCPL Empress to Union CDA contract. This impact is estimated at \$1.2 million per year.

16 *(ii) Overall Projected Gas Costs Savings – Proposed 2013 TCPL Tolls as revised June 29, 2012*

17 The impact on the Empress to Eastern Zone toll could increase by approximately \$0.03/GJ (from  
18 \$1.76 to \$1.79). The expected savings for Union's customers referenced earlier of \$18.1 million  
19 may be reduced. Union estimates the potential TCPL toll impact could decrease Union North  
20 customer savings by approximately \$1.6 million per year. In addition, Union South customers  
21 could experience a toll increase on the TCPL Empress to Union CDA contract. That impact is  
22 estimated at \$0.9 million per year.

1 With many other changes taking place in the marketplace in addition to Union's actions, it is  
2 extremely difficult to determine how those changes will impact TCPL tolls. These calculations  
3 assume that Union's activity is the only impact to TCPL revenues and that TCPL is unable to  
4 replace any lost revenue or capacity in any other fashion.

5 In an environment of significant TCPL toll uncertainty, Union's analysis shows that under either  
6 TCPL toll scenario above, there are significant benefits to Union North customers as a result of  
7 these two new short haul transportation contracts. Further, to the extent that TCPL tolls increase  
8 as a result of Union de-contracting TCPL long haul transportation capacity, the substantial net  
9 benefit to Union North customers is not materially impacted.

## 10 **6. Cost Allocation, Rate Design, and Rate Impacts**

11 This following evidence describes:

12 (a) Union's current Board-approved cost allocation methodology for Union North  
13 upstream transportation costs;

14 (b) Union's current Board-approved rate design for Union North gas supply  
15 transportation and storage rates;

16 (c) the rate and bill impacts associated with Union's proposal to replace long haul  
17 TCPL FT transportation contracts and STS transportation contracts with short  
18 haul TCPL FT transportation contracts; and

19 (d) future cost allocation and rate design considerations.

1 As described above, Union is seeking pre-approval of the cost consequences associated with two  
2 long-term short haul transportation contracts to serve Union North sales service and bundled  
3 direct purchase customers. In addition to the enhanced diversity and security of supply that  
4 results from the Contracts, Union estimates that there is an overall reduction in gas supply costs  
5 of \$18.1 million to \$28.2 million per year for Union North sales service and bundled direct  
6 purchase customers. The following analyses is based on gas cost savings of \$28.2 million as  
7 provided at Figure 11-7 and assumes current approved TCPL tolls and Union's proposed 2013  
8 Gas Supply Plan, as of May 2012.

9 Updating the gas cost savings to reflect the current approved 2013 Gas Supply Plan per the  
10 Board's (EB-2011-0210) Decision, reduces the gas cost savings to approximately \$25.6 million.

11 For the purposes of calculating rate impacts, Union estimates the overall gas cost savings to be  
12 \$31.3 million per year. The difference between the gas cost savings of \$25.6 million and \$31.3  
13 million (or \$5.7 million) is due to \$5.5 million in bundled direct purchase gas supply commodity  
14 costs (which are not included in Union's gas supply commodity rates), and \$0.2 million in  
15 Dawn- Parkway costs.

16 The reconciliation of the upstream transportation cost savings and gas supply commodity cost  
17 increases described above are provided at Schedule 11-5.

18 To calculate rate impacts, the overall gas cost savings of \$31.3 million are comprised of \$43.8  
19 million per year in upstream transportation cost savings and \$12.5 million in additional gas  
20 supply commodity costs resulting from the purchase of gas supply at Dawn versus Empress.

Based on Union's current Board-approved cost allocation methodology, the upstream transportation cost savings of \$43.8 million per year will be allocated to Union North sales service and bundled direct purchase customers in all zones. The additional gas supply commodity costs of \$12.5 million per year will be allocated to Union North sales service customers only.

(a) Current Cost Allocation – Union North Upstream Transportation Costs

In Union's Board-approved 2013 Gas Supply plan, Union North upstream transportation costs are considered to be either transportation or storage-related costs. In addition, Dawn storage and Dawn-Parkway System demand costs are treated as storage-related costs for Union North customers.

Upstream transportation costs deemed to be transportation-related include firm transportation demand, diversion and firm transportation commodity costs associated with gas supply transportation contracts with TCPL, Centra Transmission Holdings ("CTHI"), Centra Pipelines Minnesota ("CPM"), Michigan Consolidated Gas Company ("MichCon") and GLGT. Gas supply transportation contracts on these pipelines are required to meet sales service and bundled direct purchase customer demands in Union North.

Upstream transportation costs deemed to be storage-related include TCPL STS transportation and short haul TCPL FT transportation demand and commodity costs. Existing short haul TCPL FT transportation contracts include Dawn to Parkway capacity contracted with TCPL and Parkway to the Union EDA. TCPL STS transportation and short haul TCPL FT contracts

1 provide Union North customers with access to Dawn storage to meet daily, seasonal and annual  
2 balancing requirements.

3 Union North storage-related costs also include costs associated with Union North sales service  
4 and bundled direct purchase customers' use of Dawn storage and the Dawn-Parkway  
5 transmission system. Union North customers require Dawn storage and Dawn-Parkway  
6 transmission to meet daily, seasonal and annual balancing requirements.

7 The current Board-approved cost allocation methodologies for transportation and storage-related  
8 upstream transportation costs, Dawn storage and Dawn-Parkway transmission costs are  
9 described below.

10 *Firm Transportation Demand and Diversion Costs*

11 In Union's Board-approved 2013 cost allocation study, firm transportation demand and diversion  
12 costs are allocated to Union North rate classes based on a combination of average day volumes  
13 and peak day over average day demands. This cost allocation methodology recognizes that firm  
14 transportation demand and diversion costs are required to meet both average annual daily  
15 demands and peak day demands that exceed the average annual daily demands.

16 The average day demand costs are determined by calculating the proportion of average day  
17 demand to the total contracted firm transportation demand. The average day demand costs are  
18 allocated to rate classes in proportion to the Union North average day sales service and bundled  
19 direct purchase volumes.



1 The remaining firm transportation demand and diversion costs in excess of the costs required to  
2 serve sales service and bundled direct purchase demands on an average day are allocated to rate  
3 classes in proportion to excess peak day over average day demand.

4 A portion of the gas supply firm transportation demand costs are also directly assigned to  
5 interruptible Rate 25 based on winter sales volumes.

6 The 2013 Board-approved allocation of firm transportation demand and diversion costs is  
7 provided at Schedule 11-6.

8 *Firm Transportation Commodity Costs*

9 In Union's Board-approved 2013 cost allocation study, firm transportation commodity costs are  
10 allocated to rate classes in proportion to Union North annual sales service and bundled direct  
11 purchase delivery volumes. A portion of the upstream transportation commodity costs are also  
12 directly assigned to interruptible Rate 25 based on winter sales volumes.

13 *TCPL STS and Short-Haul TCPL FT Demand and Commodity Costs*

14 In Union's Board-approved 2013 cost allocation study, TCPL STS and short haul TCPL FT  
15 demand costs are allocated to Union North rate classes in proportion to the excess of peak day  
16 over average day demand.

17 The STS commodity and fuel-related costs are allocated to Union North rate classes in  
18 proportion to winter delivery volumes, excluding Rate 25 and T-Service.

1       *Dawn Storage and Dawn-Parkway Transmission Demand and Commodity Costs*

2       In Union's Board-approved 2013 cost allocation study, Dawn storage costs are allocated to  
3       Union North based on design day demands and allocated to rate classes in proportion to the  
4       excess of peak day over average day demand.

5       Dawn-Parkway transmission demand costs are allocated to Union North based on distance-  
6       weighted design day demands and allocated to rate classes in proportion to the excess of peak  
7       day over average day demand.

8       Commodity-related costs are allocated to Union North based on forecasted sales service and  
9       bundled direct purchase delivery volumes and allocated to rate classes in proportion to winter  
10      delivery volumes, excluding Rate 25 and T-Service.

11      *(b) Current Rate Design – Union North Gas Supply Transportation and Storage Rates*

12      As described above, Union utilizes a variety of upstream transportation contracts on TCPL,  
13      CTHI, CPM, MichCon and GLGT, as well as Dawn storage and the Dawn-Parkway transmission  
14      system to meet daily, seasonal and annual requirements for Union North sales service and  
15      bundled direct purchase customers in six delivery areas (representing four zones). Union's  
16      Board-approved rate design for recovering upstream transportation and storage costs in Union  
17      North gas supply transportation and storage rates is provided below.

18      *Gas Supply Transportation Rates*

19      Union's Board-approved rate design for Union North gas supply transportation rates recognizes  
20      that Union North consists of four zones (from west to east; Fort Frances, Western, Northern and

1 Eastern) and that upstream transportation for Union North customers is predominantly provided  
2 using long haul TCPL FT transportation capacity from Empress.

3 Accordingly, Union's Board-approved rate design recognizes that a portion of upstream  
4 transportation costs in gas supply transportation rates are different for each zone, while the  
5 remaining upstream transportation costs to serve customers are common to all four zones. This  
6 two step approach to setting gas supply transportation rates in Union North is described in more  
7 detail below.

8 The first step in setting Union North gas supply transportation rates is to determine the portion of  
9 the upstream transportation costs related to the zonal differentials within each rate class. For  
10 each zone, Union calculates the 100% load factor rate based on the upstream firm transportation  
11 tolls. The zonal differentials are calculated as the differences between the most westerly zone  
12 (Fort Frances) and all other zones. The zonal differentials multiplied by the forecast zonal  
13 billing units by zone in each rate class establish the costs related to zonal differences. This step  
14 determines the 'zonal' portion of gas supply transportation rates.

15 The second step in setting Union North gas supply transportation rates is to set the portion of the  
16 rate to recover the remaining transportation costs that are common to all sales service and  
17 bundled direct purchase customers within a rate class, regardless of zone. Accordingly, these  
18 costs are recovered from all customers in the rate class based on the Board-approved volume  
19 forecast.

1 To determine final gas supply transportation rates Union adds the zonal portion of gas supply  
2 transportation rates for each zone to the portion of the rate that is common for customers in all  
3 zones.

4 Please see Schedule 11-7 for the calculation of Rate 01 gas supply transportation rates by zone.

5 As shown at Schedule 11-7, Line 3 column (a), total 2013 Board-approved upstream  
6 transportation costs allocated to Rate 01 are \$70.278 million. Of this amount, \$22.679 million or  
7 33% (Line 13) are related to zonal cost differentials in the Western, Northern and Eastern zones  
8 as compared to the Fort Frances zone. For example, the Western zonal cost differential is 0.6014  
9 cents/m<sup>3</sup> (Line 5) or \$1.030 million (Line 6); which represents the incremental transportation  
10 costs to serve sales service and bundled direct purchase customers in the Western zone compared  
11 to similar customers in the Fort Frances zone.

12 The remaining transportation costs of \$47.599 million or 67% (Line 14) are recovered from all  
13 Rate 01 customers based on the 2013 Board-approved volume forecast. The result is a common  
14 portion of the Rate 01 gas supply transportation rate of 5.3819 cents/m<sup>3</sup> (Line 16), which is  
15 applicable to all zones.

16 For example, the Board-approved gas supply transportation rate for the Fort Frances zone is  
17 5.3819 cents/m<sup>3</sup> (Line 16). This rate includes the common portion of the rate only, as there are  
18 no zonal cost differentials associated with this zone. In contrast, the Board-approved gas supply  
19 transportation rate for the Western zone is 5.9834 cents/m<sup>3</sup> (Line 17). This rate is comprised of  
20 the common rate of 5.3819 cents/m<sup>3</sup>, plus the zonal differential rate of 0.6014 cents/m<sup>3</sup>. Rate 01  
21 gas supply transportation rates in the Northern and Eastern zones are set in the same manner as  
22 described above.

1           Storage Rates

2   Union North storage rates applicable to sales service and bundled direct purchase customers  
3   include costs associated with TCPL STS transportation, short haul TCPL FT transportation,  
4   Dawn storage and the Dawn-Parkway transmission system. Union's Board-approved rate design  
5   for setting Union North storage rates is consistent with the rate design used to set gas supply  
6   transportation rates described above.

7   A portion of Union North storage rates are common to all customers in each zone and a portion  
8   of storage rates are based on west to east TCPL zonal differentials (i.e. zonal or distance-based).  
9   The calculation of 2013 Board-approved Rate 01 storage rates by zone is also provided at  
10   Schedule 11-7, column (b).

11   (c) Rate and Bill Impacts

12   To calculate the Union North gas supply transportation and storage rate and bill impacts  
13   associated with Union's proposal, Union started with the Board-approved 2013 Gas Supply Plan  
14   and made the changes to reflect the replacement of long haul TCPL FT transportation contracts  
15   and STS contracts with short haul TCPL FT transportation contracts. Consistent with the Board-  
16   approved 2013 Gas Supply Plan, the revised Gas Supply Plan is based on current approved 2012  
17   TCPL tolls. The detailed cost comparison of the Board-approved 2013 Gas Supply Plan and the  
18   revised Gas Supply Plan is provided at Schedule 11-8.

19   Subsequently, Union included the revised Gas Supply Plan in its 2013 Board-approved cost  
20   allocation study. The upstream transportation costs were allocated to rate classes using Union's  
21   Board-approved cost allocation methodology, as described earlier. The cost allocation impact by

1 rate class is provided at Schedule 11-9. As shown at Schedule 11-9, Line 7, column (f) the  
2 upstream transportation cost savings for Union North sales service and bundled direct purchase  
3 customers are \$43.8 million, of which approximately \$29.9 million are allocated to the Rate 01  
4 rate class (Line 7, column (a)).

5 The resulting Rate 01 gas supply transportation and storage rates by zone using Union's Board-  
6 approved rate design compared to current approved rates (per EB-2011-0210) are provided at  
7 Schedule 11-10.

8 To determine bill impacts for the average Rate 01 residential customer, Union has used the gas  
9 supply transportation and storage rates as calculated per Schedule 11-10. In addition, Union has  
10 estimated the bill impact on the average sales service residential customer associated with the  
11 \$9.4 million in gas supply commodity costs allocated to the Rate 01 rate class (Schedule 11-9,  
12 Line 10, column (a)). The bill impacts also include the impacts associated with the Brantford to  
13 Kirkwall and Parkway D Compressor project described in Section 10. The bill impacts for the  
14 average Rate 01 residential customer by zone and Rate M1 residential customer as compared to  
15 Union's current approved rates (per EB-2011-0210) are provided at Schedule 11-11.

16 The bill impacts for the average Rate 01 sales service residential customer by zone in Union  
17 North are also provided in Figure 11-10 below. For the average Rate 01 sales service residential  
18 customer consuming 2,200 m<sup>3</sup> per year, the bill impact is a reduction of (\$42.00 to \$43.00) per  
19 year. For the average Rate M1 residential customer in Union South consuming 2,200 m<sup>3</sup> per

year, the bill impact is a reduction of approximately (\$1.12) per year.

**Figure 11-10**

**Estimated Bill Impact**

**Average Rate 01 Sales Service Residential Customer by Zone**

**Includes Brantford to Kirkwall and Parkway D Compressor Project**

**And Long Term Contracting Proposal**

<b>Rate 01 Zone</b>	<b>EB-2011-0210 Current Approved Bill (\$)</b>	<b>EB-2013-0074 Estimated Bill (\$)</b>	<b>Bill Impact (\$)</b>	<b>Bill Impact (%)</b>
Fort Frances	892.26	849.31	(42.95)	(4.8)
Western	911.98	868.99	(42.99)	(4.7)
Northern	977.67	934.67	(43.00)	(4.4)
Eastern	1,006.02	963.01	(43.01)	(4.3)

As described in EB-2012-0433 (Union's Parkway West Project), the rate impacts associated with the Parkway West Project result in rate decreases for Union North and Union South in-franchise customers. For the average Rate 01 residential customer in Union North consuming 2,200 m<sup>3</sup> per year the bill impact is a reduction of approximately (\$1.00) per year, while for the average Rate M1 residential customer in Union South consuming 2,200 m<sup>3</sup> per year the bill impact is a reduction of approximately (\$1.25) per year.

1 As described in Section 10, Union will propose to build the annual revenue requirement  
2 associated with the Parkway West Project into Union South delivery rates, Union North gas  
3 supply transportation and storage rates, and ex-franchise transportation rates effective January 1,  
4 2014. Union will also propose to adjust in-franchise and ex-franchise rates on an annual basis  
5 from 2014 to 2018 in order to recover the costs associated with the Parkway West Project.

6 To calculate final rate impacts Union included the largest annual revenue requirement for  
7 Parkway West (\$16.6 million), the largest annual revenue requirement for the Brantford to  
8 Kirkwall and the Parkway D Compressor project (\$15.9 million) and the modified 2013 Gas  
9 Supply Plan in its 2013 Board-approved cost allocation study. The bill impacts for the average  
10 Rate 01 residential customer by zone and Rate M1 residential customer as compared to Union's  
11 current approved rates (per EB-2011-0210) are provided at Schedule 11-12.

12 The bill impacts for the average Rate 01 sales service residential customer by zone in Union  
13 North are also provided in Figure 11-11 below. For the average Rate 01 sales service residential  
14 customer consuming 2,200 m<sup>3</sup> per year, the bill impact is a reduction of approximately (\$42.00 to  
15 \$43.00) per year. For the average Rate M1 residential customer in Union South consuming



2,200 m<sup>3</sup> per year, the bill impact is a reduction of approximately (\$1.90) per year.

**Figure 11-11**

**Estimated Bill Impact**

**Average Rate 01 Sales Service Residential Customer by Zone**

Includes Brantford to Kirkwall and Parkway D Compressor Project,

Parkway West Project with Gas Supply and Long Term Contracting Proposal

<b>Rate 01 Zone</b>	<b>EB-2011-0210 Current Approved Bill (\$)</b>	<b>EB-2013-0074 Estimated Bill (\$)</b>	<b>Bill Impact (\$)</b>	<b>Bill Impact (%)</b>
Fort Frances	892.26	849.46	(42.80)	(4.8)
Western	911.98	869.16	(42.82)	(4.7)
Northern	977.67	934.82	(42.85)	(4.4)
Eastern	1,006.02	963.17	(42.85)	(4.3)

(d) Future Cost Allocation and Rate Design Considerations

As Union fundamentally changes the manner in which it serves Union North sales service and bundled direct purchase customers, Union will need to review its current approved cost allocation and rate design methodologies used to set Union North gas supply transportation and storage rates. Pre-approval of the cost consequences of the new long term transportation contracts will assist Union as it undertakes its review of cost allocation and rate design.

In making its determination on the need for cost allocation and/or rate design changes Union will need to consider several factors. These factors include:

- An allocation of upstream transportation costs that reflect cost causality;
- The level of current rates and the magnitude of any proposed change;
- The potential impact on customers; and
- Customer expectations with respect to rate stability and predictability.

Union will bring forward any cost allocation or rate design proposals for Board approval in a future rates proceeding.

## **7. Summary**

There have been significant changes to the North American supply dynamics and a movement away from the WCSB and long haul transportation. Union, TCPL and Enbridge are investing in significant infrastructure to respond to these market factors. By using transportation on Union's Dawn-Parkway System and entering into the Contracts, Union is responding to these changes. This response introduces supply and transportation diversity to Union North and allows access to the Dawn Hub. Access to the multiple basins that connect to the Dawn Hub provides greater security of supply, supply diversity, and economic choices for Union North customers. There are significant cost savings as a result for Union North sales service and bundled direct purchase ratepayers. Accordingly, pursuant to the Guidelines, the Board should approve the recovery of the cost consequences of the Contracts as proposed by Union.

**SECTION 12**

**SECTION 90 AND SECTION 91 APPLICATIONS**

***FACILITIES DESIGN AND CONSTRUCTION***

***Proposed Facilities***

Union proposes to construct the Proposed Pipeline which will run from Brantford Valve Site at the west end to Kirkwall Custody Transfer Station at the east end. Brantford and Kirkwall station sites will be modified in order to connect the Proposed Pipeline.

Union also proposes to construct the Proposed Parkway D Compressor at the Parkway West Compressor Station. The Proposed Parkway D Compressor and associated facilities will utilize site infrastructure installed under the Parkway West Project. Union has separately filed with the Board under proceeding EB-2012-0433 for development of the proposed Parkway West Project at the Parkway West Compressor Station

***Project Schedule***

Schedule 12-1 provides the overall Project and construction schedule.

It is anticipated that construction of the Proposed Pipeline facilities will begin in the spring of 2015 and be completed by the fall of 2015. The proposed construction schedule takes advantage of the drier summer months thereby minimizing the impact of construction on agricultural lands and other features such as watercourses.

Construction of the Proposed Parkway D Compressor will begin in the summer of 2014 with civil work and will progress through piping and compressor unit installation, for an in-service date of the fall of 2015.

In order to ensure sufficient time is available for the delivery of the new compressor unit and other long lead delivery material, Union respectfully requests a decision by September 15th, 2013.

### Proposed Brantford-Kirkwall Pipeline

#### Design

All design, installation and testing of the Proposed Pipeline and station facilities is in accordance with the requirements of Ontario Regulation 210/01, Oil and Gas Pipeline Systems under the Technical Standards and Safety Act 2000. This regulation governs the installation of pipelines in the Province of Ontario. The design meets or exceeds the requirements of CSA Z662-11 Standard in accordance with the Code Adoption document under the Ontario Regulations.

The pipe design depends on which Class Location it is located within. To determine Class Location, CSA Z662-11 uses a classification system that takes into account land use and population density. The classifications are as follows:

- 1) Class 1 areas consist of 10 or fewer dwellings;
- 2) Class 2 areas consist of 11 to 45 dwellings, or a building occupied by 20 or more persons during normal use such as playgrounds, recreational areas, or other places of public assembly as well as industrial installations;

1           3) Class 3 areas consist of 46 or more dwellings.

2           4) Class 4 contains a prevalence of buildings intended for human occupancy with 4  
3           or more stories above ground.

4   The Class Location boundaries are determined by a sliding boundary 1.6 km long by 400 metre  
5   wide centered over the pipeline. This method covers existing development. This is  
6   supplemented with information for future development through discussions with Landowners,  
7   and municipalities. The pipeline may be designed to accommodate a higher Class Location to be  
8   compatible with future development.

9   For the Brantford-Kirkwall section there is a mix of Class 1 to Class 3 Locations.

10   In all locations a design factor of 0.8 as required by CSA was used for the design of the pipeline  
11   system. In addition a second design factor is applied. A location factor of 0.9 was used for Class  
12   1 and 2 locations with the following exceptions where a location factor of 0.625 was used:

13       1) when crossing any public right of ways including roads, highways, public streets,  
14       railways and major rivers.

15       2) for any fabrications such as stations or valve sites

16       3) for pipeline undercrossings

17   For Class 3 Locations, a location factor of 0.625 is used.

18

The Proposed Pipeline design parameters will be in accordance with the Figure 12-1 below:

**Figure 12-1**

Design Parameters

	<b>Class 1 &amp; 2</b>	<b>Class 3</b>
Location Factor	0.9	0.625
Design Factor	0.8	0.8
Maximum Operating Pressure	6160 KPa	6160 KPa
Test Medium	Water	Water
Test Duration	24 hours	24 hours
Minimum Test Pressure	7700 KPa	8624 KPa
Valve and Flange Ratings	PN 100 (ANSI 600)	PN 100 (ANSI 600)
Minimum Depth of Cover	1.0 m	1.0 m

Specifications

Minimum pipe specifications are covered in Figure 12-2 below. The proposed expansion will use NPS 48 pipe which has an outside diameter of 1219 mm. Since there are two different pipe designs required for this Project, there are two different grades of pipe and two different wall thicknesses. Pipe with a location factor of 0.9 uses 11.7 mm wall thickness and a specified minimum yield strength (“SMYS”) of 448 MPa. Pipe with a location factor of 0.625 uses 15.6

1 mm wall thickness and a SMYS of 483 MPa.

2 **Figure 12-2**

**Minimum Pipe Specifications**

Size	1219 mm OD
Grade	448 MPa/483 MPa
Wall thickness	11.7 mm/15.6 mm
Category	II M5C
Coating	FBE – Fusion Bond Epoxy

3

4 The NPS48 pipe will be manufactured using a DSAW (double submerged arc welding) process.

5 As per code, the pipe will be manufactured to the American Petroleum Institute (“API”) 5L Line

6 Pipe standard. The pipe is designed to provide the required maximum operating pressure

7 (“MOP”) of 6160 kPa using the various location factors.

8 The rating of all valves, flanges and fittings will be PN 100 rated for 9930 kPa.

9 Based on the pipe specifications provided above, the hoop stress of the piping will be as listed in

10 Figure 12-3:

11 **Figure 12-3**

Design Factor	Location Factor	Wall Thickness (mm)	Pipe Grade (MPa)	% SMYS
0.8	0.9	11.7	448	71.6
0.8	0.625	15.6	483	49.8

1 Minimum depth of cover required will be 1.0 metre from top of pipe to final grade. Where  
2 required, additional cover will be used to accommodate planned or existing underground  
3 facilities and roads, railway and watercourse crossings. In agricultural areas the minimum depth  
4 of cover will be 1.2 metres, except where bedrock is encountered at a depth less than 1.2 metres,  
5 in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0  
6 metres below grade.

#### 7 Construction

8 Schedule 12-2 describes the general techniques and methods of construction that Union will  
9 employ for the construction of the Proposed Pipeline facilities. It details such activities as  
10 clearing, grading, stringing of pipe, trenching, welding, backfill, tile repair and clean-up.

11 Bedrock will be encountered on this Project. Any bedrock that is found will be removed by hoe-  
12 ram or blasting.

13 The Proposed Pipeline will be tested hydrostatically with water for a period of 24 hours to prove  
14 its integrity. Testing will follow the requirements of CSA Z662-11 Oil and Gas Pipeline  
15 Systems Section 8. Any fabrication tests that will be fully exposed or above ground will require  
16 a minimum of a 1 hour pressure test. Locations for hydrostatic testing water sources have not yet  
17 been determined and will be developed in conjunction with the Pipeline Contractor once the  
18 construction contract is awarded. Union will work with the Contractor to locate a water source  
19 that is the most economical and creates the least environmental impact.



1 After the test water is removed, the line will be dried. An electronic sizing tool will be run to  
2 check for dents or ovality. Cathodic protection will be applied to the completed pipeline.

3 Union foresees no issues obtaining material for the Project within the proposed timelines and  
4 Union foresees no problem in obtaining a contractor to complete the proposed construction.

5 Union will construct the Proposed Pipeline in compliance with its current construction  
6 procedures, environmental mitigation identified in the Environmental Report, permit conditions  
7 and commitments to Regulators and Landowners. Union continuously updates and refines its  
8 construction procedures to minimize potential impacts to lands and has since seen many  
9 improvements as a result of better construction practices. Union will continue to work with each  
10 municipality and comply with the intent of the various by-laws and permits to the extent  
11 possible. Prior to tendering the construction contract, Union's Landowner Relations Agent  
12 ("LRA") will contact each Landowner along the route prior to construction to obtain site specific  
13 requirements such as livestock fencing and access points. This information is included in the  
14 construction contract so that the Contractor is contractually obligated to fulfill all commitments  
15 made to the Landowner. The visit also provides an informal opportunity to answer questions and  
16 discuss construction plans.

17 Very few, if any, systematic drainage systems will be encountered in this pipeline section. Pre-  
18 construction tiling will be completed if necessary and if timing and soil conditions permit. This  
19 is done to minimize disruption to field drainage systems and farm operations that may result  
20 from pipeline construction. Pre-construction tiling can only be undertaken when the existing tile  
21 system design, available outlet drains, topography, and soils allow for the installation of header  
22 tile adjacent to the pipeline construction area. Union retains a qualified drainage consultant to

determine whether a property that contains a field drainage system could benefit from pre-construction tiling. Union's drainage consultant will be contacting the Landowners to discuss their tile needs. Landowner approval is required for tiling work conducted outside of the easement. The drainage consultant will prepare a tiling plan and provide a copy of the plan to both Union and the Landowner.

Union's Reforestation Program consists of replanting twice the woodlot area cleared for construction. Coniferous and deciduous seedlings native to Ontario are planted on the Landowner's property if requested, and maintained up to a period of five years or until the trees reach a free-to-grow status defined by a height of one metre and free of adjacent brush competition. Replanting must be done in accordance with Union's policies regarding tree planting so that the easement is left open for access to the pipeline and aerial patrol.

All necessary permits, approvals and authorizations will be obtained. Union expects to receive all approvals prior to construction.

Union will provide inspection staff to ensure that contractual obligations between Union and the Contractor, Provincial ministries, Municipal Government and Landowners are complied with.

### ***Proposed Parkway D Compressor Plant***

#### **Design**

The Proposed Parkway D Compressor consists of a gas turbine driven centrifugal compressor package with an ISO rating of 44,500 HP, complete with all ancillary support systems, such as fuel gas, lubricating oil and seal gas. The plant will include all main gas piping and equipment,

1 auxiliary support systems, and safety systems required for a facility of this nature and scope.

2 Critical operating equipment will be housed in metal or pre-cast concrete buildings.

3 The gas turbine driver portion of the package will be installed inside an acoustically treated  
4 enclosure, with the remaining components of the package, inside an acoustically treated building.

5 The overall noise and air emissions profile of the operating plant will be designed to ensure  
6 compliance with provincial and municipal requirements.

7 The compressor plant main gas piping will include NPS42 suction and discharge piping, with  
8 valved connections into both NPS48 station suction headers and both NPS42 station discharge  
9 headers. Valves will be equipped with gas/hydraulic actuators and automated to provide  
10 emergency isolation and evacuation of natural gas in the plant piping when required based on  
11 operating conditions. The main gas piping system will include additional equipment such as a  
12 gas scrubber, gas coolers, compressor surge and recycle valves. Measurement facilities will be  
13 included as required. In addition to the main gas system, auxiliary systems such as compressed  
14 air, fuel gas, HVAC, and power gas will be installed to support the overall operation of the plant.  
15 Operating equipment for some of these auxiliary systems, the compressor package control  
16 system and power distribution equipment will be installed inside a combined control/auxiliary  
17 building. Safety systems, including gas and fire detection, and fire suppression will be installed  
18 inside the gas turbine enclosure, compressor building, and other critical locations to ensure safe  
19 operation of the plant and protection of the assets.

The Maximum Operating Pressure for all high pressure piping within the Proposed Parkway D Compressor will be 6895 kPa. Other system piping will be designed for maximum operating pressures suitable for their respective applications.

The proposed piping (of various sizes) contained within the Parkway D Compressor Station currently requires a minimum location factor of 0.625; however, in consideration of future urban development in the area, the entire Parkway West Compressor Station facility will be designed for a future Class 4 location, hence a 0.5 location factor will be used. Piping Design Specifications for the Proposed Parkway D Compressor are set out in Figure 12-4:

**Figure 12-4**

	<b>Class 4</b>
Location Factor	0.5
Design Factor	0.8
Maximum Allowable Operating Pressure	6895 KPag
Test Medium	Water
Test Duration	24 hours
Minimum Test Pressure	9653 KPag
Valve and Flange Ratings	PN 100 (ANSI 600)
Minimum Depth of Cover	1.0 m

#### Specifications

All design, installation and testing of the natural gas pipeline and station facilities is in accordance with the requirements of Ontario Regulation 210/01, Oil and Gas Pipeline Systems

1 under the Technical Standards and Safety Act 2000. Design meets or exceeds the requirements  
2 of CSAZ662-11 Standard in accordance with the Code Adoption document under the Ontario  
3 Regulations.

4 Other codes and standards will apply to various portions of the proposed scope for the  
5 compressor; including the ASME piping and pressure vessel standards, the Ontario Electrical  
6 Safety Code and the Ontario Building Code. The most recent adopted version of all applicable  
7 codes will be met or exceeded.

#### 8 Construction

9 Union foresees no issues obtaining material for the Proposed Parkway D Compressor within the  
10 proposed timelines and Union foresees no problem in obtaining a contractor to complete the  
11 proposed construction. Due to the long lead times for some significant components of the  
12 proposed compressor, Union is required to place orders for these significant components in the  
13 fall of 2013.

14 The station piping will be tested hydrostatically to prove its integrity. Testing will follow the  
15 requirements of all applicable codes and guidelines.

16 Union will construct the Proposed Parkway D Compressor Station in compliance with its current  
17 construction procedures, environmental mitigation identified in the Environmental Report,  
18 permit conditions and commitments to Regulators. Union's construction procedures have been  
19 continually updated and refined to minimize potential environmental impacts.

1 Union will continue to work with the Municipality and comply with the intent of the various by-  
2 laws and permits to the extent possible.

3 Union will landscape the site after construction, which will include the construction of berms.

4 All necessary permits, approvals and authorizations will be obtained in a timely manner.

5 Union will retain inspection staff to ensure that contractual obligations between Union and the  
6 Contractor, Provincial Ministries and Municipal Government are complied with.

7

1    ***ENVIRONMENTAL MATTERS***

2    *Proposed Pipeline*

3    A Route Selection and Environmental Impact Assessment Report (“ER”) for the Proposed  
4    Pipeline was originally completed in January, 2009 by Stantec Consulting Limited. The ER can  
5    be found at Schedule 12-3.

6    The ER for the Proposed Pipeline was forwarded for review to the Ontario Pipeline Coordination  
7    Committee (“OPCC”) in early 2009. At that time, copies of the report were also forwarded to all  
8    affected municipalities and the Grand River Conservation Authority. An Executive Summary of  
9    the ER was forwarded to Landowners as well as First Nations and Métis Nation of Ontario who  
10   were given the option to obtain a copy of the ER upon request to Union.

11   In early 2013, an ER Addendum report was prepared to:

- 12           1)     report on the most recent consultation program for the Proposed Pipeline ;
- 13           2)     assess and report on any significant environmental and socio economic conditions  
14                   in the area of the Proposed Pipeline that may not have been reported in the  
15                   original ER ;
- 16           3)     identify any mitigation measures deemed necessary in addition to measures  
17                   identified in the original ER.

18   Copies of both the ER and ER Addendum reports have been forwarded to the OPCC, other  
19   Provincial and Municipal agencies and various First Nations and the Métis Nation of Ontario.

1 Copies of the reports will also be made available to affected Landowners upon request.

2 The ER Addendum report can be found at Schedule 12-4.

3 To inform the public and solicit input from Landowners, tenants and the general public with  
4 respect to the Proposed Pipeline, public information sessions were initially held on August 27,  
5 2008 and November 5, 2008. Notification of the information session was completed through  
6 newspaper notices and/or letters. A more recent consultation program was initiated in December  
7 2012 including a general newspaper notice of the Proposed Pipeline, resumption and notification  
8 letters to various federal, provincial and municipal agencies and authorities, special interest  
9 groups, First Nations and the Métis Nation of Ontario. Comments received to date are included  
10 in the ER Addendum.

11 The results of the ER and the ER Addendum indicate that the location of the Proposed Pipeline is  
12 the environmentally preferred route. As part of the ER, Union's consultant has developed a  
13 mitigation plan to minimize any impacts to the environment as a result of the Proposed Pipeline.  
14 Union believes that by following its standard construction practices and adhering to the  
15 recommendations and mitigation identified in the ER and ER Addendum reports that  
16 construction and operation of the Proposed Pipeline will have negligible impacts on the  
17 environment. The cumulative effects assessment completed by the independent consulting firm  
18 has indicated that no significant cumulative effects are anticipated from the development of the  
19 Proposed Pipeline. Union will comply with all mitigation measures recommended in the ER and  
20 ER Addendum.



1 Parkway West Compressor Station

2 Environmental and socio economic effects of the Proposed Parkway D Compressor are  
3 addressed in Union's Environmental Report for the Parkway West Compressor Station  
4 completed by Stantec Consulting Limited, attached as Schedule 12-5. The ER was submitted as  
5 part of Union's Parkway West project application to the Board. The ER addresses Union's  
6 proposed Parkway West Compressor Station including the Proposed Parkway D Compressor.

7 The ER for the proposed Parkway West Compressor Station was forwarded for review to the  
8 Ontario Pipeline Coordination Committee ("OPCC") on March 18, 2013. Copies of the report  
9 were also forwarded to all affected municipalities, Conservation Halton, adjacent Landowners,  
10 First Nations and the Métis Nation of Ontario.

11 To inform the public and solicit input from Landowners, tenants and the general public with  
12 respect to the proposed compressor station, an information session was held on March 7, 2013.  
13 Notification of the information session was completed through newspaper notices and letters.  
14 Consultation for the compressor station will also continue as part of the municipal review and  
15 approvals process. Comments received to date are included in the ER.

16 The results of the ER indicate that the effects of the proposed Parkway West Compressor Station  
17 are not anticipated to be significant. As part of the ER, Union's consultant has developed  
18 mitigation measures to minimize any impacts to the environment. Union will comply with all  
19 mitigation measures recommended in the ER. Union recognizes and believes that by following  
20 its standard construction practices and adhering to the recommendations and mitigation

identified in the ER, that construction and operation of the Parkway West Compressor Station will have negligible impacts on the environment.

Union will obtain all necessary approvals from the Ministry of Environment for air, noise and site drainage works for the Proposed Parkway D Compressor.

Features Common to the Proposed Brantford-Kirkwall Pipeline and Proposed Parkway D Compressor

Union will implement an environmental inspection program to ensure that the recommendations in the ER, including any commitments made by Union are followed. The Environmental Inspector will monitor construction activities and ensure that all activities comply with all conditions of approval.

Estimated environmental costs associated with the Project can be found in Schedule 12-6.

Union will conduct all necessary environmental field survey assessments and obtain all necessary environmental permits prior to construction.

Cultural Heritage

An archaeological assessment will be completed by a licensed archaeological firm along the pipeline route and at the Parkway West Compressor Station, as recommended in each ER. Union proposes to complete the archaeological assessment during the 2013 and 2014 field season.

1 Ground Water

2 Union will retain a qualified hydro-geologist to review the existing groundwater conditions along  
3 the pipeline route and at the Parkway West Compressor Station in order to inventory existing  
4 water wells. The hydro-geologist will then develop and implement a program for monitoring all  
5 wells that could be affected by construction. Union will also follow the recommendations  
6 outlined in each ER, environmental permits and any Landowner agreements.

7 Species at Risk

8 Union will initiate the field survey programs to determine the presence or absence of species at  
9 risk and their habitats along the Proposed Pipeline route and at the Parkway West Station. Union  
10 will work with the Ontario Ministry of Natural Resources should any species at risk or habitat be  
11 identified through the field survey program to develop appropriate mitigation procedures.

12 ***Features Specific to the Proposed Brantford-Kirkwall Pipeline***

13 Soy Bean Cyst Nematode (“SCN”)

14 Union will sample all agricultural easements along the pipeline route and any soils imported to  
15 the easement lands for the presence of SCN. Sampling along the pipeline easement will take  
16 place prior to the start of construction. In the event that sampling indicates the presence of SCN,  
17 Union will work with the Ontario Ministry of Agriculture and Food to develop a best practices  
18 protocol to handle SCN when detected and will employ the most current best practices at the  
19 time of construction.

1    Agricultural Lands

2    Measures to be implemented by Union to minimize impacts to soil and agricultural land along  
3    the pipeline route will include:

- 4           1)     Union's wet soil shut down practice
- 5           2)     Topsoil stripping
- 6           3)     Maintaining proper separation between subsoil and topsoil
- 7           4)     Flagging and repairing broken tiles
- 8           5)     Retaining a qualified soils expert/inspector
- 9           6)     Union's post construction cover crop program

10   Watercourse Crossings

11   Figure 12-5 below outlines the watercourses to be crossed and crossing method for the proposed  
12   pipeline. Watercourses will be confirmed through a field investigation and consultation with the

13

1 Grand River Conservation Authority.

2 **Figure 12-5**

<b>Watercourse Crossing</b>	<b>Crossing Method</b>
1. Tributary of Alder Creek	Dam & Pump
2. Tributary of Fairchild Creek	Dam & Pump
3. Tributary of Fairchild Creek	Dam & Pump
4. Tributary of Fairchild Creek	Dam & Pump
5. Tributary of Fairchild Creek	Dam & Pump
6. Tributary of Fairchild Creek	Dam & Pump
7. Tributary of Fairchild Creek	Dam & Pump
8. Tributary of Fairchild Creek (Barlow Creek)	Dam & Pump
9. Tributary of Fairchild Creek (Barlow Creek)	Dam & Pump
10. Tributary of Fairchild Creek (Barlow Creek)	Dam & Pump
11. Tributary of Fairchild Creek (Barlow Creek)	Dam & Pump

3

1    ***LAND MATTERS***

2    A drawing showing the Proposed Brantford-Kirkwall Pipeline location is provided in Schedule  
3    12-7.

4    A drawing showing the location of the proposed Parkway D compressor is provided in Schedule  
5    12-8.

6    Union will require approximately 36.18 hectares (89.40 acres) of permanent easement for the  
7    Proposed Brantford-Kirkwall Pipeline. Union will also require approximately 25.58 hectares  
8    (63.21 acres) of temporary easement for construction and top soil storage purposes

9    Union has acquired options to purchase all the necessary lands for the Parkway West  
10   Compressor Station facility. This is described in greater detail in EB-2012-0433 Parkway West  
11   Project, Section 13, paragraphs 54 – 59, inclusive.

12   *Proposed Pipeline Easement Requirements*

13   A list of the properties and the approximate dimensions of permanent easements and temporary  
14   easements required for the Proposed Pipeline is outlined in Schedule 12-9.

15   Union's form of easement is attached as Schedule 12-10. This agreement covers the installation,  
16   operation, and maintenance of one pipeline. The major restrictions imposed on the Landowner  
17   by the agreement are that the Landowner cannot erect buildings or privacy fencing on the  
18   easement. In addition, the Landowner cannot excavate on the easement or install field tile  
19   without prior notification to Union. The Landowner is free to farm the easement, or turn the  
20   easement into a laneway.

1 The temporary easements are in the form previously provided to the Board and used by Union in  
2 the past on similar pipeline projects. These agreements are usually for a period of two years,  
3 beginning in the year of construction. This allows Union an opportunity to return in the year  
4 following construction to perform further clean-up work as required.

5 Landowner Issues

6 Union will implement a comprehensive program to provide Landowners, tenants and other  
7 interested parties with information regarding the Proposed Pipeline. Information was previously  
8 distributed through correspondence and meetings with the public. Where formal public meetings  
9 were held, in conjunction with the EA, directly-affected Landowners and agencies were invited  
10 by letter while notification to the general public was made through newspaper advertisements.

11 Negotiation of Land Rights

12 Union has obtained early access from Landowners to conduct preliminary surveys. Union will  
13 commence easement negotiations with individual Landowners in spring of 2013. Preliminary  
14 discussions have not identified any strong objection to the Proposed Pipeline. Union will have  
15 all land rights in place prior to construction.

16 Construction Monitoring and Commitment Follow-up

17 For over a decade Union has had in place a comprehensive Landowner relations program which  
18 has proven successful on other projects. The key elements of this program are a Complaint  
19 Tracking system, and the assignment of a Landowner Relations Agent to ensure that  
20 commitments made to Landowners are fulfilled, to address questions and concerns of the

1 Landowners, and to act as a liaison between Landowners and the Contractor and Union  
2 engineering personnel. Union's Complaint Resolution System will be used in this Project to  
3 record, monitor, and ensure follow-up on any complaint or issue received by Union related to the  
4 construction. This process assists in resolving complaints and tracking the fulfillment of  
5 commitments. A process chart and explanatory notes that describe the Complaint Resolution  
6 System are found in Schedule 12-11. In addition to the LRA's duties during construction, the  
7 person assigned to this position will conduct post-construction interviews to capture any  
8 outstanding concerns, including damages, so that they can be resolved; and capture comment so  
9 that they may be considered in the planning of future projects.

10 When the cleanup is completed, the Landowner will be asked by a Union representative to sign a  
11 clean-up acknowledgement form if satisfied with the clean-up. This form, when signed, releases  
12 the Contractor allowing payment for the clean-up on the property. This form in no way releases  
13 Union from its obligation for tile repairs, compensation for damages and/or further clean-up as  
14 required due to erosion or subsidence directly related to pipeline construction.

15



1    ***FIRST NATIONS AND MÉTIS CONSULTATIONS***

2    Union has a long standing practice of consulting with Métis and First Nations, and has programs  
3    in place to ensure they are aware of Union's projects and have the opportunity to participate in  
4    both the planning and construction phases of the Project.

5    Union has an extensive data base and knowledge of First Nations and Métis organizations in  
6    Ontario and consults with the Tribal organizations and the data bases with the Ministry of  
7    Natural Resources, with the Ministry of Aboriginal Affairs and the Aboriginal Affairs and  
8    Northern Development Canada to ensure consultation is carried out with the most appropriate  
9    groups.

10   Union has signed a General Relationship Agreement with the Métis Nation of Ontario which  
11   describes Union's commitments to the Métis when planning and constructing pipeline projects.

12   The following First Nations and Métis were notified by letter regarding the Project as identified

13

1 in Figure 12-6 below:

2 **Figure 12-6**

July 16, 2012	Chief Bryan LaForme	Mississaugas of New Credit First Nation
July 16, 2012	Chief William Montour	Six Nations of the Grand First Nation
July 16, 2012	Chief Patrick Waddilove	Munsee Delaware First Nation
Aug. 20, 2012	Chief Phyllis Williams	Curve Lake First Nation
July 16, 2012	Chief Joel Abrams	Oneida Nation of the Thames First Nation
Dec. 10, 2012	Hazel Hill: Interim Executive Director of the Haudenosaunee Development Institute	Haudenosaunee Confederacy Chiefs Council
July 16, 2012	Mark Bowler: Director of Lands Resources and Consultation	Métis Nation of Ontario

3

4 The following First Nations requested that Union conduct formal consultations and or  
5 engagement meetings with them:

- 6 1) The Mississaugas of New Credit (New Credit)
- 7 2) The Six Nations of the Grand River First Nation (Six Nations)
- 8 3) Haudenosaunee Confederacy Chiefs Council through their representative board of  
9 the Haudenosaunee Development Institute (HDI)

10 The consultation and/or engagement meetings included:

- 1) Formal Consultation meetings with the Mississaugas of New Credit Consultation Committee on August 1, 2012 and January 15, 2013
- 2) Formal Consultation meetings with the Six Nations Elected Council Consultation Committee on August 2, 2012, September 6, 2012, November 22, 2012 and January 24, 2013.
- 3) Engagement protocol meetings with the HDI board on December 5, 2012 and February 22, 2013
- 4) Project review meeting with the Métis Nation of Ontario (MNO) on August 7, 2012

Copies of the correspondence that were sent to the First Nations and Métis groups can be found in Schedule 12-12.

The following issues were raised as part of the ongoing consultations process:

- 1) Capacity funding is required to support the consultation work for the Six Nations of the Grand River First Nation and the Mississaugas of New Credit First Nations Consultation Committees;
- 2) An Engagement agreement is required by the HDI;
- 3) Archeology Monitors from the HDI, the Six Nations of the Grand River First Nation and the Mississauga's of New Credit First Nation will be required on any Stage 2 or Stage 3 field studies for this Project;

- 1           4)     The Curve Lake First Nation requests follow up information on the Archeology  
2                     study work to be completed.

3     Union proposed to address these concerns in the following manner:

- 4           1)     Union has signed a formal Capacity Funding agreement with the Six Nations of  
5                     the Grand River First Nation and the Mississaugas of New Credit First Nation  
6                     respectively to support the continued Consultation work;
- 7           2)     Union is currently negotiating a formal Engagement Agreement with the HDI;
- 8           3)     Union will notify the HDI, the Six Nations of the Grand River First Nation and  
9                     the Mississaugas of New Credit First Nation committees when Stage 2 or Stage 3  
10                    work commences to have their Monitors on site during the study;
- 11          4)     Union will notify the Curve Lake First Nation of the Stage 2 Archeology findings  
12                    and if a Stage 3 is required, for their participation;

13     Upon completion of the necessary archaeological assessments for the Project, Union will make  
14     available the assessment to any First Nations or Métis that request a copy and will undertake any  
15     construction in accordance with any mitigation measures recommended in the assessments.

16     During construction, Union has Inspectors in the field who are available to First Nations and  
17     Métis as a primary contact to discuss and review any issues that may arise.

18     Union will continue with its commitment to enhance our relationship with First Nations and  
19     Métis communities.

**UNION GAS LIMITED**  
**GLOSSARY**

**10 m<sup>3</sup>** – One thousand cubic metres, this is the basic metric volumetric unit for gas, in place of Mcf. One thousand cubic metres equals approximately 35.3 Mcf.

**Aid to Construct** – A charge collected in advance of construction from new customers who have agreed to fund the shortfall in the economics of a project to serve them.

**Alberta Energy Company price point (“AECO”)** – The price of gas at the Alberta Energy Company storage facility located to the west of Empress.

**Alberta Border Reference Price** – The Alberta border forward price established in Union’s QRAM process.

**Alliance/Vector** – A pipeline system comprised of the Alliance Pipeline, which runs from Northeastern B.C. to Joliet, Illinois (near Chicago), and the Vector Pipeline which runs from Joliet, Illinois to the interconnect with Union at Dawn.

**Bcf** – Billion cubic feet

**Basis** – The differential between the future or forward price for a given commodity and the cash or spot price for such commodity. It can reflect differences in time periods, product qualities or locations.

**Basis Point (“bps”)** – A unit equal to 1/100th of 1% and is used in denoting the change in a financial instrument. The basis point is commonly used for calculating changes in yield of a fixed-income security, interest rates and equity indexes.

**Bundled Service** – a service in which the demand for natural gas at a customer delivery point is met by Union using whatever resources/functions or combination of resources/functions (e.g. transportation, storage, daily nominations) are required. Union offers bundled, semi-bundled (e.g. T-1, T-3) and unbundled (e.g. U2, U5, U7) services to its in-franchise customers.

**Bright Compressor Station (“Bright”)** – Bright is one of two mainline compressor stations (the other is the Lobo Compressor Station) along Union’s Dawn-Parkway system. Bright is located west of Kitchener Waterloo. The compression facilities along with the pipeline network are used to move volumes from Dawn to Parkway.

**British Thermal Unit (“BTU”)** – The amount of heat energy necessary to raise the temperature of one pound of water one degree Fahrenheit.

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**Compressor** – A device used to increase the pressure in the pipeline system.

**Construction Work In Process (“CWIP”)** – Expenditures incurred in relation to the construction of a capital asset that is not yet ready for use.

**Cross-Charge** – The cost charged to Union’s non-utility storage operations for the use of utility storage space in excess of utility requirements. This cost is expensed on the non-utility financials and utility O&M expenses are reduced by this amount.

**Cubic Foot** – The imperial unit of measurement of natural gas volume; the amount of gas required to fill a volume of one cubic foot under stated conditions of temperature, pressure, and water vapour.

**Cubic Metre** – That volume of gas which at a temperature of 15 degrees Celsius and at an absolute pressure of 101.325 kilopascals occupies one cubic metre.

**Customer Supplied Fuel** – represents compressor fuel collected from M12 and C1 storage and transportation services customers.

**Daily Contract Quantity (“DCQ”)** – The maximum amount of natural gas per day that a direct purchaser may deliver to Union’s system under the provisions of a direct purchase contract.

**Dawn Compressor Station (“Dawn”)** – The location of Union’s main compressor station. Dawn is referred to as a “hub” as it represents the point where Union’s supply, storage and transmission systems meet. A number of other pipeline systems (e.g. TCPL, Vector) are interconnected to Union’s system at Dawn. Dawn is located southeast of Sarnia, Ontario.

**Decatherm (“Dth”)** – A measurement of heat equivalent to one million BTUs.

**Deliverability** – The capability of a storage reservoir or pipeline to deliver gas at a given flowing pressure. It is usually expressed in thousands of cubic metres per day ( $10^3\text{m}^3$ ).

**Delivered supply** – See Spot Gas.

**Demand** – This is the level of need for natural gas at a specific location. Examples of where this can be found are; the point of end use (a residential, commercial or industrial customer), at the supply point to a community, a takeoff point from a transmission, or at an interconnect with another pipeline system.

**Demand Forecast** – The demand forecast is a prediction of the total natural gas expected to be consumed in a future period. This could apply to a customer class, rate class or market.

**Design Day Requirements** – Design day requirements are the expected demands by a customer at Union's design weather condition. Union plans to have facilities in place to meet these requirements.

**Direct purchase ("DP")** – A service whereby a customer or their agent arranges for gas supply and/or upstream transmission services directly, and arranges for Union's distribution service to deliver gas to end-user locations.

**Discounted Cash Flow ("DCF") analysis** – Represents an analysis of the incremental cash inflows and outflows resulting from a project. Cash Flows are discounted using the utility's incremental weighted average after tax cost of capital.

**Easement** – A right held by one person to make specific, limited use of land owned by another person. An easement is granted by the owner of the property for the convenience, or ease, of the person using the property. Common easements include the right to pass across the property, the right to construct and maintain a roadway across the property, the right to construct a pipeline under the land, or a power line over the land.

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**Eastern Zone Toll** – TCPL toll that applies to all points in TCPL's Central Delivery Area, the Southwestern Delivery Area and the Eastern Delivery Area.

**EGD** – Enbridge Gas Distribution

**Empress** – The Interconnect between NOVA and TCPL immediately east of the Alberta/Saskatchewan border.

**Ex-Franchise** – Customers located outside Union's franchise areas.

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**UNION GAS LIMITED**  
**GLOSSARY**

**10 m<sup>3</sup>** – One thousand cubic metres, this is the basic metric volumetric unit for gas, in place of Mcf. One thousand cubic metres equals approximately 35.3 Mcf.

**Aid to Construct** – A charge collected in advance of construction from new customers who have agreed to fund the shortfall in the economics of a project to serve them.

**Alberta Energy Company price point (“AECO”)** – The price of gas at the Alberta Energy Company storage facility located to the west of Empress.

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**Alliance/Vector** – A pipeline system comprised of the Alliance Pipeline, which runs from Northeastern B.C. to Joliet, Illinois (near Chicago), and the Vector Pipeline which runs from Joliet, Illinois to the interconnect with Union at Dawn.

**Bcf** – Billion cubic feet

**Basis** – The differential between the future or forward price for a given commodity and the cash or spot price for such commodity. It can reflect differences in time periods, product qualities or locations.

**Basis Point (“bps”)** – A unit equal to 1/100th of 1% and is used in denoting the change in a financial instrument. The basis point is commonly used for calculating changes in yield of a fixed-income security, interest rates and equity indexes.

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**Fuel Gas** – Gas used as fuel to operate the compressors that move the gas through the pipeline. Usually expressed as a percentage of volumes transported.

**GJ (gigajoule)** – See Joule.  $1 \text{ GJ} = 10^9 \text{ J}$  (refer to conversion table at the end of the glossary).

**Gas Distributor** – An entity that physically delivers gas to a consumer.

**Gas Supply Commodity Rate (North)** – This rate reflects the commodity cost of gas and the associated upstream transportation fuel to transport gas to the delivery area in the North in which the gas is consumed.

**Gas Supply Transportation Rate (North)** – This rate reflects all the costs of upstream (TCPL) transportation, the associated Dawn-Trafalgar transportation and TCPL STS services that are used to provide daily firm service to each delivery area in the North.

**Gas Supply Commodity Charge (South)** – This rate reflects the commodity cost of gas and the associated upstream transportation fuel to transport gas to the South.

**Heating Degree Day (“HDD”)** – Heating degree-day is the unit of measurement for weather normalization. One heating degree-day (HDD) is a measure of the heating demand for natural gas caused by a one-degree temperature difference relative to Union’s temperature benchmark of 18°C. The number of HDDs, on one day, is determined by subtracting the mean daily temperature for the day from the benchmark temperature. For example, if the mean daily temperature is 11°C, then there are 7 HDDs (i.e. 18-11) on that day. If the mean daily temperature is above 18°C, there are no HDDs.

**Hoop Stress** – The stress around the circumference of a pipe (i.e. perpendicular to the pipe length) that results from internal pressure.

**Hub** – An interchange where multiple pipelines interconnect and form a market center.

**Hydrostatic Test** – This is a pressure test of the pipeline using water as the medium to confirm its structural integrity.

**Interruptible Transportation Service (“IT”)** – Gas service which is subject to curtailment for either capacity and/or supply reasons, at the option of the Company.

**In-Franchise** – Customers inside Union’s franchise areas.

**Independent Market Operator (“IMO”)** – An independent entity in Ontario charged with operating the wholesale electricity market.

**Independent Power Producer (“IPP”)** – A non-utility power generating entity, that typically sells the power it generates to electric utilities at wholesale prices.

**Investment Portfolio** – The costs and revenues associated with all new distribution customers who are forecast to attach in a particular test year (including new customers attaching on existing mains). The Investment Portfolio includes a forecast of normalized reinforcement costs.

**Joule (J)** – The metric unit of energy.

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**Gas Supply Commodity Charge (South)** – This rate reflects the commodity cost of gas and the associated upstream transportation fuel to transport gas to the South.

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**Joule (J)** – The metric unit of energy.

**Leave to Construct Application** – This is an application to the Ontario Energy Board for approval to construct a hydrocarbon pipeline and/or facilities.

**Line Pack** – Inventory of gas in a pipeline, or in a gas distribution system.

**Load Balancing** – The efforts of a utility to meet its bundled customer requirements in the most economic manner on a daily or seasonal basis. It involves balancing the gas supply to meet total demands by using storage and other peak supply sources (e.g. spot gas) curtailment of interruptible demands, and diversions from one delivery point to another.

**Load Factor** – The ratio of average load to peak load during a specific period of time, expressed as a percent. It indicates the average utilization of a pipeline system relative to total system capacity.

**Load Duration Profile/Curve** – A curve of loads, plotted in descending order of magnitude, against time intervals for a specified period. The curve indicates the period of time load was above a certain magnitude. Load duration curves are profiles of system demand that can be drawn for specified periods of time (e.g., daily, monthly, yearly). The coordinates may be absolute quantities or percentages.

**Loading Factor** – The loading factor is the number by which a direct cost is multiplied to arrive at the fully loaded cost. The fully loaded cost is a cost-based price that is the sum of the direct costs (such as employee salaries and other expenditures) incurred in providing the service and the indirect costs (such as payroll benefits, cost of assets used and a return on invested capital) that are related to the direct costs. The fully loaded cost is the amount that would be charged to the service receiver.

**Lobo Compressor Station (“Lobo”)** – Lobo is one of two mainline compressor stations (the other is the Bright Compressor Station) along Union’s Dawn Parkway system. Lobo is located west of London. The compression facilities along with the pipeline network are used to move volumes from Dawn to Parkway.

**Local Ontario Production** – Natural gas production in Ontario, most of which is delivered or produced in Union's franchise area where it is either purchased by Union for sales service customers' consumption or transported to Dawn (on M-13 contracts with the producers) for sale by the producers to others.

**Loop** – Loop relates to the action of installing a pipeline section parallel to an existing pipeline. The purpose of this additional facility is to increase system capacity, increase pressure or some combination of the two.

**Mcf** – Million cubic feet.

<sup>3</sup>  
**m** – See Cubic metre (also refer to conversion table at the end of the glossary).

**MMbtu** – Million British thermal units (refer to conversion table at the end of the glossary).

**Main** – Pipe used to carry natural gas from one point to another. As contrasted with service gas pipes, mains usually carry natural gas in large volume for general or collective use.



**Market Strip (one-year strip)** – The average future price of gas over a specified term.

**Market Transformation** – a program designed to produce market effects that change the structure of a market or the behaviour of market players, and which creates an increase in the adoption of an energy efficient technology, service, or practice.

**Meter** – An instrument for measuring and indicating, or recording, the volume of natural gas that has passed through it.

**Normalized Average Consumption (“NAC”)** – NAC is an estimate of the average amount of natural gas a residential, commercial or industrial customer will annually consume, given normal weather conditions. NAC is estimated by determining what the actual average consumption is, and then restating that number to reflect normal weather.

**Net Present Value (“NPV”)** – The sum of the discounted yearly benefits arising from an investment over the life-term of that investment.

**Normal Weather** – Normal weather is used to calculate normalized average consumption, which is a key element in determining the demand forecast for natural gas. Normal weather is the term used to describe the most likely weather, or more accurately, heating degree-days that can be expected in the long run. Normal weather can be determined by various methods. The current method being used by Union to define normal weather is the 20-year declining trend.

**Nominal Pipe Size (“NPS”)** This is an indication of pipe diameter in inches.

**Obligated direct purchase deliveries** – Direct purchase customers have an obligation to deliver on a daily basis a certain amount to Union (i.e. their obligated DCQ). Union counts on these deliveries arriving at a specified location in determining the facilities required to meet the design day demand.

**Ontario Landed Reference Price** – The Alberta Border Reference Price plus 100% load factor TCPL tolls (to the Eastern Delivery Area) plus compressor fuel established in Union’s QRAM process. It is the price that Union charges its sales service customers for the costs of gas supplies and benchmark for recording debits or credits to its gas supply-related deferral accounts.

**Panhandle** – The Panhandle Eastern Pipeline system that runs from the U.S. mid-continent (Kansas, Texas, Oklahoma) to Michigan and Southwestern Ontario.

**Parkway Compressor Station (“Parkway”)** - Located at the east end of Union’s Dawn Parkway system. At this location, Union connects with Enbridge and TCPL. Facilities at this site include custody transfer measurement to Enbridge and TCPL. Compression is also located here to facilitate the movement of volumes between Union and TCPL.

**Parkway Deliverability** – Total planned deliverability at Parkway (including volumes received from TCPL) on design day.

**Peak Day** – The 24-hour period of greatest total gas sendout.

**Peak day requirement** – Also referenced as Design Day requirements.

**PJ (petajoule)** – See Joule.  $1 \text{ PJ} = 10^{15} \text{ J}$ .

**Profitability Index (“PI”)** – The results from the DCF analysis are presented as a ratio of the net present value of revenues to the net present value of costs. This ratio is referred to as the profitability index or PI.

**Sales Service** – Otherwise referred to as system gas supply. Refers to the sale of the commodity to in-franchise customers by Union.

**SENDOUT ©** – An optimization software developed by NewEnergy Associates which is used by Union for supply/demand modeling as part of its annual gas supply planning process.

**Service** – The pipe that carries natural gas from the main to a customer meter.

**South Portfolio** – The mix of upstream transportation capacities that are used to serve customers in the Southern Operations area.

**South Portfolio Cost Differential (“SPCD”)** – The proposed adjustment to the transportation component of the Total Gas Supply Charge for the Southern Operations area to reflect the costs of delivering supplies to sales service customers. It is the difference between the Ontario Landed Reference Price and the South Portfolio costs.

**Specified Minimum Yield Strength (“SMYS”)** – The minimum yield strength prescribed by the specifications or standard to which pipe is manufactured.

**Spot gas** – Gas supplies that are not underpinned by upstream transportation capacities and which are purchased for delivery at a specific location (e.g. Dawn).

**Storage Transportation Service (“STS”)** – A service offered by TCPL that allows for the movement of gas from a specified delivery area in the North to Parkway (summer “injections”) and from Parkway to a specified delivery area (winter “withdrawals”) in the North.

**System Capacity** – This is the measure of the capability of the pipeline system. It is expressed under a set of pressure conditions and shows the system’s ability to meet a set of demands specific locations.

**TCPL** – TransCanada Pipelines Limited

**Therm** – A measurement of heat equivalent to 100,000 BTUs.

**Throughput** – The total annual amount of natural gas transported through Union’s transmission system.

**Toll** – A charge levied by a pipeline company.

**Total Resource Cost (“TRC”) Test** – A test that measures the net benefits of DSM efforts from a societal perspective (also known as the Societal Cost Test). Under the TRC test, benefits are driven by avoided resource costs, and costs include the equipment and program support associated with delivering that equipment to the marketplace.

**Transportation Service (“T-Service”)** – Service offered by a pipeline company or distributor to transport gas owned by others for a toll.

**Trunkline** – A pipeline system that runs from the Gulf of Mexico to the border of Indiana and Michigan.

**Unabsorbed Demand Charge (“UDC”)** – Occurs when gas is transported on an upstream transmission pipeline with demand charges included in its toll, at less than 100% load factor.

**Unbundled Service** – A service in which the demand for natural gas at a customer delivery point is met by the level of separate services and functions (e.g. transportation, storage space, storage injection/withdrawal, daily nominations) contracted to be available.

**Union North** – Refers to the Northern and Eastern Operations Area, or the sections of Union’s system that spans north of Toronto to the Manitoba border and east of Toronto to Cornwall.

**Union South** – Refers to the Southern Operations Area, or the southern section of Union’s system that spans as far west as Windsor and as far east as Parkway.

**Vertical slice** – A methodology that was approved by the Board in its RP-1999-0017 Decision to be used by Union to proportionately allocate upstream transportation capacity to its customers in the Southern Operations area who elect to begin direct purchase.

**WACC** – Weighted average cost of capital.

**WACOG** – Weighted average cost of gas.

**Winter Peaking Service (“WPS”)** – Winter Peaking Service is one of the non-facility options Union can use to meet its system demands. Volumes will be delivered to Union for a specified maximum number of days at Union’s call. This service would be provided by a third party who agrees to deliver the volumes on the days Union nominates them.

**Working Capacity** – The working capacity is the total volume of gas injected into a storage reservoir in excess of the cushion gas. This is the total maximum volume of gas available for delivery during any injection-withdrawal cycle. EB-2005-0520 Exhibit A1 Tab 15 Page 15 of 15 December, 2005

**CONVERSION TABLE**

**Volume**

To convert Mcf to  $10^3 \text{ m}^3$ , multiply by 0.02832784.

To convert  $10^3 \text{ m}^3$  to Mcf, multiply by 35.30096.

**Energy**

To convert MMbtu to GJ, multiply by 1.054615.

To convert GJ to MMbtu, multiply by 0.948213.

## EXECUTIVE SUMMARY

1. North American natural gas markets are experiencing dramatic changes. Production from mature natural gas basins such as the Western Canadian Sedimentary Basin is in decline while new production basins like Marcellus and Utica have emerged. Marcellus shale gas production alone has increased by nearly 7 PJ/d since the beginning of 2007, with supply expected to more than triple by 2035.
2. The increase in shale and other non-traditional gas supply has put downward pressure on natural gas prices and reduced price volatility. It has also changed the price differentials across North America and impacted market behavior. Market participants are moving away from long haul transportation. They are contracting short haul transportation to move supply purchased at liquid hubs located closer to market areas. This has increased demand for transportation on the Dawn-Parkway System and created an opportunity for Union Gas Limited (“Union”) to diversify its natural gas supply portfolio for Union North.
3. This application by Union is brought in response to these fundamental market changes. The application consists of the following five requests:
  - (1) Section 90 Application for leave to construct a NPS48 pipeline from the existing Brantford Valve Site to the Kirkwall Custody Transfer Station (“Proposed Pipeline”);
  - (2) Section 91 Application for leave to construct the Parkway D compressor, including measurement, and associated facilities (“Proposed Parkway D Compressor”);together the “Project”
  - (3) Section 36 Application for pre-approval for recovery of the cost consequences of all facilities associated with the development of the Project from ratepayers, effective January 1, 2015;

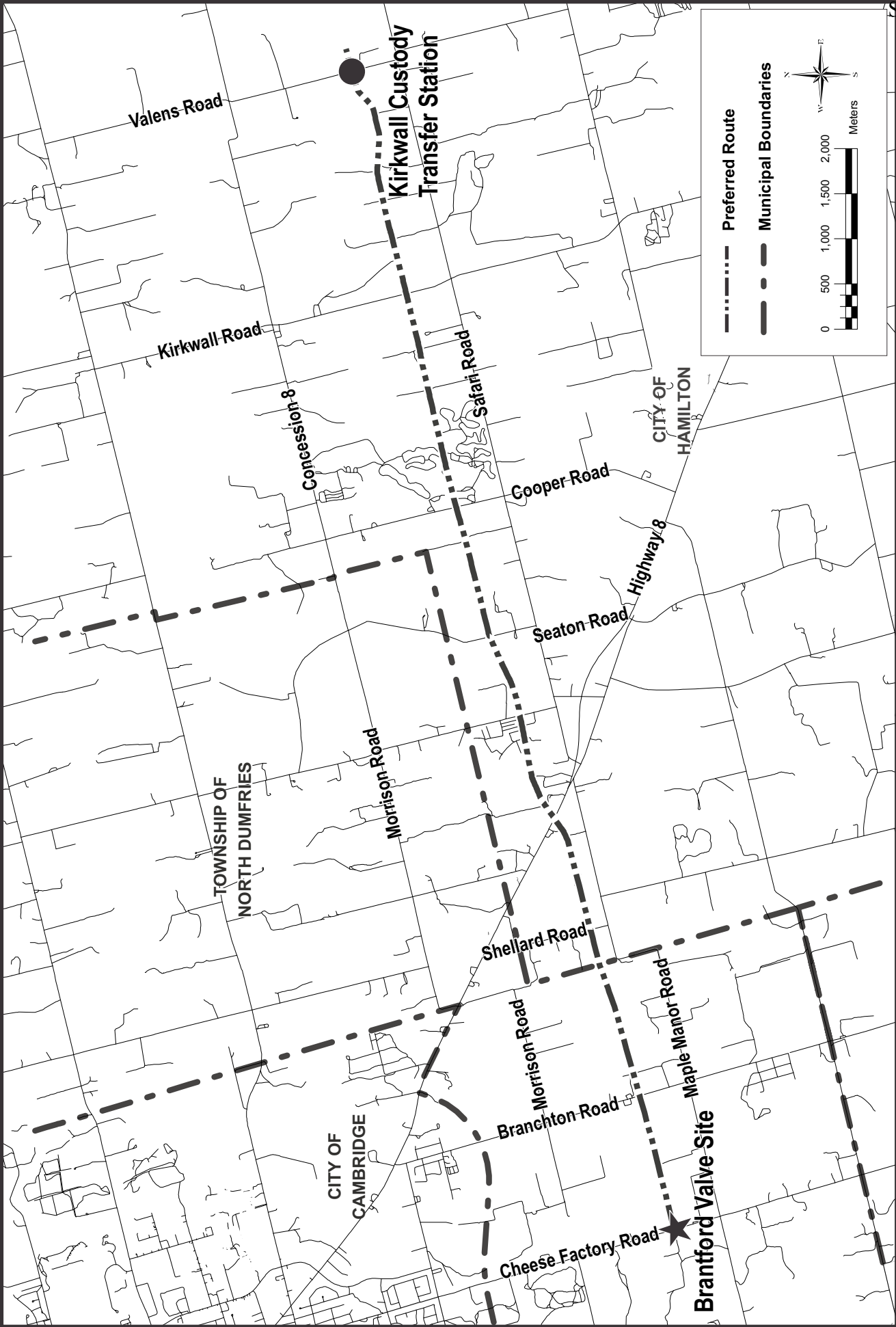
- (4) Section 36 Application for approval of an accounting order to establish the Brantford-Kirkwall/Parkway D Deferral Account; and
  - (5) Section 36 Application for pre-approval of the cost consequences of two long term short haul transportation contracts on the TransCanada Pipelines Limited (“TCPL”) Mainline;
4. The facilities and new short haul transportation contracts described in the application will produce significant benefit for Union’s in-franchise customers, particularly in Union North. The gas supply savings to the Union North sales service and bundled direct purchase customers are expected to be between \$180 million and \$280 million over the next ten years.
5. The facilities proposed by Union were determined in consultation with Enbridge Gas Distribution (“Enbridge”), TCPL and Gaz Métro Limited Partnership (“Gaz Métro”). The proposed facilities complement Union’s Parkway West Project and projects being developed by Enbridge and TCPL. The further benefits of the Project include: diversity and security of supply for Union, Enbridge, and Gaz Métro; and, an affordable source of natural gas for the proposed Enbridge and TCPL expansions. Between Union, Enbridge, and Gaz Métro up to \$2.0 billion in gas supply cost savings is possible between 2015 and 2025 should the Project proceed.
6. By building the Project, Union is pro-actively addressing the impacts of future turn back. Union will be better positioned to re-purpose or re-sell turn back capacity provided market opportunities exist. The ability to re-purpose or re-sell turn back capacity would help mitigate future rate risk for Union’s customers. In addition, the Project supports continued growth of the Dawn Hub, which increases depth, liquidity and price competitiveness of gas supply options for Ontario customers over the long term.

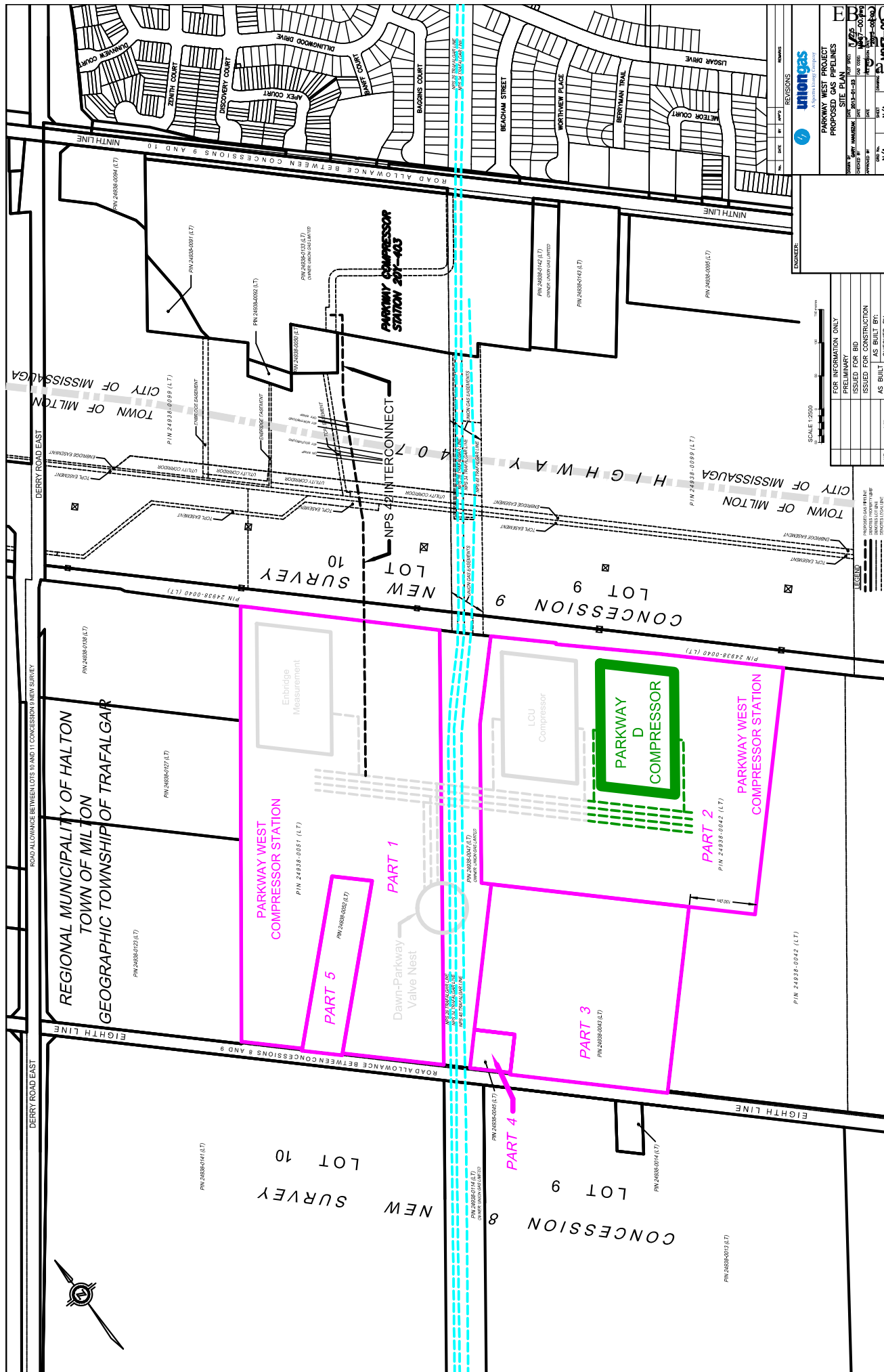
7. The total estimated capital cost of the Project is \$204 million. The largest revenue requirement associated with the Project increases to approximately \$15.9 million over the 2015 to 2018 period. The Project will result in: (i) an increase of costs of approximately \$1.6 million, allocated to Union North in-franchise rate classes, (ii) an increase of costs of approximately \$16.0 million allocated to ex-franchise rate classes and (iii) a reduction in costs of approximately \$1.7 million, allocated to Union South in-franchise rate classes. The ex-franchise customers that will bear the majority of the costs associated with the Project are supportive
8. Total residential bill impacts were calculated to include the combined impacts of the gas cost savings associated with Union's long term contracting proposal and the Project. Total residential bill impacts were calculated to reflect the combined impact of the gas cost savings associated with Union's long term contracting proposal and the Project. For the average Rate 01 residential customer in Union North consuming 2,200 m<sup>3</sup> per year, the total bill impact is a reduction of (\$42.00 to \$43.00) per year as compared to Union's current approved rates (per EB-2011-0210). For the average Rate M1 residential customer in Union South consuming 2,200 m<sup>3</sup>, the total bill impact is a reduction of approximately (\$1.12) per year.
9. For ex-franchise customers, and others that use the Dawn-Parkway System, the M12 rate will increase from \$0.078/GJ/d to \$0.091/GJ/d upon completion of the Parkway West Project and this Project. Union's M12 rate has traditionally ranged from \$0.07/GJ/d to \$0.10/GJ/d. This increased rate of \$0.091/GJ/d is within this historic range.
10. Union proposes to start construction in the summer of 2014 with a target in-service date of the fall of 2015. Given that Union is required to order the long lead delivery items in 2013, Union is seeking a Board decision by September 15, 2013.

11. In summary, the Project addresses the increase in demands on the Dawn-Parkway System; results in significant benefits for Ontario energy consumers, Union's in-franchise and ex-franchise customers; and represents rational development of Union's facilities. Accordingly, the Project should be approved by the Board.



Union Gas Limited Proposed Brantford-Kirkwall Pipeline







# Impact of Changing Supply Dynamics on the Ontario Natural Gas Market

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January 30, 2013

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## Table of Contents

List of Exhibits .....	ii
1 Executive Summary .....	1
2 Introduction .....	3
3 Ontario Natural Gas Market Outlook .....	4
3.1 Ontario Natural Gas Demand .....	4
3.1.1 Ontario Natural Gas Consumption .....	4
3.1.2 Ontario Natural Gas Exports .....	5
3.2 Natural Gas Supply .....	6
3.2.1 Role of U.S. Shale Gas Supplies in Serving Ontario Energy Markets .....	7
3.3 Changes in TransCanada's Role in Serving Ontario Markets .....	8
3.4 Parkway-Maple Pipeline Capacity Constraints .....	11
3.5 Landed Cost of Ontario Natural Gas Supply .....	11
4 North American Natural Gas Market Outlook .....	13
4.1 North American Demand .....	13
4.1.1 Western Canadian Natural Gas Demand .....	15
4.2 North American Natural Gas Supply Outlook .....	17
4.2.1 ICF Base Case Supply Outlook .....	17
4.2.2 Natural Gas Production Costs .....	19
4.3 LNG Exports .....	20
4.3.1 LNG exports from British Columbia .....	21
4.4 North American Pipeline Flows .....	22
4.5 Natural Gas Price Outlook .....	25
5 Conclusions .....	27
6 Appendices .....	28
Appendix A: New Sources of Western Canadian Natural Gas Supply .....	28
6.1.1 Overview of New Natural Gas Resource Plays in Western Canada .....	28
6.1.2 Expected Production from Western Canadian Resource Basins .....	31

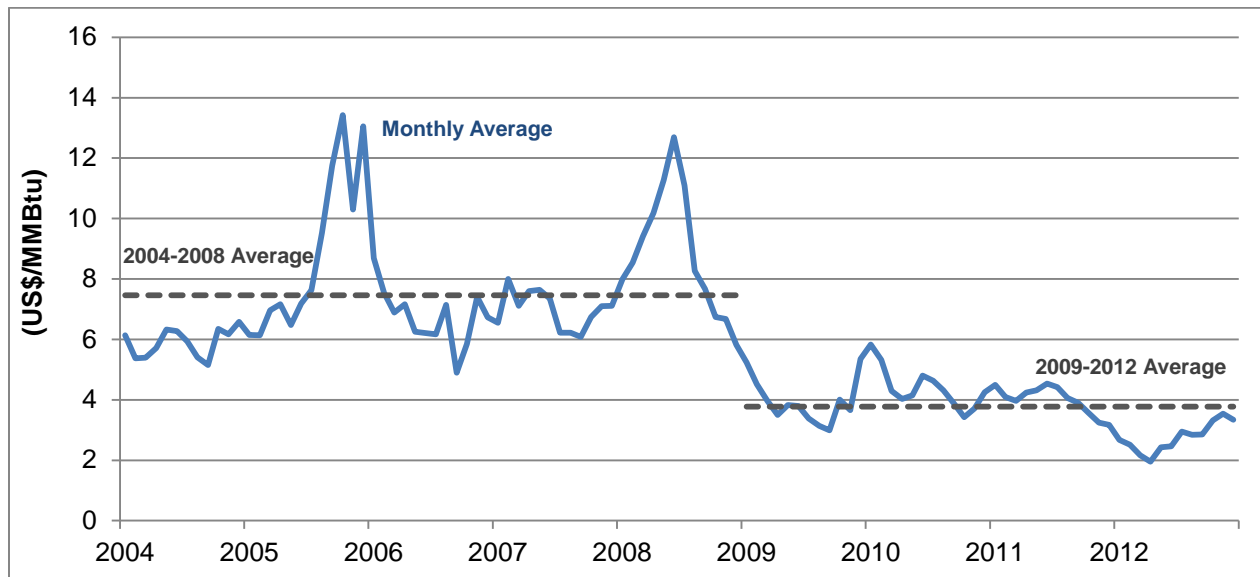
## List of Exhibits

Exhibit 1-1: Monthly Average Spot Price at Henry Hub (Nom\$/MMBtu) .....	1
Exhibit 3-1: Ontario Natural Gas Consumption by End Use.....	5
Exhibit 3-2: Historical and Projected Ontario Natural Gas Demand .....	6
Exhibit 3-3: Historical and Projected Ontario Natural Gas Supply.....	7
Exhibit 3-4: Ontario's Supply Sources and Competing Demand Sources .....	8
Exhibit 3-5: Production Trends in WCSB versus Marcellus Shale .....	9
Exhibit 3-6: Changes in TransCanada Mainline Throughput Forecasts .....	10
Exhibit 3-7: Long-term Transportation Contracting Analysis (Full Utilization).....	12
Exhibit 3-8: Long-term Transportation Contracting Analysis (80% Utilization) .....	12
Exhibit 4-1: U.S. and Canadian Gas Consumption by Sector (Tcf per year).....	14
Exhibit 4-2: Western Canadian Gas Consumption by Sector (Tcf per year) .....	15
Exhibit 4-3: Alberta Oil Sands and Related Gas Consumption .....	16
Exhibit 4-4: Projected U.S. and Canadian Gas Supplies .....	18
Exhibit 4-5: Projected U.S. and Canadian Shale Gas Production (Bcfd).....	19
Exhibit 4-6: Projected North American LNG Exports (Bcfd) .....	20
Exhibit 4-7: TransCanada Mainline Flows versus Canadian LNG Exports.....	21
Exhibit 4-8: Projected Change in Interregional Pipeline Flows (2012-2025) .....	23
Exhibit 4-9: Impact of Marcellus Production Growth on Regional Flows (2012-2025).....	25
Exhibit 4-10: GMM Average Annual Prices for Selected Markets .....	26
Exhibit 6-1: Encana Regional Play Map .....	30
Exhibit 6-2: Location of Duvernay Gas and Condensate Trend, Alberta.....	30
Exhibit 6-3: Tight Oil Plays of Western Canada.....	31
Exhibit 6-4: Production in WCSB versus Marcellus Shale .....	32

## 1 Executive Summary

As 2013 begins, natural gas markets in Ontario are at a pivotal turn. The development of abundant and competitively priced sources of gas in the Marcellus and Utica formations in Pennsylvania, Ohio, and West Virginia offer the promise of gas supply in relatively close proximity to Ontario. The technological advancements that made the development of these and other unconventional resources throughout North America possible have significantly changed the outlook for future natural gas markets and natural gas commodity prices (see Exhibit 1-1 below). North American natural gas is now a resource that can provide a growing source of economic energy to homes and businesses in Ontario for decades to come.

**Exhibit 1-1: Monthly Average Spot Price at Henry Hub (Nom\$/MMBtu)**



Source: The U.S. Energy Information Administration (EIA). "Henry Hub Gulf Coast Natural Gas Spot Price." EIA, 16 January 2013: Washington, D.C. Available at: <http://www.eia.gov/dnav/ng/hist/rngwhhdm.htm>

At the same time, the maturation of traditional supply sources of western Canada, as well as competition for the nascent unconventional gas resources in Alberta and British Columbia, create uncertainty and gas supply planning risk for Ontario. Decisions being made today regarding gas supply planning and infrastructure development within the Province and at the national level will have implications for the natural gas costs and gas supply reliability in Ontario for the next several decades.

In the analysis of the factors and forces affecting the Ontario gas market, ICF has reached the following conclusions:

- Natural gas consumption in Ontario is expected to see continued growth, led by expanding use in the power sector.

- Ontario will see the second largest gas-fired generation capacity additions over the next ten years in Canada, behind only Alberta.
- The decline in Ontario's gas availability from western Canada is expected to continue in the future due to a combination of declines in conventional WCSB natural gas production and growth in western Canadian demand (led by LNG exports and Alberta oil sands development).
  - Natural gas production in the WCSB has been declining since 2006. After peaking at 16.7 Bcfd in marketable production, production fell to 14.3 Bcfd in 2010 and 14.0 Bcfd in 2011.<sup>1</sup>
  - While conventional gas production has continued to decline, a trend that will persist over the next several years, shale gas in western Canada is also being developed. Shale gas production is forecast to grow, eventually reversing the production decline. ***However, declines in conventional resource production capabilities are expected to more than offset growth in unconventional gas production until 2019, when unconventional WCSB production begins to exceed that of conventional. That trend will continue over the foreseeable future, with unconventional gas production comprising over 60 percent of WCSB production in 2025 (up from just over 20 percent in 2011).***<sup>2</sup>
- Growth in LNG exports and gas consumption from oil sands production, which uses natural gas in the production process, will create significant requirements for gas produced in western Canada. This growth creates new consumption options closer to production for gas use, which lessens the amount of gas available to move to markets in the east.
- ICF is projecting continued growth in U.S. supplies of natural gas into Ontario to meet growth in Ontario and Quebec demand, as well as to replace declines in natural gas supply from the WCSB.
- Policies and regulatory approval for the development of infrastructure to access unconventional gas supplies from the Marcellus and Utica formations offer the potential to lower delivered gas costs for households and businesses in Ontario.
- Ontario's ability to expand access to U.S. shale gas supplies remains a serious concern.
  - ICF estimates that significant new pipeline capacity from the Marcellus and Utica shale production regions will be required to meet demand growth in eastern Canada.
  - Investment in pipeline capacity will depend on project economics that are acceptable to the market, as well as regulatory approval of economic projects.

<sup>1</sup> National Energy Board (NEB) of Canada

<sup>2</sup> See Appendix A for details on western Canadian unconventional natural gas resources.



## 2 Introduction

ICF was engaged by Torys LLP to prepare a report that examines the rapidly changing dynamics of North American natural gas markets and the implications of these changes on consumers and businesses in Ontario. This report is the latest in a series of reports prepared by ICF and presented in various proceedings in Ontario. The objective of this report is to analyze and explain the options for the acquisition of gas supply at a high level. Specifically, the report considers the importance of diversifying away from reliance on gas supplies in western Canada and increasing the percentage of gas supply obtained from unconventional shale formations in the eastern half of the United States.

This report builds on two previous ICF reports filed with OEB staff. In 2010, OEB staff commissioned ICF to prepare a report to provide analysis and insight into the state of the North American and Ontario natural gas markets and the expected state of the Ontario natural gas market in the future. In 2011, Union Gas staff commissioned ICF to prepare a report to provide analysis and insight into the state of the North American and Ontario natural gas markets and the expected state of the Ontario natural gas market through 2025.

ICF's forecasts herein are based on the 2012 Q4 Gas Market Model (GMM®) results, released in October 2012, with projections through 2025. The GMM, an internationally recognized modeling and market analysis system for the North American gas market, includes natural gas demand sectors, conventional and unconventional natural gas resources (including western Canadian developments), the impact of production costs, and other developments such as potential LNG exports and Alberta oil sands development.

### 3 Ontario Natural Gas Market Outlook

The recent changes in the North American natural gas market are creating both challenges and opportunities for Ontario. Natural gas consumption in Ontario is expected to see continued growth, led by expanding use in the power sector. Ontario will see the second largest gas generation capacity additions in Canada over the next ten years, behind only Alberta. At the same time, natural gas supplies available to Ontario from western Canada, the traditional source for most of Ontario's natural gas supply, have been declining, and are expected to continue to decline. As a result, Ontario's ability to meet additional gas demand hinges on its ability to access new sources of natural gas supply such as the Utica and Marcellus shales.

The key natural gas market development in recent years has been the growth of North American resources and gas supply due to the technological advances in the recovery of gas from shale formations. Producers have long understood that shale formations contain significant gas volumes. But it has only been during the last decade that technologies have advanced to allow access to this gas resource base at competitive costs. Moreover, the cost of employing these technologies has been declining at a remarkable rate, making gas produced from shale and other unconventional formations available at lower exploration and production costs than development of incremental conventional gas supplies. These changes have had, and will continue to have, a dramatic impact on Ontario natural gas markets.

#### 3.1 Ontario Natural Gas Demand

Total Ontario natural gas demand includes both consumption of natural gas in the province, as well as transshipments of natural gas from western Canada and the U.S. Midwest to Quebec and the U.S. Northeast. Ontario is expected to see gas consumption growth averaging 2.6 percent annually through 2025, while growth in total natural gas supply flowing to and through Ontario will average 1.5 percent annually as exports to the U.S. continue to decline.<sup>3</sup>

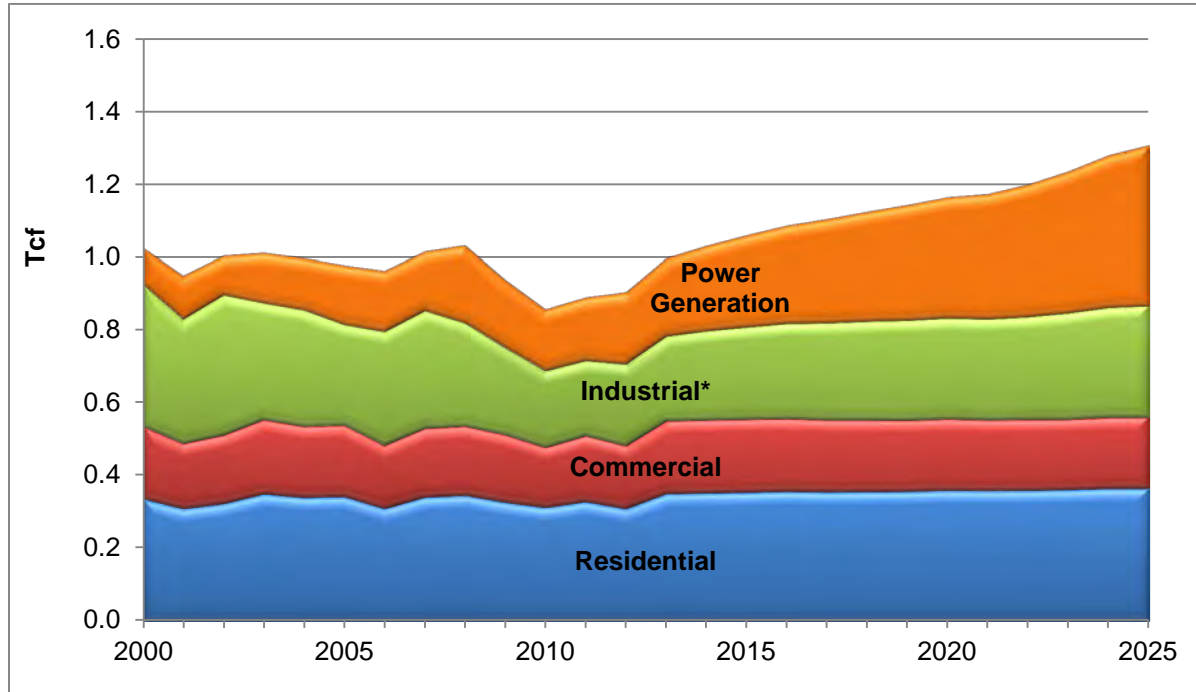
##### 3.1.1 Ontario Natural Gas Consumption

Natural gas consumption in Ontario is expected to see continued growth, led by expanding use in the power sector (see Exhibit 3-1). Ontario will see the second largest gas generation capacity additions in Canada over the next ten years, behind Alberta.<sup>4</sup> Gas-fired capacity additions in Ontario will be driven by demand growth and displacement of coal-fired electric generation by natural gas generation that complements renewable energy capacity additions. Growth in other end-use sectors will remain modest, limited by GDP growth and energy efficiency improvements (offsetting growth in the residential and commercial sectors).

<sup>3</sup> Includes pipeline exports to Quebec and the U.S. Mid-Atlantic and storage injections.

<sup>4</sup> The Conference Board of Canada. "The Role of Natural Gas in Powering Canada's Economy." December 2012: Ottawa, Ontario. P. 9.

**Exhibit 3-1: Ontario Natural Gas Consumption by End Use**

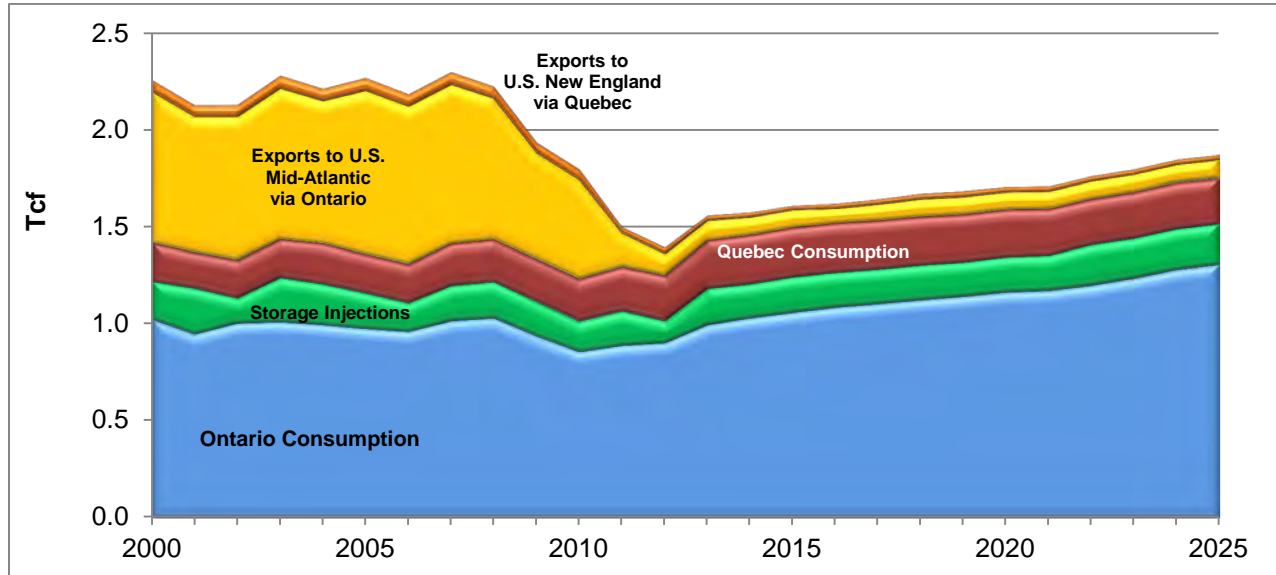


Source: ICF GMM® Oct 2012

\* Includes lease, plant, and pipeline fuel

### **3.1.2 Ontario Natural Gas Exports**

Prior to 2007, about half of the total natural gas delivered to Ontario was exported to Quebec and the U.S. Northeast. However, as conventional natural gas production in western Canada has declined, and as natural gas production in the U.S. Northeast has increased, Ontario exports have declined substantially (see exhibit below). ICF projects that Quebec will continue to receive most of its natural gas requirements via pipeline deliveries through Ontario. However, deliveries into the U.S. Northeast are likely to remain at relatively low levels in the future. That said, Ontario will remain a significant source of winter deliveries into U.S. markets from natural gas storage within the province. Much of the seasonal gas supply, however, will enter Ontario from the United States through Michigan and New York rather than directly from western Canada through the Northern Ontario Line of the TCPL Mainline.

**Exhibit 3-2: Historical and Projected Ontario Natural Gas Demand**

Source: ICF GMM® Oct 2012

Note: New England includes Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont. The U.S. Mid-Atlantic region includes New Jersey, New York, and Pennsylvania.

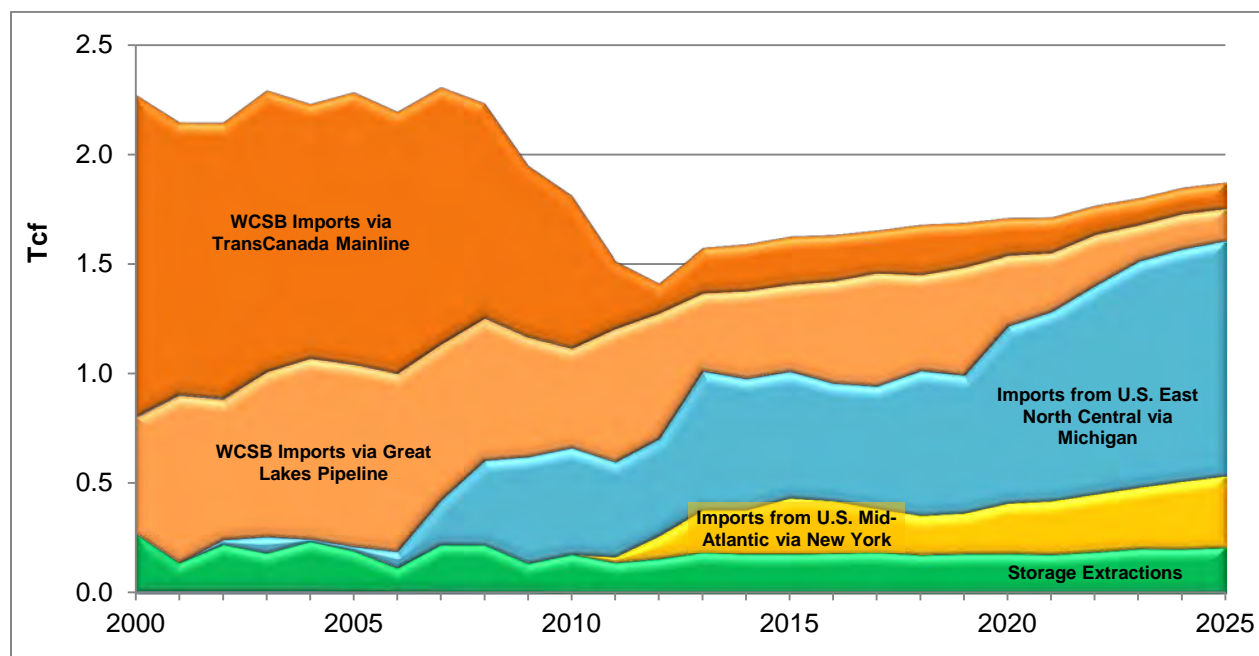
### 3.2 Natural Gas Supply

In the past, Ontario relied heavily on natural gas from western Canada to meet consumption and pipeline export demand. However, gas flows from western Canada have declined dramatically over the last several years, while gas imports from the U.S. Midwest through Michigan into Ontario have increased, and exports into the U.S. Northeast have declined (see Exhibit 3-3). In 2012, Ontario also started importing significant volumes of natural gas from the U.S. Northeast via Niagara.

According to ICF's estimates, the WCSB share of Ontario's supply sources transported on the TCPL Mainline and on Great Lakes Gas Transmission has dwindled from 90 percent in 2000 to less than two-thirds in 2010, and is expected to drop below 20 percent by 2025. The share of Ontario natural gas supply delivered into Ontario via the Vector Pipeline, which includes WCSB gas delivered to the Chicago region on the Alliance Pipeline, and U.S. natural gas delivered to the Chicago region from the Rocky Mountains and U.S. Gulf Coast, is expected to remain relatively constant.

The decline in gas supply from the WCSB will be offset by growth in natural gas supply from the U.S. supplies delivered into Ontario via pipeline imports from Michigan and New York. Much of this incremental natural gas supply is expected to be supplied by natural gas produced from the Utica and Marcellus shales, which are expected to comprise an increasing share of Ontario's gas supply through 2025.

**Exhibit 3-3: Historical and Projected Ontario Natural Gas Supply**



Source: ICF GMM® Oct 2012

Note 1: The U.S. East North Central region includes Illinois, Indiana, Michigan, Ohio, and Wisconsin. The U.S. Mid-Atlantic region includes New Jersey, New York, and Pennsylvania.

Note 2: "Imports from U.S. East North Central" includes WCSB supplies flowing on Alliance and Vector, as well as U.S. gas supplies.

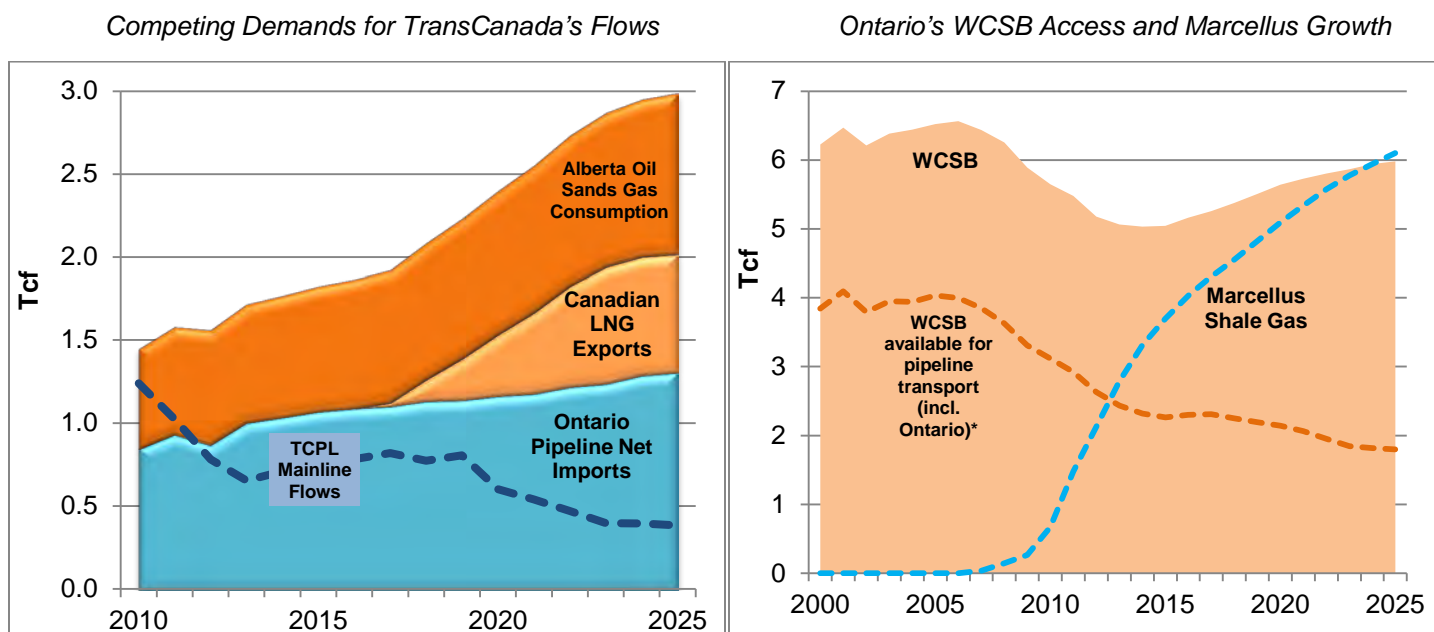
### 3.2.1 Role of U.S. Shale Gas Supplies in Serving Ontario Energy Markets

ICF is projecting continued growth in U.S. supplies of natural gas into Ontario to meet growth in Ontario and Quebec demand, as well as to replace declines in natural gas supply from the WCSB. However, Ontario's ability to expand access to U.S. shale gas supplies remains a serious concern. ICF estimates that significant new pipeline capacity from the Marcellus and Utica shale production regions will be required to meet the growth in demand. However, investment in pipeline capacity will depend on economic approval by the market, as well as regulatory approval.

Potential new sources of gas supply, including Marcellus and Utica gas production, offer economic sources of gas in proximity to the Province. To benefit from these supplies, however, proposed projects will require regulatory approval for the construction of infrastructure to access these supplies, as well as infrastructure enabling gas supplies to reach Ontario *and* flow through the Province. Absent that approval, Ontario will be forced to pay higher gas prices as the Province attempts to draw gas supply away from the alternative uses in the west, as well as pay transportation costs associated with long-haul transport on the TCPL Mainline.

In addition to declining WCSB production and high toll rates on the eastern mainline system, LNG exports and oil sands development in western Canada, which rely on WCSB production, may further limit Ontario's access to declining WCSB supplies (see Exhibit 3-4).

### Exhibit 3-4: Ontario's Supply Sources and Competing Demand Sources



Source: ICF GMM® Oct 2012

### 3.3 Changes in TransCanada's Role in Serving Ontario Markets

Over the past several years, TCPL Mainline volumes have declined, largely due to waning WCSB production and increases in Alberta oil sands demand for natural gas. The decline in Mainline volume flows has led to a doubling of pipeline tolls over the past several years. Actual TCPL tolls in the future will depend on the National Energy Board (NEB) decision in the ongoing rate restructuring case<sup>5</sup>, as well as the ability of TransCanada to meet the Mainline flow targets used to determine the proposed tolls. As discussed below, ICF believes that TransCanada Mainline volumes will be lower than anticipated by TransCanada, which may lead to higher TransCanada tolls than currently proposed for 2012 and 2013, and higher rates thereafter. Falling throughput would push toll rates further up, making U.S. supplies and supplies purchased at Dawn more attractive to Ontario customers, further limiting TCPL Mainline volume flows.

Ontario's gas supply access is directly affected by TransCanada rates and policies on the eastern end of the TransCanada system. TransCanada has proposed a number of significant changes in rates and tariffs that will impact the cost and availability of natural gas supplies from the U.S. if approved. TCPL's proposed move from distance- to energy-based toll rates will directly affect Ontario markets, as the resulting change in rates will disproportionately fall on

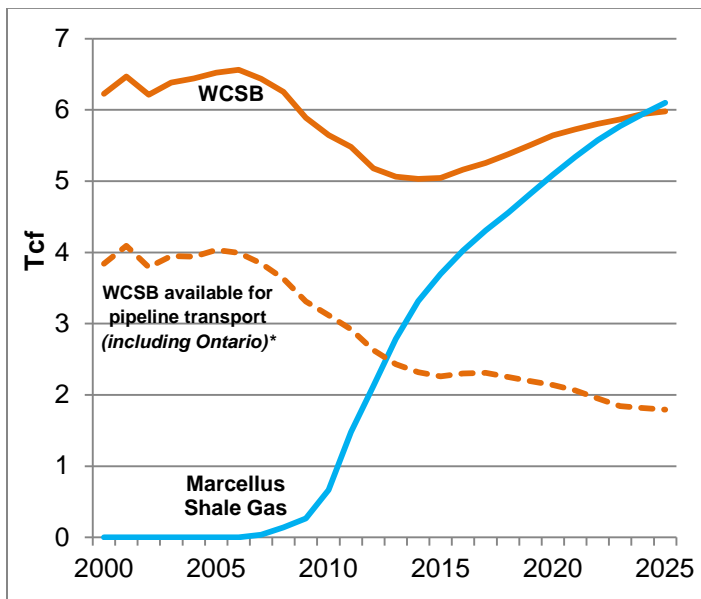
<sup>5</sup> RH-003-2011

short-haul shippers (including Northern Ontario Line shippers), the majority of which are located in eastern Canada, moving supply to Ontario and other eastern Canadian markets.

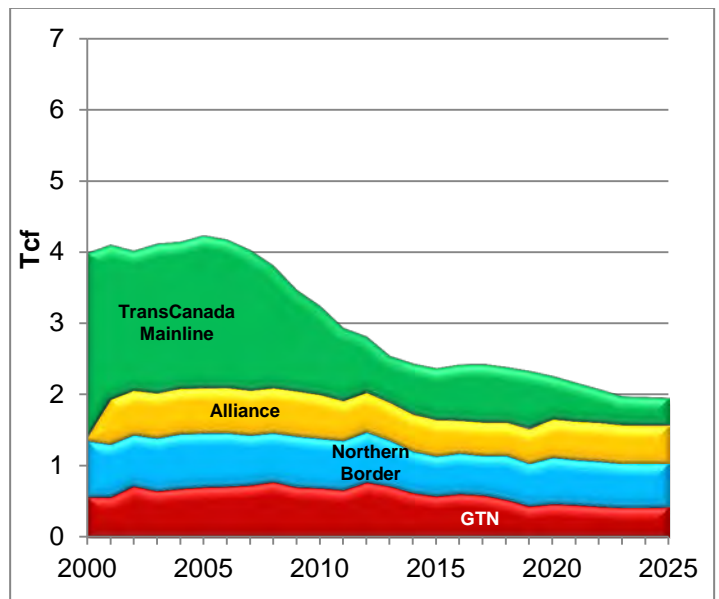
The shifts in flow patterns, particularly around the WCSB, are occurring extremely rapidly. Flows on the TCPL Mainline have dropped significantly over the past decade, as shown in the exhibit below, leading to increases in TCPL tolls. ICF believes that this declining trend will continue into the future.

### Exhibit 3-5: Production Trends in WCSB versus Marcellus Shale

*Production in WCSB versus in Marcellus Shale*



*WCSB Pipeline Exports by Pipeline*



Source: ICF GMM® Oct 2012

\* Excludes consumption in Alberta, British Columbia, and Saskatchewan; LNG exports; pipeline fuel; and lease & plant fuel

Note: Right-hand chart (WCSB Pipeline Exports) excludes pipeline fuel and lease & plant fuel

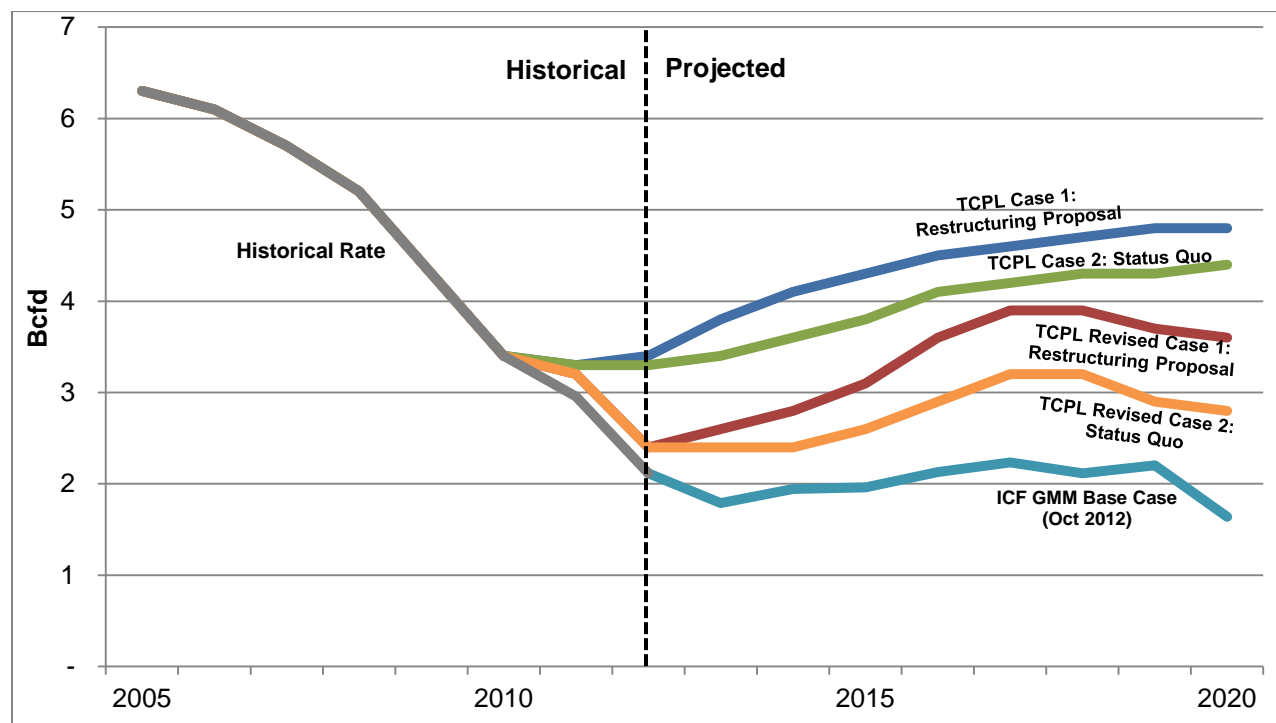
In the initial application in the recent proceeding, TransCanada published a throughput study. During the course of the proceeding, TransCanada published revised throughput scenarios because of deteriorating supply trends in western Canada. As with any forecast, actual throughput could be lower or higher than projected. In the event that TCPL Mainline throughput volumes decline more than TCPL anticipates (following recent historical trends), the decline must be offset by increasing tolls, adversely affecting shippers and consumers in eastern markets such as Ontario, which are already impacted by competing gas demands from LNG exports and oil sands development.

As shown in the exhibit below, between the time that TCPL's restructuring proposal was first filed as part of the TCPL 2012-2013 toll proceeding in late 2011 and when TCPL updated the throughput projections presented in the proceeding in June of 2012, TCPL's estimates of 2012-2020 average throughput dropped by approximately 1 Bcfd per year to an average of 2.8 Bcfd over the forecast horizon. Based on our assessment of the North American natural gas



markets, we expect TransCanada Mainline flows to be well below even the revised TCPL throughput forecasts. ICF currently projects that TCPL Mainline throughput will average around 2 Bcfd between 2012 and 2020.<sup>6</sup> Moreover, other independent projections, including those presented in the ERCB report and the NEB align closely with ICF's view of supply development.

**Exhibit 3-6: Changes in TransCanada Mainline Throughput Forecasts**



Source: TransCanada NEB filings, ICF GMM® Oct 2012

There are a number of potential market uncertainties that could impact TCPL's ability to meet the projected throughput. For example:

- 1) Natural gas prices fall below the forecast used by TransCanada to project natural gas production from the WSCB, leading to lower exploration and development activity, and reducing the volume of natural gas available for transportation on the TCPL system.
- 2) LNG exports from British Columbia proceed, reducing natural gas available for transportation on the TCPL system.
- 3) Alberta natural gas demand could be higher than anticipated, reducing natural gas available for transportation on the TransCanada system.
- 4) TransCanada could be less successful than projected in competing with other pipelines to export WCSB natural gas to other regions.

<sup>6</sup> MAS Response to TCPL 1-15, April 27, 2012.



While it is possible that the flows on the TCPL Mainline could be greater or less than projected in the various forecasts, tremendous uncertainty exists around actual throughput volumes in the future and impact on Ontario's ability to meet its gas demands.

### **3.4 Parkway-Maple Pipeline Capacity Constraints**

Recognizing the need for improving eastern Canada's access to Marcellus gas supplies, the NEB recently approved TransCanada's application to expand the eastern triangle segment of the Mainline from Parkway to Maple, a portion of which (12.9 kilometers) includes the Parkway Pipeline. While this is a first step toward improving diversity and security of supply for eastern markets, further expansions are required.

### **3.5 Landed Cost of Ontario Natural Gas Supply**

ICF compared the landed cost of natural gas sourced from Empress and Dawn to different TCPL delivery zones and moved under different TCPL tolls.<sup>7,8</sup> The landed cost of gas from different supply sources is calculated based on the gas supply purchase cost at either Dawn or Empress plus the cost of TCPL firm transportation capacity (including commodity costs and fuel) from the supply point to the delivery zone.

The analysis has been conducted for the period from 2015 through 2025 for three different sets of TCPL tolls:

- TCPL approved 2012 interim tolls.
- TCPL proposed tolls for 2012.
- TCPL proposed tolls for 2013.

The landed cost of gas varies based on the utilization of the contracted pipeline capacity needed for each supply option. Lower pipeline utilization rates result in higher costs per unit of throughput and increase the landed cost of natural gas. Hence, utilities, including Union Gas, generally attempt to utilize pipeline capacity at a high load factor so that annual natural gas flows on the pipeline are maximized in order to maximize the value of the capacity to the utility. However, achieving 100-percent load factor utilization is generally not achievable, given weather variability. Utilities consider a variety of factors, including design day capacity requirements, when making pipeline contracting decisions, leading to planned utilization of these assets at less than 100 percent on an annual basis. In addition, daily and seasonal changes in demand often result in less than planned utilization of the pipeline capacity during certain times.

<sup>7</sup> The calculation methodology used in the calculations is consistent with the approach used since it was approved in EB-2005-0520.

<sup>8</sup> ICF has used the OEB-approved methodology developed by Union gas for landed cost of natural gas comparisons.

Utilities can release unneeded capacity to other parties in order to recover part of the cost of holding the capacity. However, not all unused capacity can be released, and the value received for released capacity may not recover the full cost of the released capacity to the utility. To account for this uncertainty, we have evaluated the landed cost of gas for two load factors reflecting different assumptions about the value of the contracted pipeline capacity that would be recovered through the secondary market. The two scenarios include:

- 1) The full value of the contracted pipeline capacity is utilized by Union Gas or recovered through the secondary market.
- 2) Eighty percent of the value of the contracted capacity is utilized by Union Gas, or is recovered through the secondary market.

Based on the ICF analysis, we expect deliveries of natural gas sourced at Dawn to be less expensive than deliveries of natural gas sourced at Empress for the TransCanada NCDA and EDA toll zones for all three sets of rates considered. In the NDA, the least cost source of natural gas supply depends on the specific tolls used.

If capacity holders are unable to utilize, or release at full value, 100 percent of their pipeline capacity on TransCanada, the landed cost of gas sourced at Dawn generally becomes more attractive relative to purchasing at Empress (see Exhibit 3-7 and Exhibit 3-8).

**Exhibit 3-7: Long-term Transportation Contracting Analysis (Full Utilization)**

ICF October 2012 Base Case – Pipeline Capacity Fully Utilized or Recovered (2015-2025)						
TCPL Delivery Region	TCPL 2012 Approved Tolls		TCPL 2012 Proposed Tolls		TCPL 2013 Proposed Tolls	
	Dawn	Empress	Dawn	Empress	Dawn	Empress
NDA	7.11	7.41	7.08	6.87	7.04	6.75
NCDA	6.85	7.96	6.88	7.08	6.85	6.94
EDA	6.96	7.96	6.96	7.23	6.93	7.08

Source: ICF

**Exhibit 3-8: Long-term Transportation Contracting Analysis (80% Utilization)**

ICF October 2012 Base Case – 20% of Pipeline Capacity Unutilized and Unrecovered (2015-2025)						
TCPL Delivery Region	TCPL 2012 Approved Tolls		TCPL 2012 Proposed Tolls		TCPL 2013 Proposed Tolls	
	Dawn	Empress	Dawn	Empress	Dawn	Empress
NDA	7.23	7.85	7.19	7.19	7.14	7.03
NCDA	6.92	8.53	6.94	7.44	6.91	7.27
EDA	7.04	8.53	7.04	7.63	7.00	7.44

Source: ICF

## 4 North American Natural Gas Market Outlook

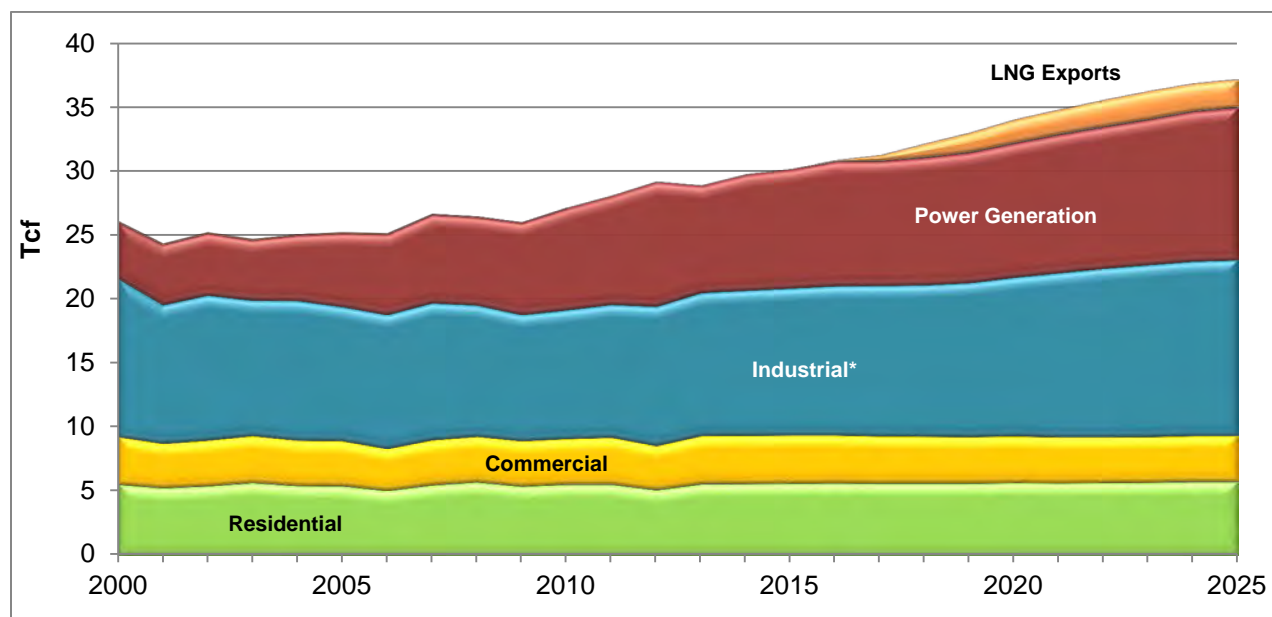
This section discusses North American natural gas market forecasts, starting with natural gas demand, including power generation, western Canadian developments, and end-use markets. The section then discusses trends in North American supply sources, including ICF's projections through 2025, the role of WCSB and unconventional production (such as the Marcellus), impact of production costs, and the apparent move toward natural gas liquids. The section then discusses LNG exports, pipeline flow issues, and natural gas price forecasts.

### 4.1 North American Demand

While new LNG export facilities in the U.S. and Canada are expected to come online starting in 2017, power generation will see the bulk of incremental consumption growth over the foreseeable future, along with some growth in the industry sector, led by gas-intensive end uses such as gas-to-liquids (GTL) processing, petrochemicals, fertilizers, and transportation (compressed natural gas vehicles and LNG vehicles).

The market growth that we project places upward pressure on gas prices. However, given the abundant resource available at relatively low prices, gas prices are only expected to grow modestly. ICF projects U.S. and Canadian gas production to grow from about 27 Tcf in 2010 to over 35 Tcf by 2025, an average annual growth rate of almost 2 percent per year (Exhibit 4-1). This growth is anticipated to come from unconventional production, while conventional onshore production is expected to decline. LNG imports are expected to comprise less than 1 percent of total North American supplies by 2025, although LNG remains important for the New England market, particularly in peak winter months when pipeline capacity into New England can become constrained. Overall, unconventional gas production, dominated by shale gas, will become the base source of natural gas for the United States. Many of the conventional supplies will become the marginal sources of gas supply in the future.

About 36 percent of the total growth in gas use, or 2.5 Tcf, is projected to occur in the power generation sector, where gas-fired generation increases significantly over time. Growth in gas demand for power generation is driven by a number of factors. In the past 15 years, there have been 460 gigawatts (GW) of new gas-fired generating capacity built in the U.S. and Canada, and much of that capacity is underutilized and readily available to satisfy incremental electric load growth. Electricity demand has historically been linked to Gross Domestic Product (GDP). Prior to the 2007-2008 global recession, demand for electricity was growing at about 2 percent per year. Over the next twenty years, although GDP is forecast to grow at 2.6 percent annually, electricity demand growth is expected to average only about 1.4 percent per year, mainly due to implementation of energy efficiency measures. Even at this lower growth rate, annual electricity sales are expected to increase to nearly 4,300 Terawatt-hours (TWh) per year by 2020, or growth nearing 20 percent over 2010 levels (3,700 TWh annually).

**Exhibit 4-1: U.S. and Canadian Gas Consumption by Sector (Tcf per year)**

Source: ICF GMM® Oct 2012.

The expanding use of natural gas in the power sector is driven in part by environmental regulations, primarily in the United States. The ICF Base Case assumes that all current air quality rules and regulations continue to apply. The ICF Base Case also assumes that new U.S. Environmental Protection Agency (EPA) hazardous air pollutant regulations lead to the retirement of about 50 GW of coal capacity by 2020. In addition to these regulations, ICF's Base Case also assumes that a federal cap-and-trade system to control CO<sub>2</sub> emissions is implemented toward the end of this decade, although the anticipated CO<sub>2</sub> allowance prices are not so high as to have a major impact on power markets. ICF also assumes that all current state renewable portfolio standards are met, and renewable generation grows at a rapid pace, but remains a relatively small portion of total generation. We also assume existing nuclear units have a maximum lifespan of 60 years, which results in a small number of nuclear retirements by 2030, but has a more significant impact thereafter.

The ICF Base Case forecasts an increase in gas use in the power generation market from 29 percent of the total in 2010 to 33 percent by 2020. This growth in gas generation and the accompanying growth in gas consumption is the primary driver of gas demand growth throughout the forecast period. About 50 percent of the total natural gas demand growth between 2010 and 2020 is forecast in the power generation sector.

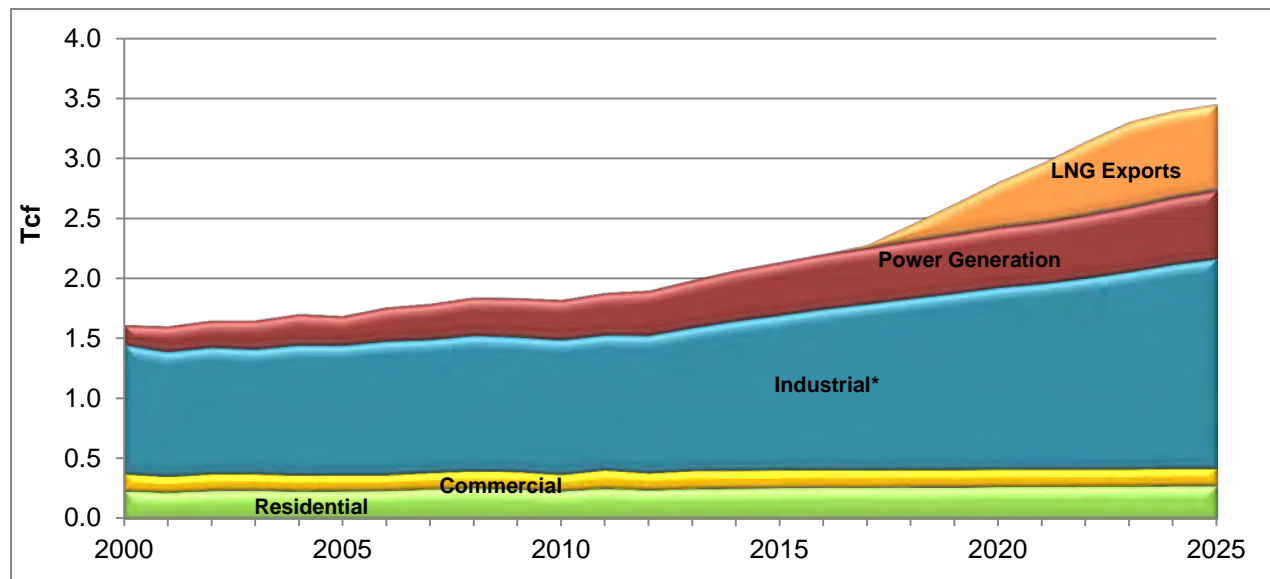
Industrial demand accounts for 41 percent of the total growth in North American natural gas demand during the same period. A large share of the industrial gas demand increase is from the development of the western Canadian oil sands. Excluding natural gas use for oil sands, the growth in industrial sector gas demand in the ICF Base Case is relatively small, as reducing energy intensity (i.e., energy input per unit of industrial output) remains a top priority for manufacturers.

Growth of gas demand in other sectors will be much slower than in the power sector. Residential and commercial gas use is driven by both population growth and efficiency improvements. Energy efficiency gains lead to lower per-customer gas consumption, thus somewhat offsetting gas demand growth in the residential and commercial sectors, which lead to lower per-customer gas consumption. Gas use by natural gas vehicles (NGVs) is included in the commercial sector. The ICF Base Case assumes that the growth of NGVs is primarily in fleet vehicles (e.g., urban buses), and vehicular gas consumption is not a major contributor to total demand growth.

#### 4.1.1 Western Canadian Natural Gas Demand

Natural gas demand in western Canada has a direct impact on Ontario markets due to its impact on natural gas supply available for export from the region (see exhibit below). Western Canadian natural gas consumption (including LNG exports) is expected to grow from 1.8 Tcf in 2010 to nearly 3.5 Tcf by 2025, driven by growth in LNG exports and the industrial sector (oil sands development).

**Exhibit 4-2: Western Canadian Gas Consumption by Sector (Tcf per year)**



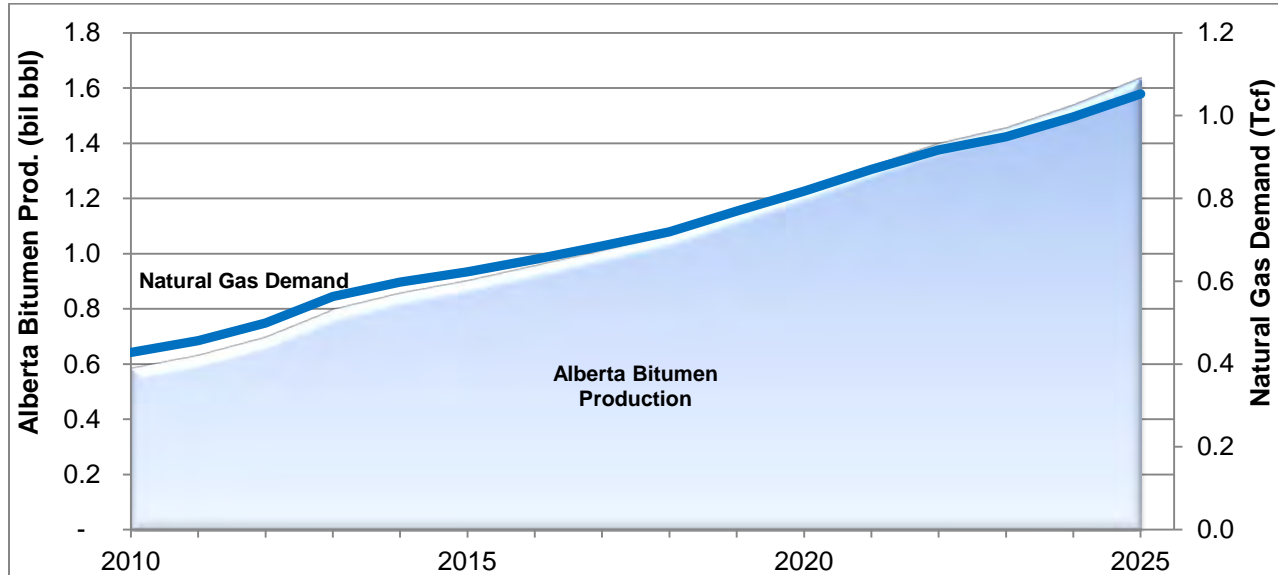
Source: ICF GMM® Oct 2012.

\* Includes pipeline fuel and lease & plant

Most of the projected demand growth in the WCSB is in oil sands demand. Development of Alberta's oil sands will mean significant consumption of natural gas fuels (see Exhibit 4-3). While significant development uncertainties persist, ICF expects oil sand production in Alberta to exceed 1.6 billion annual barrels by 2025, which would require nearly 1.1 Tcf in gas consumption (the equivalent of 80 percent of Ontario's annual gas consumption that year). This represents an increase of about 0.6 Tcf, or 1.5 Bcfd of natural gas demand between 2012 and 2025. The growth in natural gas demand for oil sands production will significantly reduce natural gas available for export from the WCSB to Ontario and other markets.

There remains significant uncertainty with respect to future natural gas demand growth by the oil sands industry. Potential additional growth in oil sands demand that could result from higher than projected oil prices would further reduce natural gas available for export from the WCSB. However, oil sands developments remain contentious and uncertain, both due to concerns about climate change impacts, as well as the social and environmental impacts of moving oil sands production to markets outside of Alberta.

**Exhibit 4-3: Alberta Oil Sands and Related Gas Consumption**



Source: ICF GMM® Oct 2012

As mentioned above, there is significant uncertainty with regard to western Canadian natural gas demand sources (i.e., LNG exports, Alberta bitumen production). However, lower than anticipated oil sands development and/or lower BC LNG exports could mean gas is freed up for markets such as Ontario and long-haul shippers, meaning lower toll rates and higher TCPL Mainline throughputs. While this alternate scenario is not likely, according to ICF's market forecasts, it highlights the significant uncertainty surrounding actual natural gas demand requirements from these new sources, as well as the precarious situation Ontario and other eastern Canadian markets is in.

It is worth mentioning that these new demand sources not only put new demand requirements on a declining resource (i.e., WCSB production), but also require a response in terms of demand reductions from other sources. ICF estimates that the supply required to meet a 1 bcfd gas demand requirement for either LNG exports or oil sands development originates from increases in production (roughly 66%), demand declines in competing industries (30%-33%), and (in some cases) growth in natural gas imports from the U.S. (0%-3%) to meet the remaining requirement. The demand response, in the form of price increases, which lead to lower gas demands as the price increases, directly impacts Ontario consumers.

The demand response is primarily in the form of coal switching in the power sector, in which a small portion of power generation switches to coal-fired plants (assuming coal is the cheapest option in power generation); oil switching in the transportation sector, in which natural gas (fleet) vehicles are replaced with traditional gasoline or diesel tanks; conservation efforts to limit natural gas use; and industrial process demand response, in which certain gas-intensive industries (e.g., fertilizers, petrochemicals) are shuttered due to a lack of economics as gas prices rise. Although the increase in production will offset the adverse effects from demand responses in the aggregate, Ontario and other eastern Canadian consumers will definitely see price increases and further limits on WCSB supply access. In the case that BC exports increase further or oil sands development requires more gas than expected, Ontario and other eastern Canadian consumers will be adversely impacted by both the actual demand, but also the demand response (i.e., price increase).

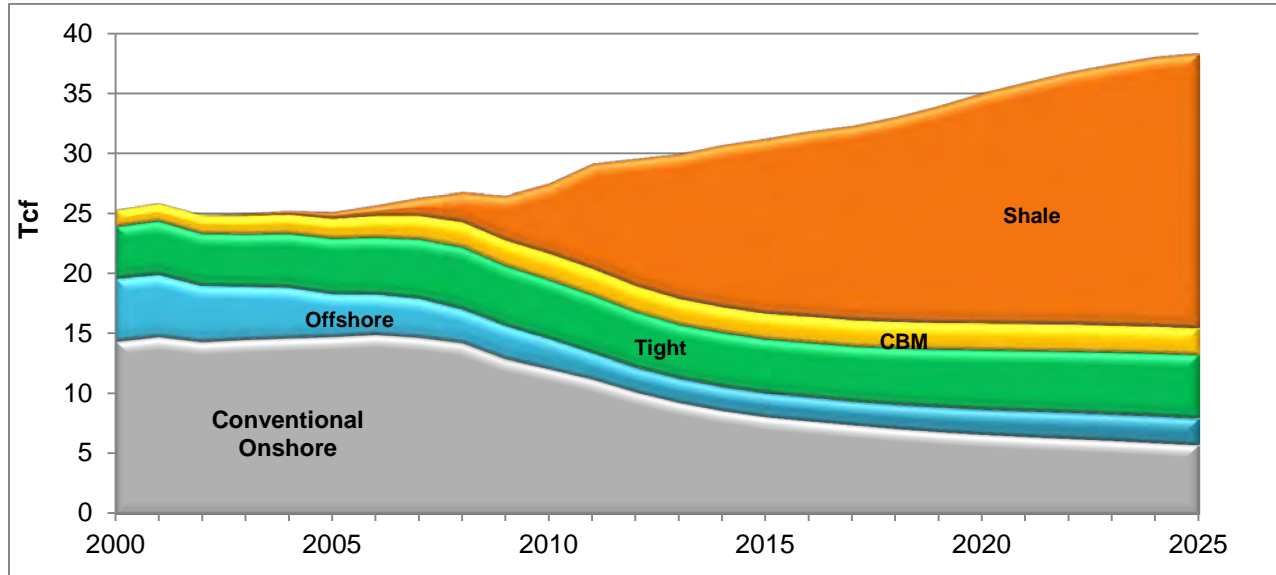
In today's market, there is significant uncertainty regarding the amount of LNG export capacity that will ultimately be built in North America. Shifts in the pricing of gas from pricing formulas that are tied to crude oil prices to prevailing North American gas market prices that have occurred recently may place pressure on LNG project economics. At the same time, the current price advantage in North America relative to world markets continues to make North American LNG project economics competitive.

## **4.2 North American Natural Gas Supply Outlook**

### **4.2.1 ICF Base Case Supply Outlook**

Over the past five years, natural gas production in the U.S. and Canada has grown quickly, led by unconventional production, and is expected to grow further over the foreseeable future (see Exhibit 4-4). Unconventional production technologies (i.e., horizontal drilling, hydraulic fracturing) have fundamentally changed supply and demand dynamics for the U.S. and Canada, with unconventional production expected to offset declining conventional production in such areas as the WCSB. These geographic changes will call for significant infrastructure investments to create pathways between new supply sources and demand markets.

**Exhibit 4-4: Projected U.S. and Canadian Gas Supplies**

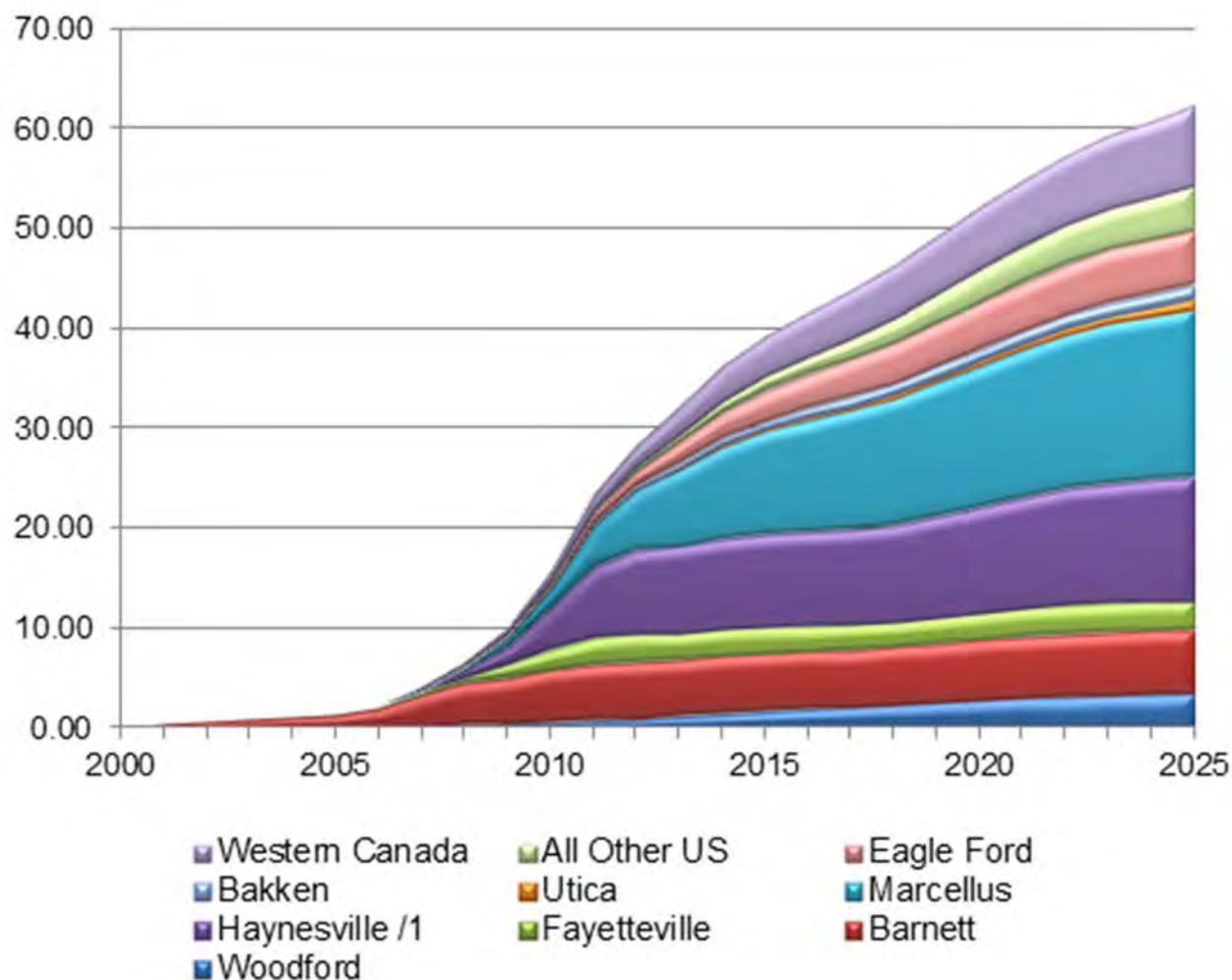


Source: ICF GMM® Oct 2012

Production from U.S. shale formations will grow from about 6 Tcf in 2010 to nearly 20 Tcf by 2025 (see exhibit below). As noted above, the major shale formations in North America are located in the U.S. Northeast (Marcellus and Utica), the Mid-continent (Barnett, Woodford, Fayetteville, and Haynesville), southern Texas (Eagle Ford), and western Canada (Montney and Horn River). The Bakken Shale, which spans parts of North Dakota and Montana, is primarily an oil formation, but also has significant natural gas volumes. There are other shale formations in the U.S. that have not yet been evaluated or developed for gas production.



**Exhibit 4-5: Projected U.S. and Canadian Shale Gas Production (Bcfd)**



Source: ICF GMM® Oct 2012

Note: Haynesville production includes production from other shales in the vicinity, e.g., the Bossier Shale.

#### **4.2.2 Natural Gas Production Costs**

The development of new natural gas production technologies has led to a very rapid decline in natural gas resource development costs. ICF has estimated that there are 1,500 Tcf of technically recoverable natural gas in the U.S. and Canada that can be developed at a wellhead cost of \$5 per MMBtu or less. Of the 1,500 Tcf that can be developed at \$5 per MMBtu or less, about 800 Tcf is from shale gas resource bases.

ICF estimates that production of unconventional natural gas (including shale gas, tight gas, and CBM) will generally be much lower cost on a per-unit basis than conventional sources.<sup>9</sup> The

<sup>9</sup> Unconventional refers to production that requires some form of stimulation within the well to produce gas. Conventional wells do not require stimulation.

gas supply curves show the incremental cost of developing different types of gas resource, as well as for the resource base in total.

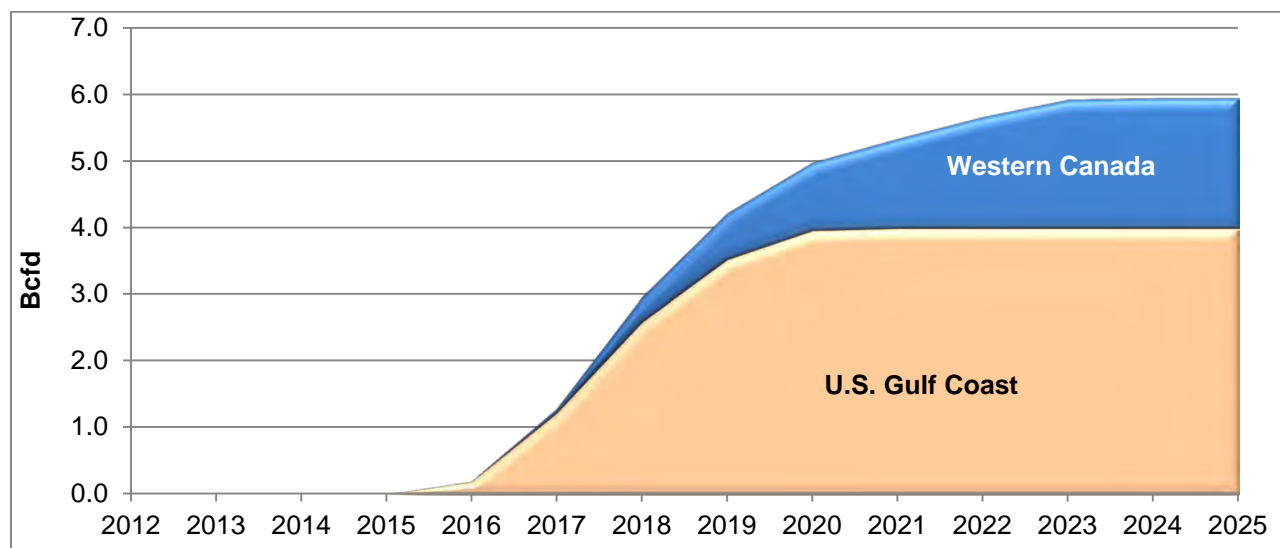
While the nascent stage of shale gas production, as well as the site-specific nature of unconventional production costs, mean uncertain production costs, shale plays such as the Marcellus are proving significantly cheaper (on a per-unit basis) than conventional sources, including conventional sources in the WCSB.

### 4.3 LNG Exports

LNG exports are expected to provide additional markets for both Canadian and U.S. natural gas production. In Canada, the National Energy Board (NEB) has granted approval for Kitimat and BC LNG, both located on the West Coast. Several other LNG projects in British Columbia are in various stages of development, but have not yet received NEB approval. In the U.S., the U.S. Department of Energy has received 13 applications to export LNG non-Free Trade Agreement (FTA) countries. Most of the major LNG-consuming countries, including Japan, do not have Free Trade Agreements with the U.S. So far, only Cheniere's Sabine Pass facility in the Gulf Coast has received approval for both FTA and non-FTA exports.

The number of LNG facilities that may eventually enter the market remains highly uncertain. Based on our assessment of world LNG demand and other international sources of LNG supply, ICF is projecting completion of a total of five North American export facilities between 2016 and 2021 (two in Canada and three on the U.S. Gulf Coast), exporting a total of 6 Bcfd by 2023 (see exhibit below). The BC LNG facilities are dependent on the development of pipeline capacity to transport natural gas from Eastern British Columbia and western Alberta to the LNG facilities in BC. Development of the BC facilities will reduce the available supply of gas that otherwise could be exported from western Canada.

**Exhibit 4-6: Projected North American LNG Exports (Bcfd)**



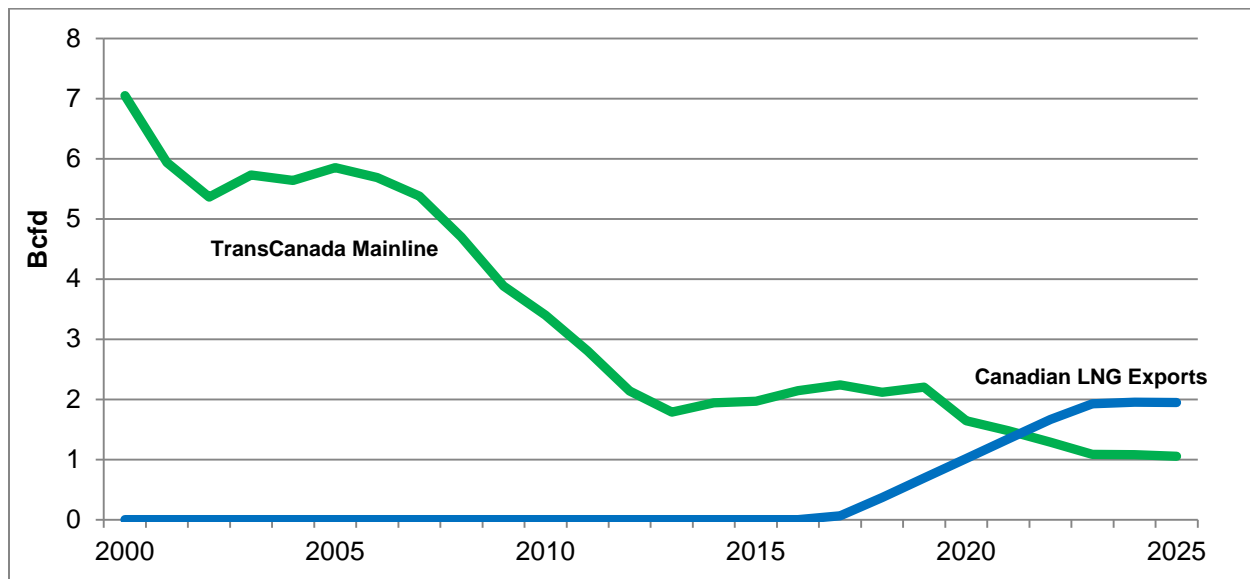
Source: ICF GMM® Oct 2012

#### 4.3.1 LNG exports from British Columbia

In our current Base Case, ICF is projecting completion of two LNG export projects in British Columbia by 2020, creating incremental demand for WCSB natural gas of 1 Bcfd of natural gas, reaching 2 Bcfd by 2023. As illustrated below, the two LNG export terminals alone will exceed flows on TransCanada's Mainline by 2021.

We estimate that about 60 percent of the total natural gas required for these facilities, or about 0.6 Bcfd for every 1 Bcfd of exports, will be produced directly as a result of the LNG demand, either tied directly into the natural gas pipelines serving the LNG facilities, or produced incrementally due to higher prices created by the LNG demand. The other 0.4 Bcfd is natural gas that otherwise would be exported along the pipeline routes, primarily the TransCanada Mainline, leaving Alberta.

**Exhibit 4-7: TransCanada Mainline Flows versus Canadian LNG Exports**



Source: ICF GMM® Oct 2012

The ICF Base Case represents a conservative projection of the potential LNG exports. Several export facilities have been proposed and are in various stages of development. In the last year, several major milestones have been reached, and new projects with strong financial backing have been proposed that would result in LNG exports well above the levels included in the ICF Base Case if developed. The major announced projects include:

- 1) **Kitimat LNG**: Kitimat LNG is developing a natural gas liquefaction, LNG storage, and market on-loading facilities capable of exporting 1.2 Bcfd of natural gas from a site in Kitimat, British Columbia. In October of 2011, Kitimat LNG was granted a 20-year export license by the NEB to serve international markets. The facility would receive natural gas from the proposed Pacific Trail Pipelines, which would connect to the existing Spectra Energy West Coast Pipeline system.

- 2) BC LNG Export Co-operative LLC (BC LNG): BC LNG is developing a barge-based natural gas liquefaction facility capable of exporting 0.125 Bcfd of natural gas from a site near Kitimat, British Columbia. BC LNG was granted a 20-year export license to serve international markets by the NEB on September 6, 2012. The proposed facility would receive natural gas from existing PNG Pipeline, which is connected to the existing Spectra Energy West Coast Pipeline system.
- 3) LNG Canada: LNG Canada is a joint venture between Shell Canada Ltd., Korea Gas Corporation (KOGAS), Mitsubishi Corporation, and PetroChina Company Limited that is proposing to build and operate a 2 Bcfd LNG export terminal in Kitimat, British Columbia. The LNG Canada facility would receive natural gas from the 1.7 Bcfd Coastal GasLink Pipeline proposed by TransCanada. The LNG Canada project was announced in May 2012.
- 4) BG Group PLC (BG): BG is a major international LNG producer and transporter. BG has proposed development of an LNG export facility in Prince Rupert, BC with an initial planned capacity expected to exceed 2 Bcfd. The facility would receive natural gas from the 4.2 Bcfd pipeline proposed by Spectra Energy and BG Group from Northeast British Columbia to Prince Rupert. The Pipeline project was announced in September 2012.

A number of other projects have been proposed and are in various stages of development. If all of the proposed projects are completed, the total demand for WCSB natural gas could exceed 10 Bcfd. While ICF considers this outcome unlikely, any additional LNG exports above the 1 Bcfd (which rises to 2 Bcfd by 2023) included in the ICF Base Case would draw additional natural gas supplies away from the TransCanada Mainline.

The pipelines needed to transport natural gas from the WCSB to the British Columbia LNG terminals face significant public opposition. The opposition to these projects creates significant uncertainty in the rate of WCSB resource development and the amount of natural gas that will be available for export from the WCSB to Ontario in the future.

#### **4.4 North American Pipeline Flows**

As regional gas supply and demand continue to shift over time, there are likely to be significant changes in interregional pipeline flows.

Exhibit 4-8 shows the projected changes in interregional pipeline flows from 2012 to 2025 in the ICF Base Case. The map shows the United States divided into regions. The arrows show the changes in gas flows over the pipeline corridors between the regions between the years 2012 and 2025, where the gray arrows indicate increases in flows and red arrows indicate decreases. The blue lines indicate changes in LNG flows.

- The growth in Marcellus Shale gas production in the Mid-Atlantic Region will displace gas that once was imported into that region, hence the red arrows entering the Middle Atlantic Region from points north (Canada), Midwest (Ohio), and South Atlantic (North Carolina). In effect, the Middle Atlantic Region becomes a major producer of gas and supplies gas to consumers throughout the East Coast. The flow of natural gas from Alberta through eastern Canada to the eastern U.S. will decline as Marcellus production displaces both imports from Canada and flow from the U.S. Gulf Coast. While the red arrows from the Gulf Coast to the U.S. Northeast indicate that gas continues to flow into the U.S. Northeast, Marcellus gas over the past 5 years has significantly narrowed those volumes, a trend that will continue over the foreseeable future.

### Flow Change from 2012 to 2025 (MMcfd)

Gray lines indicate increased pipeline flows  
Red lines indicate decreased pipeline flows  
Blue lines indicate changes in LNG flows

- The large increases in flows eastward from the West South Central Region (Texas, Louisiana, and Arkansas) are due to growing shale gas production in the region. However, most of this gas is consumed in the East South Central Region (Mississippi, Alabama, Tennessee, and Kentucky) and South Atlantic Region (Florida to North Carolina) where demand is growing. In addition, natural gas will be exported from the

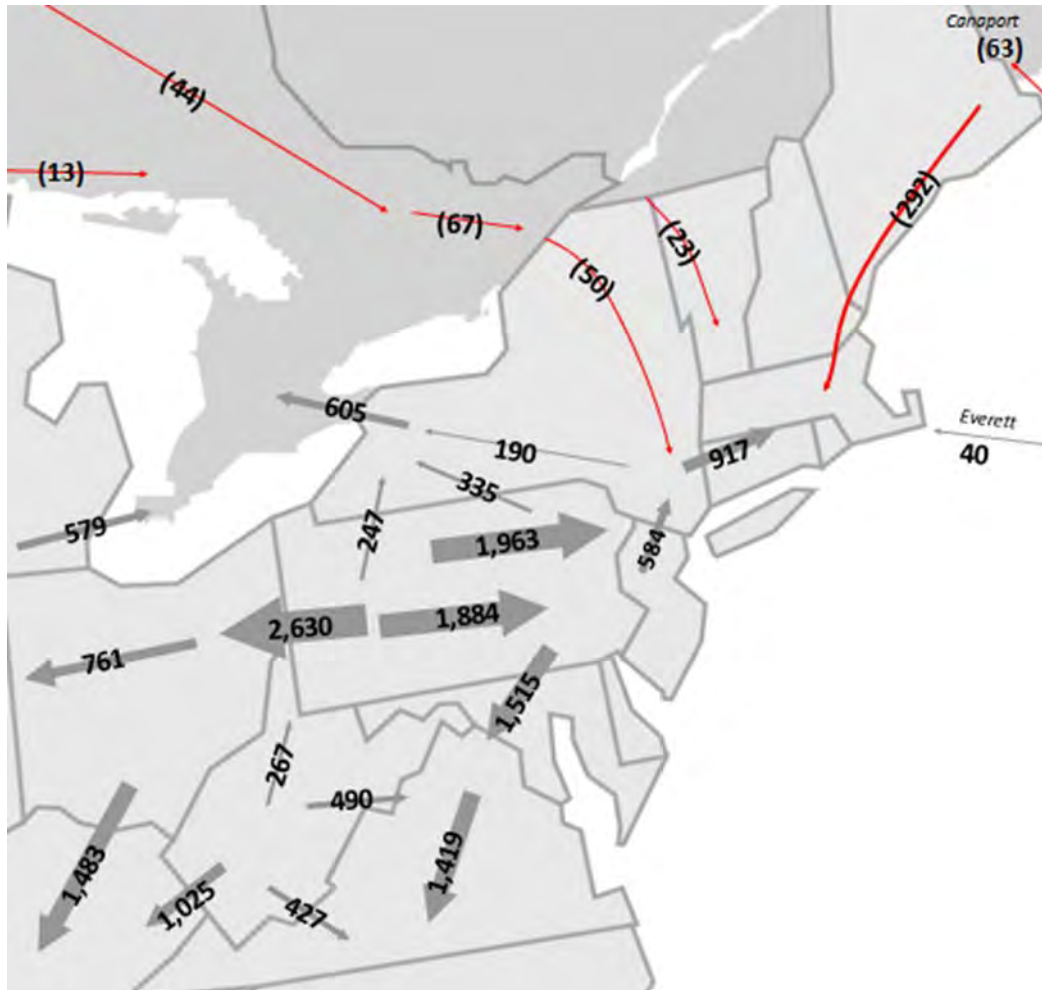
West South Central in the form of LNG starting in 2017. The growing Marcellus gas production in the Middle Atlantic Region will also displace gas flow from the West South Central Census Region to the South Atlantic states.

- Gas flows out of western Canada are projected to decrease. Growth in production from shale gas resources in BC and Alberta will be more than offset by declines in conventional gas production in Alberta until 2020, as well as growth in natural gas demand in western Canada. Strong industrial demand growth in western Canadian for producing oil from oil sands will keep more gas in the western provinces. The planned LNG export terminals in British Columbia also will draw off gas supply once exports of LNG begin.
- Pipeline flows west out of the Rocky Mountains will increase to northern California. The completion of the Ruby Pipeline in 2011 allowed Rocky Mountain gas to displace gas coming from Alberta on Gas Transmission Northwest.
- Changes in LNG imports into the Gulf Coast, as well as into Cove Point, Maryland; Elba Island, Georgia; and New England will also change gas flow patterns.
- ICF projects that a total of five North American LNG export facilities will be built during the period of 2016 and 2021. Two of these facilities will be in Canada (Kitimat and BC LNG) and three facilities will be along the Gulf Coast. By 2020 North American LNG exports will total to 5 Bcfd.

Exhibit 4-9 focuses on the changes in the flow patterns in closer proximity to Ontario. Historically, considerable volumes of gas flowed from Ontario into the Northeast through three pipeline paths; through Niagara into New York, onto the Iroquois pipeline and via PNGTS. In the past several years, these flows have decreased dramatically. This trend, moreover, will continue to the point where considerable volumes of gas will flow into Ontario from the Northeast, principally through Niagara. These supplies will augment the growing volume of gas entering Ontario from the South West through Michigan.



**Exhibit 4-9: Impact of Marcellus Production Growth on Regional Flows (2012-2025)**  
*Change in Average Annual Flows (MMcfd)*



Source: ICF GMM® Oct 2012

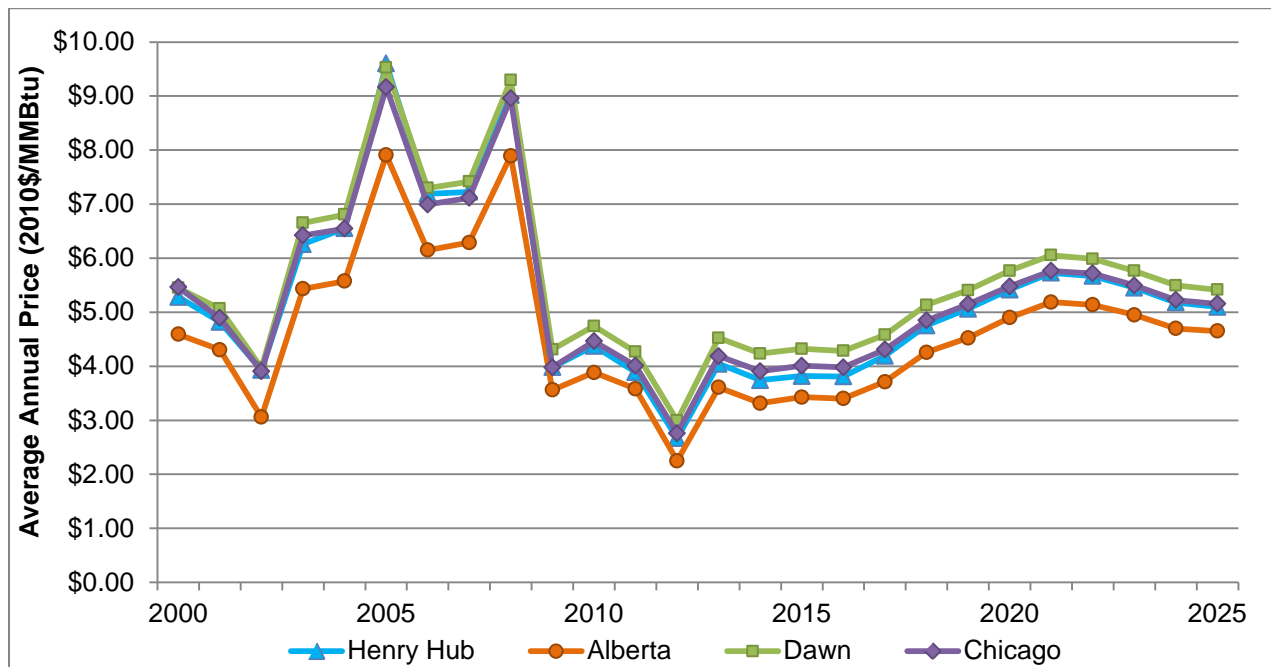
#### 4.5 Natural Gas Price Outlook

With growing gas demand and increased reliance on new sources of supply, the ICF Base Case forecasts higher gas prices from current levels. Nevertheless, the cost of producing shale gas moderates the price increase. In the ICF Base Case, gas prices in Alberta are expected to increase gradually, climbing from less than \$2.50 per MMBtu in mid-2012 to about \$4.50 per MMBtu in 2025 (in 2010 dollars) (see exhibit below). This gradual increase in gas prices supports development of new sources of supply, but prices are not so high as to discourage demand growth.

Gas prices throughout North America are expected to remain moderate; however, in some regions other market dynamics will influence regional prices. The price difference (or basis)

between Henry Hub and Alberta is projected to narrow in 2013-2015, thereafter widening somewhat through around 2020. As more gas is produced in the U.S. Northeast from shale resources, the market price in this region is expected to decline relative to Henry Hub. The decline in Northeastern U.S. prices is expected to be reflected in Ontario prices as well. In terms of impact on Ontario, Marcellus shale is cheaper than importing from Alberta, given the market prices in different regions and the transportation costs associated with moving natural gas from the production region into Ontario. The region's ability to improve access to Marcellus product will limit price fluctuations.

**Exhibit 4-10: GMM Average Annual Prices for Selected Markets**



Source: ICF GMM® Oct 2012

The growth in shale gas supply has had a significant impact on natural gas prices. Since January 2008, natural gas prices at Alberta have fallen from US\$7.23/MMBtu (\$C6.88/MMBtu) to US\$2.25/MMBtu (\$C2.10/MMBtu) in August 2012.



## 5 Conclusions

As 2013 begins, natural gas markets in Ontario are at a pivotal point. The development of abundant and competitively priced sources of gas in the Marcellus and Utica formations in Pennsylvania, Ohio and West Virginia offer the promises of gas supply in relatively close proximity to the province. The technology advancements that made the development of these and other unconventional resources throughout North America possible have significantly changed the outlook for future natural gas commodity prices. North American natural gas is now a resource that can provide an economic source of energy to homes and business in Ontario for decades to come.

At the same time, the maturation of traditional supply sources of western Canadian gas supply and competition for the nascent unconventional gas resources in Alberta and British Columbia create uncertainty and gas supply planning risk for Ontario. Decisions being made today regarding gas supply planning and infrastructure development within the Province and at the nation level will have implications for the gas energy costs to households and business in Ontario for decades to come.

Uncertainty regarding Ontario's ability to secure gas supplies from traditional sources in western Canada presents a significant concern. Fortunately for Ontario, Marcellus and Utica production forecasts continue to rise. Infrastructure construction, linking Ontario markets to the Marcellus, could significantly limit Ontario's supply issues, though TCPL's efforts to limit that expansion may hamper infrastructure efforts.

When examining all of these forces, ICF expects to see significant swings in pricing of WCSB gas and supply availability that will impact Ontario's ability to purchase natural gas on a consistent basis. BC LNG exports will come online in 2017, reaching 1 Bcfd within a year (roughly the equivalent of one-third of Ontario's gas consumption), and 2 Bcfd by 2023. These exports signify a historic change in TCPL flow patterns, with WCSB flows moving westward instead of eastward to traditional consumer markets.

Ontario's success in securing gas supplies will depend on a number of uncertain factors, including WCSB production rates, TCPL Mainline flow volumes and patterns, Marcellus production, and infrastructure advances. Access to these supplies offer the potential of lower cost, more reliable gas supplies. Ultimately, policies and regulatory approval for the development of infrastructure to access these supplies offers the potential for lower delivered gas costs for households and businesses in Ontario.

## 6 Appendices

### Appendix A: New Sources of Western Canadian Natural Gas Supply

#### 6.1.1 Overview of New Natural Gas Resource Plays in Western Canada

Declines in conventional WCSB production, uncertainty in the timing and magnitude of unconventional production in western Canada create a level of uncertainty regarding the amount of gas supply that might be available to transport east on the TCPL Mainline. At the same time and as discussed earlier, competing demand for western Canadian gas supply (i.e., LNG exports, oil sands development, power generation), environmental concerns, pipeline/gathering/processing constraints, and TCPL cost recovery issues and service offerings all combine to increase the imperative to diversify gas supply practices for Ontario consumers away from the traditional, heavy reliance on WCSB.

There are several emerging shale gas, tight gas sand, and tight oil plays in western Alberta and northeastern British Columbia whose contribution will have a major impact on gas and oil production in the coming decades. These can be divided into dry gas plays, wet gas plays, and tight oil plays. The dry gas plays with the greatest potential are:

- Montney Siltstone (dry gas subplay) in Alberta and BC
- Horn River Shale in northeastern BC

The wet gas plays with the most potential are:

- Montney Siltstone (wet gas subplay) in eastern BC
- Big Horn tight sands in western Alberta.
- Duvernay Shale in western Alberta

The tight oil plays include:

- Cardium Sand
- Oil portion of Montney

The following material presents an in-depth review of the supply conditions that exist in western Canada.

#### **Montney**

The Montney Siltstone play is a huge unconventional gas play extending from western Alberta into eastern British Columbia. The play has an eastern area of conventional, higher permeability that has been active for decades. With the advent of horizontal drilling and fracturing, the oil and gas industry moved westward into the low permeability areas with great success. The play is a northwest-southeast oblong area. Some of the thicker, highly productive

areas are along the deeper, southwestern and northwestern portions. However, the area of high natural gas liquid (NGL) production - the "Septimus" area and surrounding areas - lies more toward the shallower, northeastern portion of the play and within BC. The extent of the wet gas area is not fully known. There is also an oil window in the eastern portion of the play. The Montney play is currently producing over 1.6 Bcfd, with production increasing rapidly. Most of the current Montney production is primarily dry gas, however, recent exploration activity has shifted to the wetter gas areas of the basin. The oil portion of the Montney is also still being assessed.

### **Horn River**

The Horn River Basin Muskwa Formation currently produces over 300 million cubic feet per day (MMcfd) from horizontal wells. This is very dry production with some CO<sub>2</sub> content. The wells are prolific but the basin is very remote and lacks adequate processing and pipeline infrastructure. Because of this, drilling has not reached the scale of major shale gas plays. The basin has tremendous potential for dry gas production, however production is constrained by infrastructure and economic issues. Adjacent to the Horn River Basin to the west is the Liard Basin, which also contains a very large dry gas resource. That basin is not yet commercially productive. Operators in the basin, including Encana and Apache are exploring options for LNG exports from the West Coast.

### **Bighorn Tight Sands**

The Bighorn tight sands or Deep Basin tight play (Exhibit 6-1) has been around for decades. Encana has a large land position there and has plans to ramp up wet gas production. Operators are drilling both vertical and horizontal wells.

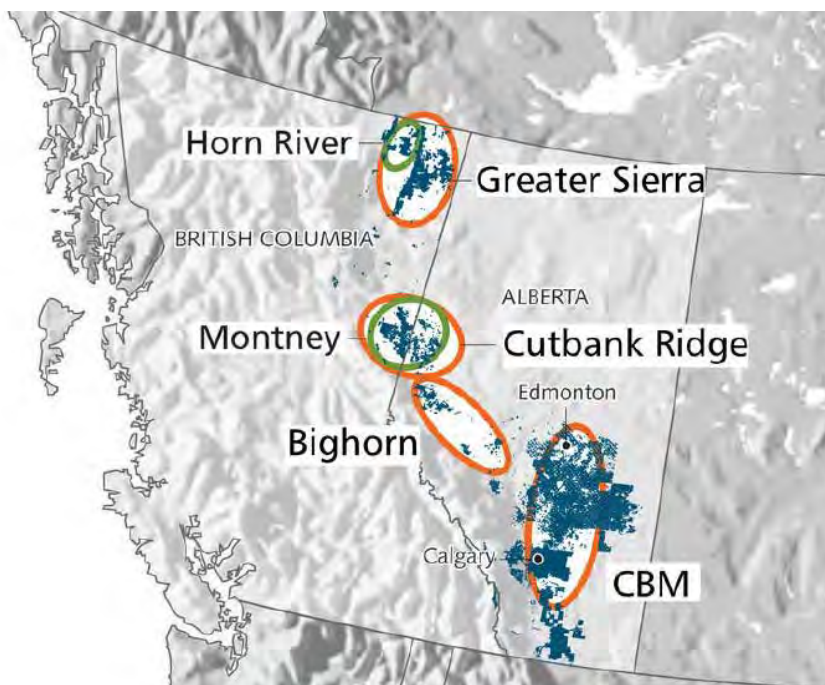
### **Duvernay**

The Duvernay horizontal shale gas play covers a very large area in western Alberta and is still in a delineation phase with probably less than 50 horizontal wells drilled (Exhibit 6-2). The play produces gas at high rates with a large concentration of NGLs. The play has an oil window, a wet gas window, and a dry gas window. To date, there has not been much activity in the oil window.

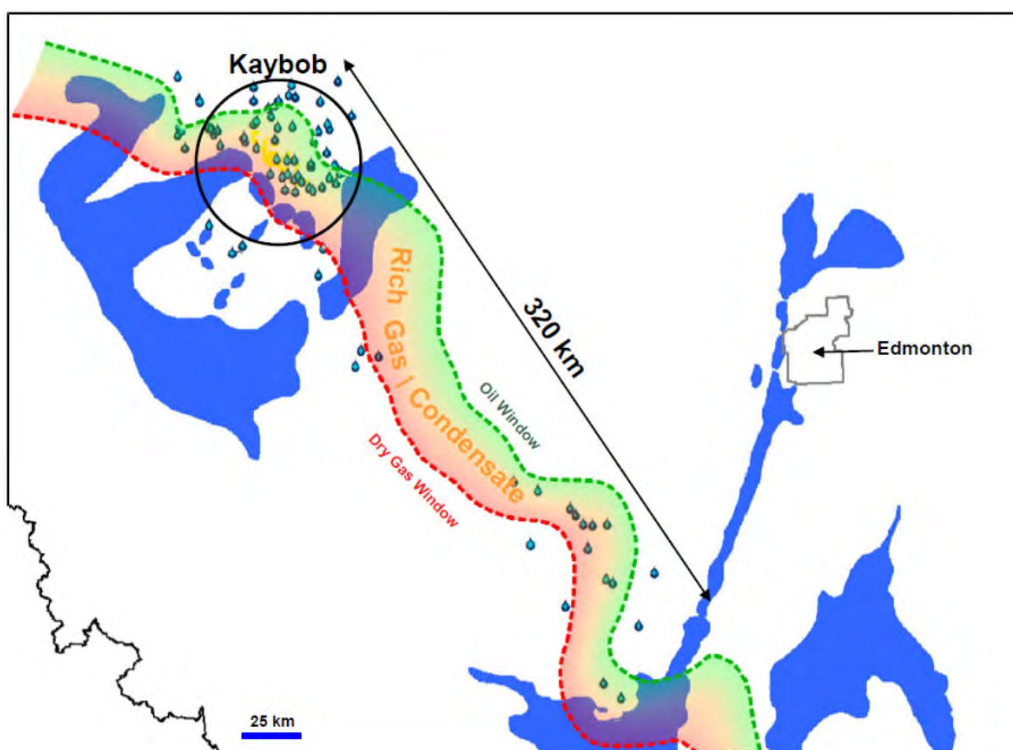
### **Cardium**

The Cardium play is likely the basin's tight oil play with the greatest potential (Exhibit 6-3). The play is a very active horizontal play with oil and associated gas. Hundreds of relatively shallow horizontal wells have been drilled around old oil fields. The Cardium play produces about 50,000 barrels of oil per day (BOPD). Economics appear very favorable with current oil prices. Exhibit 6-3 shows that there are a number of other tight oil plays in western Canada. These include the Montney oil window, the Viking and the Canadian portion of the Bakken-Three Forks.

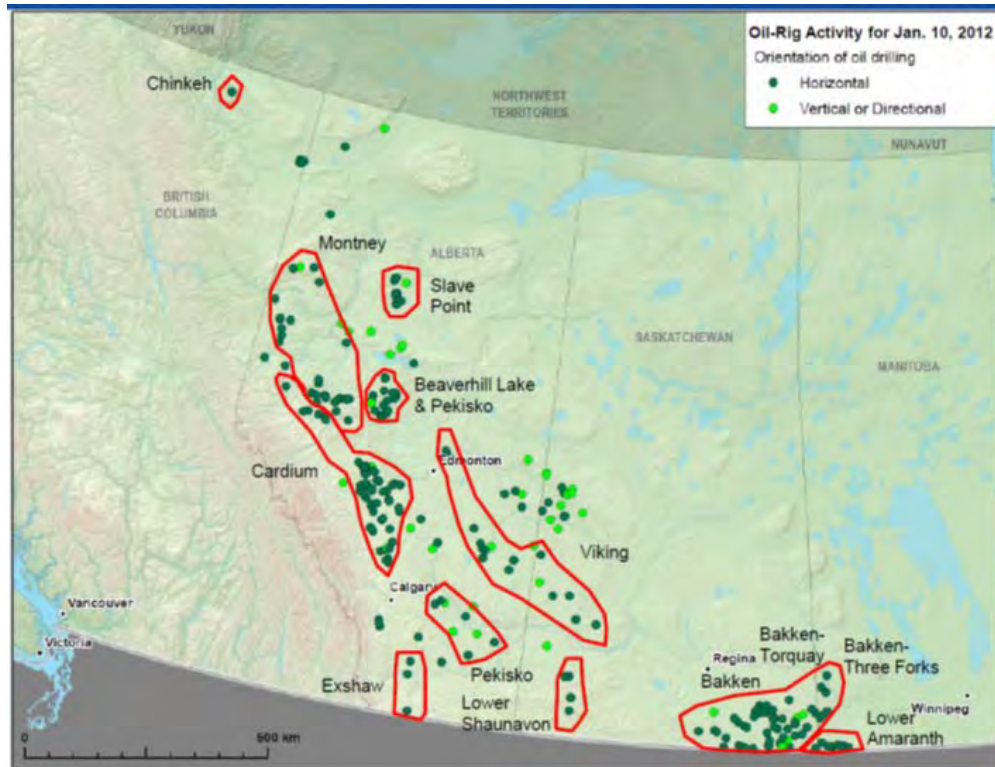
**Exhibit 6-1: Encana Regional Play Map**



**Exhibit 6-2: Location of Duvernay Gas and Condensate Trend, Alberta**



**Exhibit 6-3: Tight Oil Plays of Western Canada**



### **6.1.2 Expected Production from Western Canadian Resource Basins**

While dry gas production in the Montney accounts for the bulk of current shale gas production in the WCSB, much of the current activity is focused on the liquids plays, and much of the upside potential in the region for liquids may depend on future developments in the Duvernay.

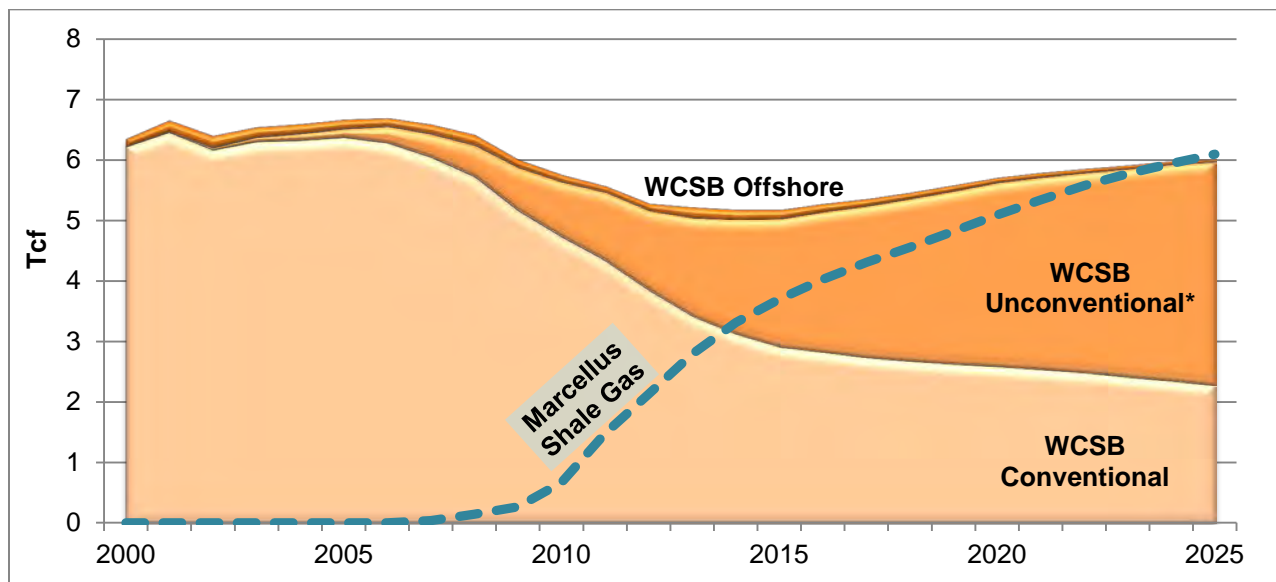
WCSB conventional production is on the decline, as shown in the exhibit below. Shale gas, tight gas, and CBM production gains are anticipated in certain areas of the WCSB, though such unconventional production is in a much earlier stage than some U.S. plays such as the Marcellus, meaning greater uncertainty with regard to actual production rates. Current development in the WCSB is focused in the Montney shales. The Horn River, another potential unconventional site within the WCSB where significant exploratory activity has taken place, is isolated with limited infrastructure to carry product to market, a constraint that may hinder development.

Although other unconventional plays within the WCSB such as the liquids-rich Duvernay and oil-rich Cardium may see successful production, these unconventional plays are in the very early stages of development, and future production from these plays is very uncertain.

While we project significant growth in unconventional production from the WCSB plays, the actual level of production from these plays is uncertain. In addition to the uncertainty related to development of relatively new resource plays, natural gas prices will have a significant impact on production levels. Particularly, in the higher costs plays such as the Horn River, exploration and development activity will depend on the absolute level of natural gas prices. As the pace of new development in less expensive North American plays, including the Marcellus and Utica, continues to accelerate, and new sources of natural gas supply are developed, ICF's forecast of natural gas prices continues to decline. Further declines in prices are likely to reduce exploration activity in the more expensive natural gas plays, as well as further reducing activity in WCSB conventional natural gas production. In addition, development of the Utica Shale in Ohio and western Pennsylvania are closer to Ontario markets, meaning that Ontario will become less dependent upon WCSB (conventional and unconventional) as infrastructure connecting Utica production to Ontario grows.

Uncertainty with respect to TCPL Mainline tolls is also expected to impact WCSB natural gas prices and production. If flows on the TCPL Mainline fall below TransCanada projections, as forecasted to do so by ICF, Mainline tolls are expected to increase further, suppressing prices in the WCSB, and further suppressing production.

**Exhibit 6-4: Production in WCSB versus Marcellus Shale**



Source: ICF GMM® Oct 2012

\* Excludes consumption in Alberta, British Columbia, and Saskatchewan; LNG exports; pipeline fuel; and lease & plant fuel

Natural gas availability from the WCSB will also be affected by environmental concerns. The largest potential sources of new demand for WCSB natural gas production include Alberta oil sands, and British Columbia LNG exports.



# DECISION

QUÉBEC

RÉGIE DE L'ÉNERGIE

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D-2012-175

R-3809-2012

December 18, 2012

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**PRESENT:**

Marc Turgeon  
Jean-François Viau  
Françoise Gagnon  
Commissioners

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**Gaz Métro Limited Partnership**

Applicant

and

**Stakeholders whose names appear hereinafter**

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**Final decision for the supply plan, the multipoint project,  
and the strategy for transferring the supply structure  
from Empress to Dawn**

***Request for approval for the supply plan and for the  
modification of Gaz Métro Limited Partnership's  
Conditions of Natural Gas Service and Tariff beginning  
on October 1, 2012***

## Stakeholders:

- Industrial Gas User's Association (IGUA)
- Canadian Federation of Independent Business (CFIB) (Quebec chapter)
- Groupe de recherche appliquée en macroécologie (GRAME)
- Option consommateurs (OC)
- Regroupement des organismes environnementaux en énergie (ROÉE)
- Regroupement national des conseils régionaux de l'environnement du Québec (RNCREQ)
- Stratégies énergétiques and Association québécoise de lutte contre la pollution atmosphérique (S.É./AQLPA).
- TransCanada Energy Ltd. (TCE);
- TransCanada Pipelines Limited (TCPL);
- Union des consommateurs (UC)
- Union of Quebec Municipalities (UMQ)



## 1. INTRODUCTION

[1] On July 6, 2012, the Gaz Métro Limited Partnership (Gaz Métro or the distributor) submits to the Régie de l'énergie (the Régie) an application for approval of the supply plan and the modification of its *Conditions of Natural Gas Service and Tariff* effective October 1, 2012. It proposes to examine this application in two phases.

[2] Phase 1 covers to the following subjects:

- The supply plan for 2013-2015
- The evolution and value of “Futures” of location variations from Henry Hub for various exchange points for natural gas in Northwestern United States
- The purchase records at Dawn
- The multipoint project, and the strategy for transferring the supply structure from Empress to Dawn
- The financial derivative program
- Rate modifications regarding the interruptions
- The performance indicator aimed at optimizing the supply tools.

[3] On September 18, 2012, the Régie transmitted a distinct schedule in conjunction with Phase 1, for examination of the subjects regarding the performance indicator<sup>1</sup>, including a subsidiary proposal from the distributor.

[4] On October 11, 2012, Gaz Métro submitted an amended request in which it requested a one-year postponement of the availability of TCPL's additional capacity be taken into account.

[5] The hearing for Phase 1 of the application covered all of its subjects, except for the performance indicator. It occurred over a period of five days, from November 5-9, 2012. The Régie began its deliberation on the subjects reviewed by the hearing on November 9, 2012.

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<sup>1</sup> Exhibit B-0023.

[6] On November 23, 2012, the Régie rendered its decision D-2012-158 on the distributor's requests regarding the approval of the supply plan for rate year 2013, the financial derivative program, and the rate modifications related to prohibited withdrawals. It also mentioned that all of the other subjects under consideration shall be the subject of a future decision.

[7] This decision pertains to the other subjects considered during deliberations after the hearings in November 2012 such as the supply plan, the multipoint project and the strategy for transferring the supply structure from Empress to Dawn as well as Gaz Métro's objections concerning the admissibility as evidence of the documents submitted by TCPL.

## 2. CONCLUSIONS SOUGHT.....

[8]The conclusions sought by Gaz Métro for Phase 1, other than the conclusions regarding the performance indicator, and the elements addressed by decision D-2012-158 are the following:

**“Regarding the supply plan (Gaz Métro-1, Documents 1, 3 to 13 and 16)**

*APPROVE the supply plan including the strategy for moving for the supply structure from Empress to Dawn as well as the use of the operation method approved in decision D-2011-162 for rate years 2013, 2014, and 2015*

**In regards to the historical evolution and the “Futures” value for location variations from Henry Hub - follow-up of decision D-2011-182 (Exhibit Gaz Métro-1, Document 2)**

*DECLARE that the information provided in the Gaz Métro-1, Document 2 Exhibit provides the follow-up requested in Paragraph 41 of Decision D-2011-182*

**In regards to the purchase records at Dawn - follow-up of Decision D-2011-153  
 (Exhibit Gaz Métro-1, Document 15)**

*DECLARE that the historical comparison of purchases at Dawn presented in Exhibit Gaz Métro-1 Document 15 provides the follow-up requested in Paragraph 21 of Decision D-2011-153;*

**In regards to the multipoint supply project - follow-up of Decision D-2011-164  
 (Exhibit Gaz Métro-1, Document 16)**

*DECLARE that the studies and analyses carried out in response to the follow-up requested by the Régie in Decision D-2011-182, in Paragraphs 41 and 42, concerning the multipoint delivery project are satisfactory and that the decision to halt this project is justified” [Emphasis by Gaz Métro]*

### **3. STRATEGY FOR MOVING THE SUPPLY STRUCTURE TO DAWN**

[9] The rate regulations in effect force direct purchase customers to deliver the natural gas that they wish to transport to Québec by Gaz Métro to Empress. In its Decision D-2011-164, the Régie accepted a new method of operation that allowed all customers of Gaz Métro’s transportation service to benefit from cost reductions resulting from supply carried out at Dawn rather than from Empress.

[10] In the same decision, the Régie ordered Gaz Métro to add to this application a global solution to the problem of multipoint procurement for customers using direct purchase in order to examine the possibilities for the said customers to deliver their natural gas to more than one delivery point and releasing them from their obligation to deliver to Empress.

### **3.1 GAZ MÉTRO'S OBJECTIONS REGARDING THE SUBMITTING OF TCPL DOCUMENTS**

[11] The distributor objected to the admissibility as evidence of Exhibits C-TCPL-0027 to C-TCPL-0045, which consist of documents submitted during a hearing at the National Energy Board (NEB).

[12] At the hearing, TCPL recognized that these documents represent a quick reference used during the cross-examination of the distributor's witnesses, that the goal of the exercise was not to submit proof in the Régie's application<sup>2</sup> and that it did not intend to establish the proof for these documents to the Régie<sup>3</sup>.

[13] Considering TCPL's announced intention in regards to the use of these documents, the Régie deemed that there was no valid reason to adjudicate the objection raised by the distributor in this regard.

### **3.2 GAZ MÉTRO'S POSITION**

[14] In response to the Régie's request, Gaz Métro has offered to implement a project to transfer the supply structure from Empress to Dawn: the delivery point for direct purchase customers would henceforth be located at Dawn.

[15] More specifically, Gaz Métro is seeking to release from contract its transportation capacities originating from Empress and replace them by transportation capacities originating from Dawn instead as soon as possible, while maintaining the flexibility of its procurements to meet its customers' daily needs.

[16] Union Gas Limited (Union) and TCPL launched calls to tender targeting new transportation capacities on March 13 and 30, 2012, respectively. Gaz Métro submitted a tender in response to these calls to tender and its tenders were retained.

[17] To justify this transfer, Gaz Métro claims that Dawn is a crossroads where there is an increasing supply of natural gas: many pipelines

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<sup>2</sup> Exhibit A-0030, pages 81-84.

<sup>3</sup> Exhibit A-0050, page 221.

already arrive at Dawn and new pipelines should allow it to receive the gas production from the Marcellus and Utica production sites.

[18] In terms of the procurement at Empress, over the past few years, there has been a decline in gas production in the sedimentary basin in Western Canada, causing the flows in the pipeline connecting Empress to the Eastern Canadian markets to diminish. The increase caused by the “*Firm Transportation Long Haul*” (FTLH) transportation rate causes gas from Western Canada delivered to Dawn to be less competitive and accentuates the decrease in the pipeline’s use.

[19] Gaz Métro wishes to decrease its vulnerability in regards to ever-decreasing volumes on FTLH transportation pipelines and resulting in an upwards pressure on the long-distance rate. In 2013, approximately  $2,600,10^6 \text{ m}^3$  will be sent from Empress to the Gaz Métro territory either by FTLH transport held by Gaz Métro or by exchange. These volumes represent about 46% of the territory’s overall needs. Gaz Métro is, for all useful purposes, at the limit of purchases it can currently make at Dawn, due to the carrying capacities between Dawn and GMi-EDA at its disposal.

[20] The carrying capacities, contracted from TCPL and Union pursuant to their respective calls to tender, shall contribute to carrying out the project to transfer the location at which direct purchase customers shall deliver the natural gas they purchase. These additional capacities shall also allow Gaz Métro to increase the share of network gas sales that it purchases from Dawn.

[21] One of Gaz Métro’s arguments in favour of this transfer to Dawn is the economic benefits. The price difference between AECO and Dawn has substantially diminished over the past few years and the financial market indicates that this trend will continue with the difference ranging from \$0.40 to \$0.60/GJ over the period from May 2012 to October 2017. TCPL’s transport rate for the AECO-Dawn route is currently \$2.44/GJ (\$0.20 for AECO to Empress and \$2.24 between Empress and Dawn). The current financial market indicates that it is more profitable to purchase natural gas directly from Dawn than to purchase it at AECO and to pay the current transportation rate as well as the compression gas.

[22] Gaz Métro is currently invoking the distance argument to justify the transfer from Empress to Dawn.

*“It always makes more sense to purchase supplies from close to one’s franchise rather than from 3,000 kilometres away, whether from an environmental standpoint, or from an economic standpoint; it simply makes better sense.”<sup>4</sup>*

[23] In response to the Régie’s questions, Gaz Métro indicates that a transportation contract from Empress limits procurement to Empress or AECO points. On the other hand, by using transportation from Dawn, Gaz Métro or its direct purchase customers have various procurement options, and they may choose whichever offers the lowest price delivered to Montreal. Among these options is Empress<sup>5</sup>. Gaz Métro also confirms that transferring the supply structure to Dawn does not necessarily require that all procurement be done from Dawn.

[24] In response to TCPL’s request to the Régie to delay its decision concerning the transfer of the supply structure to Dawn until it has heard the NEB’s decision concerning application RH-003-2011 regarding a restructuring of the rates over its network, Gaz Métro states:

*“It is Gaz Métro’s belief that the decision that will be made by the NEB in early two thousand thirteen (2013) will not shed any more light on what we already know here about the information. Gaz Métro’s position is that, undeniably, no matter what decisions are made, the advantage of getting our supplies closer to our market will remain.”<sup>6</sup>*

[25] Gaz Métro also indicates that it cannot afford to pass up the opportunity of developing new transportation capacities from Dawn. To act any other way could delay the access to this market by several years.

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<sup>4</sup> Exhibit A-0030, page 38.

<sup>5</sup> Exhibit A-0042, page 133, lines 18 to

<sup>6</sup> 25. Exhibit A-0050, page 252.

### 3.3 POSITION OF THE STAKEHOLDERS

[26] The IGUA supports the project to transfer the supply structure from Empress to Dawn:

*“You are aware that Dawn is now recognized as a strategic hub in Canada in terms of procurement; it is very liquid and accessible from various supply locations in North America, including, we shall not exclude it, I think Mr. Otis was clear on this subject, from Western Canada.*

*And so this means that, eventually, if TransCanada fixes its current problems with the “long haul” transportation rates and the rates become more competitive due to measures that have not yet been looked at but that could eventually be implemented in the future, Western Canada could once again become a choice supply point while going through Dawn.*

*It is clear, in our opinion, that Dawn offers better selection and flexibility to Gaz Métro and its customers in terms of supply sources, and this allows us, most specifically, to have access to new supply sources from Northeast America, such as the Marcellus production site where production is increasing significantly.<sup>7</sup>”*

[27] In its evidence, the CFIB indicated that it deferred to the Régie. The stakeholder did not participate in the hearing.

[28] OC supports the transfer of the supply structure to Dawn. It invokes the reduction of Gaz Métro’s vulnerability as well as its dependence upon TCPL’s main network.

[29] S.É./AQLPA supports the project of transferring the main supply point to Dawn in order to serve the customers in the southern region due to the prediction of a decrease in the offer of conventional natural gas available from Empress.

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<sup>7</sup> Exhibit A-0050, pages 96-97.

[30] S.É./AQLPA believes that in the long term it is more likely that the price of natural gas delivered from Empress to GMi-EDA will even out with the price of natural gas delivered to GMi-EDA from Dawn. Therefore, the advantage of getting supplies at Dawn rests upon the foreseeable decrease in supply available for Gaz Métro from Empress.

[31] According to S.É./AQLPA, the low volumes required for the northern region render possible a diversification that would consist in maintaining procurement at Empress for customers in that area. Supply there would be, according to the stakeholder, less expensive than supply from Dawn-GMi-NDA.

[32] TCPL first of all requested that the matter of transferring to Dawn be processed separately from the supply plan.

[33] Also, TCPL requested the Régie to withhold a decision on Gaz Métro's proposal until it learned of the NEB's decision regarding application RH-003-2011. The NEB must make a decision concerning a restructuring proposal with and in-depth review of the rates for its network. TCPL, indicates that, as mentioned by Gaz Métro in its evidence, the NEB's decision is expected to possibly come in early 2013<sup>8</sup>.

[34] TCPL considers that the NEB's decision could cause the savings forecast by Gaz Métro to disappear, as these rely upon hypothetical scenarios:

*“Thus, according to the benefit of the decision that shall be made in application RH-003-2011, the advantages presented by Gaz Métro favouring the transfer of the supply structure to Dawn, including the estimated savings, all rely in many ways upon hypothetical scenarios. These advantages could simply not even apply once the NEB renders its decision.*

*In order to allow it to conclude that the NEB's decision regarding application RH-003-2011 is, for all practical purposes, useless in its analysis, Gaz Métro presented the Régie with savings that its customers could benefit from based on TransCanada's current interim rates and the rates that it proposed in application RH-003-2011 for the years two thousand twelve (2012) and two thousand thirteen (2013).*

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<sup>8</sup> Exhibit A-0050, page 205.



[...] Also, *Gaz Métro* in its evidence did not take into account the other proposals formulated by stakeholders in application RH-003-2011, including the one that *Gaz Métro* submitted through MAS, the Market Area Shippers, a group composed of *Gaz Métro*, Union Gas and Enbridge.<sup>9</sup>”

[35] TCPL claims that *Gaz Métro* did not reasonably demonstrate the urgency of adopting, at this stage, the strategy for transferring to Dawn and that this request is premature. TCPL first points out that the transfer would only take place in November 2015. TCPL also alleges the fact that its expansion project was put off for one year removes “any sense of urgency for the Régie, if there ever was one, to render a decision on very short notice regarding *Gaz Métro*’s decision.”<sup>10</sup>,

[36] According to TCPL, *Gaz Métro* did not demonstrate any prejudice in regards to this setback or any obligation that it will not be able to meet.

[37] TCPL invokes an argument according to which *Gaz Métro* is willing to wait for the NEB’s decision for certain things, such as the flexibility needs, while at the same time, it does not seem to want to do the same for the major revision of TCPL’s rates<sup>11</sup>.

[38] TCPL also claims that *Gaz Métro*’s evidence is insufficient to currently justify approving the strategy of transferring to Dawn. In its opinion, it is clear that the Régie must have in its possession the NEB’s decision regarding application RH-003-2011 before being able to conclude that the strategy of transferring to Dawn is well-founded<sup>12</sup>.

[39] TCPL also argues that *Gaz Métro* has not presented an analysis that takes into account the upward pressure that a reduction in FTLH’s transportation contracts would bring about on TCPL’s rates, to the profit of “*Firm Transportation Short Haul*” (FTSH) transportation contracts.

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<sup>9</sup> Exhibit A-0050, pages 206-211.

<sup>10</sup> Exhibit A-0050, page 208.

<sup>11</sup> Exhibit A-0050, page 209.

<sup>12</sup> Exhibit A-0050, pages 212-213.

[40] TCPL alleges that several issues regarding the terms of transfer to Dawn as well as to other matters, such as the operational flexibility and the possibility of gaining access to other supply points, should be treated at the same time as the approval request for the transfer to Dawn.

[41] Finally, TCPL mentions that this application contains no analysis of the petroleum reserves in Western Canada. Its cross-examination of the IGUA's witness demonstrated that there are considerable reserves of conventional and non-conventional natural gas in Western Canada and that it would be premature to conclude that Western Canada no longer has a place in Gaz Métro's supply portfolio.

[42] The UMQ supports Gaz Métro's proposal.

### **3.4 THE RÉGIE'S OPINION**

[43] The Régie shares the distributor's opinion and deems that remaining with Empress and not acquiring additional carrying capacities for the Dawn-GMi-EDA route would leave the distributor's customers captive of TCPL's FTLH tolls.

[44] The Régie agrees with the IGUA in saying that transferring to Dawn would give Gaz Métro and its customers greater selection and flexibility. As a matter of fact, transferring to Dawn would give access to new supply sources from Northeastern America while continuing to have the possibility of purchasing natural gas from Empress while going through Dawn, if this turned out to be the most economical solution.

[45] The Régie notes that in response to a request for information, the IGUA evaluates, based on rates proposed for 2013 by TCPL, the difference between the FTLH transportation cost for Empress-GMi-EDA and the total FTLH transportation cost for Empress-Dawn and FTSH-GMi-EDA is approximately \$0.27/GJ.

[46] Furthermore, the Régie maintains, as mentioned by the IGUA, that transferring the supply structure to Dawn would help save substantial amounts every year. These amounts vary between \$88 million and \$120 million, based on current rates and those proposed by TCPL<sup>13</sup>.

[47] The Régie also recognizes the fundamental logic of preferring a supply station that is close to Gaz Métro's territory over one that is 3,000 kilometres away.

[48] The Régie recognizes that all consumer groups support Gaz Métro's proposal, except for the CFIB, which defers to the Régie.

[49] The Régie deems that the solution of transferring the supply structure to Dawn is advantageous due to its flexibility. It allows Gaz Métro and its customers to take advantage of the savings provided by obtaining supplies from Northeastern America, while maintaining the possibility of making adjustments if needed and making a contract with, for example, Empress, if it is advantageous to do so.

[50] Consequently, the Régie rejects the arguments presented by S.É./AQLPA concerning the supply from Empress for the northern region. In fact, the reasoning provided by S.É./AQLPA rests upon the premises that the natural gas prices delivered to GMi-EDA from Empress and Dawn will even out and that Empress will continue to have sufficient reserves at the same price. If these hypotheses do not hold true, the customers of the northern region will be stuck with the FTLH transportation prices for the TCPL network. The Régie considers that the solution from Dawn offers the most flexibility to adjust to the various contexts that may occur.

[51] In regards to TCPL's proposal to wait for the NEB's decision regarding application RH-003-2011, the Régie notes that this decision will pertain to rates applicable to the TCPL network. It will not modify the intrinsic characteristics of the procurement options from Empress and Dawn for Gaz Métro and its customers. The solution from Empress will continue to keep Gaz Métro and its customers under the FTLH rate and the procurement conditions in Western Canada. On the other hand, the solution from Dawn will continue to offer the advantage of flexibility, including the recourse to supplies from Empress. The strategic nature of the choice to make remains unchanged.

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<sup>13</sup> Exhibit A-0050, pages 97-98.

[52] The Régie notes that TCPL also presents other arguments, such as the evolution of natural gas reserves in Western Canada and the evolution of the distance-kilometres factor in TCPL's billing. The Régie considers that these arguments are not deciding factors in selecting a fundamental strategy orientation such as transferring the supply structure when the solution chosen provides the flexibility of adjusting to context changes as they come up.

[53] The Régie deems that the arguments presented by TCPL regarding the terms and conditions to be determined due to the transfer of the supply structure are not pertinent. These matters shall be addressed and resolved in due time, and they do not influence the strategic elements of this decision.

[54] **For all of these reasons, the Régie approves of Gaz Métro's proposal to transfer the supply structure from Empress to Dawn, a proposal that is materializing through the tenders submitted by Gaz Métro for the calls for tenders launched in 2012 by Union and TCPL, who retained them.**

#### **4. MOVING THE SUPPLY STRUCTURE TO DAWN - TERMS AND CONDITIONS**

[55] Various problems associated with transferring the supply structure to Dawn were raised in this document:

- The “multipoint” proposal presented by Gaz Métro
- The “multipoint” variant presented by IGUA
- The distribution of costs and profits for Gaz Métro's procurement portfolio
- The pricing of charges associated with operational flexibility
- The transition premium and the potential fees for customers who continue to deliver to Empress after November 1, 2015
- The terms and conditions of the advance notice for the distributor's transportation and the assignment of the carrying capacity held by the distributor.

## **4.1 MULTIPPOINT PROPOSAL**

### **4.1.1 GAZ MÉTRO'S PROPOSAL**

[56] Gaz Métro proposes not to implement a multipoint delivery system for direct purchase customers and to replace Empress' current delivery point by Dawn.

[57] Gaz Métro justifies this orientation by the complexity that would inevitably result from having many delivery points without changing the total cost for customers<sup>14</sup>.

[58] In regards to the decision to go with Dawn as the only delivery point, Gaz Métro mentions that several pipelines already go to this point and give access to many basins in North America, which provides diversity in procurement with a large number of service providers<sup>15</sup>.

### **4.1.2 STAKEHOLDERS' POSITION**

[59] All consumer groups support the change in delivery points from Empress to Dawn for direct purchase customers, except for the CFIB, which defers to the Régie.

### **4.1.3 THE RÉGIE'S OPINION**

[60] The Régie notes that Gaz Métro's proposal to replace the Empress delivery point by Dawn is a simple solution, which allows direct purchase customers to diversify their delivery points if they so desire, so long as they deliver the natural gas that they require to Dawn from the various delivery points that go through this point.

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<sup>14</sup> Exhibit B-0034, page 32.

<sup>15</sup> Exhibit B-0034, page 33.

[61] The Régie deems that the decision to select Dawn as the only delivery point is justified. The previous section regarding the transfer of the supply structure fully dealt with this subject.

**[62] For these reasons, the Régie retains Gaz Métro's proposal to not offer multipoint delivery service to direct purchase customers.**

## **4.2 “MULTIPOINT” VARIANT PROPOSED BY THE IGUA**

### **4.2.1 THE IGUA'S POSITION**

[63] The IGUA's proposal is for direct purchase customers to be able to deliver, for a minimum of one year, to points other than Dawn located on the route between Dawn and GMI-EDA, such as Kirkwall, North Bay Junction and Parkway. These customers would still pay the same transportation rate as other customers.

### **4.2.2 GAZ MÉTRO'S POSITION**

[64] Gaz Métro indicates that these transactions currently could not take place on a firm basis, except at Parkway inasmuch as it maintains contracts for which the receipt point is Parkway, taking into account the rules applicable for the TCPL network.

[65] Gaz Métro is opposed to this proposal, due to the potential situation where the rules applying to the TCPL network would be modified and these transactions could not be carried out on a firm basis. Gaz Métro invokes reasons of equity toward its gas network customers.

[66] Gaz Métro clarifies its position in the following manner:

*“We see it is a matter of equity when there is an opportunity to save money by moving a supply point to a specific location. The big question is, should one customer benefit from it, or should all the customers?”*

*When Gaz Métro does it with network gas, what we do is we redistribute the savings incurred to all of our customers.*

[...]

*Therefore, when such an opportunity comes about through the transportation tools controlled by Gaz Métro, the question that we must ask ourselves is: Should this opportunity be placed at the disposal of only one customer, or should it be captured, if possible, by Gaz Métro, who would then redistribute it to all its customers.*<sup>16,,</sup>

[67] The IGUA's witness recognized in the cross-examination that modifications needed to be made to TCPL's tolls in order to operationalize the delivery to North Bay Junction or Kirkwall. He also admitted that the IGUA's proposal carried with it some equity problems, except for perhaps North Bay Junction<sup>17</sup>.

#### 4.2.3 THE RÉGIE'S OPINION

[68] The Régie notes first of all that Parkway is the only receipt point on the Dawn-GMi-EDA route that could be used under the terms of the current TCPL tolls.

[69] The Régie considers that Gaz Métro's argument, that any profit made from transportation tools controlled by Gaz Métro should be shared by all its customers using Gaz Métro's transportation service, is very persuasive. To act any other way would be to risk causing an equity problem between the network gas customers and the direct purchase customers.

[70] However the Régie is aware of the IGUA's argument regarding the North Bay point, which would not be affected by the matter of equity. Consequently, in the event where this delivery point would become accessible to Gaz Métro, including its transportation tools on a firm basis in terms of the TCPL's tolls, the Régie would be willing to re-examine the IGUA's proposal for this delivery point.

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<sup>16</sup> Exhibit A-0042, pages 187-188.

<sup>17</sup> Exhibit A-0046, pages 212-213.

**[71] On these grounds and subject to the preceding, the Régie rejects the IGUA's proposal.**

#### **4.3 DISTRIBUTION OF COSTS AND PROFITS OF GAZ MÉTRO'S SUPPLY PORTFOLIO**

[72] During the latest rate application, the Régie temporarily accepted the implementation of a rate rebate applicable to the transportation rate in order to cause direct purchase customers to benefit from savings made thanks to purchases made at Dawn, even though their natural gas is delivered to Empress<sup>18</sup>. This decision is the result of a new operating method for the cost of purchases at Dawn.

[73] According to Gaz Métro, the regulations in effect help maintain equity among the various customer categories, due to:

- The supply price evaluated at Empress
- The transfer of costs of the supply service toward balancing
- The evaluation of an average transportation rate.

[74] These mechanisms thus allow network gas customers and direct purchase customers to be treated equally. These two customer categories pay their natural gas at Empress' price and pay the same average transportation rate.

[75] The Régie asked Gaz Métro and the IGUA the following question:

*“Hypothetically, if Gaz Métro were to sign a contract for transportation from Iroquois or Niagara and this solution would turn out to be more economical than Dawn, should the decrease in supply costs, according to Gaz Métro, be distributed between network gas customers and direct purchase customers?”<sup>19</sup>,*

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<sup>18</sup> Application R-3752-2011, decision D-2011-164.

<sup>19</sup> Exhibit B-0094, page 7.



#### **4.3.1 GAZ MÉTRO'S POSITION**

[76] The supply structure defined by Gaz Métro is implemented to serve all of its customers. If a structure modification causes an increase or decrease of total costs, the variations would then be shared by all of the customers using the distributor's transportation service.

[77] The operating method for these purchases between supply, compression, transportation, and balancing services allows the savings made to be imputed against the transportation and balancing services, consequently reducing the energy bill for all the customers using the distributor's transportation service.

#### **4.3.2 THE IGUA'S POSITION**

[78] The costs and savings for supplies delivered in franchise and made by Gaz Métro would only benefit customers using network gas. The same would occur if additional costs were incurred by Gaz Métro.

[79] The IGUA recognizes that there may be situations where the market does not have sufficient Dawn-GMi-EDA capacities, for example, to face a sudden increase in demand, and that Gaz Métro would then incur additional costs. In the event of constraints, the IGUA agrees that it would be best to share the costs between all customers of the transportation service.

#### **4.3.3 THE RÉGIE'S OPINION**

[80] The Régie considers that Gaz Métro's approach allows it to distribute costs and profits resulting from the transportation tool portfolio among all the transportation service customers every year.

[81] This approach is also in compliance with the principle expressed in Paragraph 69 of this decision, which is that any cost/profit resulting from transportation tools controlled by Gaz Métro should be shared by all of Gaz Métro's transportation service customers.

[82] The Régie considers that this approach has already been tested since it is the underlying principle of the operating method that is currently in effect. Furthermore, the Régie deems that this approach is much simpler to apply and more equitable for all the customers using the distributor's transportation service. However, the Régie deems that such an approach requires that the distributor adopt a dynamic management of its supply portfolio and that it seizes any opportunities that come up in order to allow all customers using the distributor's transportation service to benefit from them.

**[83] For these reasons, the Régie retains Gaz Métro's interpretation regarding the distribution of costs and profits of its supply portfolio.**

**[84] Furthermore, the Régie takes note of Gaz Métro's commitment to present, in the 2014 rate application, a new operating method for purchases that will come into effect on November 1, 2015. The Régie requests that this method rest upon the principle expressed in this section regarding the manner in which costs and profits from Gaz Métro's supply portfolio are distributed.**

**[85] Finally, until November 1, 2015, the Régie maintains the current operating method in place.**

#### **4.4 PRICING OF RATES ASSOCIATED WITH OPERATIONAL FLEXIBILITY**

[86] Each type of contract with TCPL has its special features and prerequisites which influence the operational management of all the tools controlled by Gaz Métro.

[87] The main special feature is the flexibility of daily contracts through the nomination windows available with each of these contracts:

*“The FTI (Firm Transportation Injection) service is a condition included in the FTLH contract which allows Gaz Métro to redirect Empress' natural gas to Parkway so that it can then be delivered to Dawn rather than being delivered to GMI, mainly in the summer. The possibility of using FTI is a result of having STS contracts. The main historical management principle for these capacities was*

*the following: to extract natural gas from the storage site and use Parkway's STS (Storage Transportation Service) transportation to GMI, the site must have been injected with Empress' FTI to Parkway during the previous summer. The FTI service is mainly used in the summer to regulate supply, while the STS is mainly used in the winter.*<sup>20</sup>,

[88] The transfer of the supply structure could cause Gaz Métro to review the manner in which it ensures it has the necessary flexibility tools at its disposal. Maintaining this flexibility could result in additional costs.

[89] Currently, the cost of operating flexibility is difficult to disassociate from the cost of certain tools, such as the STS (*Storage Transportation Service*) which is considered to be a balancing tool, since it is not identified as such.

#### 4.4.1 STAKEHOLDERS' POSITION

[90] The CFIB proposes to have all customers pay for any costs associated with the operational flexibility required by Gaz Métro.

[91] The IGUA supports this proposal, with the hope that these fees are temporary.

#### 4.4.2 GAZ MÉTRO'S POSITION

[92] Gaz Métro considers that these costs should be covered by all customers<sup>21</sup>.

#### 4.4.3 THE RÉGIE'S OPINION

[93] Until now, the cost of operational flexibility tools could not be disassociated from the cost of transportation and balancing tools. **The Régie agrees with the CFIB's proposal and requests that Gaz Métro presents,**

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<sup>20</sup> Exhibit B-0070, page 37.

<sup>21</sup> Exhibit B-0042, page 179.

for the 2015 rate application at the latest, a proposal for spreading the operating flexibility and distribution costs among all customers as well as a proposal for the pricing of these costs.

#### **4.5 TRANSITION PREMIUM AND POTENTIAL CHARGES FOR CUSTOMERS WHO WILL CONTINUE TO DELIVER TO EMPRESS AFTER NOVEMBER 1, 2015**

##### **4.5.1 GAZ MÉTRO'S POSITION**

[94] Gaz Métro indicates that transferring the delivery point from Empress to Dawn will cause the implementation of transitory measures for customers whose natural gas contracts will expire after November 1, 2015.

[95] One of the measures considered by Gaz Métro in this matter is a transition premium that would cause consumers to be indifferent to the idea of transferring their purchases to Dawn. In fact, after November 1, 2015, customers who are bound by their natural gas contracts to stay with Empress would be clearly better off without this transition fee, because they would have to pay the molecule price to Empress (which is lower than Dawn's molecule cost) and a transportation rate that would likely be equal to the Dawn-GMi-EDA transportation cost<sup>22</sup>. The transition premium would bring the supply and transportation costs back down to the cost of Dawn's supplies, even if their supplies are still delivered to Empress.

[96] If a customer continues to deliver to Empress after November 1, 2015, Gaz Métro could have to incur costs that are otherwise not required to send this customer's natural gas to Dawn. These costs would be closer to the price differential between Empress and Dawn<sup>23</sup>. Furthermore, these costs could otherwise be required if the operating flexibility constraint causes Gaz Métro to keep a transportation amount at Empress that is at least equal to the transportation amount required to transport these customers' natural gas to Dawn.

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<sup>22</sup> Exhibit B-0094, page 6, Table 2 and Exhibit B-0042, page 151, lines 1 to 17.

<sup>23</sup> Exhibit A-0042, page 152, lines 10 to 25 and page 153, lines 1 to 5.

[97] Gaz Métro considers that the transition premium should also reflect, if applicable, the costs that are otherwise not required to send the natural gas to Dawn for customers whose current supply contracts force them to deliver Empress after November 1, 2015,

[98] Gaz Métro mentions that it will no longer offer its transportation service to customers with contracts expiring before November 1, 2015, and who renew supply contracts to Empress for a period going beyond November 1, 2015:

*“Regarding direct purchase customers, Gaz Métro will have to obtain the expiration dates of contracts that are already in place or of commitments already made with suppliers. This information will be mainly required in order to know the level of carrying capacities that will be required to go between Empress and Dawn in order to meet customer commitments, and it will also allow Gaz Métro to have some measure of control over commitments between customers and suppliers that will come to term and that must be transferred to Dawn.*

*When the contracts between customers and suppliers expire, Gaz Métro will not allow these customers to continue delivering to Empress. If such is a customer’s desire, he will have to provide his own transportation service and deliver his natural gas directly into Gaz Métro’s territory.”<sup>24</sup>,*

[99] No stakeholder has expressed an opinion on this matter.

#### 4.5.2 THE RÉGIE’S OPINION

[100] **In order to maintain fairness among all of its customers, the Régie orders Gaz Métro to apply a transition premium to customers who continue to deliver to Empress after November 1, 2015 because their natural gas contracts have not yet expired. In other cases, the Régie orders the distributor to no longer offer the FTLH transportation service to customers after November 1, 2015.**

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<sup>24</sup> Exhibit B-0037, page 38.

[101] Once again, for equity reasons, the Régie shares Gaz Métro's opinion in that this transition premium must have a double effect, namely:

- To bring the supply and transportation costs back down to the cost of Dawn's supplies, even if their supplies are still delivered to Empress
- To make them responsible for any cost, which would otherwise not be required, to direct their natural gas from Empress to Dawn, which will cause the supply and transportation costs for these customers to be the same as Empress'.

[102] **In order to communicate this as quickly as possible to the customers who will eventually be affected by the rules governing the transfer of the delivery point for direct purchase customers from Empress to Dawn, the Régie requests that Gaz Métro present, in its next rate application, the specific terms of this transition premium and the modifications to be made to the *Conditions of Natural Gas Service and Tariff* text, while taking into account the orientations previously mentioned.**

#### **4.6 TERMS AND CONDITIONS RELATED TO THE ADVANCE NOTICE OF THE DECOMMISSIONING OF THE DISTRIBUTOR'S TRANSPORTATION AND THE ASSIGNMENT OF THE CARRYING CAPACITY HELD BY THE DISTRIBUTOR**

##### **4.6.1 GAZ MÉTRO'S POSITION**

[103] Gaz Métro indicates that the terms and conditions for the advance notice of the decommissioning of the distributor's transportation and for the carrying capacity held by the distributor should be reviewed in conjunction with the project of transferring the supply structure to Dawn.

[104] Due to the commitments made by Gaz Métro that will come into effect on November 1, 2015, and due to the fact that a customer could immediately request to provide his own transportation, the Régie asked Gaz Métro how it was going to deal with this situation in the short term. Gaz Métro indicates that it does not expect many customers to follow this procedure, because the market does not have a high capacity for short distance transportation.

[105] Gaz Métro also contends that it still has flexibility to increase or decrease its capacities<sup>25</sup>.

[106] Finally, Gaz Métro specifies that it cannot deal with this matter in Phase 2 of this application and that the subject will probably be addressed in the next rate application.

#### **4.6.2 THE RÉGIE'S OPINION**

[107] **The Régie retains Gaz Métro's position in which it cannot process the terms and conditions regarding the advance notice of the decommissioning of the distributor's transportation and the assignment of the carrying capacity it holds in Phase 2 of this application. Consequently, the Régie orders Gaz Métro to make a proposal for the new terms and conditions regarding the advance notice and the assignment of the carrying capacity held by the distributor in the next rate application.**

### **5. SUPPLY PLAN**

#### **5.1 TRANSACTION EXCHANGE OF 82,000 GJ/DAY**

##### **5.1.1 GAZ MÉTRO'S POSITION**

[108] On June 26, 2012, Gaz Métro signed an exchange contract for the Dawn-GMi-EDA route with a third party for a 10-year duration, effective November 1, 2013.

This transaction allows 82,000 GJ/day to be sent to GMi-EDA, which is approximately 14% of consumption volumes for the distributor's territory.

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<sup>25</sup> Exhibit B-0042, page 147, lines 19 to 21.

[109] Gaz Métro explains the context of the transaction:

*“The due date to submit a tender for these calls to tender, including the offer for the secondary market, was May 4, 2012.*

*In spite of the fact that these various offers came into effect after the date originally set for the implementation of the new supply strategy, Gaz Métro could not afford to let these opportunities pass by, due to the important gains to be made by the customers affected by them. It therefore made many analyses forecasting the demand for supply for 2013-2015 as well as the transportation contracts already in place in order to establish its strategy and to submit its proposal to Gaz Métro’s Board of Directors.*

*Gaz Métro’s first decision was to sign the exchange contract between Dawn and GMI EDA on the secondary market for a quantity of 82,000 GJ/day (2.164x10<sup>3</sup>m<sup>3</sup>/day), effective November 1 2013, for a 10-year duration.<sup>26,,</sup>*

[110] In response to a request for information by the Régie, Gaz Métro supplied the following additional information:

*“The initial discussions with the counterparty pertained to the possibility of delivering supplies to GMi-EDA in accordance with a structure from Niagara.*

*[...]*

*However, Gaz Métro concluded that it could not commit to a purchase of network gas on an annual basis of this size on a long-term basis. In fact, network gas is purchased in preponderance during the winter in order to reduce storage needs. Although Gaz Métro plans to purchase an amount of network gas similar to the amount covered by the transaction for a normal year, such a supply signed in advance could create a situation of surplus in the event of a year that is warmer than usual.<sup>27,,</sup>*

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<sup>26</sup> Exhibit B-0070, page 46.

<sup>27</sup> Exhibit A-0094, pages 1-2.



[111] When questioned on this matter by the Régie during a hearing, Gaz Métro declared that it had not considered a smaller transaction or a transaction with many phases. When invited to explain the reasons for this, the witness invoked the short time frame.

*“Honestly, the idea of putting this transaction together, to divide it into several methods, never came to our minds. We tried to come up with at least one working method that would allow us to secure savings for all of our customers.”<sup>28,</sup>*

[112] Gaz Métro indicates that it must consider possible migrations between network gas and direct purchasing over the period of the agreement and that it would be unwise to commit to purchasing such quantities for the supply of network gas at Niagara<sup>29</sup>.

[113] Gaz Métro alleges that purchasing network gas at Niagara would also concentrate a large part of molecule purchases with one supplier<sup>30</sup>.

[114] The following answer presents the most economical analysis, according to Gaz Métro, justifying the selection of a supplier at Dawn’s price plus transportation to GMI-EDA compared to the cost of procurement from imported natural gas going through Niagara plus transportation to Montreal.

*“The transportation rate with TCPL between Niagara and the GMI EDA area is \$0.5921/GJ while the combined Union/TCPL transportation price for shipping between Dawn – Parkway and Parkway – GMI EDA is \$0.5745/GJ. The price of compression gas required is currently lower for the Niagara – GMI EDA segment than for the other segment. The actual impact of compression gas will therefore depend on the future price of natural gas and on the calculation of the amount of compression gas required for Union and TCPL transportation systems. The overall transportation costs, however, are similar from both points.*

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<sup>28</sup> Exhibit A-0042, pages 210-211.

<sup>29</sup> Exhibit B-0094, page 2.

<sup>30</sup> Exhibit B-0094, page 2.

*The molecule price at the Niagara point historically came from Canada. The Niagara molecule thus was more expensive than that of Dawn. The introduction of procurement from the United States should thus modify this dynamic. Gaz Métro believes that the pricing structure agreed upon with the counterparty adequately reflects this market dynamic.*<sup>31,,</sup>

[115] When questioned during a hearing, Gaz Métro admitted that, based on “futures” and taking transportation costs into account, the cost of natural gas delivered to GMi-EDA from Niagara would be less expensive than that which is delivered from Dawn. Gaz Métro nevertheless indicated that this was not certain<sup>32</sup>.

[116] Gaz Métro claims that it does not know about the flow over the past few years of the 10 pipelines that feed into Dawn. It also admits that it does not know about the physical installations required to send natural gas from Marcellus to Dawn<sup>33</sup>. When questioned to know if it had evaluated the risk of having a higher price difference between Niagara and Dawn, the distributor gave the following answer:

*“Well, listen, once again, Gaz Métro does not make any price predictions. We look at what the market is forecasting. And so what you see in terms of price differences in the curves is based on the market forecasts for these various points, and this is the result.*

*So, does Gaz Métro know everything that is going on in the market? Of course not, we don’t know. We will never know. We haven’t even made any forecasts for these points, we do not deal with Niagara. The structure we implemented is not a structure that begins in Niagara. You may ask me these questions concerning any geographical location: “Why didn’t you try to implement a structure beginning in Chicago? Why not from Boston?”*

[...]

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<sup>31</sup> Exhibit B-0094, page 2.

<sup>32</sup> Exhibit B-0042, page 219.

<sup>33</sup> Exhibit B-0093, page 14.

*With that being said, Gaz Métro will not second-guess the market as to what the price will be at a certain geographic location. We go into the market, and we ask people “in your opinion, what are the price expectations?” and we see what kind of results we get. Once again, will these differences reflect reality? We will only know in two thousand sixteen (2016) what the prices were in two thousand fifteen (2015).<sup>34,,</sup>*

[117] In its argument, Gaz Métro summarizes its position as follows:

*“The matter of knowing if the decision to proceed at this exchange transaction was correct from a financial standpoint was raised during hearings.*

*[...]*

*As for me, in the evidence, it is not disputed that the exchange transaction has helped saved a substantial amount for our customers. Specifically, this amount is twenty-two point three million (\$22.3 million) in two thousand fourteen (2014), and twenty-three point eight million (\$23.8 million) in two thousand fifteen (2015).*

*Furthermore, the price of the transaction, which was... - This price was disclosed in confidence. You have this information in your hands. - Proves that Gaz Métro took advantage of the market opportunities, to the full advantage of the customers. I also will reiterate that Gaz Métro does not benefit from this transaction.<sup>35,,</sup>*

### 5.1.2 THE IGUA’S POSITION

[118] The IGUA did not directly address the issue of the exchange transaction of 82,000 GJ/day. However, it presented various information and concerns regarding procurement at Dawn.

[119] In regards to the price comparison for natural gas delivered to Montreal from Niagara and Dawn, the IGUA indicates the following:

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<sup>34</sup> Exhibit A-0042, pages 227-229.

<sup>35</sup> Exhibit A-0050, page 14.

*“According to transportation costs, it could be expected that the price from Niagara would be approximately \$0.06/GJ, which is lower than Dawn’s price.*

- *The Niagara-Kirkwall TCPL price proposed for 2013 is approximately \$0.13/GJ.*
- *The price for Union Gas Dawn – Kirkwall is currently \$0.065/GJ.*

*In fact, when one observes the regional price curves supplied by Gaz Métro (Niagara) and the price curve for Dawn, one notices a difference of approximately \$0.05/GJ in May 2015 between Dawn and Niagara, which is relatively similar to the difference in transportation costs. Thus, a supply solution at Dawn is equivalent to one at Niagara.*

*The price curve for Dawn probably presumes that new transportation infrastructures will connect the Marcellus/Utica and Dawn productions. If these infrastructures are delayed and TCPL is late in introducing competitive long haul prices and innovative products, the Niagara supplier will be in a position to request a premium for his Niagara/GMI EDA service.<sup>36,</sup>*

[120] In regards to the outlooks for the supply situation at Dawn, the IGUA presents the following observations:

*“In this scenario, two of the ten gas pipelines feeding into Dawn are no longer interesting – TCPL Dawn and TCPL Parkway. Furthermore, two of the other gas pipelines are connected to the underground storage exits and these represent very large quantities. Only Vector and a few small gas pipelines remain to supply the current request at Dawn. Hence the IGUA’s concerns, as expressed in its evidence.<sup>37,</sup>*

[121] Finally, the IGUA expresses its appreciation for the various supply perspectives by importing natural gas from Marcellus to Niagara:

*“I’m taking the third pipeline, the Kirkwall TCPL. And this is for importing natural gas from Niagara or Chippewa. For now, its capacity is approximately four hundred terajoules (400 TJ/day) per day, and it is currently dedicated to the Ontario market. And to unlock additional capacities, because we know that in the US, there are several projects to provide for Niagara and Chippewa*

<sup>36</sup> Exhibit C-ACIG-0010, page 7.

<sup>37</sup> Exhibit C-ACIG-0010, page 6.

*from Marcellus' production, but in order to unlock most capacities, ten (10) year contracts will be required to unlock such a capacity.<sup>38,,</sup>*

## **5.2 THE RÉGIE'S OPINION**

### **5.2.1 EXCHANGE TRANSACTION OF 82,000 GJ/DAY**

[122] The Régie finds that the exchange transaction of 82,000 GJ/day is important. It is set over a period of 10 years and can send a volume of natural gas to GMi-EDA evaluated by the Régie to be approximately 14% of the annual needs of the territory served by Gaz Métro.

[123] The Régie, in order to ensure that the supply plan is maximized, must be able to evaluate the proposal retained by Gaz Métro in regards to possible alternative solutions.

[124] In the case of this transaction, it was established that natural gas would be imported to Niagara and that the transaction could have been in the form of procurement from Niagara.

[125] Gaz Métro affirms that such an agreement would create a situation where there would be a supply surplus in the event of a year that is warmer than usual. The Régie notes that when the distributor's supply came mainly from Empress for network gas, there was a surplus of FTLH transportation during years that were warmer than usual, which the distributor sold on the secondary market. The Régie observes that Gaz Métro has not given any details as to the size of this surplus, or of the potential financial consequences of such a surplus. This information could have allowed the Régie to appreciate the practical relevance of this constraint.

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<sup>38</sup> Exhibit B-0046, page 192.

[126] The distributor also describes the possibility of migration for the network gas service volumes toward direct purchasing. The distributor indicates that there has not been this type of significant migrations over the last few years when the network gas price was significantly higher than the direct purchase gas. The Régie observes that the distributor gave no evidence regarding the size of potential future migrations, considering the current level of network gas sales and the current considerable price difference between network gas and direct purchase gas.

[127] The Régie must come to the conclusion that the distributor has not considered a smaller transaction or one that contains several sections.

[128] The Régie rejects Gaz Métro's argument that purchasing from Niagara would concentrate a large portion of molecule purchases with one supplier. The exchange transaction, as presented by Gaz Métro, produces the same result: natural gas delivered to GMi-EDA comes from only one supplier.

[129] The Régie notes that, based on the IGUA's analysis of "Future" prices and on transportation rates, the price of natural gas delivered to GMi-EDA from Niagara would be slightly less than the price of natural gas delivered to GMi-EDA from Dawn, even when taking into account the exchange transaction price.

[130] The Régie understands from Gaz Métro's evidence that the installations required in the United States to supply Niagara and Chippawa as well as the installations required in Canada from Niagara to Parkway have been completed or are in the process<sup>39</sup>.

[131] The Régie notes that Gaz Métro did not have the information concerning the flow over the last years for the 10 pipelines currently feeding into Dawn, nor does it have the forecasts for the upcoming years.

[132] The Régie is sensitive to the concerns raised by the IGUA regarding the price differences that could occur if the completion installations that will send the gas from Marcellus and Utica to Dawn were to be delayed.

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<sup>39</sup> Exhibit B-0062, page 19, lines 19 to 31.

[133] The Régie observes that the distributor did not carry out any risk studies concerning the price difference between Niagara and Dawn or any other risk and sensitivity studies.

[134] Furthermore, the Régie considers that the possible diversification of supply sources is also a fundamental aspect that was ignored in the evaluation of alternatives.

[135] The Régie is concerned by the fact that the distributor did not consider that procurement from Niagara was a serious alternative to procurement from Dawn nor that risk studies were required for such a transaction:

*“I would say that it is a fair affirmation within a structure based on a Niagara price, but that is not what we have established. Thus, since what we have concluded with the counterparty is a price for an exchange contract between Dawn and the franchise, the pricing structure at Niagara and the market dynamics at Niagara are not important at that level.”<sup>40</sup>,*

[136] The Régie reiterates that apart from the principle of healthy management which requires an analysis of alternatives and of risk analyses during important decisions, the Regulation regarding the contents and frequency of the supply plan mentions in Article 1 that:

*“The supply plan that any holder of exclusive natural gas rights must prepare and submit for the Régie of Energy’s approval must contain the following information:*

[...]

*3° The holder’s objectives as well as the strategy that it plans to implement [...] concerning additional supplies required as identified in Sub-paragraph C of Paragraph 2°, and the characteristics of contracts that it expects to conclude, by defining, amongst other things:*

- a) The various products, tools, or measures planned*
- b) The risks resulting from the choice of supply sources*

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<sup>40</sup> Exhibit A-0042, page 222.

*c) The measures that it hopes to take to reduce the impact of risks*  
[...]<sup>41</sup>,

[137] The Régie considers that these expectations applicable to supply plans become the absolute minimum requirements when it comes to presenting a contract for which the characteristics and risks have not been the object of prior discussions in the application dealing with the supply plan.

[138] The Régie notes that Gaz Métro is seeking to decrease its vulnerability through a transaction carried out at a very liquid point. Nevertheless, the Régie considers that there was more than one solution to reduce the vulnerability caused by receiving supplies from Empress and that the problem was not limited to a decision between Empress and Dawn as in the case of tenders presented to TCPL and Union.

[139] The analysis of the problem of choosing between Empress and Dawn demonstrates that the Dawn solution dominates the Empress solution in that it is the solution that is currently considered to be the most flexible and economical. The characteristic considerably lightens the burden of the evidence associated with risk analyses. It is in this context that the Régie was satisfied, in the case of tenders accepted by TCPL and Union, by the evidence that these transactions help forecast cost reductions without running any major risks.

[140] The Régie is not in a position to voice an opinion as to which transaction is most profitable, and it has no reason to do so either. However, based on the evidence of the application and for all of the aforementioned reasons, the Régie concludes that the decision regarding the conclusion of an exchange contract of 82,000 GJ/day was not made carefully.

[141] During the conclusion of an important transaction, the Régie expects alternate solutions to be identified and complete profitability studies to be completed. The advantages and risks associated with these various alternative solutions should be discussed, analyzed, and evaluated.

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<sup>41</sup> (2001) 133 G.O. II, 6038.



[142] Consequently, the Régie orders the distributor to submit a follow-up report for this transaction for the next ten years as part of the annual report examination. This follow-up report shall contain the following information:

- The index of prices at Dawn and Niagara as well as the difference between these two indexes
- The unit cost of transportation for the Dawn-GMi-EDA segment
- The unit cost of transportation for the Niagara-GMi-EDA segment
- The unit cost of compression gas for these two transportation segments
- The total unit cost for supplies, transportation, and compression for each of these points, as well as the difference in costs between these points
- The difference in total cost for these two points evaluated on the contractual amount, which is 82,000 GJ/day.

### 5.2.2 MARKET PERSPECTIVES AT DAWN

[143] The Régie notes that Gaz Métro was not in a position to respond to a request for information formulated by the IGUA: *Compare the capacity for these ten gas pipelines to deliver to Dawn to the historical quantities (2009, 2010 and 2011) delivered to Dawn by these ten pipelines.*

[144] Within the context of the transfer of the supply structure to Dawn and the flexibility resulting from it, the Régie considers that it is useful to illustrate, for the benefit of the stakeholders and that of the Régie, the perspectives of supply at Dawn over the next few years and their potential impact on annual supply plans.

[145] In this perspective, the Régie orders the distributor to present, in the next rate application, an external summary study containing:

- The delivery capacity of the ten gas pipelines feeding into Dawn for the next few years and a comparison to the real quantities delivered in 2009, 2010, 2011 and 2012
- The delivery capacity shall take into account the availability at competitive prices.
- A follow-up of the development of projects connecting the production from Marcellus and Utica to Dawn.

[146] Furthermore, the distributor shall take this study into account when establishing its supply plan for 2014-2017.

### 5.2.3 SUPPLY CONTRACTS NEAR PRODUCTION SOURCES

[147] Furthermore, the Régie notes that the distributor does not seem to expect to sign long-term supply contracts nearer to the production sites. It instead suggests trusting market strengths<sup>42</sup>.

[148] The Régie considers that the distributor has not yet presented any convincing arguments in this regard. The Régie deems that there is no reason to set aside the idea of contracts near production sources. This type of solution could secure more supply in an importing context. It is somewhat similar to the strategy used by several American buyers of Canadian natural gas<sup>43</sup>. This type of solution could also, depending on the price index retained, turn out to be more interesting or at least provide healthy diversity to the distributor's contract portfolio.

[149] Consequently, the Régie orders Gaz Métro to consider this alternative and to report on this in the next supply plans. It is open, if necessary, to express its opinion quickly concerning possible large-scale commercial proposals.

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<sup>42</sup> Exhibit B-0039, page 7.

<sup>43</sup> Exhibit B-0008, page 4.

### 5.3 DIVERSIFICATION OF INDEXES FOR ADVANCE PURCHASES AT DAWN

#### 5.3.1 GAZ MÉTRO'S POSITION

[150] In decision D-2011-153 pursuant to the 2012 rate application, the Régie requested Gaz Métro to “*proceed with a significant diversification of indexes on which the natural gas transactions could be based and to adjust the financial products program in consequence.*”<sup>44</sup>,

[151] In its request in this application, Gaz Métro indicates that the use of the AECO index will be reviewed during the transfer of the supply structure to Dawn. At that time, Gaz Métro will evaluate if this index or another index, such as Nymex or Dawn, would be more appropriate when setting the natural gas prices contracted in advance. The analysis of this item shall also take into account the derivative financial product program and it shall adapt it to reflect any modifications, if necessary<sup>45</sup>.

[152] In response to one of the Régie's questions, Gaz Métro affirms that the operating method is not an obstacle for the use of indexes other than AECO for the purchase of natural gas from Dawn<sup>46</sup>.

[153] In response to another of the Régie's questions, namely, whether it will be possible to present a concrete strategy in the 2014 rate application, the distributor gives the following answer:

*“Gaz Métro deems that so long as the distributor's supply price is evaluated at Empress, there is no reason to modify the use of the AECO index.*

*As mentioned in the exhibits, Gaz Métro shall analyze this aspect of the use of indexes, as well as the impact on the financial derivative program, in conjunction with the project of transferring the supply structure to Dawn.*

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<sup>44</sup> Decision D-2011-153, Application R-3752-2011, page 6, Paragraph 19.

<sup>45</sup> Exhibit B-0020, page 48.

<sup>46</sup> Exhibit B-0037, page 13.

*In the 2014 Rate Case, a progress report on the various reflections shall be presented to the Régie, including the aspects regarding the supply price.*<sup>47</sup>”

[154] Furthermore, in Decision D-2011-153, the Régie also requested the distributor to present a comparison of monthly prices at Dawn and monthly prices of Gaz Métro's purchases carried out at Dawn for each of the last five years available.

[155] This comparison demonstrates that the price of purchases, according to the AECO index, made by Gaz Métro have been often higher than the Dawn index since November 2009. In fact, the difference over the period spanning November 2009 - August 2011 was approximately \$17 million.

[156] In response to a question by the Régie asking if the cost difference assumed by the customers was sufficient reason to proceed as quickly as possible with a diversification of indexes on which the natural gas purchases at Dawn are based, the witness concurred with the distributor's position: Gaz Métro deems that so long as the distributor's supply price is evaluated at Empress, there is no reason to modify the use of the AECO index.

[157] Among the other reasons invoked, Gaz Métro claims that there is already a certain measure of diversity, since it regularly purchases natural gas on the spot market at Dawn's price<sup>48</sup>.

### 5.3.2 THE RÉGIE'S OPINION

[158] When the Régie rendered its decision regarding the 2012 rate application, it implicitly granted a certain latitude to the distributor to act by not imposing a specific completion schedule for the diversification of indexes or a minimum percentage for such a diversification.

[159] However, the Régie finds that Gaz Métro has not yet followed up on this decision.

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<sup>47</sup> Exhibit B-0071, page 14.

<sup>48</sup> Exhibit B-0042, page 206.

[160] The distributor established that the operating method did not constitute an obstacle to the use of indexes other than the AECO index.

[161] Furthermore, the Régie considers that the comparison of Gaz Métro's purchase prices based on the AECO index to the Dawn index since November 2009 indicates that there is no reason to keep using the AECO index for 100% of purchases made with the index. To the contrary, the Régie instead believes that it is urgent to begin significantly diversifying.

[162] The Régie also notes that Gaz Métro could have made this observation itself as early as October 2011, which was the moment when the Régie's decision was given.

[163] The Régie rejects Gaz Métro's argument, claiming that spot sales constitute a diversification that complies with the spirit of decision D-2011-153.

[164] The Régie also rejects Gaz Métro's argument claiming that it would be preferable to wait to use Dawn more before acting. The Régie stresses that there is expected to be an 85% proportion of network gas that will be purchased at Dawn in 2013.

**[165] For all these reasons, the Régie orders Gaz Métro to submit, in the next rate application, a full diversification strategy of indexes on which the advance purchases from Dawn are made. The Régie considers that this diversity must be created as quickly as possible. Consequently, this strategy shall allow the first significant diversification step to be completed in the fall of 2013, and these indexes shall be used by Gaz Métro to carry out advance purchases at Dawn.**

## **5.4 ENTRY AND EXIT CONDITIONS FOR NETWORK GAS**

### **5.4.1 GAZ MÉTRO'S POSITION**

[166] In response to one of the Régie's questions, Gaz Métro presented a table indicating the changes in volumes and the number of customers for each service:

network gas, direct purchase, and transportation service<sup>49</sup>. This table shows that between 2006 and 2012, the proportion of network gas sales went from 42% to 32% of total volumes.

[167] Gaz Métro does not conclude that there was a significant migration from network gas volumes toward direct purchasing<sup>50</sup>.

[168] Currently, in order to deal with migrations between various services, a six-month notice is required for entry to and exit from network gas. However, upon start-up the customer may pay migration fees in order to avoid the six-month notice. These fees are equal to the value of hedging positions at the market price applicable at 6/12 of the normalized annual consumption.

[169] When asked about the issue of fairness regarding migrations between network gas and other services and the establishment of exit fees to compensate for this issue, Gaz Métro mentions that due to the hedging that it took in conjunction with its derivative products program, *“If we had wanted a perfect situation, we would need customers to give us a four-year advance notice. This does not seem reasonable in a market where we want our customers to have options and to be able to make their own decisions regarding their supply structure...”*<sup>51</sup>.

#### 5.4.2 STAKEHOLDERS' POSITION

[170] OC, which represents customers who mainly purchase network gas, says that it is preoccupied by migrations between direct purchase and network gas. It requests that the Régie orders Gaz Métro to offer fair solutions to reduce migration and mitigate its impact.

<sup>49</sup> Exhibit B-0102, pages 1-2.

<sup>50</sup> Exhibit B-0042, pages 107-111.

<sup>51</sup> Exhibit B-0042, page 114.

### 5.4.3 THE RÉGIE'S OPINION

[171] The Régie notes that a significant portion of network gas customers is captive. In fact, due to the low consumption level, these customers, in practice, do not have access to other supply services, such as direct purchasing. On the other hand, other customers with higher consumption levels can, in practice, enter into or exit from the network gas service according to the regulations applicable in the *Conditions of Natural Gas Service and Tariff*.

[172] In light of this situation, the Régie finds that when migrations take place, it is ultimately captive clients who pay the financial consequences<sup>52</sup>. These consequences are generally negative, involving a higher cost. In fact, exit migrations tend to occur when the network gas price is higher than the market price, while entry migrations occur when the price of network gas is lower than the market price. This finding was confirmed by the distributor.

[173] The Régie considers that, if the financial derivatives protection program is to continue, the entry and exit terms must be reviewed in order to more adequately protect customers who are captive to network gas service. For example, entry and exit migrants could have a choice between a waiting period and fees when applicable. Thus, for example, the waiting period could be 24 months or migration fees calculated over 24 months of protection.

**[174] Consequently, the Régie orders the distributor to submit new entry and exit terms for network gas in the next rate application, in order to more adequately protect customers who are captive to this service.**

## 5.5 BIOGAS SUPPLY

### 5.5.1 S.É./AQLPA'S POSITION

[175] S.É./AQLPA questions the legitimacy of Gaz Métro's prediction that the amount of biogas available for supply will decrease.

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<sup>52</sup> Exhibit B-0042, page 112.

[176] The stakeholder recommends that Régie requests Gaz Métro to include, in the 2013-2015 supply plan, the biogas supply quantities for all projects in Québec that are expected to be implemented between now and September 30, 2015<sup>53</sup>.

[177] During the hearing, the stakeholder indicates that it believes that the new development projects for biogas from Québec that could supply Gaz Métro's main network should be considered, even if they have not yet been approved by the Régie. It specifies that the exclusion of biogas found in Article 2 of the *Act respecting the Régie de l'énergie*<sup>54</sup> (the Act) only applies if the biogas can be distinctly identified when it is delivered to a consumer through pipes.

### 5.5.2 GAZ MÉTRO'S POSITION

[178] The distributor indicates that if new potential contracts are approved and move forward, it will adapt its supply plan accordingly. It specifies that its approach, when setting up the supply plan, is to go with what has been confirmed at the time that the rate application is prepared<sup>55</sup>.

[179] In its answer, the distributor explains that even though the S.É./AQLPA's recommendation pertains to biogas, the question raised with this recommendation is to know whether or not Gaz Métro shall account for the tools resulting from an investment project that isn't even sure to occur in its supply plan<sup>56</sup>.

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<sup>53</sup> Exhibit C-SÉ-AQLPA-0011, page 23.

<sup>54</sup> L.R.Q., c. R-6.01.

<sup>55</sup> Exhibit A-0030, page 46.

<sup>56</sup> Exhibit A-0050, page 270.



### 5.5.3 THE RÉGIE'S OPINION

[180] The Act reads:

*“1. This Act applies [...] to transportation, distribution and storage of natural gas delivered or intended to be delivered through pipes to a consumer.*

*[...]*

*2. In this Act, unless the context implies something different, we understand;*

*[...]*

*“natural gas” to mean gaseous or liquid methane, except for biogas and synthetic gas;”*

[181] The Régie rejects the S.É./AQLPA's recommendation. It believes that this recommendation cannot be considered due to the content of the Act. In fact, the Régie considers that the Act does not allow it to impose on Gaz Métro the obligation to include biogas in its supply, as this type of gas is specifically excluded from the definition of natural gas mentioned in the Act.

[182] In spite of its conclusion, the Régie does not give an opinion on the distributor's capacity to include in its natural gas supply plan natural gas that can be used for consumption, no matter what its origin is. Furthermore, the Régie reiterates that in the terms of the *Conditions of Natural Gas Service and Tariff*, the gas injected in the Gaz Métro network must follow the quality criteria set by TCPL, no matter its origin.

### 5.6 2013-2015 SUPPLY PLAN

[183] In Decision D-2012-158, the Régie approved the supply plan for 2013, subject to the guidelines mentioned in Decision D-2012-136 regarding the renewal of the  $116,10^6 \text{ m}^3$  of Union's storage capacities, expiring on April 30, 2013. It reserved its decision regarding the supply plans for 2014 and 2015.

[184] Considering all of the elements of this decision, the Régie approves the supply plan for 2014 and 2015.

## 6. FOLLOW-UP OF DECISION D-2011-182

[185] Pursuant to Decision D-2011-182<sup>57</sup>, Gaz Métro provides the historical evolution and the value of “Futures” for location differentials compared to Henry Hub for various natural gas exchange points located in the Northeastern United States<sup>58</sup>.

[186] Gaz Métro requests the Régie to declare that the information thus provided satisfies the follow-up requested.

[187] Pursuant to Decision D-2011-153, Gaz Métro provides, for each of the last five years, a comparison between the average price of its purchases from Dawn, weighted by the volumes purchased, on the one hand, and the monthly prices at Dawn according to a published index, on the other hand. Gaz Métro requests the Régie declares that this comparison satisfies the follow-up requested<sup>59</sup>.

[188] In this regard, Gaz Métro also submits a table for Exhibit B-0092, page 27.

**[189] The Régie declares that the documents submitted by Gaz Métro satisfy the required follow-up.**

**[190] The Régie requests that Gaz Métro continues these follow-ups and that it presents the information in the next rate application. However, the Régie requests that the follow-up regarding the price of purchases at Dawn be submitted in the same format as Exhibit B-0092.**

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<sup>57</sup> Application R-3752-2011.

<sup>58</sup> Exhibit B-0006.

<sup>59</sup> Exhibit B-0019.

[191] **For these reasons,**

**The Régie de l'Énergie:**

**APPROVES** Gaz Métro's supply plan for 2014 and 2015, including the strategy for transferring the supply structure from Empress to Dawn, with the specifications and modifications made in this decision

**MAINTAINS** the use of the operation method approved in Decision D-2011-162 for rate years 2013, 2014 and 2015

**ORDERS** Gaz Métro to comply with all of the conclusions and decisions set forth in this decision.

Marc Turgeon  
Commissioner

Jean-François Viau  
Commissioner

Françoise Gagnon  
Commissioner

**Representatives:**

- Industrial Gas User's Association (IGUA) represented by Mr. Guy Sarault
- Canadian Federation of Independent Business (CFIB) (Quebec chapter) represented by Mr. André Turmel
- Groupe de recherche appliquée en macroécologie (GRAME) represented by Ms. Geneviève Paquet
- Option consommateurs (OC) represented by Mr. Éric David
- Regroupement des organismes environnementaux en énergie (ROÉÉ) represented by Mr. Franklin S. Gertler
- Regroupement national des conseils régionaux de l'environnement du Québec (RNCREQ) represented by Ms. Annie Gariépy
- Gaz Métro Limited Partnership (Gaz Métro) represented by Mr. Vincent Regnault and Mr. Hugo Sigouin-Plasse
- Stratégies énergétiques and Association québécoise de lutte contre la pollution atmosphérique (S.É./AQLPA) represented by Mr. Dominique Neuman
- TransCanada Energy Ltd. (TCE) represented by Mr. Pierre Grenier
- TransCanada Pipelines Limited (TCPL) represented by Mr. Pierre Grenier
- Union des consommateurs (UC) represented by Ms. Hélène Sicard
- Union des municipalités du Québec (UMQ) represented by Mr. Steve Cadrin.

**M12 Dawn to Kirkwall Contracts - Turnback (Notice Received)**

<b>SHIPPER</b>	<b>Contract Identifier</b>	<b>Receipt Point</b>	<b>Delivery Point</b>	<b>Quantity (GJ)</b>	<b>Start Date</b>	<b>End Date</b>
TransCanada PipeLines Limited	M12010	Dawn	Kirkwall	108,540	01-Nov-93	31-Oct-08
TransCanada PipeLines Limited	M12023	Dawn	Kirkwall	58,874	01-Nov-93	31-Oct-08
TransCanada PipeLines Limited	M12042	Dawn	Kirkwall	28,871	01-Nov-96	31-Oct-08
TransCanada PipeLines Limited	M12051	Dawn	Kirkwall	267,275	01-Nov-98	31-Oct-08
TransCanada PipeLines Limited	M12122	Dawn	Kirkwall	317,000	01-Nov-08	31-Oct-11
TransCanada PipeLines Limited	M12012	Dawn	Kirkwall	62,695	01-Nov-94	31-Oct-12
TransCanada PipeLines Limited	M12123	Dawn	Kirkwall	375,188	01-Nov-08	31-Oct-12
TransCanada PipeLines Limited	M12122	Dawn	Kirkwall	133,224	01-Nov-11	31-Oct-13
TransCanada PipeLines Limited	M12157	Dawn	Kirkwall	53,440	01-Nov-10	31-Oct-13
TransCanada PipeLines Limited	M12122	Dawn	Kirkwall	13,336	01-Nov-13	31-Oct-14
TransCanada PipeLines Limited	M12123	Dawn	Kirkwall	23,926	01-Nov-12	31-Oct-14

**M12 Dawn to Kirkwall Contracts - Active Contracts**

<b>Customer Name</b>	<b>Contract Identifier</b>	<b>Receipt Point</b>	<b>Delivery Point</b>	<b>Quantity (GJ)</b>	<b>Start Date</b>	<b>End Date</b>
Enbridge Gas Distribution Inc.	M12079	Dawn	Kirkwall	32,123	01-Apr-04	31-Mar-15
TransCanada PipeLines Limited	M12012	Dawn	Kirkwall	62,602	01-Nov-94	31-Oct-15
TransCanada PipeLines Limited	M12123	Dawn	Kirkwall	134,077	01-Nov-08	31-Oct-15
Dynegy Gas Imports, LLC	M12170	Dawn	Kirkwall	38,306	01-Nov-08	31-Oct-15
Enbridge Gas Distribution Inc.	M12175	Dawn	Kirkwall	35,806	01-Nov-10	31-Oct-15
Consolidated Edison Company of New York, Inc. and Orange and Rockland Utilities, Inc.	M12162	Dawn	Kirkwall	31,746	01-Nov-11	31-Oct-16
National Fuel Gas Distribution Corporation	M12196	Dawn	Kirkwall	10,791	01-Nov-10	31-Oct-17
KeySpan Gas East Corporation d/b/a National Grid	M12116	Dawn	Kirkwall	138,600	01-Nov-07	31-Oct-18
National Fuel Gas Distribution Corporation	M12211	Dawn	Kirkwall	15,904	01-Nov-10	31-Oct-20
Thorold CoGen L.P. by its General Partner Northland Power Thorold Cogen GP Inc.	M12129	Dawn	Kirkwall	49,500	01-Sep-09	31-Aug-29

**Long Term M12-X Transportation Contracts**

<b>Customer Name</b>	<b>Contract Identifier</b>	<b>Receipt Point</b>	<b>Delivery Point</b>	<b>Quantity (GJ)</b>	<b>Start Date</b>	<b>End Date</b>
TransCanada PipeLines Limited	M12X004	Dawn	Parkway	50,000	01-Sep-11	31-Aug-21
TransCanada PipeLines Limited	M12X005	Dawn	Parkway	78,316	01-Sep-11	31-Aug-21
Enbridge Gas Distribution Inc.	M12X006	Dawn	Parkway	200,000	01-Nov-12	31-Oct-22
TransCanada PipeLines Limited	M12X013	Dawn	Parkway	62,695	01-Nov-12	31-Oct-23

**Long Term C1 Kirkwall to Parkway Transportation Contracts**

<b>Customer Name</b>	<b>Contract Identifier</b>	<b>Receipt Point</b>	<b>Delivery Point</b>	<b>Quantity (GJ)</b>	<b>Start Date</b>	<b>End Date</b>
TransCanada PipeLines Limited	M12219	Kirkwall	Parkway	88,497	01-Nov-12	31-Oct-22
Emera Energy Incorporated	M12221	Kirkwall	Parkway	36,751	01-Nov-12	31-Oct-22

**NEWS RELEASE**

Union Gas Limited  
50 Kell Drive North,  
Chatham, ON N7M 5M1

March 13, 2012

CONTACT: Carrie Dudley-Tatsu  
Phone: 1-800-571-8446 ext. 5424

## **UNION GAS ANNOUNCES OPEN SEASON FOR NEW PIPELINE, CONNECTING PARKWAY TO MAPLE**

**CHATHAM, Ontario** -- Union Gas Limited is holding a binding open season to solicit market support for new firm transportation capacity originating from an interconnect near the existing Union Gas Parkway compressor station to a new interconnect with the TransCanada system at or near Maple (the "Parkway Extension Project").

The Parkway Extension Project will provide firm transportation capacity of over 0.5 PJ/d from Parkway to Maple.

This project will be an extension of the Union Gas Dawn to Parkway system that will provide secure access to diverse supplies of natural gas from the Union Gas Dawn Hub and serve a growing demand for natural gas in central, eastern and northern Ontario as well as Quebec and the U.S. Northeast. The Parkway Extension Project will give consumers a new transportation option that will increase supply diversity, while supporting the development of new natural gas infrastructure in Ontario.

Enbridge Gas Distribution Inc. is considering a pipeline project commencing at a new interconnect near the Union Gas Parkway compressor station that will upgrade its distribution system in the Greater Toronto Area. The Parkway Extension Project will consist of a segment of pipeline that will be jointly owned by Union Gas and Enbridge Gas Distribution and a second segment of pipeline that will be wholly owned by Union Gas.

"There are tremendous synergies created by Union Gas and Enbridge working together to build this important new infrastructure," said Mark Isherwood, vice president of business development, storage and transmission at Union Gas. "The Parkway Extension Project will enhance Ontario's ability to access diverse and competitive supply sources, which will support a growing Ontario economy and an increasing demand for affordable and reliable energy."

Several key potential Shippers, including both Enbridge Gas Distribution and Gaz Métro Limited Partnership, have expressed interest in the proposed service that will provide increased diversity of supply and competitive energy options for Ontario and Quebec.

The Open Season is also seeking interest in transportation service on the Union Gas Dawn to Parkway system to provide capacity to feed the new pipeline. Shippers may bid on firm transportation from the Dawn Hub, Kirkwall, or Parkway to the new interconnect at Parkway or to Maple for service starting in 2014 or 2015. Union Gas is conducting the binding open seasons from March 13, 2012 through April 25, 2012.

#### **Open Season Contact**

For additional information, visit [www.uniongas.com/openseason](http://www.uniongas.com/openseason), contact your sales representative or:

Dale Van Der Meersch  
Union Gas Limited  
519-436-5276  
[dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com)

#### **About Union Gas**

Union Gas Limited is a major Canadian natural gas storage, transmission and distribution company based in Ontario with 100 years of experience and service to customers. The distribution business serves about 1.4 million residential, commercial and industrial customers in more than 400 communities across northern, southwestern and eastern Ontario. Union Gas's growing storage and transmission business offers premium storage and transportation services to customers at the Dawn Hub, the largest underground storage facility in Canada and one of the largest in North America. It offers customers an important link in the movement of natural gas from Western Canadian and U.S. supply basins to markets in central Canada and the northeast U.S. Union Gas, one of Canada's Top 100 Employers for 2012, is a Spectra Energy (NYSE: SE) company with assets of \$5.6 billion and approximately 2,200 employees. For more information, visit [uniongas.com](http://uniongas.com).

###

#### **CONTACT:**

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## Union Gas Limited Parkway Extension Project and Dawn to Parkway Binding Transportation Open Season

March 13, 2012

Union Gas Limited is pleased to announce a binding Open Season for the **Parkway Extension Project** offering transportation service on a proposed new pipeline from a new interconnect near the Union Gas Parkway Compressor station ("**Parkway**"), to a new interconnect with the TransCanada Pipelines Limited transmission system at or near Maple, Ontario ("**Maple**"). Union Gas is also conducting a concurrent Open Season on the Dawn to Parkway system to provide capacity to the new pipeline. Service on the Dawn to Parkway system would commence as early as late 2014. Service through the Parkway Extension Project would commence as early as 2015.

The Parkway Extension Project will provide firm transportation capacity of over 500 TJ/d from Parkway to Maple.

This project will be an extension of the Union Gas Dawn to Parkway system that will provide secure access to diverse supplies of natural gas from the Union Gas Dawn Hub and serve a growing demand for natural gas in central, eastern and northern Ontario as well as Quebec and the U.S. Northeast. The Parkway Extension Project will give consumers a new transportation option that will increase supply diversity, while supporting the development of new natural gas infrastructure in Ontario.

Enbridge Gas Distribution Inc. is considering a pipeline project commencing at a new interconnect near the Union Gas Parkway compressor station that will upgrade its distribution system in the Greater Toronto Area. The Parkway Extension Project will consist of a segment of pipeline that will be jointly owned by Union Gas and Enbridge Gas Distribution and a second segment of pipeline that will be wholly owned by Union Gas.



Several key potential Shippers, including both Enbridge Gas Distribution and Gaz Métro Limited Partnership, have expressed interest in the proposed service that will provide increased diversity of supply and competitive energy options for Ontario and Quebec.

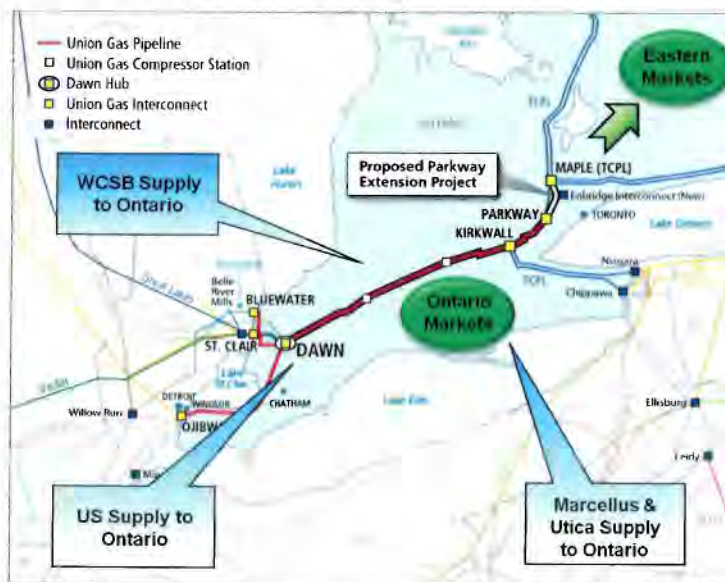




Shippers may bid on firm transportation from the Dawn Hub or Kirkwall to the new interconnect at Parkway or to the existing Parkway delivery point for service starting as early as 2014. Shippers may also bid on firm transportation from the Dawn Hub, Kirkwall, or Parkway to Maple for service starting as early as 2015.

Union Gas plans to add the new path to the M12 transportation tariff in order to be able to offer a seamless transportation service from Dawn, Kirkwall and Parkway to Maple.

Union Gas is prepared to make the proposed new interconnect at Maple bi-directional, if there is sufficient market interest in a Maple to Parkway or Maple to Dawn Hub transportation service.



Shippers interested in a multi-point bi-directional service, similar to Union Gas' <M12-X transportation service>, or in <F24-T firm all day service>, with multiple nomination windows on any segment on the Dawn to Maple path, have the option to express interest in either of these proposed services during the Open Season. Union Gas would look to develop these services if sufficient Shipper interest exists and secure all OEB approvals required to offer these services.

Once approved, Union Gas would then provide the opportunity during a subsequent Open Season to convert capacity contracted during this Open Season to either of these enhanced services.

As well, Union Gas is soliciting Shipper interest in fixed price tolls, for a 15 year period, for the Dawn to Maple, Parkway to Maple, and Kirkwall to Maple paths. Shippers may express interest in a fixed price toll at a premium to the initial cost of service rate.

The Parkway Extension Project and these transportation services will offer Shippers expanded access to the Dawn Hub, where Shippers can enjoy access to a liquid market with diverse gas supplies, Canada's largest premium storage facility and expanding markets. The Dawn Hub is strategically located and is well connected to several supply basins including the U.S. Midwest, U.S. Rockies, U.S. shale gas basins (Marcellus, Utica, Barnett and Haynesville) and the Western Canadian Sedimentary Basin.

Shippers who have end-use needs or market demands in the Toronto area, northern and



eastern Ontario, Quebec, or the U.S. Northeast can benefit from the competitive, flexible and reliable firm transportation options provided by the Parkway Extension Project and these transportation services.

**Proposed Services:**

Capacity would be available for the following proposed services, depending on market support:

- 1) Easterly firm transportation service through the new Parkway to Maple path originating from Dawn, Kirkwall or Parkway (includes option to convert existing Dawn to Parkway or Dawn to Kirkwall to Dawn to Maple); and***
- 2) Easterly firm transportation service originating at Dawn and delivered to Parkway; and***
- 3) Westerly firm transportation service, from Maple to Parkway or Dawn.***

***In total, Union Gas is proposing a maximum receipt capacity for new contracts originating from Dawn of 800 TJ/d, with up to 400 TJ/d starting as early as November 1, 2014 and a maximum receipt capacity for new contracts originating from Kirkwall of 500 TJ/d, with up to 300 TJ/d starting as early as November 1, 2014. In total Union Gas is offering 500 to 700 TJ/d of capacity on the proposed Parkway Extension Project from Parkway to Maple (New contracts plus conversion of existing contracts) starting November 1, 2015 with receipt points of Dawn, Kirkwall or Parkway. Union Gas is proposing up to 300 TJ/d of Westerly firm capacity from Maple to either Parkway or Dawn starting November 1, 2015.***

This Open Season closes at **2:00 p.m. EDT on April 25, 2012.**

**1. Service Description and Details:**

**Easterly Firm Transportation Service Parameters**

- Transportation service would commence as early as November 1, 2014 or November 1, 2015
- Receipt Point is one of **Dawn, Kirkwall, Parkway**
- Delivery Point is one of **Parkway or Maple**
- Term of the bid will be a **minimum term of 15 years.**
- Service is proposed to be in accordance with the Union Gas M12 Rate Schedule which will require changes to incorporate the services proposed and OEB approval.
- Demand and fuel rates will be subject to final project size and Shipper demands. The following cost of service M12 rates are anticipated (not including the fixed price option, if developed):





Easterly Demand Charge Rates (C\$/GJ/day)		
Receipt Point	To Maple	To Parkway
Dawn	\$0.10 - \$0.15	\$0.08 - \$0.10
Kirkwall	\$0.05 - \$0.10	\$0.01 - \$0.02
Parkway	\$0.02 - \$0.07	N/A

- It is expected that the fuel requirement for service to Maple would be approximately 0.2% - 0.4% greater than the current Dawn to Parkway fuel rate. Fuel rates will be in accordance with the [M12 Rate Schedule](#), subject to OEB approval.

View the current [Rate Schedule, General Terms and Conditions and Standard Contract](#). The M12 Rate Schedule, M12 Schedule C – Fuel Ratios & Rates, and M12 Schedule D – Points and Pressures will be updated, pending OEB approval, to include the new services and rates.

#### Westerly Firm Transportation Service Parameters

- Transportation service would commence as early as November 1, 2015
- Receipt Point is **Maple**
- Delivery Point is one of **Parkway or Dawn**
- Term of the bid will be a **minimum term of 15 years**.
- Demand charge rate is expected to be **25% to 35%** of the Easterly demand charge rate. Both demand charge and fuel rates will be subject to OEB approval
- Service is proposed to be in accordance with the Union Gas C1 Rate Schedule and is subject to OEB approval.

View the [Rate Schedule, General Terms and Conditions and Standard Contract](#). The C1 Rate Schedule and C1 Schedule C – Points and Pressures will be updated, pending OEB approval, to include the new services and rates.

#### Term:

As this expansion project requires a significant incremental capital investment and is being constructed during a period of changing gas supply dynamics, the term of these agreements is to be a minimum of fifteen (15) years. The facilities, rates and services included in this binding Open Season will be subject to Ontario Energy Board (OEB) approval.



## **2. Submitting a Binding Bid for Service**

If you wish to participate in the Parkway Extension Project, please complete, sign and return the <Firm Transportation Service Bid Form> via email or fax to:

ATTN: Dale Van Der Meersch  
Email: [dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com)  
Fax: (519) 436-4643

**Completed forms must be returned on or before 2:00 p.m. EDT on April 25, 2012**

### **Open Season Process:**

This binding Open Season is being offered to assist Union Gas with determining facility design requirements to meet market needs. Union Gas will acknowledge Shipper's bid in writing on or before 4:00 p.m. Eastern Time on April 25, 2012. Union Gas will contact all responding parties who meet the requirements of the Open Season on or before April 30, 2012. Union Gas in its sole discretion reserves the right to reject any and all proposals received. Capacity requests that meet the respective service parameters during this Open Season will be awarded as per Union Gas' Allocation Procedures in Section XVI of the Union Gas M12 tariff GT&Cs starting with those bids with the highest economic value. If the economic values of two or more independent bids are equal, then service shall be allocated on a pro-rata basis. The economic value shall be based on the net present value which shall be calculated based on the proposed per unit rate and the proposed term of the contract and without regard to the proposed Contract Demand ("NPV").

Successful bidders will be expected to execute the Union Gas <standard form M12 contract> and a related Precedent Agreement, to cover any additional conditions precedent that are required by Union Gas and the Shipper that are not already covered in the Union Gas M12 General Terms & Conditions.

Any suggested Conditions Precedent that the Shipper proposes should be clearly articulated and attached to the bid form and will be considered during the capacity allocation process. Successful participants in the Open Season will be expected to enter into a definitive Precedent Agreement with Union Gas within 30 days of the Open Season closing. The Precedent Agreement will include several Conditions Precedent in favour of Union Gas pertaining to the project as well as any additional conditions precedent identified by the Shipper in its bid submission and negotiated with Union Gas.

- <Pro-forma Precedent Agreement> (Link on web version only)

A Financial Backstopping Agreement may also be required. The need for such an agreement will be determined by the facilities required to provide the transportation service





requested by the Shipper. If costs are incurred prior to the Shipper or Union Gas waiving their conditions precedent, the Shipper will be required to backstop their pro-rated costs until the conditions precedent are waived or satisfied. Contact your Account Manager or Dale Van Der Meersch to discuss the Financial Backstopping Agreement in more detail.

- <Pro-forma Financial Backstopping Agreement> (Link on web version only)

Pro-forma versions of agreements can be found on the Union Gas website at [www.uniongas.com/openseason](http://www.uniongas.com/openseason)

Union Gas anticipates allocating capacity to successful bidders and executing the associated contracts no later than **May 25, 2012.**

If you have any questions about the Parkway Extension Project Open Season, please feel free to contact:

Dale Van Der Meersch, Project Manager, Business Development, (519) 436-5276; [dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com) or your [Account Manager](#).

**FIRM TRANSPORTATION SERVICE BID FORM****Page 1 of 1**

Please complete, sign and return this Firm Transportation Service Bid Form on or before 2:00 p.m. EDT on April 25, 2012, via email or fax to:

**ATTN:** Dale Van Der Meersch via

**Email:** [dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com)

**or Fax:** (519) 436-4643

**This is a binding bid, subject to specified conditions precedent.** The purpose of the Parkway Extension Project and the Dawn to Parkway Open Season is for Union Gas to determine the facility design requirements to support market needs. Union Gas will determine whether or not to proceed with offering any of the services defined in the Parkway Extension Project and the Dawn to Parkway Open Season based on the assessment of the results from this Open Season. By signing and returning this Firm Transportation Service Bid Form, Shipper may be contacted directly to transition to a M12 transportation contract, a related Precedent Agreement and potentially a Financial Backstopping Agreement. Pro-forma copies of each can be found at [www.uniongas.com/openseason](http://www.uniongas.com/openseason).

Shippers may submit more than one bid form. Please indicate your requirements below:

**Firm Transportation Service Binding Bid:**

Receipt Point ☐ Dawn ☐ Kirkwall ☐ Parkway ☐ Maple

Delivery Point ☐ Maple ☐ Parkway ☐ Dawn

Start Date (select one per bid) ☐ Nov 1, 2014 or ☐ Nov 1, 2015

NEW Quantity Max \_\_\_\_\_ (GJ/d)

CONVERSION Quantity Max \_\_\_\_\_ (GJ/d) (from existing M12 capacity)

Contract Reference (e.g. M12000): \_\_\_\_\_

TOTAL (New + Conversion) Max \_\_\_\_\_ (GJ/d)

TERM (15 year minimum ending October 31) \_\_\_\_\_ (yrs)

Interest in Fixed Tolls: ☐

Interest in Firm all day service with additional nomination windows: ☐

Interest in bi-directional, multiple receipt point service: ☐

Is the bid subject to any additional conditions precedent in addition to the standard

Preconditions in Section XXI of Union Gas' [M12 General Terms and Conditions](#)?

**Yes\*** **No** (circle one)

\*If yes, please articulate those conditions in an attachment

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2012

**SHIPPER LEGAL NAME** \_\_\_\_\_

By: \_\_\_\_\_

Signature: \_\_\_\_\_

E-mail: \_\_\_\_\_

Name: \_\_\_\_\_

Phone: \_\_\_\_\_



PA for [M12xxx or C1xxx]

**PRECEDENT AGREEMENT**

**THIS PRECEDENT AGREEMENT ("Precedent Agreement")** dated this [ ] day of [Month], [Year] by and between Union Gas Limited, an Ontario corporation ("Union"), and [name of shipper], a(n) [jurisdiction] [type of entity] ("Shipper") (Union and Shipper may sometimes be referred to separately as "Party" or jointly as "Parties" in this Precedent Agreement) witness that:

**WHEREAS**, Union owns and operates a natural gas transmission system in south-western Ontario, through which Union offers firm transportation services;

**WHEREAS**, Union intends, subject to Shipper's execution of this Precedent Agreement, Shipper's execution of the Transportation Agreement defined below, and Union's determination of capacity requirements, to own, build and operate certain facilities [describe Expansion Facilities to be constructed specifically for the related Transportation Contract], proposed to be in service by [in service date] and herein known as the "**Expansion Facilities**";

**WHEREAS**, this Precedent Agreement is executed as evidence of Shipper's binding request for firm transportation service as well as Shipper's acknowledgement that Union requires the benefit of certain construction and regulatory conditions precedent not contained in the tariff applicable to the Transportation Agreement;

**WHEREAS**, Shipper acknowledges that Union is relying on Shipper's commitments and obligations set forth in this Precedent Agreement in order to own, build and operate the Expansion Facilities;

**WHEREAS**, the design of the Expansion Facilities may change based on the final capacity requirements or project design as determined by Union in Union's sole discretion, which may result in a reduction in scope or elimination of the requirement for Expansion Facilities;

**WHEREAS**, Shipper agrees to enter into a transportation agreement whereby Union will provide service and Shipper will receive service in Ontario in accordance with and in the form included in Union's M12 or C1 Rate Schedule, as applicable, (such transportation agreement shall be referred to herein as the "**Transportation Agreement**"); and

**WHEREAS**, Shipper agrees to enter into a financial backstopping agreement (the "**Financial Backstopping Agreement**") whereby Shipper agrees to financially indemnify Union for the costs associated with developing and constructing the Expansion Facilities on the terms and conditions contained therein,

**NOW, THEREFORE**, in consideration of the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, Union and Shipper agree as follows:

PA for [M12xxx or C1xxx]

**1.0 Effective Date and Term**

This Precedent Agreement shall become effective as of the date first stated above and shall remain in effect until the earlier of: (a) all of the conditions precedent in Section 3.0 have been satisfied or waived by the Party claiming the benefit thereof, or (b) either Union or Shipper exercises their respective termination rights pursuant to this Precedent Agreement.

**2.0 Firm Transportation Services**

Shipper agrees that it will execute the firm Transportation Agreement necessary to satisfy Shipper's firm transportation requirements under the terms set forth below and in [the form attached as Schedule 1][insert contract number]. The Transportation Agreement shall provide firm transportation services including, without limitation, the following terms as described in [insert contract number].

- (a) Contract Demand
- (b) Start and End Dates
- (c) Receipt Point(s)
- (d) Delivery Point(s)
- (e) Demand Charge
- (f) Renewal Rights

Shipper shall be responsible for all charges, pursuant to Union's M12 or C1 Rate Schedule, as applicable.

**3.0 Conditions Precedent**

3.1 The obligations of Union to provide the Transportation Services in the Transportation Agreement are subject to the conditions precedent for Union's benefit in the Transportation Agreement and to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided for in this Precedent Agreement:

- (a) Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders, and authorizations that are required to:
  - i. construct and operate the Expansion Facilities; and
  - ii. provide the Transportation Services,

under a regulatory framework satisfactory to Union, in its sole discretion;



PA for [M12xxx or C1xxx]

- (b) Union shall have obtained all internal approvals that are necessary or appropriate to construct and operate the Expansion Facilities and provide the Transportation Services;
- (c) Union shall have completed and placed into service the Expansion Facilities;
- (d) Union, where applicable, shall have received from Shipper an executed Financial Backstopping Agreement, in form and substance reasonably acceptable to the Parties; and
- (e) Shipper shall have executed the Transportation Agreement.

3.2 The obligations of Shipper under the Transportation Agreement are subject to the conditions precedent for the benefit of Shipper in the Transportation Agreement and to the following conditions precedent, which are for the sole benefit of Shipper, and which may be waived or extended in whole or in part in the manner provided for in this Precedent Agreement:

[a),(b),(c) or "ml" if none

3.3 Subject to Section 3.6 herein, Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfill the conditions precedent, if applicable, specified in paragraphs Section 3.1 (a), (c), (d), and (e), and the conditions precedent specified in Section 3.2 (if any). Each Party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such Party's benefit. If a Party concludes that it will not be able to satisfy a condition precedent that is for its benefit, that Party may, upon written notice to the other Party, terminate this Precedent Agreement and the Transportation Agreement and upon the giving of such notice, this Precedent Agreement and the Transportation Agreement shall be of no further force and effect and each of the Parties shall be released from all further obligations hereunder.

3.4 Subject to Section 3.6 herein, if any of the conditions precedent in Section 3.1 (d) or (e) are not satisfied or waived by the Party entitled to the benefit of such condition, by May 25, 2012, (or if any of the conditions precedent in Section 3.2 are not satisfied or waived by the Party entitled to the benefit of such condition, by [insert date]), then either Party may, upon written notice to the other Party, terminate this Precedent Agreement and the Transportation Agreement and upon the giving of such notice, this Precedent Agreement and the Transportation Agreement shall be of no further force or effect and each of the Parties shall be released from all further obligations hereunder.

3.5 Subject to Section 3.6 herein, and in addition to the provisions of Sections 3.3 and 3.4 herein, Union may terminate this Precedent Agreement and the Transportation Agreement at any time upon fifteen (15) days' prior written notice to Shipper, if Union, in its sole discretion, determines for any reason that the Expansion Facilities contemplated herein are no longer required.

PA for [M12xxx or C1xxx]

3.6 In the event of termination of the Precedent Agreement and Transportation Agreement pursuant to Sections 3.3, 3.4 and 3.5 herein, then such termination shall be without prejudice to: (i) any rights or remedies that a Party may have for breaches of this Precedent Agreement and the Transportation Agreement prior to such termination and any liability a Party may have incurred before such termination shall not thereby be released; and (ii) any obligations and any liabilities that a Party may have incurred pursuant to the Financial Backstopping Agreement, associated with the Precedent Agreement and Transportation Agreement, shall not thereby be released.

#### **4.0 Union's Authorizations and Approvals**

During the term of this Precedent Agreement, Shipper agrees to support and cooperate with, and to not oppose, obstruct or otherwise interfere with in any manner, the efforts of Union to obtain all authorizations and/or exemptions and supplements and amendments thereto necessary for Union to construct, own, operate, and maintain, under Union's proposed regulatory framework, the Expansion Facilities and to provide the firm transportation service contemplated in this Precedent Agreement and to perform its obligations as contemplated by this Precedent Agreement.

#### **5.0 Allocation of Capacity in the event of partial completion of Expansion Facilities**

If Expansion Facilities are required to satisfy any Transportation Service,

- (a) then to the extent that such Expansion Facilities are only partially completed and placed in service by the Commencement Date or at any time thereafter, then any firm capacity available on such partially completed Expansion Facilities (the "**Partial Expansion Capacity**") will be allocated in accordance with this Section 5.0 to all Transportation Agreements: (a) which require the same Expansion Facilities for the Contract Demand; and (b) under which all conditions precedent have been satisfied or waived except for such conditions precedent that relate to the completion and placing in-service of the Expansion Facilities.
- (b) Such allocation shall be made in priority of the NPV as such term is defined in Article XVI of Schedule "A2010" of the M12 or C1 Rate Schedule, as applicable, and allocated in accordance with said Article.
- (c) If, pursuant to this Section, a Transportation Agreement is allocated any portion of Partial Expansion Capacity, then the conditions precedent that relate to the completion and placing in-service of the Expansion Facilities shall be deemed to have been waived such that the Initial Term under the Transportation Agreement will commence. If a Transportation Agreement is not allocated the entirety of the Contract Demand under such Transportation Agreement, then such Contract Demand shall be deemed to be such lower allocated amount (and for greater certainty, the Initial Term shall nevertheless be deemed to have commenced) until such time as the Transportation Agreement is allocated additional Partial Expansion Capacity pursuant to this Section or until the entirety of the Expansion Facilities are completed and placed in-service.



PA for [M12xxx or C1xxx]

- (d) The procedure contemplated by this Section will be applicable from time to time on each occasion that the Expansion Facilities are incrementally completed and placed in service.

#### **6.0 Limitation of Damages**

THE PARTIES HERETO AGREE THAT NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR ANY PUNITIVE, SPECIAL, EXEMPLARY, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS OR BUSINESS INTERRUPTIONS) ARISING OUT OF OR IN ANY MANNER RELATED TO THIS PRECEDENT AGREEMENT, AND WITHOUT REGARD TO THE CAUSE OR CAUSES THEREOF OR THE SOLE, CONCURRENT OR CONTRIBUTORY NEGLIGENCE (WHETHER ACTIVE OR PASSIVE), STRICT LIABILITY (INCLUDING, WITHOUT LIMITATION, STRICT STATUTORY LIABILITY AND STRICT LIABILITY IN TORT) OR OTHER FAULT OF EITHER PARTY. THE IMMEDIATELY PRECEDING SENTENCE SPECIFICALLY PROTECTS EACH PARTY AGAINST SUCH PUNITIVE, EXEMPLARY, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES EVEN IF WITH RESPECT TO THE NEGLIGENCE, GROSS NEGLIGENCE, WILLFUL MISCONDUCT, STRICT LIABILITY OR OTHER FAULT OR RESPONSIBILITY OF SUCH PARTY; AND ALL RIGHTS TO RECOVER SUCH DAMAGES OR PROFITS ARE HEREBY WAIVED AND RELEASED.

#### **7.0 Modification or Waiver**

No modification or waiver of the terms and provisions of this Precedent Agreement may be made except by the execution of a written amendment to this Precedent Agreement. The waiver by any Party of a breach or violation of any provision of this Precedent Agreement shall not operate as or be construed to be a waiver of any subsequent breach or violation thereof.

#### **8.0 Supersedes Other Agreements**

This Precedent Agreement, Transportation Agreement and the Financial Backstopping Agreement reflect the whole and entire agreement among the Parties with respect to the subject matter hereof and supersede all prior agreements and understandings among the Parties with respect to the subject matter hereof.

#### **9.0 Notices**

Notices under this Precedent Agreement must be sent,

**If to Union:**

PA for [M12xxx or C1xxx]

Union Gas Limited  
50 Keil Drive North  
Chatham, Ontario N7M 5M1  
Attention: Director, Business Development and Strategic Accounts  
Facsimile: (519) 436-4643

**If to Shipper:**

[name and address of Shipper]  
Attention: [contact name or contact office]  
Facsimile: (NNN) NNN-NNNN

Any Party may change its address by written notice to that effect to the other Party. Notices given under this Section are deemed to have been effectively given upon receipt, if mailed via prepaid overnight mail by a reputable carrier or if delivered by courier. Notices sent by mail will be deemed effectively given on the third (3rd) business day following the day when the notice properly addressed and postpaid is placed in the Canadian mail. It is expressly understood and agreed, however, that any notices must first be delivered by facsimile or other similar means, and if mailed or sent by courier, must be mailed or sent by courier as soon as practicable thereafter.

**10.0 Governing Law**

This Precedent Agreement shall be interpreted, performed, and enforced in accordance with the laws of the Province of Ontario.

**11.0 No Third Party Beneficiaries**

This Precedent Agreement shall not create any rights in third parties, and no provision of this Precedent Agreement shall be construed as creating any obligations for the benefit of, or rights in favor of, any person or entity other than the Parties.

**12.0 No Drafting Presumption**

No presumption shall operate in favor of or against any Party as a result of any responsibility that any Party may have had for drafting this Precedent Agreement.

**13.0 Recitals**

The recitals and representations appearing first above are hereby incorporated in and made a part of this Precedent Agreement.

PA for [M12xxx or C1xxx]

**14.0 Counterparts**

This Precedent Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument.

**15.0 In Service Timing**

Notwithstanding anything in this Precedent Agreement or the Transportation Agreement, Shipper agrees that it shall have no cause of action or claims against Union if the in-service date for the Expansion Facilities is later than the date stated in the Recitals. This Section 15.0 is intended to survive the termination of this Precedent Agreement.

**16.0 Definitions**

Capitalized terms used in this Precedent Agreement shall have the meaning given those terms in the Transportation Agreement, unless defined herein.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Precedent Agreement to be duly executed by their duly authorized officers as of the date first written above.

**UNION GAS LIMITED**

By: \_\_\_\_\_  
Authorized Signatory

**[Name of Shipper]**

By: \_\_\_\_\_  
Authorized Signatory

By: \_\_\_\_\_  
Authorized Signatory

PA for [M12xxx or C1 xxx]

**Schedule 1 to the Precedent Agreement**

**Transportation Agreement**



FBA for [insert Contract ref#]

THIS FINANCIAL BACKSTOPPING AGREEMENT made as of the \_\_\_\_\_ day of \_\_\_\_\_,  
2012

BETWEEN:

**UNION GAS LIMITED**, a company existing under the laws of the  
Province of Ontario,

(hereinafter referred to as "**Union**")

- and -

**[insert name of shipper]**, a company incorporated under the laws of the  
Province of **[insert province]**, Canada,

(hereinafter referred to as "**Shipper**")

**WHEREAS** Shipper has participated in an Open Season held by Union and is one of a group of shippers that have requested and entered into agreements with Union for the provision by Union of transportation services requiring all or a portion of the Expansion Facilities (collectively, the "**Open Season Shippers**");

**WHEREAS** Union and Shipper have entered into a Precedent Agreement dated \_\_\_\_\_, 2012 (the "**Precedent Agreement**") and an associated firm transportation contract [insert Contract ref # **(C1/M12XXX)**], dated \_\_\_\_\_, 2012 (the "**Contract**"), for transportation service on Union's pipeline system;

**AND WHEREAS** pursuant to the Precedent Agreement Expansion Facilities, as defined therein, must be constructed in order to enable Union to provide the required transportation service for Shipper and potentially other Open Season Shippers by the Commencement Date, as set out in the Contract;

**AND WHEREAS** the conditions precedent for the benefit of Shipper outlined in Article XXI, Section 2 of Schedule "A2010" of the Contract and Section 3.2 of the Precedent Agreement (the "**Shipper Conditions**") must be satisfied or waived by Shipper prior to the applicable date(s) provided in the Contract and the Precedent Agreement, as applicable, (each date a "**Shipper Conditions Precedent Date**");

**AND WHEREAS** the Contract and Precedent Agreement provide for certain conditions precedent for the benefit of Union;

**AND WHEREAS** Shipper has agreed to financially indemnify Union, subject to certain limitations as provided herein, for any and all Pre-Service Costs, as defined hereinafter;

**THIS CONTRACT WITNESSETH** that in consideration of the foregoing and mutual covenants herein contained, the parties hereto agree as follows:

#### **1. DEFINITIONS**

"**Cancelled Facilities**" means; (i) that portion of the Expansion Facilities not built as a result of Union's decision pursuant to the provisions of Subsection 3.a. herein; or (ii) one hundred (100)

FBA for [insert Contract ref#]

percent of the Expansion Facilities not built as a result of Union's inability to meet or waive any of the conditions precedent as outlined in Subsection 3.b. herein.

"Indemnity Date" means [REDACTED]

"Pre-service Costs" shall mean Union's costs incurred, accrued, allocated to, or for which Union is contractually obligated to pay, which are incurred on or after the Indemnity Date, in conjunction with its efforts to develop and construct the Expansion Facilities. Pre-service Costs shall include, but shall not be limited to, those expenditures and/or costs (including cancellation costs, carrying costs, third party claims and litigation costs), incurred, accrued, allocated to, or for which Union is contractually obligated to pay associated with engineering, construction, materials and equipment, environmental, the obtaining of land rights, regulatory, and/or legal activities, interest during construction, internal overhead and administration (including amounts paid to affiliates for services rendered in accordance with the Affiliate Relationships Code as established by the Ontario Energy Board) and any other costs, expenses, losses, demands, damages and obligations incurred in furtherance of Union's efforts to develop and construct the Expansion Facilities.

## 2. CONSTRUCTION

Unless the context requires otherwise: (a) any capitalized term used herein not specifically defined shall have the definition given to it in the Precedent Agreement or the Contract; (b) the gender (or lack of gender) of all words used in this Financial Backstopping Agreement includes the masculine and feminine; (c) the singular form of nouns, pronouns and verbs shall include the plural and vice versa; (d) "shall" and "will" have equal force and effect; (e) the words "include," "including," or "includes" shall be read to be followed by the words "without limitation" or words having similar import; and (f) the word "or" will have the inclusive meaning represented by the phrase "and/or".

## 3. TERMS

- a. **Partial Facilities or Cancelled Facilities, with Precedent Agreement Terminated:** If Shipper fails to satisfy or waive any Shipper Conditions by the associated Shipper Conditions Precedent Date and the Precedent Agreement is terminated in accordance with the terms thereof, and Union, based on such Shipper's failure, has decided to (i) cancel the development and construction of all or a portion of the Expansion Facilities, or (ii) build only a portion of the Expansion Facilities; then such Shipper shall reimburse Union for the Pre-Service Costs pertaining to the Cancelled Facilities. In addition, in the event that Union has decided to (i) cancel the development and construction of all or a portion of the Expansion Facilities, or (ii) build only a portion of the Expansion Facilities, based on Shipper's failure to satisfy or waive any Shipper Conditions by the associated Shipper Conditions Precedent Date and the Precedent Agreement is terminated in accordance with the terms thereof AND the similar failure of any other Open Season Shippers to satisfy or waive their shipper conditions by the associated shipper conditions precedent date; then Shipper shall reimburse Union for Shipper's proportionate share (as prorated based on initial contract demand among the other Open Season Shippers who failed to satisfy or waive their shipper conditions by the associated shipper conditions precedent date and whose transportation services would have required the development and construction of the Cancelled Facilities) of Pre-Service Costs pertaining to the Cancelled Facilities.
- b. **Union Unable to Meet or Waive Conditions Precedent, with Precedent Agreement Terminated:** If Union fails to satisfy or waive any of the conditions precedent for its benefit in Article XXI, Section 1 of Schedule "A2010" of the Contract or fails to satisfy or waive the condition precedent for its benefit set out in Subsection 3.1(a) or Subsection



FBA for [insert Contract ref#]

3.2(b) in the Precedent Agreement, and the Precedent Agreement is terminated in accordance with the terms thereof then Shipper shall reimburse Union for Shipper's proportionate share (as prorated based on initial contract demand among all Open Season Shippers whose transportation services would have required the development and construction of the Cancelled Facilities) of Pre-Service Costs.

#### 4. FINANCIAL ASSURANCES

From time to time, Union may request, and Shipper shall provide to Union, the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of this Financial Backstopping Agreement in the form and amount reasonably required by Union (the "**FBA Financial Assurances**"). The FBA Financial Assurances, if required, will be as determined solely by Union.

#### 5. INVOICING PROCESS

Upon final determination by Union of any amounts owing by Shipper under this Financial Backstopping Agreement, Union shall invoice, and Shipper shall pay, such amounts within fifteen (15) days following Shipper's receipt of any invoices. Shipper acknowledges and understands that the final determination of any amounts owing by Shipper might not be capable of determination until such time as the Expansion Facilities are completed and placed into service. If Shipper fails to pay any invoice in full within the time herein required, interest on the unpaid portion shall accrue from the date such payment is first overdue until payment is made at a rate of interest equal to an effective monthly interest rate of 1.5%, compounded monthly, for an effective annual interest rate of 19.56%, and such interest shall be immediately due and payable.

#### 6. TERMINATION OF AGREEMENT

This Financial Backstopping Agreement shall terminate on the date that the Expansion Facilities are placed into service; provided however, that any rights or remedies that a party may have for breaches of this Financial Backstopping Agreement prior to such termination and any liability a party may have incurred pursuant to the Financial Backstopping Agreement before such termination shall not thereby be released.

#### 7. Estimate of Pre-Service Costs

Shipper acknowledges that it has been provided a quarterly estimated spend profile for the Pre-Service Costs (the "**Projected Pre-Service Costs Estimate**"). Union shall provide an update to the Projected Pre-Service Costs Estimate within thirty (30) days of the end of each calendar quarter, beginning at the end of the first quarter of 2013. Shipper and Union acknowledge and agree that the Projected Pre-Service Costs Estimates are estimates provided for information purposes only and that to the extent Shipper's liability pursuant to this Financial Backstopping Agreement is greater than or less than a Projected Pre-Service Costs Estimate, Shipper shall be obligated to pay its share of Pre-Service Costs as calculated pursuant to the provisions of this Financial Backstopping Agreement.

#### 8. MISCELLANEOUS

- a. The parties hereto shall not assign this Financial Backstopping Agreement without the prior written consent of the other party, which shall not be unreasonably withheld. This Financial Backstopping Agreement shall be binding upon and shall enure to the benefit of

FBA for [insert Contract ref#]

the parties hereto and their permitted successors and assigns. In no event will the assignment of this Financial Backstopping Agreement be permitted unless the Precedent Agreement and Contract are also assigned to the same permitted assignee.

- b. This Financial Backstopping Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and each of the parties shall attorn to the exclusive jurisdiction of the courts of the Province of Ontario.
- c. This Financial Backstopping Agreement was negotiated and prepared by both parties with the advice and participation of counsel. The parties have agreed to the wording of this Financial Backstopping Agreement and none of the provisions hereof shall be construed against one party on the ground that such party is the author of this Financial Backstopping Agreement or any part hereof.
- d. The recitals and representations appearing first above are hereby incorporated in and made a part of this Financial Backstopping Agreement.
- e. This Financial Backstopping Agreement may be executed in multiple counterparts (including by means of facsimile or electronic signature pages), each of which shall be deemed an original and all of which shall constitute one and the same instrument.
- f. A waiver of any default, breach of non-compliance under this Financial Backstopping Agreement is not effective unless in writing and signed by the party to be bound by the waiver. No waiver shall be inferred from or implied by any failure to act or delay in acting by a party in respect of any default, breach, non-observance or by anything done or omitted to be done by the other party. The waiver by a party of any default, breach or non-compliance under this Financial Backstopping Agreement shall not operate as a waiver of the Party's rights under this Financial Backstopping Agreement in respect of any continuing or subsequent default, breach or non-compliance (whether of the same or any other nature).

***[Signature page follows]***

FBA for [insert Contract ref#]

**IN WITNESS WHEREOF** this Financial Backstopping Agreement has been properly executed by the parties hereto by their duly authorized officers as of the date first above written.

**[SHIPPER]**

**UNION GAS LIMITED**

\_\_\_\_\_  
Name:

Title:

\_\_\_\_\_  
Name:

Title:

\_\_\_\_\_  
Name:

Title:

\_\_\_\_\_  
Name:

Title:



## Union Gas Limited Parkway Extension Project and Dawn to Parkway Binding Transportation Open Season

**Extended to May 4, 2012**

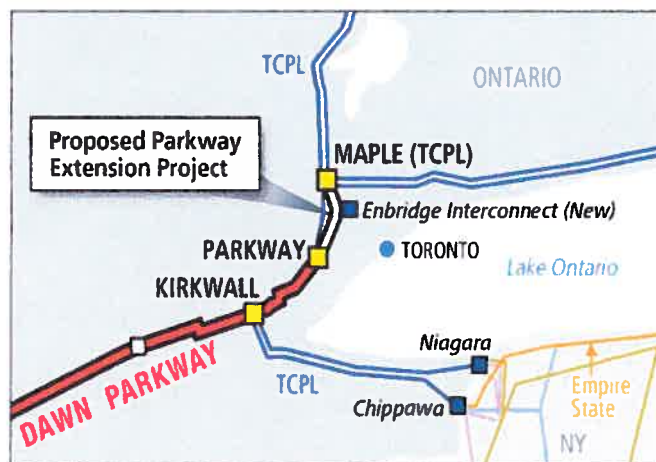
April 24, 2012

Responding to customer requests, Union Gas Limited is pleased to extend the Parkway Project Open Season. The closing for the Open Season has been extended to May 4, 2012. The **Parkway Extension Project** offers transportation service on a proposed new pipeline from a new interconnect near the Union Gas Parkway Compressor station ("**Parkway**"), to a new interconnect with the TransCanada Pipelines Limited transmission system at or near Maple, Ontario ("**Maple**"). Union Gas is also conducting a concurrent Open Season on the Dawn to Parkway system to provide capacity to the new pipeline. Service on the Dawn to Parkway corridor would commence as early as late 2014.

The Parkway Extension Project will provide firm transportation capacity of over 500 TJ/d from Parkway to Maple.

This project will be an extension of the Union Gas Dawn to Parkway system that will provide secure access to diverse supplies of natural gas from the Union Gas Dawn Hub and serve a growing demand for natural gas in central, eastern and northern Ontario as well as Quebec and the U.S. Northeast. The Parkway Extension Project will give consumers a new transportation option that will increase supply diversity, while supporting the development of new natural gas infrastructure in Ontario.

Enbridge Gas Distribution Inc. is considering a pipeline project commencing at a new interconnect near the Union Gas Parkway compressor station that will upgrade its distribution system in the Greater Toronto Area. The Parkway Extension Project will consist of a segment of pipeline that will be jointly owned by Union Gas and Enbridge Gas Distribution and a second segment of pipeline that will be wholly owned by





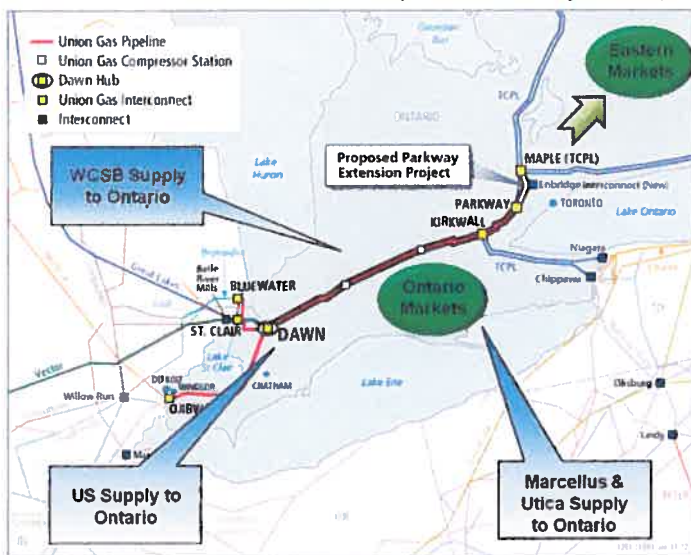


## Union Gas.

Several key potential Shippers, including both Enbridge Gas Distribution and Gaz Métro Limited Partnership, have expressed interest in the proposed services that will provide increased diversity of supply and competitive energy options for Ontario and Quebec.

Shippers may bid on firm transportation on the new Dawn to Maple corridor for service starting as early as 2014. Service on the Dawn to Maple corridor includes firm transportation from the Dawn Hub, Kirkwall or Parkway to Maple. Service also includes the option to contract firm transportation from the Dawn Hub or Kirkwall to the new interconnect at Parkway or to the existing Parkway delivery point. Union Gas plans to add the new path to the M12 transportation tariff in order to be able to offer a seamless transportation service from Dawn, Kirkwall and Parkway to Maple.

Union Gas is prepared to make the proposed new interconnect at Maple bi-directional, if there is sufficient market interest in a Maple to Parkway or Maple to Dawn Hub transportation service.



Shippers interested in a multi-point bi-directional service, similar to Union Gas' **M12-X transportation service**, or in **24-T firm all day service**, with multiple nomination windows on any segment on the Dawn to Maple path, have the option to express interest in either of these proposed services during the Open Season. Union Gas would look to develop these services if sufficient Shipper interest exists and secure all OEB approvals required to offer these services. Once approved,

Union Gas would then provide the opportunity during a subsequent Open Season to convert capacity contracted during this Open Season to either of these enhanced services.

As well, Union Gas is soliciting Shipper interest in fixed price tolls, for a minimum term of 10 years for the Dawn to Maple, Parkway to Maple, and Kirkwall to Maple paths. Shippers may express interest in a fixed price toll at a premium to the initial cost of service rate.

The Parkway Extension Project and these transportation services will offer Shippers expanded access to the Dawn Hub, where Shippers can enjoy access to a liquid market with diverse gas supplies, Canada's largest premium storage facility and expanding markets. The Dawn Hub is strategically located and is well connected to several supply basins including the U.S. Midwest,



U.S. Rockies, U.S. shale gas basins (Marcellus, Utica, Barnett and Haynesville) and the Western Canadian Sedimentary Basin.

Shippers who have end-use needs or market demands in the Toronto area, northern and eastern Ontario, Quebec, or the U.S. Northeast can benefit from the competitive, flexible and reliable firm transportation options provided by the Parkway Extension Project and these transportation services.

### **Proposed Services:**

Capacity would be available for the following proposed services, depending on market support:

- 1) Easterly firm transportation service through the new Parkway to Maple path originating from Dawn, Kirkwall or Parkway (includes option to convert existing Dawn to Parkway or Dawn to Kirkwall to Dawn to Maple); and
- 2) Easterly firm transportation service originating at Dawn or Kirkwall and delivered to Parkway; and
- 3) Westerly firm transportation service, from Maple to Parkway or Dawn.

Union Gas is proposing a maximum receipt capacity for new contracts originating from Dawn of up to 800 TJ/d, and a maximum receipt capacity for new contracts originating from Kirkwall of up to 500 TJ/d, starting as early as November 1, 2014. Union Gas is offering 500 to 700 TJ/d of capacity on the proposed Parkway Extension Project from Parkway to Maple (new contracts plus conversion of existing contracts) starting November 1, 2014 with receipt points of Dawn, Kirkwall or Parkway. Union Gas is proposing up to 300 TJ/d of Westerly firm capacity from Maple to either Parkway or Dawn starting November 1, 2014.

This Open Season closes at **12:00 p.m. EDT (noon) on May 4, 2012.**

### **1. Service Description and Details:**

#### **Easterly Firm Transportation Service Parameters**

- Transportation service would commence as early as November 1, 2014 or November 1, 2015
- Receipt Point is one of **Dawn, Kirkwall, Parkway**
- Delivery Point is one of **Parkway or Maple**
- Term of the bid will be a **minimum term of 10 years.**
- Service is proposed to be in accordance with the Union Gas M12 Rate Schedule which will require changes to incorporate the services proposed and OEB approval.
- Demand and fuel rates will be subject to final project size and Shipper demands. The following cost of service M12 rates are anticipated (not including the fixed price option, if developed):



Easterly Demand Charge Rates (C\$/GJ/day)		
Receipt Point	To Maple	To Parkway
Dawn	\$0.10 - \$0.15	\$0.08 - \$0.10
Kirkwall	\$0.05 - \$0.10	\$0.01 - \$0.02
Parkway	\$0.02 - \$0.07	N/A

- It is expected that the fuel requirement for service to Maple would be approximately 0.2% - 0.4% greater than the current Dawn to Parkway fuel rate. Fuel rates will be in accordance with the [M12 Rate Schedule](#), subject to OEB approval.

View the current [Rate Schedule, General Terms and Conditions and Standard Contract](#). The M12 Rate Schedule, M12 Schedule C – Fuel Ratios & Rates, and M12 Schedule D – Points and Pressures will be updated, pending OEB approval, to include the new services and rates.

#### **Westerly Firm Transportation Service Parameters**

- Transportation service would commence as early as November 1, 2014
- Receipt Point is **Maple**
- Delivery Point is one of **Parkway or Dawn**
- Term of the bid will be a **minimum term of 10 years**.
- Demand charge rate is expected to be **25% to 35%** of the Easterly demand charge rate. Both demand charge and fuel rates will be subject to OEB approval
- Service is proposed to be in accordance with the Union Gas C1 Rate Schedule and is subject to OEB approval.

View the [Rate Schedule, General Terms and Conditions and Standard Contract](#). The C1 Rate Schedule and C1 Schedule C – Points and Pressures will be updated, pending OEB approval, to include the new services and rates.



## **2. Submitting a Binding Bid for Service**

If you wish to participate in the Parkway Extension Project, please complete, sign and return the [Firm Transportation Service Bid Form](#) via email or fax to:

ATTN: Dale Van Der Meersch  
Email: [dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com)  
Fax: (519) 436-4643

**Completed forms must be returned on or before 12:00 p.m. EDT (noon) on May 4, 2012**

### **Open Season Process:**

This binding Open Season is being offered to assist Union Gas with determining facility design requirements to meet market needs. Union Gas will acknowledge Shipper's bid in writing on or before 4:00 p.m. Eastern Time on May 4, 2012. Union Gas will contact all responding parties who meet the requirements of the Open Season on or before May 11, 2012. Union Gas in its sole discretion reserves the right to reject any and all proposals received. Capacity requests that meet the respective service parameters during this Open Season will be awarded as per Union Gas' Allocation Procedures in Section XVI of the Union Gas M12 tariff [General Terms & Conditions](#) starting with those bids with the highest economic value. If the economic values of two or more independent bids are equal, then service shall be allocated on a pro-rata basis. The economic value shall be based on the net present value which shall be calculated based on the proposed per unit rate and the proposed term of the contract and without regard to the proposed Contract Demand ("NPV").

Successful bidders will be expected to execute the Union Gas [standard form M12 contract](#) and a related Precedent Agreement, to cover any additional conditions precedent that are required by Union Gas and the Shipper that are not already covered in the Union Gas M12 [General Terms & Conditions](#).

Any suggested Conditions Precedent that the Shipper proposes should be clearly articulated and attached to the bid form and will be considered during the capacity allocation process. Successful participants in the Open Season will be expected to enter into a definitive Precedent Agreement with Union Gas within 30 days of the Open Season closing. The Precedent Agreement will include several Conditions Precedent in favour of Union Gas pertaining to the project as well as any additional conditions precedent identified by the Shipper in its bid submission and negotiated with Union Gas.

A Financial Backstopping Agreement may also be required. The need for such an agreement will be determined by the facilities required to provide the transportation service





requested by the Shipper. If costs are incurred prior to the Shipper or Union Gas waiving their conditions precedent, the Shipper will be required to backstop their pro-rated costs until the conditions precedent are waived or satisfied. Contact your Account Manager or Dale Van Der Meersch to discuss the Financial Backstopping Agreement in more detail.

Pro-forma versions of agreements can be found on the Union Gas website at [www.uniongas.com/openseason](http://www.uniongas.com/openseason)

Union Gas anticipates allocating capacity to successful bidders and executing the associated contracts within 30 days of the Open Season closing.

If you have any questions about the Parkway Extension Project Open Season, please feel free to contact:

Dale Van Der Meersch, Project Manager, Business Development, (519) 436-5276; [dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com) or your [Account Manager](#).

**FIRM TRANSPORTATION SERVICE BID FORM****Page 1 of 1**

Please complete, sign and return this Firm Transportation Service Bid Form on or before 12:00 p.m. EDT (noon) on May 4, 2012, via email or fax to:

**ATTN:** Dale Van Der Meersch via

**Email:** [dvandermeersch@uniongas.com](mailto:dvandermeersch@uniongas.com)

or **Fax:** (519) 436-4643

This is a binding bid, subject to specified conditions precedent. The purpose of the Parkway Extension Project and the Dawn to Parkway Open Season is for Union Gas to determine the facility design requirements to support market needs. Union Gas will determine whether or not to proceed with offering any of the services defined in the Parkway Extension Project and the Dawn to Parkway Open Season based on the assessment of the results from this Open Season. By signing and returning this Firm Transportation Service Bid Form, Shipper may be contacted directly to transition to a M12 transportation contract, a related Precedent Agreement and potentially a Financial Backstopping Agreement. Pro-forma copies of each can be found at [www.uniongas.com/openseason](http://www.uniongas.com/openseason).

Shippers may submit more than one bid form. Please indicate your requirements below:

**Firm Transportation Service Binding Bid:**

Receipt Point ☐ Dawn ☐ Kirkwall ☐ Parkway ☐ Maple

Delivery Point ☐ Maple ☐ Parkway ☐ Dawn

Start Date (select one per bid) ☐ Nov 1, 2014 or ☐ Nov 1, 2015

NEW Quantity Max \_\_\_\_\_ (GJ/d)

CONVERSION Quantity Max \_\_\_\_\_ (GJ/d) (from existing M12 capacity)

Contract Reference (e.g. M12000): \_\_\_\_\_

TOTAL (New + Conversion) Max \_\_\_\_\_ (GJ/d)

TERM (10 year minimum ending October 31) \_\_\_\_\_ (yrs)

Interest in Fixed Tolls: ☐

Interest in Firm all day service with additional nomination windows: ☐

Interest in bi-directional, multiple delivery and receipt point service: ☐

Is the bid subject to any additional conditions precedent in addition to the standard Preconditions in Section XXI of Union Gas' [M12 General Terms and Conditions](#)?

**Yes\*** **No** (circle one)

\*If yes, please articulate those conditions in an attachment

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2012

**SHIPPER LEGAL NAME** \_\_\_\_\_

By: \_\_\_\_\_

Signature: \_\_\_\_\_

E-mail: \_\_\_\_\_

Name: \_\_\_\_\_

Phone: \_\_\_\_\_



## Limited Binding Reverse Open Season for Dawn to Parkway Firm Transportation Services

May 18, 2012

Union Gas Limited ("Union Gas") has recently conducted an Open Season for new capacity on the Parkway Extension Project and the Dawn to Parkway system, (the "Open Season"). The Open Season commenced March 13, 2012 and closed on May 4, 2012. Details of the Open Season can be found [here](#).

Incremental requirements on Union Gas' Dawn to Parkway system arising from the Open Season can be satisfied through the expansion of physical facilities on the system, through existing turn back, or through a reduction in the current contractual commitments with existing shippers. Consequently, in order to maintain the most efficient use of the Union Gas transportation system, while minimizing the overall costs to our shippers, Union Gas is conducting this reverse open season. We are soliciting interest from current shippers on the Dawn to Parkway system that want to turn back capacity on the Dawn to Kirkwall, Dawn to Parkway and Kirkwall to Parkway paths before the end of their primary contract term.

Your cooperation in completing the attached letter will help to accommodate Union Gas' planning schedule. To be eligible to turn back capacity, requests must be received prior to 2:00 pm EDT on June 4, 2012. Union Gas will review requests to turn back capacity and acknowledge all requests received by 2:00 pm EDT on June 5, 2012. If a request is accepted, with or without conditions, we will notify the capacity holder accordingly **no later than nine months in advance of the turn back date.** Requests will be ranked and accepted according to lowest Net Present Value. For example, a contract with two years remaining on the primary term would be accepted ahead of a similar contract with five years remaining on the term. Any and all turn back requests will be binding upon the transportation contract holder and conditional upon Union Gas executing contracts for new capacity with all conditions within those contracts being satisfied or waived, for capacity commencing November 1, 2014 or November 1, 2015.

Dawn to Parkway/Kirkwall transportation Shippers who currently have an option to provide notice of termination on their existing transportation contracts by October 31, 2012, and who wish to turn capacity back to Union Gas, (in whole or in part), may either elect to provide notice in this Reverse Open Season (preferable), or they may wait and provide notice by October 31, 2012 as per the renewal provisions in their contract.

If you have any questions, please contact your [account manager](#).



**Reverse Open Season – for Dawn to Parkway system capacity-**

Please complete, sign and return this Turn Back Letter on or before 2:00 p.m. EDT on June 4, 2012, via email or fax to:

**ATTN:** Adam Stiers via  
**Email:** astiers@uniongas.com or **Fax:** (519) 436-4643

**This is an irrevocable binding bid by the contract holder, and is conditional upon Union Gas executing and finalizing contracts for new capacity and all conditions within those new capacity contracts being satisfied or waived, for capacity commencing November 1, 2014 and/or Nov 1, 2015.**

Dear Adam:

In response to the letter from Union Gas regarding a Reverse Open Season, dated May 18, 2012, **(Please enter your company name here)** \_\_\_\_\_  
("Shipper") irrevocably and firmly confirms,

Shipper requests the opportunity to permanently turn back a portion or all of its Union Gas Dawn to Parkway, Dawn to Kirkwall or Kirkwall to Parkway transportation contracts as of November 1, 2014 or November 1, 2015, as outlined below.

<b>Contract Number</b>				
<b>Start Date of Turn Back</b>				
<b>Receipt Point</b>				
<b>Delivery Point</b>				
<b>Turn Back Quantity (GJ/d)</b>				

It is understood that Union Gas will review requests to turn back capacity and acknowledge all requests received by 2:00 pm EDT on June 5, 2012. If a request is accepted, with or without conditions, we will notify the capacity holder accordingly **no later than nine months in advance of the turn back date.** Any and all turn back requests will be conditional upon Union Gas executing contracts for new capacity and all conditions within those contracts being satisfied or waived, for capacity commencing November 1, 2014 and/or November 1, 2015.

Yours truly,

\_\_\_\_\_  
**Name (printed)**

\_\_\_\_\_  
**Phone**

\_\_\_\_\_  
**Signature**

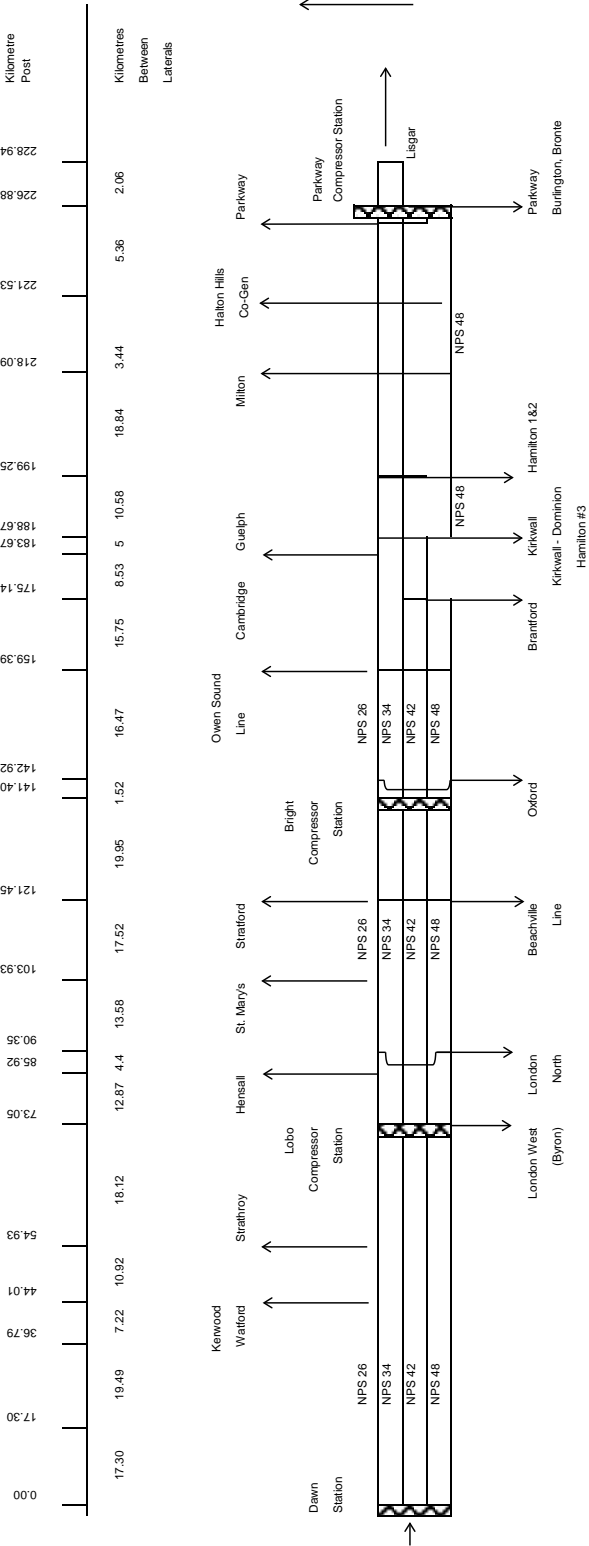
\_\_\_\_\_  
**Fax**

\_\_\_\_\_  
**Title**

\_\_\_\_\_  
**Date**



DAWN to PARKWAY SYSTEM



Design Day Demands

	(GJ/d)
Southern Ontario	
Forest, Watford	6943
Strathroy	7716
London West	110641
Hensall	28569
London North	95825
St. Mary's	6384
Stratford	35714
Beachville	51808
Oxford Line	42634
Owen Sound Line	233987
Cambridge	69021
Brantford	97294
Kirkwall - Dominion	81571
Guelph	80392
Hamilton 3	59699
Hamilton 1&2	254837
Milton	71134
Halton Hills	139754
Parkway (Greenbelt)	35050
Burlington, Bronte	137951
Total Southern Ontario	1,646,924
North and Eastern Ontario	262,587
Kirkwall	549,555
Parkway TCPL	2,545,943
Parkway Cons/Lisgar	1,638,085
Total M12	4,733,583
Total Design Day Demands	6,643,094

System Capacity

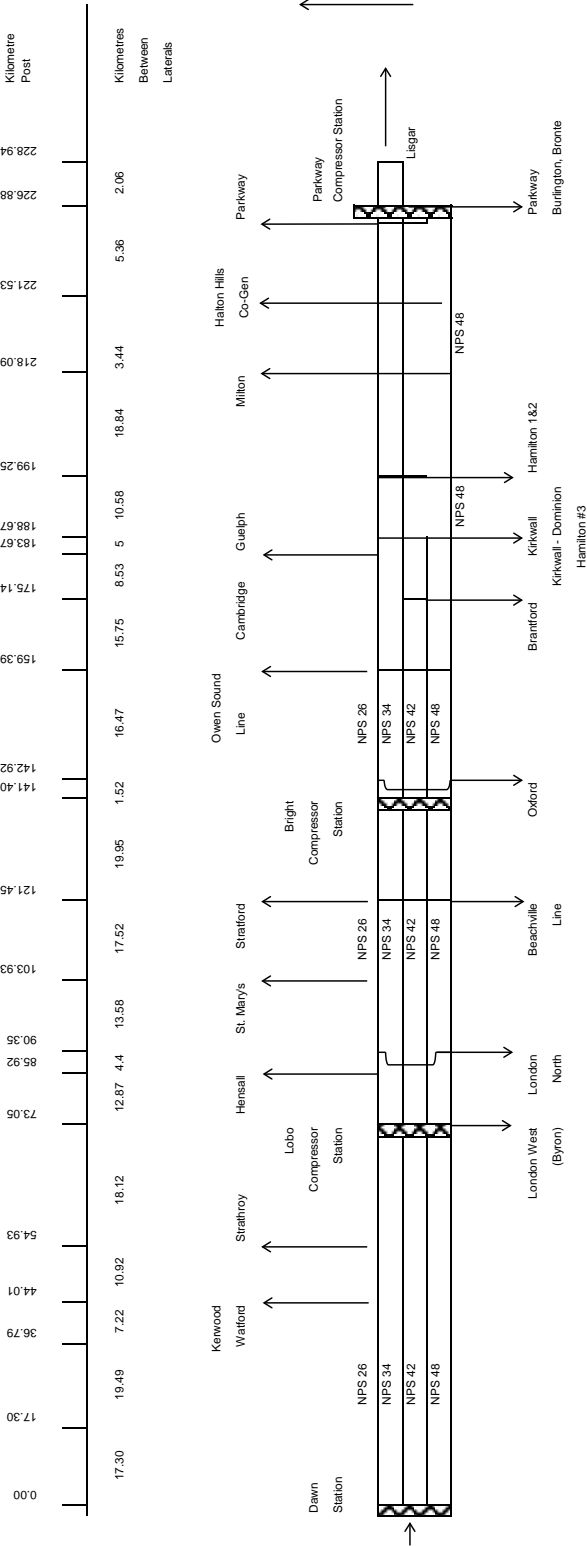
	(GJ/d)
Total System Capacity	6,800,934
(Including Firm Service Receipts of 638,626 GJ/d)	
Total Requirements	6,643,094
Total (Shortfall) Surplus	157,840
Union Markets	
M12 Transportation	
Kirkwall	
Lisgar, Parkway	157,840

Compressor Stations  
Operating Conditions at Peak Hour

STATION	LOBO	BRIGHT	PARKWAY
Power Available (MW)	36.8	91.9	52.9
Power Required (MW)	36.8	91.9	52.9
Pressure			
Suction (kPa)	4,446	3,780	3,590
Discharge (kPa)	5,219	5,880	6,453
Compression Ratio	1.17	1.56	1.80
Flow (GJ/d)	5,939,560	5,849,380	2,465,340
Daily Fuel (GJ/d)	11,512	23,233	12,657

WINTER DESIGN DAY  
DAWN-PARKWAY SYSTEM  
WINTER 2014/15

DAWN to PARKWAY SYSTEM



Design Day Demands

	(GJ/d)
Southern Ontario	6943
Forest, Watford	7716
Strathroy	11064
London West	28569
Hensall	95825
London North	6384
St. Mary's	35714
O Stratford	51808
N Beachville	42634
Oxford Line	233987
M Owen Sound Line	69021
A Cambridge	97294
R Brantford	81571
K Kirkwall - Dominion	80392
E Guelph	59699
T Hamilton 3	254837
S Hamilton 1&2	71134
Milton	139754
Halton Hills	35050
Parkway (Greenbelt)	137951
Burlington, Bronte	1,646,924
<b>Total Southern Ontario</b>	332,744
<b>North and Eastern Ontario</b>	354,023
Kirkwall	3,581,727
Parkway TCPL	1,238,085
Parkway Cons/Lisgar	5,173,835
<b>Total M12</b>	<b>7,153,503</b>
<b>Total Design Day Demands</b>	<b>7,153,503</b>

System Capacity

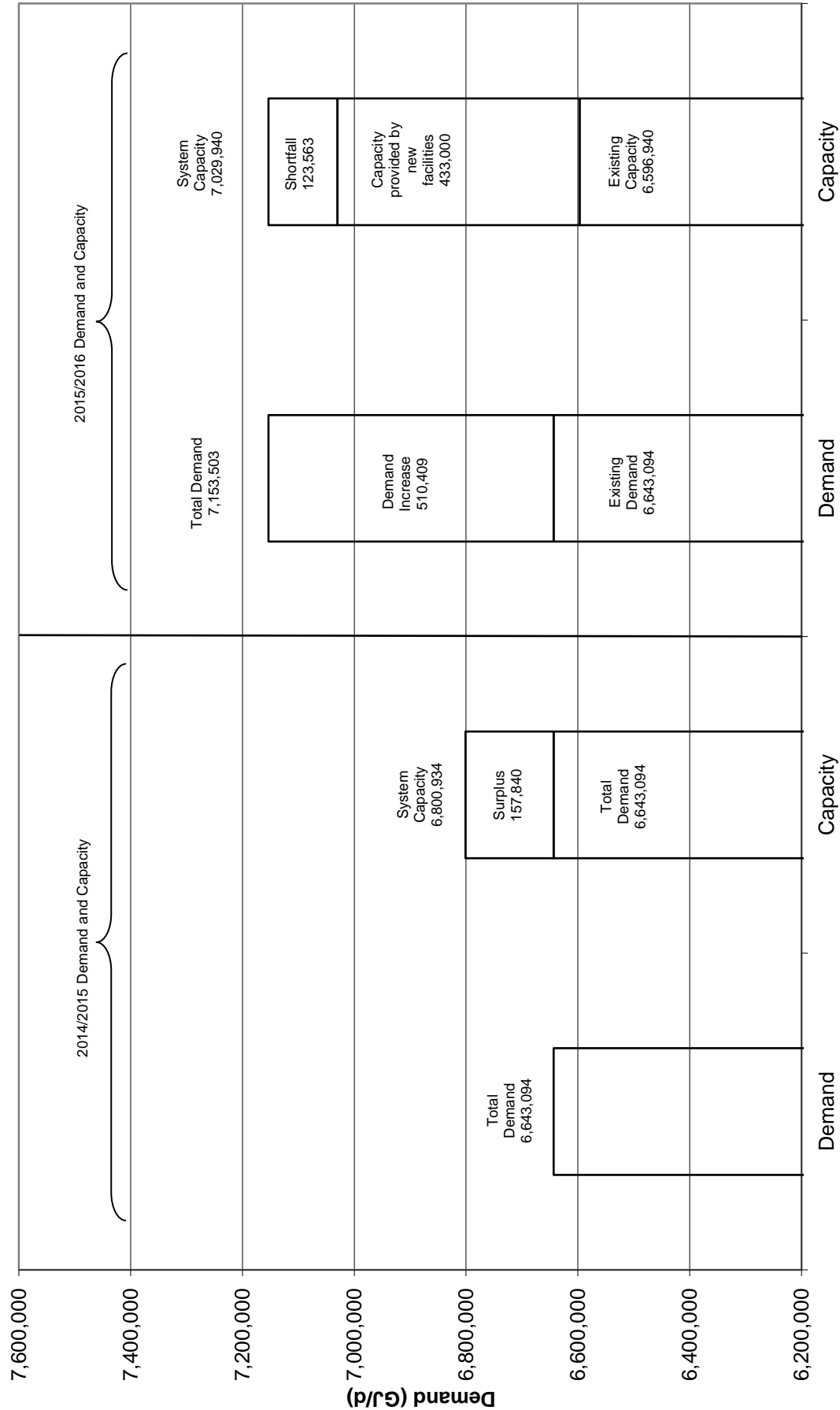
	(GJ/d)
<b>Total System Capacity</b>	<b>7,029,940</b>
(Including Firm Service Receipts of 638,626 GJ/d)	
<b>Total Requirements</b>	<b>7,153,503</b>
<b>Total (Shortfall) Surplus</b>	<b>-123,563</b>
Union Markets	
M12 Transportation	
Kirkwall	
Lisgar, Parkway	
	-123,563

Compressor Stations  
Operating Conditions at Peak Hour

STATION	LOBO	BRIGHT	PARKWAY
Power Available (MW)	36.8	91.9	87.9
Power Required (MW)	36.8	91.9	75.0
Pressure			
Suction (kPa)	4,488	3,653	3,513
Discharge (kPa)	5,229	5,616	6,453
Compression Ratio	1.17	1.54	1.84
Flow (GJ/d)	6,077,691	5,783,356	3,290,020
Daily Fuel (GJ/d)	11,513	23,538	17,288

WINTER DESIGN DAY  
DAWN-PARKWAY SYSTEM  
WINTER 2015/16

Dawn-Parkway System Design Day Demands and Capacity



# Parkway Projects

## Critical Infrastructure for Ontario's Energy Future

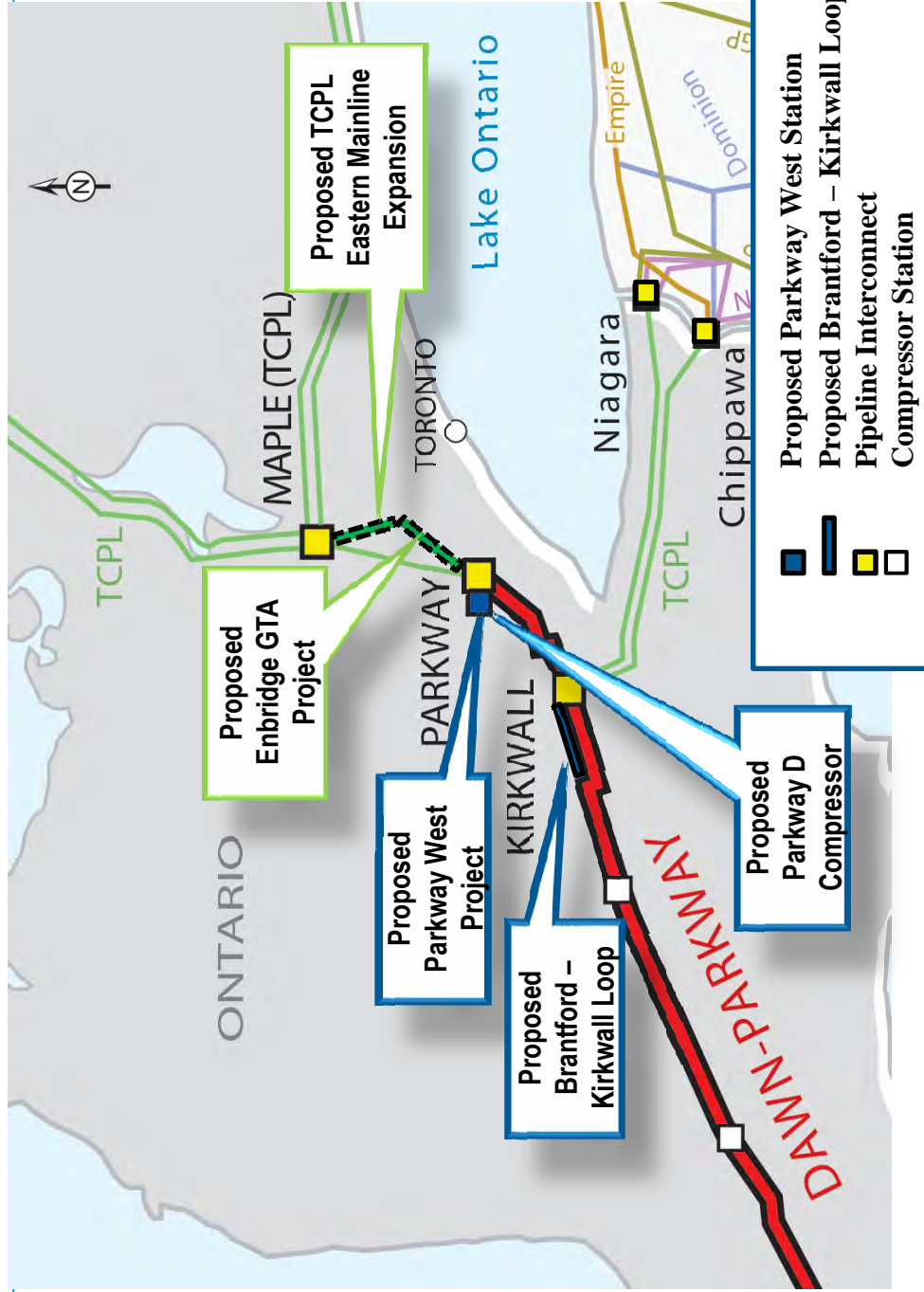


# Key Messages



- ✓ Ontario's economic competitiveness and prosperity depends on industry and other energy-intensive businesses having access to competitive energy prices.
- ✓ The liquid Dawn Hub continues to attract incremental demand for natural gas supply and transportation on the Dawn-Parkway System from downstream markets.
- ✓ Union's proposed Parkway Projects are a key link in the delivery chain that will provide Ontario, Québec and the U.S. Northeast, with access to reliable, secure, diverse, affordable natural gas supply at the Dawn Hub from new supply sources, such as the Marcellus and Utica shales.
- ✓ Ontario natural gas infrastructure expansion is expected to exceed \$1 billion over the next four years without significant rate impacts to Union's customers.
- ✓ Now is a critical time for you to support natural gas infrastructure projects that increase security, reliability, diversity and affordability in Ontario's energy portfolio.

# Parkway Projects Map



**Proposed Parkway Projects consist of the Parkway West Project, Brantford-Kirkwall Loop and Parkway D Compressor**

# Parkway Projects

New infrastructure Development in Ontario



## Parkway Projects

### Parkway West Project 2014/2015

- Total capital cost of \$203 million
- Additional connection to Enbridge system, measurement and plant infrastructure – 2014 / \$118 million
- Parkway C Compressor (Loss of Critical Unit Protection) – 2015 / \$85 million

### Brantford-Kirkwall Looping 2015

- Capital cost of \$96 million
- 13.9 km of 48" pipeline looping
- Final section in 48" pipeline from Dawn to Parkway

### Parkway D Compressor 2015

- Capital cost of \$108 million
- 44,500 hp addition at Parkway to meet increase in Dawn-Parkway demand

## Related Projects

### Enbridge GTA Project 2015

- Capital cost of \$575 million
- GTA Project proposed to connect to TCPL Mainline
- Enbridge and TCPL will share usage of Segment A of the GTA Project upsizing pipe from 36" to 42"
- Segment B meets growth and reliability needs of downtown Toronto

### TCPL Eastern Mainline Expansion 2015

- Costs not yet known
- Majority of pipeline length shared usage with Enbridge
- Creates incremental capacity between Parkway and Maple

**Infrastructure expansion upstream and downstream of Parkway is critical to serving Ontario and Québec markets from the Dawn Hub**

# New Dawn-Parkway Demands

Creates need for Brantford-Kirkwall Looping and Parkway D Compressor



## Enbridge

- 400 TJ/d of new Dawn-Parkway demand starting 2015
- 1.7 PJ/d of existing Dawn-Parkway demand extended to 2022
- Needs Enbridge GTA Project in 2015

## Gaz Métro

- 257 TJ/d of new Dawn-Parkway demand starting 2015
- Needs TCPL Eastern Mainline Expansion and Enbridge GTA Project in 2015
- Régie de l'énergie approval received for long-term contracts

## Union Gas

- 70 TJ/d of new Dawn-Parkway demand starting 2015 to serve northern and eastern in-franchise customers
- Needs TCPL Eastern Mainline Expansion and Enbridge GTA Project in 2015
- Needs long-term TCPL transportation contract approval

**Portfolio of new facilities will be required to move natural gas from the Dawn Hub to downstream markets**

# Critical Nature of Parkway

Creates need for reliability and resilience - Parkway West Project



**uniongas**

A Spectra Energy Company

## Union identifies Parkway as a critical facility

- Parkway deliveries serve a large portion of Ontario's and Québec population plus U.S. Northeast customers
- >4,000 MW of major gas-fired generation located downstream of Parkway
- Parkway is the only major compressor station in Union's system without Loss of Critical Unit protection

## Parkway considered to be single largest Enbridge system risk

- Parkway serves ~70% of Enbridge design day demand in the GTA
- Enbridge proposing to increase reliance on deliveries through Parkway
- Impact of an outage will be immediate in the GTA
- Restoration of service much more difficult for natural gas than electricity

## Outage of largest compressor results in throughput loss of up to 1.1 PJ/d

- Significant impact to Ontario, Québec and U.S. Northeast markets
- Enbridge estimates 150,000-225,000 customers would lose service
- Enbridge supported physical loss of critical unit protection in GTA Project filing

## Loss of interconnect with Enbridge results in delivery loss of up to 0.8 PJ/d

- Enbridge estimates a minimum of 270,000 customers would lose service very quickly

**Deliveries at Parkway in 2015 are expected to be 4.6 PJ/d, the energy equivalent of over 50,000 MW on an hourly basis**



# Union South In-Franchise Rates



Estimated impacts of Brantford to Kirkwall and Parkway D Compressor Project including Parkway West Project and Long Term Contracting Proposal

Rate Class	Estimated Sales Impact	Estimated Direct Purchase Impact
Rate M1	(0.5%)	(0.5%)
Rate M2	0.1%	0.1%
Rate M4	0.2%	0.2%
Rate M5A	(0.8%)	(0.8%)
Rate M7	-	0.6%
Rate M9	2.3%	2.3%
Rate M10	0.9%	0.9%
Rate T1	-	(0.2%)
Rate T2	-	0.2%
Rate T3	-	2.6%

# Union North In-Franchise Rates



Estimated impacts of Brantford to Kirkwall and Parkway D Compressor Project including Parkway West Project and Long Term Contracting Proposal

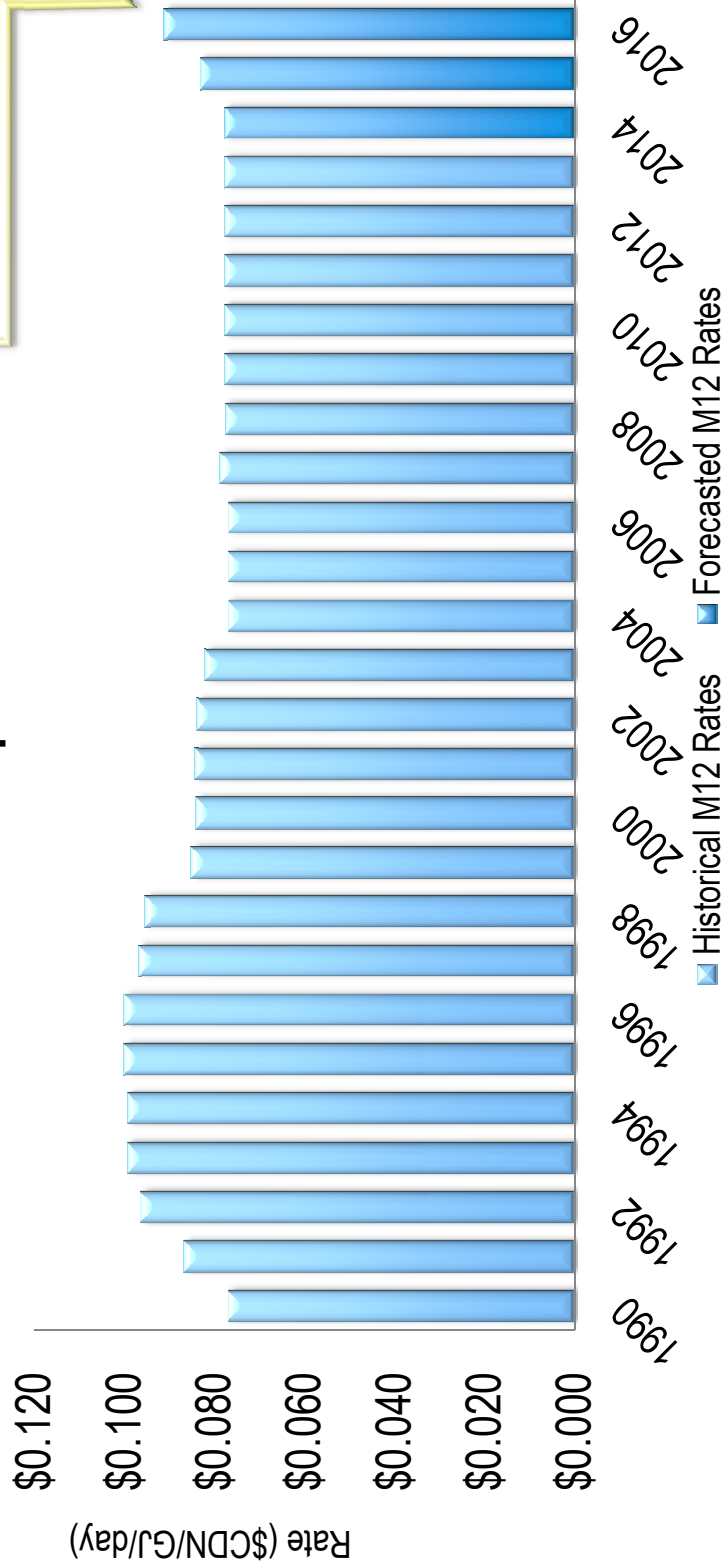
Rate Class	Estimated Sales Impact	Estimated Bundled-T Impact	Estimated T-Service Impact
Rate 01	(4.9%)	(4.9%)	-
Rate 10	(6.0%)	(6.0%)	(0.2%)
Rate 20	(6.0%)	(6.0%)	(0.7%)
Rate 25	9.0%	-	(0.9%)
Rate 100	-	-	(0.6%)

# Rates - Ex-Franchise

Dawn-Parkway rates remain competitive



M12 Transportation Rates



The Parkway Projects provide key infrastructure to attract new natural gas supply to Ontario while keeping Dawn-Parkway transportation rates competitive



# Regulatory Process

## Critical Ontario regulatory agenda



### Parkway Projects

- Section 90 Applications – Pipeline facility approvals
- Section 91 Applications – Compressor facility approvals
- Section 36 Applications - Cost recovery approval for facilities and long-term TCPL contract approval
- Parkway West Applications filed January 29, 2013
- Brantford-Kirkwall and Parkway D Applications scheduled to be filed **late March 2013**

### Related Projects

- Enbridge GTA Project filed December 2012
- Regulatory proceeding in the same timeframe as the Parkway Projects
- TCPL Eastern Mainline Expansion subject to NEB approval

**Integrated perspective for Ontario natural gas infrastructure**

# Benefits to Ontario

## Parkway Projects critical for Ontario's economic development



- Parkway Projects provide **reliable natural gas delivery** at a critical infrastructure point to serve downstream Ontario industries, businesses and residents
- Parkway Projects allow northern and eastern Ontario consumers to access new **cost effective natural gas supplies** at the Dawn Hub
- Parkway Projects **increase diversity and security of energy supply** for Ontario industries, businesses and residential customers
- Union Gas, Enbridge and TCPL are **working together** to bring efficient solutions to Ontario's energy needs
- Parkway Projects reinforce Ontario natural gas infrastructure and will **attract new supply and support liquidity at the Dawn Hub**

**Now is a critical time for you to support natural gas infrastructure projects that increase security, reliability, diversity and affordability in Ontario's energy portfolio**



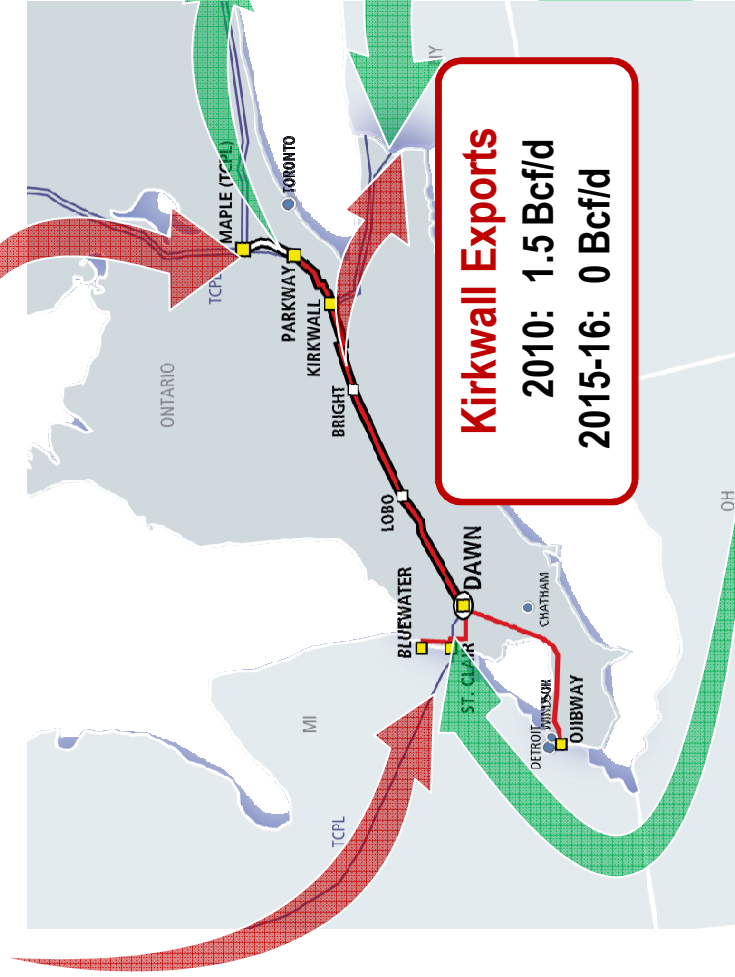
# Appendix

# Impacts of Changing Supply Dynamics

## Physical flows in Ontario have fundamentally changed



**Declining WCSB Supply to Ontario**

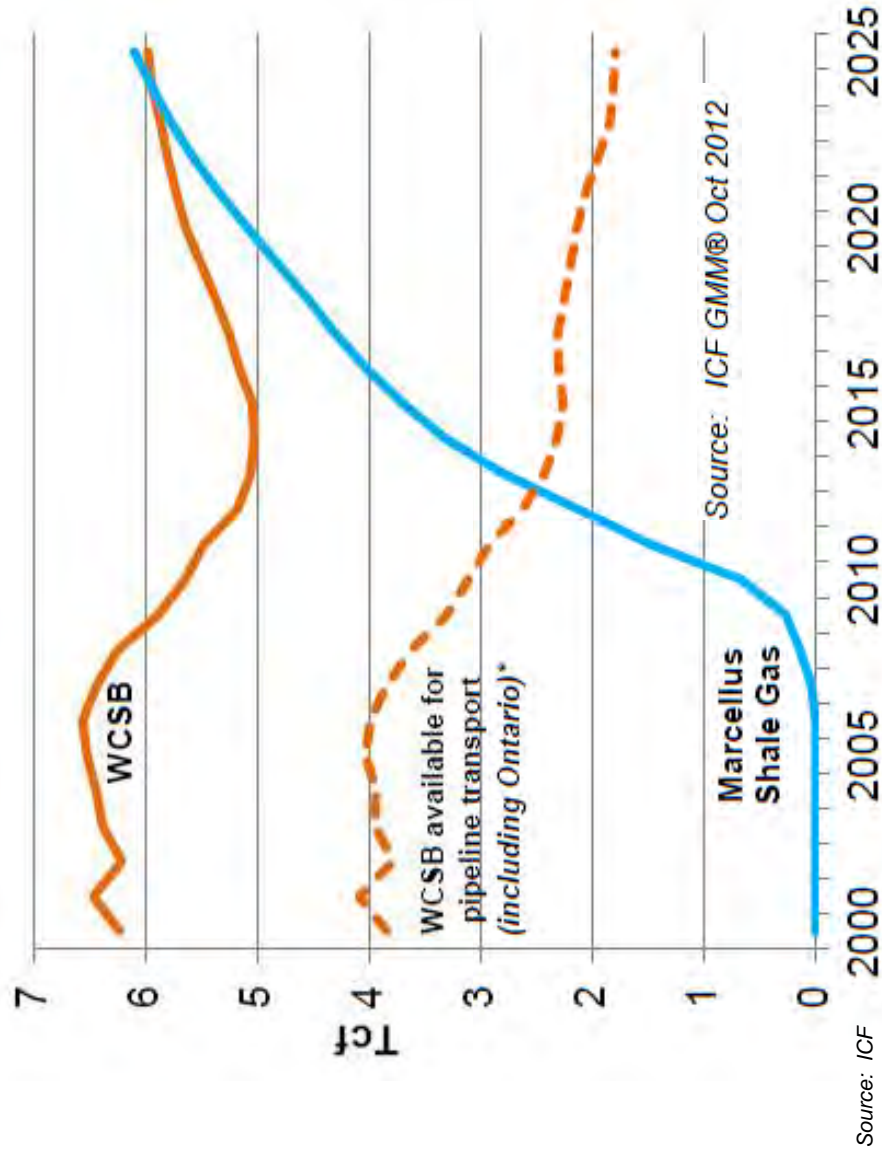


**Utica, Marcellus & Midwest Supplies to Ontario**

**With the market shift from long haul to short haul transportation, more Ontario natural gas is delivered through Parkway**

# New Supply Opportunities

Increasing supply has lowered commodity prices



**Marcellus and Utica shale gas offers Ontario a long-term solution to the declining availability of WCSB natural gas supply. Infrastructure is required.**

## **TOTAL ESTIMATED NPS 48 PIPELINE COSTS**

### **Pipeline and Equipment**

NPS 48 Steel Pipe, Coated 13,900m	\$10,880,000
Small Bore Pipe, Valves, Fittings, Miscellaneous Material	<u>\$2,254,000</u>

<b>Total Pipeline and Equipment</b>	<b><u>\$13,134,000</u></b>
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### **Construction and Labour**

Lay 13,900m of NPS 48 Steel Pipe	\$57,338,000
Easements, Lands & Damages	<u>\$8,701,000</u>

<b>Total Construction and Labour</b>	<b><u>\$66,039,000</u></b>
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<b>Total Pipeline and Equipment and Construction and Labour</b>	<b>\$79,173,000</b>
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<b>Contingencies</b>	<b>\$15,168,000</b>
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<b>Interest During Construction</b>	<b>\$1,715,000</b>
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<b>Total Estimated Pipeline Capital Costs – 2015 Construction</b>	<b><u><u>\$96,056,000</u></u></b>
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## TOTAL ESTIMATED STATION COSTS

### Parkway D Station

Materials, Buildings and Equipment	\$43,177,000
Construction and Labour	\$48,010,000
Contingencies	\$13,942,000
Interest During Construction	<u>\$2,891,000</u>

<b>Total Estimated Station Capital Costs – 2015 Construction</b>	<b><u><u>\$108,020,000</u></u></b>
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[illegible]



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**UNION GAS LIMITED**  
**2015 DAWN-PARKWAY FACILITIES EXPANSION PROGRAM**  
**Calculation of Incremental M12 Transportation Revenues**

<u>Particulars</u>	<u>Reference</u>	<u>W2015/16</u>
<b>Rates Approved per EB-2011-0210</b>		
<b><u>Effective January 1, 2013</u></b>		
Rate M12 Transportation Service (\$/GJ/d/mo.):		
Monthly Demand Charges		
Without Dawn Compression		
- Dawn-Parkway		\$ 2.113
 <b><u>Incremental Design Day Demands</u></b>		
	Section 8 Evidence	
M12 Transportation Service At Parkway (TJ/d)	Refer to Note 1	<u>363</u>
 <b><u>Incremental Annual Revenues</u></b>		
M12 Transportation At Parkway (\$000's)		<u>\$ 9,204</u>

**Note:**

(1) Represents that portion of total incremental demands that can be served by the 2015 proposed facilities calculated as follows (TJ/d):		
Total incremental system design day capacity	Section 8	433
Total Union requirements to serve EDA/NDA markets	Section 8	<u>70</u>
Balance incremental capacity available to meet increased M12 market demands		<u>363</u>

**2015 DAWN-PARKWAY FACILITIES EXPANSION PROGRAM  
(Project Specific DCF Analysis - Section 9, Schedule 3)**

**Stage 1 DCF - Listing of Key Input  
Parameters, Values and Assumptions**

<p><b>Discounting Assumptions</b></p> <p>Project Time Horizon</p> <p>Discount Rate</p>	<p>30 years commencing November 1, 2015 (maximum 30 years revenue recognition from in-service date of facility)</p> <p>Incremental after-tax weighted average cost of capital of 5.1%</p>
<p><b>Key DCF Input Parameters, Values and Assumptions</b></p> <p><b>Net Cash Inflow:</b></p> <p>Incremental Transportation Revenue:</p> <p>    Rate M12 Demand Charges</p> <p>    Total M12 transportation demands served     by 2015 proposed facilities</p> <p>Gas Supply Purchase Cost Savings</p> <p>Total transportation demands to serve Union in-franchise EDA/NDA markets</p> <p>Operating and Maintenance Expense</p> <p>Incremental Tax Expenses:</p> <p>    Municipal Tax</p> <p>    Income Tax Rate</p> <p>    CCA Rates (Transmission Plant):</p> <p>        CCA Classes:</p> <p>        ECE - Eligible Capital Expenditure         (Land Rights)</p> <p>        Class 1 (Structures)</p> <p>        Class 49 (Mains)</p> <p>        Class 7 (Compressor Equipment)</p> <p>    Transmission Plant Depreciation Rates:</p> <p>        Land Rights</p> <p>        Structures</p> <p>        Mains</p> <p>        Compressor Equipment</p>	<p>Refer to Section 9, Schedule 4 Approved per EB-2011-0210 Effective January 1, 2013</p> <p>363 TJ/d per Section 8, Schedule 4, Note 1</p> <p>\$28.2 Million/year for first 10 Years Years 11-30 M12 Margin applied = \$1.8 Million/year</p> <p>70 TJ/d per Section 9, Schedule 4, Note 1</p> <p>Estimated incremental cost</p> <p>Estimated incremental cost 26.5%</p> <p>Declining balance depreciation rates by CCA class: 7% applicable to 75% of the cost as 25% cannot be recovered for tax purposes.</p> <p>6%</p> <p>8%</p> <p>15%</p> <p>Approved per EB-2011-0210</p> <p>1.76%</p> <p>2.03%</p> <p>1.98%</p> <p>3.23%</p>
<p><b>Cash Outflow:</b></p> <p>Incremental Capital Costs</p> <p>Change in Working Capital</p>	<p>Refer to Section 9, Schedules 1 and 2</p> <p>5.051% applied to O&amp;M expenses and 0.168% applied to cost of gas purchase savings based on EB-2011-0210 cash working capital estimates</p>

UNION GAS LIMITED  
Brantford to Kirkwall and Parkway D Compressor Project - Annual Revenue Requirement

Line No.	Particulars (\$000's)	Revenue Requirement			
		2015	2016	2017	2018
		(a)	(b)	(c)	(d)
	<u>Operating Expenses:</u>				
1	Operating and Maintenance Expenses (1)	107	642	642	642
2	Depreciation Expense (2)	2,622	5,287	5,329	5,329
3	Property Taxes (3)	142	853	853	853
4	Total Operating Expenses	<u>2,871</u>	<u>6,782</u>	<u>6,824</u>	<u>6,824</u>
5	Required Return (4)	<u>1,359</u>	<u>11,383</u>	<u>11,176</u>	<u>10,868</u>
	<u>Income Taxes:</u>				
6	Income Taxes - Equity Return (5)	272	2,281	2,240	2,178
7	Income Taxes - Utility Timing Differences (6)	<u>(4,580)</u>	<u>(5,726)</u>	<u>(4,808)</u>	<u>(3,969)</u>
8	Total Income Taxes	<u>(4,307)</u>	<u>(3,445)</u>	<u>(2,568)</u>	<u>(1,791)</u>
9	Parkway Growth Revenue Requirement	<u>(77)</u>	<u>14,720</u>	<u>15,433</u>	<u>15,902</u>

Notes:

- (1) O&M expenses include \$0.012 million for pipeline related O&M and \$0.630 million of annual Parkway Compressor maintenance.
- (2) Depreciation expense at 2013 Board-approved depreciation rates.
- (3) Property taxes include \$0.188 million for compression and \$0.665 million for pipeline and building taxes.
- (4) The required return for 2018 assumes total rate base of \$188.206 million and a capital structure of 64% long-term debt at 4% and 36% common equity at the 2013 Board-approved return of 8.93%. The 2018 required return calculation is as follows:  

$$\begin{aligned} &\$188.206 \text{ million} * 64\% * 4\% = \$4.818 \text{ million plus} \\ &\$188.206 \text{ million} * 36\% * 8.93\% = \$6.050 \text{ million for a total of } \$10.868 \text{ million.} \end{aligned}$$
- (5) Taxes related to the equity component of the return at a tax rate of 26.5%.
- (6) Taxes related to utility timing differences are negative as the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.



UNION GAS LIMITED  
2018 Cost Allocation Impacts of Brantford to Kirkwall and Parkway D Compressor Project

Line No.	Particulars	Total Cost Allocation Impacts (\$000's)	Cost Allocation Change in Demands (1)		Dawn-Parkway Easterly Transmission (2)		Other Indirect Cost Impacts (\$000's)
		(a) = (b + d + f)	(\$000's)	(%)	(\$000's)	(%)	(f)
			(b)	(c)	(d)	(e)	
1	Rate M1	(1,403)	(756)	(4%)	1,017	5%	(1,665)
2	Rate M2	(121)	(254)	(1%)	342	2%	(209)
3	Rate M4	(29)	(74)	0%	99	1%	(55)
4	Rate M5	(49)	(1)	0%	1	0%	(49)
5	Rate M7	(7)	(34)	0%	46	0%	(18)
6	Rate M9	1	(12)	0%	16	0%	(3)
7	Rate M10	(0)	(0)	0%	1	0%	(0)
8	Rate T1	(27)	(36)	0%	49	0%	(39)
9	Rate T2	(83)	(237)	(1%)	319	2%	(164)
10	Rate T3	9	(86)	0%	115	1%	(20)
11	Subtotal - Union South	(1,708)	(1,490)	(8%)	2,005	10%	(2,224)
12	Excess Utility Space	(25)	0	0%	0	0%	(25)
13	Rate C1	(8)	0	0%	0	0%	(8)
14	Rate M12	16,083	99	1%	16,074	84%	(90)
15	Rate M13	(0)	0	0%	0	0%	(0)
16	Rate M16	(0)	0	0%	0	0%	(0)
17	Subtotal - Ex-franchise	16,050	99	1%	16,074	84%	(123)
18	R01	1,162	1,041	5%	843	4%	(722)
19	R10	400	272	1%	221	1%	(93)
20	R20	64	73	0%	59	0%	(68)
21	R100	(45)	5	0%	4	0%	(54)
22	R25	(21)	0	0%	0	0%	(21)
23	Subtotal - Union North	1,561	1,391	7%	1,127	5.870%	(958)
24	In-franchise	(147)	(99)	(1%)	3,133	16%	(3,181)
25	Ex-franchise	16,050	99	1%	16,074	84%	(123)
26	Total	15,902	(0)	0%	19,207	100%	(3,304)

## Notes:

- (1) The 2013 Board approved cost allocation study updated to include incremental demands for the Union North of 70,000 GJ/d and Rate M12 of 363,000 GJ/d.
- (2) The Dawn-Parkway costs of \$15.902 million for the Parkway Growth project, including indirect costs of \$3.304 million, are allocated in proportion to Dawn to Parkway demand allocation provided at EB-2011-2010, Exhibit G3, Tab 5, Schedule 23, Updated, pages 7-8, line 5, updated to include the incremental demands of 70,000 GJ/d Union North and 363,000 GJ/d Rate M12 demands.

UNION GAS LIMITED  
General Service Bill Impacts related to Brantford to Kirkwall and Parkway D Compressor Project  
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Rate M1 - Particulars (\$)	EB-2011-0210 Approved 01-Jan-13 Total Bill (1) (a)	EB-2013-0074 Estimated Total Bill (b)	Impact (c) = (b - a)	
	<u>Delivery Charges</u>				
1	Monthly Charge	252.00	252.00	-	
2	Delivery Commodity Charge	78.66	77.69	(0.97)	
3	Storage Services	16.23	16.09	(0.14)	
4	Total Delivery Charge (line 1 + line 2 + line 3)	346.89	345.78	(1.11)	-0.3%
	<u>Supply Charges</u>				
5	Transportation to Union	96.80	96.80	-	
6	Commodity & Fuel (2)	280.77	280.76	(0.01)	
7	Total Gas Supply Charge (line 5 + line 6)	377.57	377.56	(0.01)	
8	Total Bill (line 4 + line 7)	724.46	723.34	(1.12)	-0.1%
9	Impacts for Customer Notices - Sales (line 8)			(1.12)	
Line No.	Rate 01 Eastern Zone - Particulars (\$)	EB-2011-0210 Approved 01-Jan-13 Total Bill (1) (a)	EB-2013-0074 Estimated Total Bill (b)	Impact (c) = (b - a)	
	<u>Delivery Charges</u>				
1	Monthly Charge	252.00	252.00	-	
2	Delivery Commodity Charge	207.15	206.13	(1.02)	
3	Total Delivery Charge (line 1 + line 2)	459.15	458.13	(1.02)	-0.2%
	<u>Supply Charges</u>				
4	Transportation to Union	187.35	187.35	-	
5	Storage Services	78.75	82.57	3.82	
6	Subtotal (line 4 + line 5)	266.10	269.92	3.82	1.4%
7	Commodity & Fuel	280.77	280.77	-	
8	Total Gas Supply Charge (line 6 + line 7)	546.87	550.69	3.82	
9	Total Bill (line 3 + line 8)	1,006.02	1,008.82	2.80	0.3%
10	Impacts for Customer Notices - Sales (line 9)			2.80	

## Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).  
(2) Reflects changes in the Gas Supply Administration charge only.

## UNION GAS LIMITED

General Service Bill Impacts related to Brantford to Kirkwall and Parkway D Compressor Project and Parkway West Project

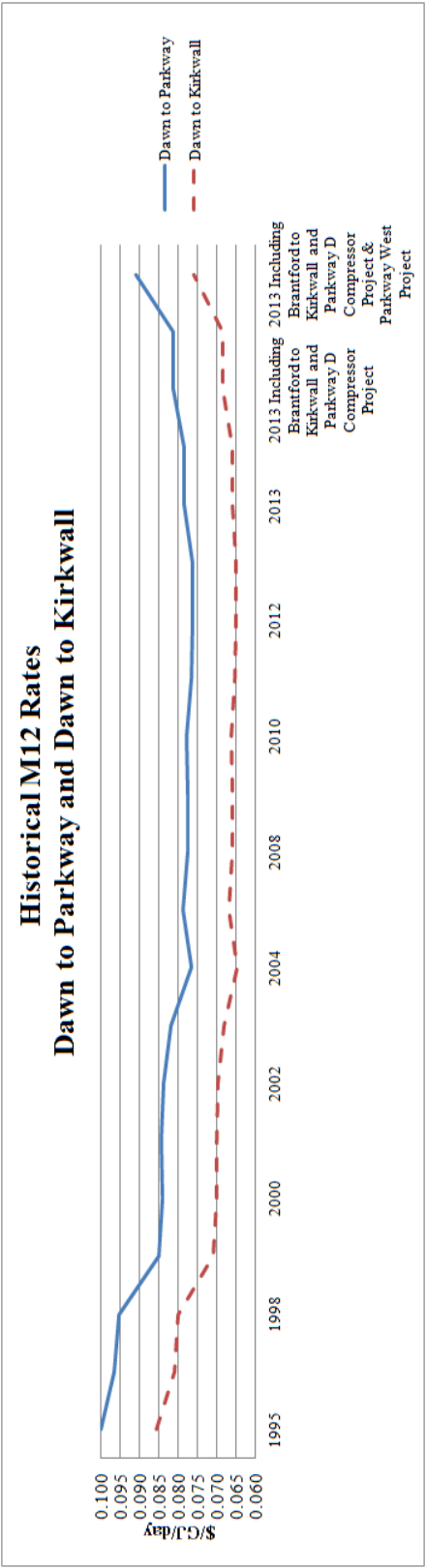
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Rate M1 - Particulars (\$)	EB-2011-0210 Approved 01-Jan-13 Total Bill (1) (a)	EB-2013-0074 Estimated Total Bill (b)	Impact (c) = (b - a)	
	<u>Delivery Charges</u>				
1	Monthly Charge	252.00	252.00	-	
2	Delivery Commodity Charge	78.66	77.02	(1.64)	
3	Storage Services	16.23	15.99	(0.24)	
4	Total Delivery Charge (line 1 + line 2 + line 3)	346.89	345.01	(1.88)	-0.5%
	<u>Supply Charges</u>				
5	Transportation to Union	96.80	96.80	-	
6	Commodity & Fuel (2)	280.77	280.76	(0.01)	
7	Total Gas Supply Charge (line 5 + line 6)	377.57	377.56	(0.01)	
8	Total Bill (line 4 + line 7)	724.46	722.57	(1.89)	-0.3%
9	Impacts for Customer Notices - Sales (line 8)			(1.89)	

Line No.	Rate 01 Eastern Zone - Particulars (\$)	EB-2011-0210 Approved 01-Jan-13 Total Bill (1) (a)	EB-2013-0074 Estimated Total Bill (b)	Impact (c) = (b - a)	
	<u>Delivery Charges</u>				
1	Monthly Charge	252.00	252.00	-	
2	Delivery Commodity Charge	207.15	204.50	(2.65)	
3	Total Delivery Charge (line 1 + line 2)	459.15	456.50	(2.65)	-0.6%
	<u>Supply Charges</u>				
4	Transportation to Union	187.35	187.36	0.01	
5	Storage Services	78.75	84.33	5.58	
6	Subtotal (line 4 + line 5)	266.10	271.69	5.59	2.1%
7	Commodity & Fuel (2)	280.77	280.75	(0.02)	
8	Total Gas Supply Charge (line 6 + line 7)	546.87	552.44	5.57	
9	Total Bill (line 3 + line 8)	1,006.02	1,008.94	2.92	0.3%
10	Impacts for Customer Notices - Sales (line 9)			2.92	

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).  
(2) Reflects changes in the Gas Supply Administration charge only.



UNION GAS LIMITED  
M12/M12-X/C1 Transportation Demand Charges Impact of the Brantford to Kirkwall and Parkway D Compressor Project

Line No.	Services	EB-2011-0210 Rate Order		Brantford to Kirkwall and Parkway D Compressor Project (Parkway West Project is excluded)		Brantford to Kirkwall and Parkway D Compressor Project (Parkway West Project is included)		Brantford to Kirkwall and Parkway D Compressor Project Comparison to 2013 Rate Order		Parkway West Project & Brantford to Kirkwall and Parkway D Compressor Project Comparison to 2013 Rate Order	
		(\$/GJ/day) (1)	(a)	(\$/GJ/day) (b)	(\$/GJ/day) (c)	Difference (d) = (b) - (a)	% Change (e) = (d) / (a)	Difference (f) = (c) - (a)	% Change (g) = (f) / (a)		
1	M12/C1 Dawn to Kirkwall		0.066	0.069	0.076	0.002	3.7%	0.010	15.1%		
2	M12/C1 Dawn to Parkway		0.078	0.081	0.091	0.003	3.9%	0.013	16.9%		
3	M12/C1 Kirkwall to Parkway		0.012	0.013	0.014	0.001	5.3%	0.002	18.6%		
4	C1 Parkway to Kirkwall		0.019	0.020	0.023	0.001	5.3%	0.004	18.6%		
5	C1 Kirkwall to Dawn		0.034	0.035	0.040	0.002	5.3%	0.006	18.6%		
6	C1 Parkway to Dawn		0.019	0.020	0.023	0.001	5.3%	0.004	18.6%		
7	M12-X		0.097	0.101	0.113	0.004	4.2%	0.016	16.2%		

Notes:  
(1) EB-2011-0210, Appendix A, Pages 14-16, column (c), effective January 1, 2013.

## UNION GAS LIMITED

Brantford to Kirkwall and Parkway D Compressor Project - Annual Rate Adjustments by Rate Class

Line No.	Particulars (\$000's)	2015 (a)	Variance (b) = (c - a)	2016 (c)	Variance (d) = (e - c)	2017 (e)	Variance (f) = (g - e)	2018 (g)
1	Rate M1	(2,310)	280	(2,029)	331	(1,698)	295	(1,403)
2	Rate M2	(440)	230	(210)	48	(162)	40	(121)
3	Rate M4	(117)	66	(51)	12	(39)	10	(29)
4	Rate M5	(57)	(13)	(70)	11	(59)	10	(49)
5	Rate M7	(46)	33	(14)	4	(10)	3	(7)
6	Rate M9	(13)	13	(0)	1	0	0	1
7	Rate M10	(0)	0	(0)	0	(0)	0	(0)
8	Rate T1	(71)	29	(42)	8	(34)	7	(27)
9	Rate T2	(364)	217	(146)	35	(111)	29	(83)
10	Rate T3	(86)	89	3	4	7	2	9
11	Subtotal - Union South	<u>(3,504)</u>	<u>945</u>	<u>(2,559)</u>	<u>454</u>	<u>(2,105)</u>	<u>397</u>	<u>(1,708)</u>
12	Excess Utility Space	(27)	(8)	(34)	5	(29)	5	(25)
13	Rate C1	(6)	(5)	(11)	1	(10)	1	(8)
14	Rate M12	2,934	13,218	16,152	44	16,197	(114)	16,083
15	Rate M13	(1)	0	(0)	0	(0)	0	(0)
16	Rate M16	(1)	0	(1)	0	(0)	0	(0)
17	Subtotal - Ex-franchise	<u>2,900</u>	<u>13,206</u>	<u>16,106</u>	<u>51</u>	<u>16,157</u>	<u>(108)</u>	<u>16,050</u>
18	R01	410	470	881	151	1,032	131	1,162
19	R10	198	161	359	22	382	19	400
20	R20	1	32	32	17	49	15	64
21	R100	(59)	(10)	(70)	13	(57)	12	(45)
22	R25	(24)	(6)	(30)	5	(25)	4	(21)
23	Subtotal - Union North	<u>527</u>	<u>646</u>	<u>1,173</u>	<u>208</u>	<u>1,381</u>	<u>180</u>	<u>1,561</u>
		0			0		0	
24	In-franchise	(2,977)	1,591	(1,386)	661	(724)	577	(147)
25	Ex-franchise	2,900	13,206	16,106	51	16,157	(108)	16,050
		0			0		0	
26	Total	<u>(77)</u>	<u>14,797</u>	<u>14,720</u>	<u>712</u>	<u>15,433</u>	<u>469</u>	<u>15,902</u>

# DRAFT

**UNION GAS LIMITED****Accounting Entries for  
Brantford-Kirkwall/Parkway D Project Costs  
Deferral Account No. 179-XXX**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                    -        Account No.179-XXX  
                                      Other Deferred Charges – Brantford-Kirkwall/Parkway D Project Costs

Credit                   -        Account No. 579  
                                      Miscellaneous Operating Revenue

To record, as a debit (credit) in Deferral Account No. 179-XXX, the difference between the actual revenue requirement related to the costs for the Brantford-Kirkwall/Parkway D Project and the revenue requirement included in rates as approved by the Board.

Debit                    -        Account No.179-XXX  
                                      Other Deferred Charges – Brantford-Kirkwall/Parkway D Project Costs

Credit                   -        Account No. 323  
                                      Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-XXX, interest on the balance in Deferral Account No. 179-132. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**FIRM TRANSPORTATION SERVICE CONTRACT**

THIS FIRM TRANSPORTATION SERVICE CONTRACT, made as of the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

BETWEEN:

TRANSCANADA PIPELINES LIMITED  
a Canadian corporation  
("TransCanada")

OF THE FIRST PART

and

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
("Shipper")

OF THE SECOND PART

WITNESSES THAT:

WHEREAS TransCanada owns and operates a natural gas pipeline system extending from a point near the Alberta/Saskatchewan border where TransCanada's facilities interconnect with the facilities of NOVA Gas Transmission Ltd. easterly to the Province of Quebec with branch lines extending to various points on the Canada/United States of America International Border; and

WHEREAS Shipper has satisfied in full, or TransCanada has waived, each of the conditions precedent set out in Sections 1.1 (b) and (c) of TransCanada's Firm Transportation Service Toll Schedule referred to in Section 7.1 hereof (the "FT Toll Schedule"); and

WHEREAS Shipper has requested and TransCanada has agreed to transport quantities of gas, that are delivered by Shipper or Shipper's agent to TransCanada at the Receipt Point(s) referred to in Section 3.2 hereof (the "Receipt Point(s)"), to the Delivery Point(s) referred to in Section 3.1 hereof (the "Delivery Point(s)") pursuant to the terms and conditions of this Contract; and



(Insert A)

WHEREAS the quantities of gas delivered hereunder by Shipper or Shipper's agent to TransCanada are to be removed from the province of production of such gas by Shipper and/or Shipper's suppliers and/or its (their) designated agent(s) pursuant to valid and subsisting permits and/or such other authorizations in respect thereof.

NOW THEREFORE THIS CONTRACT WITNESSES THAT, in consideration of the covenants and agreement herein contained, the parties hereto covenant and agree as follows:

#### **ARTICLE I - COMMENCEMENT OF SERVICE**

(Insert B)

#### **ARTICLE II - GAS TO BE TRANSPORTED**

2.1 Subject to the provisions of this Contract, the FT Toll Schedule, the List of Tolls, and the General Terms and Conditions referred to in Section 7.1 hereof, TransCanada shall provide transportation service hereunder for Shipper in respect of a quantity of gas which, in any one day from the Date of Commencement until the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_, shall not exceed \_\_\_\_\_ GJ (the "Contract Demand").

#### **ARTICLE III - DELIVERY POINT(S) AND RECEIPT POINT(S)**

3.1 The Delivery Point(s) hereunder are those points specified as such in Exhibit "1" which is attached hereto and made a part hereof.

3.2 The Receipt Point(s) hereunder are those points specified as such in Exhibit "1" hereof.

#### **ARTICLE IV - TOLLS**

4.1 Shipper shall pay for all transportation service hereunder from the Date of Commencement in accordance with TransCanada's FT Toll Schedule, List of Tolls, and General Terms and Conditions set out in TransCanada's Transportation Tariff as the same may be amended or approved from time to time by the National Energy Board (the "NEB").

(Insert C)

**ARTICLE V - TERM OF CONTRACT**

5.1 This Contract shall be effective from the date hereof and shall continue until the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

**ARTICLE VI - NOTICES**

6.1 Any notice, request, demand, statement or bill (for the purpose of this paragraph, collectively referred to as "Notice") to or upon the respective parties hereto shall be in writing and shall be directed as follows:

**IN THE CASE OF TRANSCANADA: TransCanada PipeLines Limited**

(i) mailing address:

P.O. Box 1000  
Station M  
Calgary, Alberta  
T2P 4K5

(ii) delivery address:

TransCanada Tower  
450 – 1<sup>st</sup> Street S.W.  
Calgary, Alberta  
T2P 5H1

Attention: Director, Customer Service  
Telecopy: \_\_\_\_\_

(iii) nominations:

Attention: Manager, Nominations & Allocations  
Telecopy: \_\_\_\_\_

(iv) bills:

Attention: Manager, Contracts & Billing  
Telecopy: \_\_\_\_\_

(v) other matters:

Attention: Director, Customer Service  
Telecopy: \_\_\_\_\_

**IN THE CASE OF SHIPPER:**

(i) mailing address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(ii) delivery address:

\_\_\_\_\_  
\_\_\_\_\_

(iii) nominations:

Attention: \_\_\_\_\_  
Telecopy: \_\_\_\_\_

**Transportation Tariff****TransCanada Pipelines Limited**

FT CONTRACT

(iv) bills:

Attention: \_\_\_\_\_

Telecopy: \_\_\_\_\_

E-mail address: \_\_\_\_\_

(v) other matters:

Attention: \_\_\_\_\_

Telecopy: \_\_\_\_\_

Notice may be given by telecopier or other telecommunication device and any such Notice shall be deemed to be given four (4) hours after transmission. Notice may also be given by personal delivery or by courier and any such Notice shall be deemed to be given at the time of delivery. Any Notice may also be given by prepaid mail and any such Notice shall be deemed to be given four (4) days after mailing, Saturdays, Sundays and statutory holidays excepted. In the event regular mail service, courier service, telecopier or other telecommunication service shall be interrupted by a cause beyond the control of the parties hereto, then the party sending the Notice shall utilize any service that has not been so interrupted to deliver such Notice. Each party shall provide Notice to the other of any change of address for the purposes hereof. Any Notice may also be given by telephone followed immediately by personal delivery, courier, prepaid mail, telecopier or other telecommunication, and any Notice so given shall be deemed to be given as of the date and time of the telephone notice.

**ARTICLE VII - MISCELLANEOUS PROVISIONS**

7.1 The FT Toll Schedule, the List of Tolls, and the General Terms and Conditions set out in TransCanada's Transportation Tariff as amended or approved from time to time by the NEB are all by reference made a part of this Contract and operations hereunder shall, in addition to the terms and conditions of this Contract, be subject to the provisions thereof. TransCanada shall notify Shipper at any time that TransCanada files with the NEB revisions to the FT Toll Schedule, the List of Tolls, and/or the General Terms and Conditions (the "Revisions") and shall provide Shipper with a copy of the Revisions.

7.2 The headings used throughout this Contract, the FT Toll Schedule, the List of Tolls, and the General Terms and Conditions are inserted for convenience of reference only and are not to be considered or taken into account in construing the terms or provisions thereof nor to be deemed in any way to qualify, modify or explain the effect of any such provisions or terms.

**Transportation Tariff****TransCanada PipeLines Limited**

FT CONTRACT

7.3 This Contract shall be construed and applied, and be subject to the laws of the Province of Alberta, and, when applicable, the laws of Canada, and shall be subject to the rules, regulations and orders of any regulatory or legislative authority having jurisdiction.

(Insert D)

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the date first above written.

TRANSCANADA PIPELINES LIMITED

per \_\_\_\_\_

per \_\_\_\_\_

.....

per \_\_\_\_\_

per \_\_\_\_\_

## EXHIBIT "1"

This is EXHIBIT "1" to the FIRM TRANSPORTATION SERVICE CONTRACT made as of the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_ between TRANSCANADA PIPELINES LIMITED ("TransCanada") and \_\_\_\_\_ ("Shipper").

The Delivery Point(s) hereunder is (are) the (those) point(s) of interconnection between the pipeline facilities of TransCanada and \_\_\_\_\_ which is (are) located at:

The Receipt Point(s) hereunder is (are) the (those) point(s) of interconnection between the pipeline facilities of TransCanada and \_\_\_\_\_ which is (are) located at:

**DIFFERENT CONTRACT VERSIONS**

**I For a Firm Transportation Service Contract Executed Following Completion of a Precedent Agreement:**

**Insert A**

WHEREAS the parties hereto have heretofore entered into an agreement dated as of the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, (the "Precedent Agreement") which bound them, subject to the fulfillment or waiver of the conditions precedent therein set forth, to enter into a Contract substantially upon the terms and conditions hereinafter described; and

WHEREAS the conditions precedent of the Precedent Agreement have been satisfied or waived; and

**Insert B**

1.1 TransCanada shall use reasonable efforts to have the additional facilities (and/or obtain such transportation arrangements on other gas transmission systems) as may be required to effect the transportation of the gas hereunder (the "Necessary Capacity") in place by the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, or as soon as possible thereafter. TransCanada's ability to provide service by the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, will be subject to, inter alia:

(a) the timing of receipt by Shipper and TransCanada of the authorizations referred to in paragraphs 1 and 2 of the Precedent Agreement which are required prior to the commencement of construction of TransCanada's facilities and the timing of the commencement of the services required by TransCanada (if any) on the systems of Great Lakes Gas Transmission Limited Partnership, TransQuebec and Maritimes Pipeline Inc., and Union Gas Limited; and

(b) the lead time required for the acquisition, construction and installation of those facilities required by TransCanada.

TransCanada shall use reasonable efforts to provide Shipper with ten (10) days advance Notice of the anticipated availability of the Necessary Capacity (the "Advance Notice"). TransCanada shall give Shipper Notice of the actual date of availability of the Necessary Capacity ("TransCanada's Notice"), and service hereunder shall not commence prior to the actual date of availability of the Necessary Capacity.

**Transportation Tariff****TransCanada PipeLines Limited**FT CONTRACT

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1.2 The date of commencement of service hereunder (the "Date of Commencement") shall be the earlier of:

- (a) the date for which Shipper first nominates and TransCanada authorizes service hereunder; or
- (b) the tenth (10th) day following the day on which Shipper received TransCanada's Notice;

PROVIDED that Shipper shall not be obligated to a Date of Commencement which is earlier than the \_\_\_\_ day of \_\_\_\_, 20\_\_, unless mutually agreed upon by both parties.

**II Firm Transportation Service Contract Requiring Displacement of a Firm Transportation Service Contract:**

**Insert A**

(nothing)

**Insert B**

1.1 As TransCanada does not otherwise have sufficient pipeline capacity on its system to offer this service, another shipper who has a long term Firm Transportation Service contract(s) for the purpose of delivering gas to the same Delivery Point(s) (the "Other Contract") must agree to reductions in the Contract Demand under the Other Contract equal to the Contract Demand hereunder effective as of the Date of Commencement.

1.2 The date of commencement of service hereunder (the "Date of Commencement") shall be the date for which Shipper first nominates, and TransCanada authorizes deliveries hereunder, pursuant to the provisions of this Contract.

1.3 Notwithstanding Section 5.1 hereof, if the Date of Commencement has not occurred on or before the \_\_\_\_ day of \_\_\_\_, 20\_\_, then either party may at any time thereafter, provided that service shall not have commenced hereunder, terminate this Contract forthwith by Notice to the other party.

**III Firm Transportation Service Contract Not Following a Precedent Agreement and Not Requiring Displacement of a Firm Transportation Service Contract:**

**Insert A**

(nothing)

**Insert B**

1.1 The date of commencement of service hereunder (the "Date of Commencement") shall be the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

**IV Contracts with Emerson I and II, Dawn, Niagara Falls, Iroquois, Chippawa or East Hereford as Delivery Points**

**Insert C**

4.2 Shipper shall pay for all delivery pressure service hereunder from the Date of Commencement in accordance with TransCanada's FT Toll Schedule, List of Tolls and General Terms and Conditions set out in TransCanada's Transportation Tariff as the same may be amended or approved from time to time by the NEB.

**(a) Emerson I (Viking) Delivery Point**

**Insert D****ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the Point to the pressure necessary for Shipper to have Viking Gas Transmission Company accept receipt of such gas from Shipper for transportation from the Delivery Point, provided that, from the Date of Commencement until the termination of this Contract, TransCanada shall not be obligated to provide a pressure greater than 5 170 kPa (g).

**(b) Emerson II (Great Lakes) Delivery Point**

**Insert D****ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the Delivery Point to the pressure necessary for Shipper to have Great Lakes Gas Transmission Limited Partnership accept receipt of such gas from Shipper for transportation from the Delivery Point, provided that, from the Date of Commencement until the termination of this Contract, TransCanada shall not be obligated to provide a pressure greater than 5 460 kPa (g).



**(c) Dawn Delivery Point**

Insert D

**ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the Delivery Point to a pressure of not less than 4 850 kPa (g).

**(d) Niagara Falls Delivery Point**

Insert D

**ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the Delivery Point to a pressure of not less than 4 830 kPa (g).

**(e) Iroquois Delivery Point**

Insert D

**ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the Delivery Point to the pressure necessary for Shipper to have Iroquois Gas Transmission System, L.P. accept receipt of such gas from Shipper for transportation from the Delivery Point, provided that, from the Date of Commencement until the termination of this Contract, such pressure is not greater than 9 895 kPa (g).

**(f) Chippawa Delivery Point**

Insert D

**ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the Chippawa Delivery Point to the pressure necessary for Shipper to have Empire State Pipeline accept receipt of such gas from Shipper for transportation from the Chippawa Delivery Point, provided that such pressure is not greater than 8 450 kPa (g).

**(g) East Hereford Delivery Point****Insert D****ARTICLE VIII - DELIVERY PRESSURE**

8.1 TransCanada shall increase the line pressure of the gas it delivers to Shipper at the East Hereford Delivery Point to the pressure necessary for Shipper to have Portland Natural Gas Transmission System accept receipt of such gas from Shipper for transportation from the East Hereford Delivery Point, provided that such pressure is not greater than 8 650 kPa (g).

**FIRM TRANSPORTATION SERVICE**

**FT TOLL SCHEDULE**

**INDEX**

<b>Section</b>	<b>Sheet No.</b>
1. AVAILABILITY.....	1
2. APPLICABILITY AND CHARACTER OF SERVICE.....	2
3. MONTHLY BILL.....	2
4. MINIMUM BILL.....	3
5. DEMAND CHARGE ADJUSTMENTS.....	3
6. ALTERNATE RECEIPT AND DIVERSION OF GAS.....	4
7. ASSIGNMENT.....	6
8. RENEWAL RIGHTS.....	7
9. TEMPORARY RECEIPT AND/OR DELIVERY POINT(S).....	8
10. CONVERSION RIGHTS.....	10
11. MISCELLANEOUS PROVISIONS.....	10

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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**1. AVAILABILITY**

1.1 Any Shipper shall be eligible to receive service pursuant to this Toll Schedule provided that Shipper:

- (a) has entered into a Firm Transportation Service Contract with TransCanada having a minimum term of one (1) year; or has obtained an Order of the NEB, pursuant to subsection 71(2) of the National Energy Board Act as amended from time to time ("71(2) Order"), requiring TransCanada to transport gas for Shipper subject to the provisions of this Toll Schedule and to the terms and conditions contained in the 71(2) Order; and
- (b) has pipeline facilities interconnecting with TransCanada's facilities at the delivery point(s) specified in the Contract, or which has provided TransCanada with adequate assurances that arrangements have been made to have an authorized gas distribution or transmission company act as Shipper's agent in receiving from TransCanada the gas to be delivered pursuant to this Toll Schedule; and
- (c) has provided TransCanada with financial assurances as required by TransCanada pursuant to Section XXIII of the General Terms and Conditions referred to in Section 11 hereof.

**1.2 Facilities Construction Policy**

In order to provide service pursuant to this Toll Schedule, TransCanada utilizes capacity available from its own gas transmission system and from its firm transportation service entitlement on the Great Lakes Gas Transmission Company system, the Union Gas Limited system, and the Trans Quebec & Maritimes Pipeline Inc. system (the "Combined Capacity"). If a request for service pursuant to this Toll Schedule (the "Requested Service") requires an increase to the Combined Capacity, TransCanada is prepared to use all reasonable efforts to enable it to increase the Combined Capacity to the extent necessary provided that:

- (a) there is reasonable expectation of a long term requirement for the increase in the Combined Capacity; and
- (b) the NEB approves the additional facilities and/or transportation services necessary to increase the Combined Capacity; and

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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- (c) the availability provisions of subsection 1.1 hereof are satisfied with respect to the Requested Service.

**2. APPLICABILITY AND CHARACTER OF SERVICE**

- 2.1 On each day during the term of the Contract Shipper shall be entitled to request service hereunder. Nominations for service shall be made pursuant to Section XXII of the General Terms and Conditions. Service hereunder shall not be subject to curtailment or interruption except as provided in Section XI, XIV, and XV of the General Terms and Conditions; PROVIDED HOWEVER, that if Shipper fails to provide on an ongoing and timely basis to TransCanada satisfactory evidence of its right to remove from the province of production all or any part of the quantities of gas to be transported by TransCanada under the Contract, Shipper shall be in default hereunder (the "Default") to the extent of the daily quantity not authorized for removal from the province of production as aforesaid (the "Default Quantity"), and TransCanada shall be entitled to immediately suspend service for a quantity up to, and including, the Default Quantity until such time as Shipper remedies the Default. TransCanada shall terminate any such suspension and resume service as to that part of the Default Quantity in respect of which the Default has been remedied.

**3. MONTHLY BILL**

- 3.1 The monthly bill payable to TransCanada for service hereunder shall include the demand charge and the commodity charge in effect during the billing month for transportation service and, where applicable, for delivery pressure service and the Union Dawn Receipt Point Surcharge and shall be calculated by applying, as follows, the applicable tolls as approved by the NEB (as set forth in the List of Tolls referred to in Section 11 hereof):

(a) **Transportation Service**

(i) **Demand Charge**

For each month, the demand charge for transportation service shall be equal to the applicable Monthly Demand Toll multiplied by Shipper's Contract Demand. If Shipper's Contract Demand changes during a month, then a weighted average daily Contract Demand shall be determined for such month and shall be used to calculate the demand charge for such month. The said demand charge is payable by Shipper notwithstanding any failure by Shipper during such month, for any

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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reason whatsoever including force majeure or a default by Shipper under Section 2.1 hereof, to deliver Shipper's Authorized Quantity to TransCanada at the receipt point.

(ii) **Commodity Charge**

For each month the commodity charge for transportation service shall be equal to the applicable Commodity Toll multiplied by Shipper's Authorized Quantities for transportation service between each authorized receipt point and delivery point or area.

(b) **Delivery Pressure Service**

For each month, the demand charge for delivery pressure service at each delivery point at which a toll for delivery pressure has been set shall be equal to the applicable Delivery Pressure Monthly Demand Toll multiplied by Shipper's Contract Demand in effect at each such delivery point. If Shipper's Contract Demand changes during a month, then a weighted average daily Contract Demand shall be determined for such month and shall be used to calculate the demand charge for such month. The said demand charge is payable by Shipper notwithstanding any failure by Shipper during such month, for any reason whatsoever including force majeure or a default by Shipper under Section 2.1 hereof, to deliver Shipper's Authorized Quantity to TransCanada at the receipt point.

(c) **Union Dawn Receipt Point Surcharge**

Each month, Shipper shall pay the Union Dawn Receipt Point Surcharge for service from the Union Dawn Receipt Point notwithstanding any failure by Shipper during such month, for any reason whatsoever including force majeure or a default by Shipper under subsection 2.1 hereof, to deliver Shipper's Authorized Quantity to TransCanada at the Union Dawn Receipt Point.

(d) **Fuel**

For each month, a Shipper shall provide, on a daily basis, a quantity of fuel in accordance with Section IV (1)(a) of the General Terms and Conditions.

**Transportation Tariff**

**TransCanada PipeLines Limited**

**FT TOLL SCHEDULE**

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**4. MINIMUM BILL**

- 4.1 The minimum monthly bill for service hereunder shall be the demand charges determined in Paragraphs 3.1 (a) (i) and (if applicable) 3.1 (b) and 3.1 (c) hereof, after giving effect to any adjustment pursuant to Section 5 hereof.

**5. DEMAND CHARGE ADJUSTMENTS**

- 5.1 If during any day, TransCanada fails to deliver the quantity of gas requested by Shipper up to the Contract Demand, for any reason related solely to TransCanada's operations, including an event of force majeure occurring on any of the pipeline systems of TransCanada, Great Lakes Gas Transmission Company ("GLGT"), Union Gas Limited ("Union") and Trans Québec & Maritimes Pipeline Inc. ("TQM"), then the monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Toll multiplied by the difference between the quantity of gas which TransCanada actually delivered to Shipper on such day, and the quantity of gas which such Shipper in good faith nominated hereunder on such day. If TransCanada refuses to accept deliveries of Shipper's gas or curtails receipts from or deliveries to Shipper pursuant to Paragraph 8 (Energy Imbalance Recovery) of Section XXII of the General Terms and Conditions, then there shall be no corresponding reduction in the monthly demand charge to Shipper. Notwithstanding the foregoing, if the quantity of gas which TransCanada fails to deliver is the subject of an accepted nomination for a Diversion and/or an Alternate Receipt, then TransCanada shall only be obligated to reduce the monthly demand charge if such Diversion is a Diversion and/or such Alternate Receipt is of the nature described in subsection 1(h)(ii) or 2(h)(ii) in Section XV of the General Terms and Conditions and in all other cases there shall be no reduction in the monthly demand charge.
- 5.2 For any day on which transportation service charges are adjusted pursuant to subsection 5.1 above, the Union Dawn Receipt Point Surcharge payable by Shipper pursuant to subsection 3.1(c) hereof shall also be adjusted. Such surcharge shall be reduced by an amount equal to the applicable Union Dawn Receipt Point Daily Demand Toll multiplied by the difference between the quantity of gas which TransCanada actually transported from the Union Dawn Receipt Point on such day and the quantity which such Shipper in good faith nominated for transport on such day.

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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**6. ALTERNATE RECEIPT AND DIVERSION OF GAS**

- 6.1 (a) Subject to the provisions herein, Shipper shall have the right to nominate an Alternate Receipt and/or a Diversion under Shipper's Contract in the manner provided herein.
- (b) The aggregate of all nominations for delivery hereunder shall not exceed the Contract Demand under Shippers Contract.
- (c) Shipper shall not be entitled to nominate a Diversion to a delivery point or delivery area which is upstream of the receipt point specified in Shipper's Contract or upstream of the Alternate Receipt point.
- (d) Shipper shall not be entitled to nominate an Alternate Receipt from a receipt point that is upstream of the receipt point specified in Shippers Contract or is downstream of the delivery point or delivery area specified in Shippers Contract.
- (e) For the purpose of Section XVI of the General Terms and Conditions, Alternate Receipts and Diversions shall be equivalent to service under an STS Contract.
- 6.2 Any nomination by Shipper for an Alternate Receipt and/or a Diversion under Shipper's Contract must be received by TransCanada's Gas Control Department in Calgary at the time specified pursuant to Section XXII of the General Terms and Conditions.
- 6.3 TransCanada shall have the right to not accept a nomination made pursuant to Section 6.2 hereof or to accept only a portion of the quantities so nominated if the Alternate Receipt and/or the Diversion nominated would negatively impact TransCanada's ability to provide those transportation services which, pursuant to Section XV of the General Terms and Conditions, have a priority of service which is higher than that of the Alternate Receipt and/or the Diversion nominated by Shipper or if such Alternate Receipt and /or Diversion would otherwise be immediately curtailed pursuant to Paragraph 1(e) or 2(e) of Section XV of the General Terms and Conditions. TransCanada shall have the right to curtail Alternate Receipts, and/or Diversions in accordance with Section XV of the General Terms and Conditions.
- 6.4. **Alternate Receipt and Diversions Return Home**
- In the event that TransCanada does not accept a nomination for an Alternate Receipt and/or a Diversion pursuant to Sections 6.2 and 6.3 hereof, or accepts only a portion of the quantity so nominated, then TransCanada shall exercise reasonable efforts to allow



**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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Shipper to re-nominate the receipt point and/or delivery point or delivery area specified in Shipper's Contract. TransCanada shall have the right to reject any such re-nomination, or to accept only a portion of the quantity so re-nominated, if the re-nomination would negatively impact any other authorized transportation service. In any event, Shipper shall pay the Daily Demand Toll based on the receipt point and delivery point or area specified in Shipper's Contract for the entire quantity set out in an Alternate Receipt and/or Diversion nomination which was rejected by TransCanada pursuant to Section 6.3 hereof.

- (a) In addition to the charges payable pursuant to Section 3.1(a) and (d) above, Shipper shall pay TransCanada for all Alternate Receipts and Diversions, a charge equal to the aggregate of:
  - (i) the product obtained by multiplying the amount, if any, by which the Daily Demand Toll, applicable from the Alternate Receipt point to the delivery point or area specified in Shipper's Contract, exceeds the applicable Daily Demand Toll from the receipt point to the delivery point or area which are specified in Shipper's Contract by Shippers Authorized Quantity, and
  - (ii) the product obtained by multiplying the amount, if any, by which the Daily Demand Toll, applicable from the receipt point specified in the Shipper's Contract to the Diversion point, exceeds the applicable Daily Demand Toll from the receipt point to the delivery point or area which are specified in the Shipper's Contract, by Shippers Authorized Quantity.
- (b) If the gas is diverted hereunder to a Delivery Point at which a delivery pressure charge has been approved by the NEB and no delivery pressure charge exists for the Delivery Point specified in Shipper's Contract, then Shipper shall pay TransCanada, in addition to the charges provided above, an amount equal to the applicable Delivery Pressure Toll multiplied by Shipper's total Diversion quantity at such Delivery Point for such month (a "Point Diversion Delivery Pressure Charge"). If a delivery pressure charge exists at the delivery point specified in Shipper's Contract, then Shipper shall pay TransCanada, in addition to the delivery pressure charge described in Section 3.1(b) above, an amount (a "Point Diversion Delivery Charge") equal to the product obtained by multiplying Shipper's total Diversion quantity at the delivery point which is the subject of the

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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Diversion multiplied by that amount, if any, by which the Delivery Pressure Toll at the delivery point which is the subject of the Diversion exceeds the delivery pressure toll at the delivery point specified in Shipper's Contract.

The total delivery pressure charge for Diversion quantities shall be the sum of the Point Diversion Delivery Pressure Charges at all applicable Delivery Points plus the delivery pressure charge, if any, payable pursuant to Section 3.1(b) above.

- (c) If Shipper nominates Union Dawn Receipt Point as an Alternate Receipt point, then Shipper shall pay to TransCanada, in addition to any other applicable charges, the Union Dawn Receipt Point Surcharge for service from the Union Dawn Receipt Point.

**7. ASSIGNMENT**

- 7.1 Any company which shall succeed by purchase, merger or consolidation to the properties, substantially or in entirety, of Shipper or of TransCanada, as the case may be, shall be entitled to the rights and shall be subject to the obligations of its predecessor in title under any Contract into which this Toll Schedule is incorporated and any related contracts. Further, either Shipper or TransCanada may, without relieving itself of its obligations under any Contract into which this Toll Schedule is incorporated (unless consented to by the other party which consent shall not be unreasonably withheld), assign any of its rights and obligations thereunder to another party. Nothing herein shall in any way prevent either party to such Contract from pledging or mortgaging its rights thereunder as security for its indebtedness. Such Contract shall be binding upon and shall inure to the benefit of the respective successors and assigns of the parties thereto. No assignment hereunder in respect of a service which has already resulted in a reduction of the affected distributor's Contract Demand shall entitle such distributor to any further reduction in its Contract Demand.
- 7.2 Assignments at a discount negotiated between assignors and assignees are permitted, provided that the approved toll continues to be paid to TransCanada.
- 7.3 Prior to the effective date of any assignment of any Contract subject to subsection XXIII(3)(b) of the General Terms and Conditions of TransCanada's Tariff, assignee shall as requested by TransCanada, execute an assignment of any related Financial Assurances Agreements (as defined in Section 4.4(c)(ii) of the Transportation Access Procedure) or execute a new Financial Assurances Agreement.

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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- 7.4 Save as herein provided, assignments of any Contracts into which this Toll Schedule is incorporated are expressly prohibited.

**8. RENEWAL RIGHTS**

- 8.1 Pursuant to any Contract into which this FT Toll Schedule is incorporated and which Contract has been determined by TransCanada to be serving a long term market, and subject to the following conditions, Shipper shall have the option (the "Renewal Option") of extending the existing term (the "Existing Term") of the Contract for a period of no less than one (1) year (the "Renewal Term") and revising the Contract Demand to a level no greater than the Contract Demand set out in the Contract (the "Renewal OD") provided that the following conditions are met:

- (a) TransCanada receives written notice from Shipper of Shipper's election to exercise the Renewal Option which sets out the term and Contract Demand of such renewal (the "Renewal Provisions") no less than six (6) months before the termination date which would otherwise prevail under the Contract; and
- (b) Shipper supplies TransCanada at the time of such notice with evidence satisfactory to TransCanada that Shipper will meet the availability provisions of the FT Toll Schedule in respect of the Renewal Provisions prior to the commencement of the Renewal Term.

TransCanada may accept late notice of Shipper's election to exercise the Renewal Option if TransCanada, in its sole discretion, determines that TransCanada will have the required capacity available after providing capacity for all of TransCanada's obligations pursuant to prior outstanding requests from Shipper and/or others, that such renewal will not adversely impact TransCanada's system operations and that all of the costs for providing this service will be covered by TransCanada's tolls. Contracts may be revised as of the effective renewal date to adhere to the then current Pro Forma Firm Transportation Service Contract.

Shipper may exercise the Renewal Option more than one time provided that the conditions found in this Section 8.1 and in Section 8.2 hereof are met upon each and every exercise of the Renewal Option.

- 8.2 Provided TransCanada has either received timely notice as provided in Section 8.1(a) above from Shipper of Shipper's election to exercise the Renewal Option, or accepted

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

---

late notice from Shipper of his election to exercise the Renewal Option, and provided that Shipper has met the availability provisions of the FT Toll Schedule in respect of the Renewal Provisions, the Contract shall be amended as follows:

- (a) the Contract Demand set out in the Contract shall be revised to the level specified in the Renewal Provisions, effective as of the commencement of the Renewal Term; and
- (b) the term of the Contract shall be extended to that specified in the Renewal Provisions, effective as of the expiry of the Existing Term.

8.3 All renewals shall be stated in GJ.

**9. TEMPORARY RECEIPT AND/OR DELIVERY POINT(S)**

9.1 Upon receipt of a written request from Shipper, TransCanada may, in its sole discretion, allow Shipper to temporarily change the receipt and/or delivery point(s) under a Contract. Such a temporary change in receipt and/or delivery point(s), once authorized by TransCanada, shall apply for a minimum duration of three (3) months and shall not exceed the remaining term of the Contract.

9.2 Shipper's limited entitlement to obtain temporary receipt and/or delivery point(s) may apply to the full Contract Demand specified in the Contract, or any portion thereof.

9.3 For transportation service from a temporary receipt point and/or to a temporary delivery point, Shipper shall pay the following:

- (a) the greater of the Monthly Demand Toll payable for transportation from the original receipt point to the original delivery point specified in the Contract, and the Demand Toll which applies:
  - (i) from the original receipt point to the temporary delivery point;
  - (ii) from the temporary receipt point to the original delivery point; or
  - (iii) from the temporary receipt point to the temporary delivery point;

as the case may be:

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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- (b) the applicable Commodity Toll for the quantity of gas delivered after giving effect to the temporary receipt and/or delivery point(s);
  - (c) the greater of the Delivery Pressure Monthly Demand Toll applicable to the original delivery point specified in the Contract and the Delivery Pressure Monthly Demand Toll which applies to the temporary delivery point, plus any fuel related to the delivery pressure; and
  - (d) the Union Dawn Receipt Point Monthly Surcharge, provided however:
    - (i) if Shipper temporarily changes all or a portion of its Contract Demand from the Union Dawn Receipt Point to any other Receipt Point, the Contract Demand for the purposes of determining the Union Dawn Receipt Point Surcharge shall be Shipper's original Contract Demand at the Union Dawn Receipt Point notwithstanding any temporary changes of all or a portion of such Contract Demand to any other Receipt Point; and
    - (ii) if Shipper temporarily changes all or a portion of its Contract Demand from a Receipt Point other than the Union Dawn Receipt Point to the Union Dawn Receipt Point, the Contract Demand for the purposes of determining the Union Dawn Receipt Point Surcharge shall be the portion of such Contract Demand temporarily changed to the Union Dawn Receipt Point.
- 9.4 The Demand charges set out in subsections 9.3 a), c) and d) above are payable by Shipper notwithstanding any failure by Shipper during such month, for any reason whatsoever, including force majeure or a default by Shipper under Section 2.1 hereof, to deliver Shipper's Receipt Gas to TransCanada at the temporary receipt point.
- 9.5 Shipper shall pay for or provide, on a daily basis, a quantity of fuel based on the applicable monthly fuel ratio established by TransCanada for transportation for the quantity of gas delivered after giving effect to the temporary receipt and/or delivery point(s).

**Transportation Tariff****TransCanada PipeLines Limited****FT TOLL SCHEDULE**

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- 9.6 Upon acceptance by TransCanada of Shipper's request for a temporary receipt or delivery point, transportation service hereunder shall be firm in accordance with Section 2.1 of this FT Toll Schedule.
- 9.7 If Shipper executes an Exhibit "B" to any STS-L Contract, Shipper shall not be entitled to change any receipt and/or delivery points pursuant to this Section 9 for any of the Linked FT Contracts during the Linked Term both set out in such Exhibit "B".

**10. CONVERSION RIGHTS**

- 10.1 Shipper may convert service pursuant to an FT Contract to service pursuant to an FT-SN Contract provided that:
- (a) Shipper submits a written request to TransCanada for conversion of a specified FT Contract;
  - (b) all the availability conditions set out in Section 1 of the FT-SN Toll Schedule have been satisfied; and
  - (c) TransCanada determines, in its sole discretion, it is able to accommodate the conversion to FT-SN with consideration for any operational matters including, but not limited to, flow control valves, meter capacity, changes in delivery patterns and transient effects.

**11. MISCELLANEOUS PROVISIONS**

- 11.1 The General Terms and Conditions and the List of Tolls of TransCanada's Transportation Tariff, as amended from time to time, are applicable to this Toll Schedule and are hereby made a part hereof. If there is any conflict between the provisions of this Toll Schedule and the General Terms and Conditions, the provisions of this Toll Schedule shall prevail.
- 11.2 This Toll Schedule, the List of Tolls and the General Terms and Conditions are subject to the provisions of the National Energy Board Act or any other legislation passed in amendment thereof or substitution therefor.
- 11.3 This Toll Schedule together with the provisions of the General Terms and Conditions supercedes and replaces all previous Toll Schedules applicable to the Contract.

**GENERAL TERMS AND CONDITIONS****INDEX**

<b>Section</b>		<b>Sheet No.</b>
I	DEFINITIONS .....	2
II	APPLICABILITY AND CHARACTER OF SERVICE .....	8
III	TOLLS .....	9
IV	SHIPPER PROVISION OF FUEL REQUIREMENTS .....	10
V	QUALITY .....	11
VI	MEASUREMENTS .....	13
VII	DELIVERY POINT .....	14
VIII	POSSESSION OF GAS .....	15
IX	MEASURING EQUIPMENT .....	15
X	BILLING .....	18
XI	PAYMENTS .....	18
XII	DELIVERY PRESSURE .....	21
XIII	WARRANTY OF TITLE TO GAS .....	22
XIV	FORCE MAJEURE .....	22
XV	IMPAIRED DELIVERIES .....	23
XVI	DETERMINATION OF DAILY DELIVERIES .....	30
XVII	DEFAULT AND TERMINATION .....	31
XVIII	NON-WAIVER AND FUTURE DEFAULT .....	31
XIX	DELIVERY AREAS .....	32
XX	DELIVERY AREAS, TOLL ZONES AND EXPORT DELIVERY POINTS .....	32
XXI	INCORPORATION IN TOLL SCHEDULES AND CONTRACTS .....	34
XXII	NOMINATIONS AND UNAUTHORIZED QUANTITIES .....	34
XXIII	FINANCIAL ASSURANCES .....	43
XXIV	TITLE TRANSFERS .....	45
XXV	LIABILITY AND LIMITATION OF LIABILITY .....	45

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GENERAL TERMS and CONDITIONS

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**I DEFINITIONS**

Except where the context expressly states another meaning, the following terms, when used in these General Terms and Conditions, in any Contract and in any Toll Schedule into which these General Terms and Conditions are incorporated, shall be construed to have the following meanings:

- "Alternate Receipt" shall mean the receipt of quantities of gas at a receipt point not specified in Shipper's FT, FT-SN or FT-NR Contract.
- "Banking Day" shall mean any day that the Royal Bank of Canada, Main Branch, Calgary, Canada or other financial institutions agreed to by TransCanada for payment pursuant to Section XI herein, conducts business.
- "Contract" shall mean a transportation service contract or a contract pursuant to the SNB Toll Schedule and shall also mean an Order of the NEB pursuant to Section 71(2) of the National Energy Board Act, as amended from time to time requiring TransCanada to provide transportation service.
- "Contract Demand" shall mean:
  - (i) with respect to transportation service contracts entered into prior to November 1, 1998, the contract demand, maximum daily quantity, annual contract quantity or maximum quantity as stated in a transportation service contract, converted to GJ by multiplying such contract demand, maximum daily quantity, annual contract quantity or maximum quantity by GHV-97 for the relevant delivery point as more particularly set out in the HV-97 Schedule attached to these General Terms and Conditions subject to variance pursuant to a Shipper election to restate its contract demand within the range from 99% of GHV-97 to 101% of GHV-97, which was received by TransCanada on or before February 13, 1998; and,
  - (ii) with respect to transportation service contracts entered into on or after November 1, 1998, that quantity of gas expressed in GJ specified in Shipper's transportation service contract as Shipper's daily or seasonal entitlement, as the case may be, to transportation capacity.
- "Contract Year" shall mean a period of 12 consecutive months beginning on a first day of November.



**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

- "Cubic Metre" or "m<sup>3</sup>" shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of fifteen degrees (15°) Celsius, and at a pressure of 101.325 kilopascals absolute.

- "Cumulative Storage Balance" for a Shipper's STS or STS-L Contract on any Day shall be equal to:  $A + B + C + D - E$

Where:

"A" = the cumulative Daily Injection Quantity on such Day;

"B" = the cumulative Daily STFT Quantity on such Day;

"C" = the cumulative Daily IT Quantity on such Day;

"D" = the cumulative Daily Diversion Quantity on such Day; and

"E" = the cumulative Daily Withdrawal Quantity on such Day;

all as defined in subsection 3.1(e) of the STS Toll Schedule for STS Contracts or 3.1(c) of the STS-L Toll Schedule for STS-L Contracts.

- "Daily Contract Injection Quantity" shall, for the purposes of the STS-L Contracts, mean the quantity of gas specified in the STS-L Contract for delivery from the Market Point to the Storage Injection Point(s).
- "Daily Contract Withdrawal Quantity" shall, for the purposes of the STS-L Contracts, mean 75% of the Daily Contract Injection Quantity, for delivery from the Storage Withdrawal Point to the Market Point.
- "Daily Diversion Quantity" shall have the meaning ascribed in subsection 3.1(e)(i) of the STS Toll Schedule.
- "Daily Excess Withdrawal Quantity" shall be as defined in subsection 3.1(e) of the STS Toll Schedule for STS Contracts and subsection 3.1(c) of the STS-L Toll Schedule for STS-L Contracts.

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- "Daily Injection Quantity" shall be as defined in subsection 2.2(a) of the STS Toll Schedule for STS Contracts or STS-L Toll Schedule for STS-L Contracts.
- "Daily IT Quantity" shall be as defined in subsection 3.1(e) of the STS Toll Schedule for STS Contracts and in subsection 3.1(e) of the STS-L Toll Schedule for STS-L Contracts.
- "Daily Operational Injection Quantity" shall, for the purposes of STS-L Contracts, mean the least of the aggregate of the Contract Demand(s) of the Linked FT Contract(s) and the Daily Contract Injection Quantity from the Market Point to the Storage Injection Point(s).
- "Daily STFT Quantity" shall be as defined in subsection 3.1 (e) of the STS Toll Schedule for STS Contracts and in subsection 3.1(e) of the STS-L Toll Schedule for STS-L Contracts.
- "Daily Withdrawal Quantity" shall be as defined in subsection 2.2(b) of the STS Toll Schedule for STS Contracts and subsection 2.2(b) STS-L Toll Schedule for STS-L Contracts.
- "Daily Demand Toll" shall mean the toll determined by multiplying the Monthly Demand Toll for transportation service, as approved by the NEB (as set forth in the List of Tolls referred to in Section III hereof), by twelve (12) and dividing the result by the number of days in the Year.
- "Day" shall mean a period of 24 consecutive hours, beginning and ending at 09:00 hours Central Clock Time, or at such other time as may be mutually agreed upon by Shipper and TransCanada. The reference date for any day shall be the calendar date upon which the 24 hour period shall commence.
- "Delivery Pressure Daily Demand Toll" shall mean the toll determined by multiplying the Delivery Pressure Monthly Demand Toll, as approved by the NEB (as set forth in the List of Tolls referred to in Section III hereof), by twelve (12) and dividing the result by the number of days in the Year.
- "Diversion" shall mean the delivery of quantities of gas at a delivery point and/or delivery area not specified in Shipper's FT, FT-SN, FT-NR, FST or LT-WFS Contract.
- "EDI" means Electronic Data Interchange being the direct computer-to-computer transfer of information using ANSI ASC X12 protocol and a specific definition assigned by TransCanada under standards agreed to by a consensus of the natural gas industry (through standard-setting committees).

**Transportation Tariff****TransCanada PipeLines Limited**

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GENERAL TERMS and CONDITIONS

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- "EDI format" shall mean a file format compliant with the ANSI ASC X12 protocol used for EDI and according to the specific definition assigned by TransCanada under standards agreed to by a consensus of the natural gas industry (through standard-setting committees).
- "Financial Assurance" shall have the meaning attributed to it in subsection XXIII(1) hereof.
- "Fuel Quantity" shall mean the quantity of gas expressed in gigajoules which is to be used by TransCanada as fuel for transporting Shipper's Authorized Quantity.
- "GJ" shall mean gigajoule being 1,000,000,000 joules and include the plural as the context requires.
- "GHV-97" shall mean the gross heating value for each delivery point as set out in the HV-97 Schedule attached to these general terms and conditions as adjusted in accordance with any Shipper election given to TransCanada prior to February 13, 1998.
- "GHV" shall mean gross heating value.
- "Gas" shall mean: (i) any hydrocarbons or mixture of hydrocarbons that, at a temperature of 15° C and a pressure of 101.325 kPa, is in a gaseous state, or (ii) any substance designated as a gas product by regulations made under section 130 of the National Energy Board Act.
- "Gross Heating Value" shall mean the total joules expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion to be at standard temperature and all water formed by combustion reaction to be condensed to the liquid state.
- "Joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force.
- "Linked FT Contract" shall mean the FT Contract(s) identified in Exhibit "B" of Shipper's STS-L Contract and such FT Contract shall satisfy the following:
  - i. the delivery point shall be the same as the Market Point specified in Exhibit "A" of Shippers STS-L Contract;

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- ii. is not identified in any other STS Contract or any Exhibit "B" of any other STS-L Contract;
  - iii. has a minimum Linked Term of 1 month, and shall commence on the first day of a month and shall end on the last day of a month;
  - iv. has a receipt point that is Empress or in the province of Saskatchewan.
- "Linked Term" shall have the meaning ascribed in Exhibit "B" of the STS-L Toll Schedule
- "Market Point" shall have the meaning ascribed in Exhibit "A" of the STS Contract or STS-L Contract as the case may be.
- "Month" shall mean the period beginning on the first day of the calendar month and ending at the beginning of the first day of the next succeeding calendar month.
- "Natural Gas Interchangeability Indices" shall have the meaning ascribed in section 5(iv).
- "CCT" shall mean Central Clock Time, representing the time in effect in the Central Time Zone of Canada at the time a transaction occurs, regardless of whether that time may be Standard Time or Daylight Savings Time as those terms are commonly known and understood.
- "NEB" shall mean the National Energy Board or any regulatory or government authority hereafter having a similar jurisdiction in substitution therefor.
- "Shipper" shall mean a customer of transportation service.
- "Shipper's Authorized Quantity" shall be as defined in subsection 1 of Section XXII.
- "Shipper's Maximum Hourly Flow Rate" shall mean, on any Day, the maximum hourly rate of flow of Gas Shipper may receive at a delivery point or area and which shall be equal to the sum of:
  - a) 5% of the aggregate daily Contract Demand for all of Shipper's service pursuant to FT, FT-NR, FST, LT-WFS, STFT, FBT, STS and STS-L Contracts which specify delivery of gas to such delivery point or area (excluding deliveries pursuant to STS and STS-L Contracts that are on a best efforts basis) minus all Diversions under such Contracts on such Day; and

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- b) 5% of the aggregate Shipper's Authorized Quantity for deliveries to such delivery point or area under all of Shipper's IT, IBT, and ECR Contracts, STS Overrun, FST Makeup, Diversions on such Day and deliveries which are on a best effort basis pursuant to STS and STS-L Contracts.
- "Short Notice Service" shall mean service pursuant to a FT-SN Toll Schedule, SNB Toll Schedule or ST-SN Toll Schedule.
  - "Storage Injection Point" shall have the meaning ascribed in Exhibit "A" of the STS Contract or the STS-L Contract as the case may be.
  - "Storage Withdrawal Point" shall have the meaning ascribed in Exhibit "A" of the STS Contract or the STS-L Contract as the case may be.
  - "Subsidiary" shall mean a company in which 50% or more of the issued share capital (having full voting rights under all circumstances) is owned or controlled directly or indirectly by another company, by one or more subsidiaries of such other company, or by such other company and one or more of its subsidiaries.
  - "Title Transfer" shall mean the transfer of title to gas between two (2) Shippers at a Title Transfer Point.
  - "Title Transfer Point" shall be those points and areas where the quantity of gas allocated to each Shipper is established each day and is not subject to reallocation.
  - "TransCanada" shall mean "TransCanada PipeLines Limited" and its successors.
  - "Transportation Service Contract" shall mean "Firm Transportation Service Contract", "FT Contract", "Firm Transportation Short Notice Contract", "FT-SN Contract", "Non Renewable Firm Transportation Contract", "FT-NR Contract", "Interruptible Service Transportation Contract", "IT Contract", "Interruptible Backhaul Service Contract", "IT Backhaul Contract", "Storage Transportation Service Contract", "STS Contract", "STS-L Contract", "Short Term Firm Transportation Service Contract", "STFT Contract", "Short Term Short Notice Service Contract", "ST-SN Contract", "Firm Service Tendered Contract, "FST Contract", "Enhanced Capacity Release Service Contract", "ECR Contract", "Long-Term Firm Service Contract", "LT-WFS Contract", "Firm Backhaul Transportation Service Contract" and "FBT Contract".

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

- "Union Dawn Receipt Point Daily Demand Toll" shall mean the toll determined by multiplying the Union Dawn Receipt Point Monthly Demand Toll by twelve (12) and dividing the result by the number of days in the Year.
- "Union Dawn Receipt Point Surcharge" shall mean a charge payable by Shipper for service from the Union Dawn Receipt Point determined as follows:
  - (a) for service under FT, FT-NR and FT-SN Transportation Service Contracts, by multiplying the Union Dawn Receipt Point Monthly Demand Toll by Shipper's Contract Demand; provided however that if Shipper's Contract Demand changes during a month, then a weighted average daily Contract Demand shall be determined for such month and shall be used to calculate the demand charge for such month; and
  - (b) for service under all other Transportation Service Contracts, by multiplying the Union Dawn Receipt Point Daily Demand Toll by Shipper's Authorized Quantity.
- "Wobbe Index" shall mean a measure of the thermal input through a fixed orifice, calculated by dividing the natural gas Gross Heating Value in mega joules per cubic meter by the square root of the natural gas specific gravity with respect to air, based on a gross or higher heating value (HHV) at standard conditions 14.73 psi/60° F, 101.325Kpa/15° C real, dry basis.
- "Year" shall mean a period of 365 consecutive days commencing January 1<sup>st</sup> of any year; PROVIDED HOWEVER, that any such year which contains a date of February 29 shall consist of 366 consecutive days.

**II APPLICABILITY AND CHARACTER OF SERVICE**

1. (a) Subject to the provisions of the applicable Toll Schedule and these General Terms and Conditions, on each day for which service is requested by Shipper, and authorized by TransCanada pursuant to Section XXII hereof, Shipper shall deliver and TransCanada shall receive, at the receipt point set out in Shipper's Contract (the "receipt point"), the Shipper's Authorized Quantity and TransCanada shall transport for Shipper and Shipper shall receive, at the delivery point set out in Shipper's Contract (the "delivery point"), a quantity of gas equal thereto; PROVIDED HOWEVER, that under no circumstances shall TransCanada be obligated to deliver to Shipper in any one day, at the delivery point, a quantity of gas in excess of the Contract Demand.

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

- (b) If on any day Shipper fails to accept all or any portion of the gas delivered at the delivery point by TransCanada pursuant to the applicable Toll Schedule, TransCanada shall have the right to curtail further receipts of gas from Shipper at the receipt point in a quantity equal to that which Shipper failed to accept from TransCanada. If on any day Shipper requests service hereunder but fails, for whatever reason, to deliver gas to TransCanada at the receipt point, then TransCanada shall have the right to curtail further deliveries of gas to Shipper at the delivery point in a quantity equal to that which Shipper failed to deliver to TransCanada.
2. Shipper's Authorized Quantity shall, where applicable, be delivered on such day by Shipper to TransCanada at the receipt point or taken on such day by Shipper from TransCanada at the delivery point or area, as the case may be, at hourly rates of flow as nearly constant as possible; PROVIDED HOWEVER, that Shipper may not, without TransCanada's consent, take delivery of such gas at the delivery point or area at an hourly rate of flow in excess of the Shipper's Maximum Hourly Flow Rate.
3. Departures from scheduled daily deliveries due to the inability of TransCanada or Shipper to maintain precise control shall be kept to the minimum permitted by operating conditions.
4. From the time gas is delivered into the possession of TransCanada at the receipt point TransCanada shall have the unqualified right to commingle such gas with other gas in TransCanada's pipeline system.

**III TOLLS**

1. The tolls applicable to service provided under any Contract into which these General Terms and Conditions are incorporated shall be determined:
- (i) in the case of all transportation services, except Storage Transportation Service ("STS") and "Storage Transportation Service-Linked" (STS-L), where the receipt point is located at the Alberta/Saskatchewan border or where the receipt and delivery points are located in different provinces, on the basis of the Canadian Toll Zone in which the delivery point is located for gas which is delivered for consumption in Canada under a Contract in which the principal delivery point(s) specified therein do not include any export delivery points for gas destined for export to the United States; or

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- (ii) as fixed and approved by the NEB, on the basis of the receipt and delivery points for delivery of gas destined for export to the United States; or
- (iii) in the case of STS and STS-L contracts and contracts providing receipt and delivery points within one province of Canada, as fixed and approved by the NEB, on the basis of the receipt point and delivery points set out therein.

If gas intended for consumption in Canada is delivered hereunder at more than one delivery point within a Canadian Toll Zone, the appropriate toll shall be applied as though such delivery points were one point and as if the gas delivered was measured by one meter; or

- (iv) in the case of service pursuant to the SNB Toll Schedule using a methodology approved by the NEB.

2. The tolls applicable to services provided pursuant to the Toll Schedules of TransCanada's Transportation Tariff are set out in the List of Tolls of TransCanada's Transportation Tariff as same may be amended from time to time upon approval of the NEB.

**IV SHIPPER PROVISION OF FUEL REQUIREMENTS****1. Daily Operations**

- (a) For each and every day in respect of which Shipper's Authorized Quantity is accepted by TransCanada for transportation, Shipper shall, in addition to Shipper's Authorized Quantity, nominate, pursuant to the provisions of Section 2 hereof, and make available to TransCanada at any receipt point specified in the contract and/or Alternate Receipt point for FT or FT-NR Contracts the Fuel Quantity ("Qf"), which quantity shall be determined as follows:

$$Q_f = Q_d \times FR\% / 100 + \sum (Q_{d_j} \times fr_j\% / 100) + \sum (Q_{d_{Dawn}} \times fr_{Dawn}\% / 100)$$

Where:



**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

"FR%" is the applicable monthly fuel ratio respecting transportation service from the nominated receipt point to the nominated delivery point;

"fr<sub>i</sub>%" is the applicable monthly fuel ratio for delivery pressure in excess of a gauge pressure of 4000 kilopascals at delivery point "i", both as set out in TransCanada's notice to Shipper delivered pursuant to Section 2 hereof;

"fr<sub>Dawn</sub>%" is the applicable monthly fuel ratio respecting transportation service from the nominated Union Dawn Receipt Point to the nominated delivery point;

"Qd" is the Shipper's Authorized Quantity;

"Qd<sub>i</sub>" is the quantity to be delivered at delivery point "i", for which point a toll for delivery pressure services has been approved by the NEB (as set forth in the List of Tolls referred to in Section III hereof);

"Qd<sub>Dawn</sub>" is the quantity to be transported by Shipper from the Union Dawn Receipt Point, for which a toll has been approved by the NEB (as set forth in the List of Tolls referred to in Section III hereof);

" $\Sigma (Qd_i \times fr_i\% / 100)$ " represents the sum of the fuel quantities required for delivery pressure in excess of a gauge pressure of 4000 kilopascals at all points applicable to Shipper's Authorized Quantity; and

" $\Sigma (Qd_{Dawn} \times fr_{Dawn}\% / 100)$ " is the sum of the fuel quantities required for the Union Dawn Receipt Point applicable to Shipper's Authorized Quantity.

- (b) TransCanada shall not be required to accept or deliver gas on any day if the appropriate Fuel Quantity has not been nominated by Shipper, or if TransCanada is unable to confirm that a quantity of gas equal to Shipper's Authorized Quantity plus the appropriate Fuel Quantity will, in fact, be made available on such day.

## GENERAL TERMS and CONDITIONS

**2. Nominations and Authorizations**

Concurrent with nominating for transportation service for a given day, pursuant to Section XXII hereof, Shipper shall also nominate the Fuel Quantity to be made available to TransCanada on such day (the "fuel tender"). In the event TransCanada is not prepared to authorize Shipper's nomination or if TransCanada determines that Shipper's fuel tender is incorrect, TransCanada shall, by 14:00 hours CCT of the day immediately preceding the day for which service has been requested, advise Shipper to revise its fuel tender, and Shipper shall nominate such revised fuel tender by 15:00 hours CCT on such day. All fuel tenders shall be stated to the nearest one (1) GJ.

Shipper's fuel tender shall be determined by Shipper pursuant to the formula set out in subsection 1(a) hereof. On or before the twenty-fifth day of each month, TransCanada shall provide Shipper with written notice of the monthly fuel ratio to be applied during the next succeeding month. In the absence of any notice as aforesaid Shipper shall determine the fuel tender on the basis of the fuel ratio used in the immediately preceding month.

**V QUALITY**

1. The gas to be delivered hereunder shall be natural gas; provided however, that helium, natural gasoline, butane, propane and any other hydrocarbons except methane may be removed prior to delivery. TransCanada may subject, or permit the subjection of the natural gas to compression, cooling, cleaning and other processes.
2. **Heating Value:** The minimum gross heating value of the gas to be received and delivered by TransCanada shall be  $36.00 \text{ MJ/m}^3$ . The maximum Gross Heating Value of the gas to be received and delivered by TransCanada shall be  $41.34 \text{ MJ/m}^3$ . TransCanada shall have the right to refuse to accept Shipper's gas if the Gross Heating Value of such gas remains below  $36.00 \text{ MJ/m}^3$  or above  $41.34 \text{ MJ/m}^3$ .

In the event that the Gross Heating Value of the gas to be delivered by TransCanada is below  $36.00 \text{ MJ/m}^3$  or above  $41.34 \text{ MJ/m}^3$  the Shipper shall have the option to refuse to accept such gas so long as the Gross Heating Value remains below  $36.00 \text{ MJ/m}^3$  or above  $41.34 \text{ MJ/m}^3$ .

3. **Freedom from Objectionable Matter:** The gas to be received by TransCanada from Shipper and to be delivered by TransCanada hereunder:

**Transportation Tariff****TransCanada PipeLines Limited**

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GENERAL TERMS and CONDITIONS

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- (a) Shall be commercially free (at prevailing pressure and temperature in TransCanada's pipeline) from sand, dust, gums, oils, hydrocarbons liquefiable at temperatures in excess of minus ten degrees (-10°) Celsius at five thousand five hundred (5500) kPa absolute, impurities, other objectionable substances which may become separated from the gas, and other solids or liquids which will render it unmerchantable or cause injury to or interference with proper operations of the lines, regulators, meters or other appliances through which it flows; and shall not contain any substance not contained in the gas at the time the same was produced other than traces of those materials and chemicals necessary for the transportation and delivery of the gas and which do not cause it to fail to meet any of the quality specifications herein set forth.
- (b) Shall contain no more than twenty-three (23) milligrams of hydrogen sulphide per cubic metre nor more than one hundred and fifteen (115) milligrams of total sulphur per cubic metre of gas as determined by standard methods of testing.
- (c) Shall not contain more than two per cent (2%) by volume of carbon dioxide.
- (d) Shall have been dehydrated, if necessary, for removal of water present therein in a vapour state, and in no event contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas.
- (e) Shall not exceed a temperature of fifty degrees (50°) Celsius.
- (f) Shall be as free of oxygen as practicable and shall not in any event contain more than four tenths of one percent (0.4%) by volume of oxygen.
- (g) Shall not have a total inert gas content in excess of 4% when used as a diluent to meet Natural Gas Interchangeability Indices.
- (h) Shall be free of any microbiological organisms, active bacteria or bacterial agents, including but not limited to sulphate reducing bacteria, iron oxidizing bacteria, and/or acid producing bacteria.

4. **Failure to Conform to Specifications Re Objectionable Matter:** If the gas being received by TransCanada from Shipper or transported by TransCanada to Shipper fails at any time to conform to any of the specifications set forth in subsection 3 of this Section, then the party receiving such gas (the "First Party") shall notify the party delivering such gas (the "Second Party") of such deficiency and thereupon the First Party may at the First Party's option refuse to accept delivery pending correction by the Second Party. Upon the Second Party's failure promptly to remedy any deficiency in quality as specified in subsection 3 of this Section, the First

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

Party may accept delivery of such gas and may make changes necessary to bring such gas into conformity with such specifications, and the Second Party shall reimburse the First Party for any reasonable expense incurred by the First Party in effecting such changes.

5. **Natural Gas Interchangeability Indices:** The natural gas received by TransCanada shall conform to the following specifications (the "Natural Gas Interchangeability Indices");

- i) Weaver Incomplete Combustion Index less than or equal to 0.05;
- ii) AGA Yellow Tipping Index greater than or equal to 0.86;
- iii) The minimum Wobbe Index of the gas shall be  $47.23 \text{ MJ/m}^3$ ;
- iv) The maximum Wobbe Index of the gas shall be  $51.16 \text{ MJ/m}^3$ ; and
- v) Shall not contain greater than 1.5 mole percent (%) Butanes Plus.

The Natural Gas Interchangeability Indices are based on the following historical supply gas composition:

<b>Compound</b>	<b>Mole %</b>
Methane	95.6734
Ethane	1.6241
Propane	0.1410
I-Butane	0.0180
N-Butane	0.0173
I-Pentane	0.0034
N-Pentane	0.0034
N-Hexane	0.0014
N-Heptane	0.0007
N-Octane	0.0002
Nitrogen	1.8419
Carbon Dioxide	0.6411
Helium	0.0339

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GENERAL TERMS and CONDITIONS

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**VI MEASUREMENTS**

1. **Unit of Volume and Unit of Quantity:** The unit of volume for the purpose of reporting shall be one thousand (1000) cubic metres ( $10^3 \text{ m}^3$ ) of gas and the unit of quantity shall be GJ.
2. **Determination of Volume and Gross Heating Value:** The volume and the gross heating value of the gas received by TransCanada from Shipper and delivered to Shipper shall be determined as follows:
  - (a) The gas volumes shall be computed in accordance with the methodology prescribed in the Electricity and Gas Inspection Act (Canada) (R.S.C. 1985, c.E-4) as amended from time to time including all regulations and specifications promulgated pursuant to such Act (collectively, the "Electricity and Gas Inspection Act").
  - (b) For the purpose of measurement of gas received into and delivered from the TransCanada system, the parties agree that the average absolute atmospheric (barometric) pressure at such points shall be assumed to be constant during the term thereof, regardless of variations in actual barometric pressure from time to time, and shall be calculated based on the elevation of the measurement point. The formula used to calculate the atmospheric pressure shall be in accordance with the methodology prescribed in the Electricity and Gas Inspection Act (Canada) (R.S.C. 1985, c.E-4) amended from time to time including all regulations and specifications promulgated pursuant to such Act.
  - (c) The determination of the gross heating value of the gas received or delivered shall be performed in a manner approved under the Electricity and Gas Inspection Act or, if such specification is not set out in such Act, in accordance with industry accepted standards, and, in any event, in such manner as to ensure that the gross heating values so determined are representative of the gas received or delivered at the receipt or delivery point.
  - (d) The determination of the relative density of the gas received or delivered shall be performed in a manner approved under the Electricity and Gas Inspection Act or, if such specification is not set out in such Act, in accordance with industry accepted standards, and, in any event, in such manner as to ensure that the relative densities so determined are representative of the gas received or delivered at the receipt or delivery point.

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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**VII DELIVERY POINT**

1. For the purpose of Section VIII hereunder, unless otherwise specified in the Contract, the delivery point or points for all gas to be delivered by TransCanada to Shipper pursuant to any Contract into which these General Terms and Conditions are incorporated shall be on the outlet side of TransCanada's measuring stations located at or near the point or points of connection with the facilities of Shipper or Shipper's agent in receiving the gas, as specified in the Contract.
2. If the total quantity of gas delivered at any delivery point is less than 3750 GJ during any contract year, then Shipper shall pay TransCanada at the end of such contract year, in addition to any amounts otherwise payable, an amount equal to:

$$\frac{(\text{3750 GJ minus "X"}) \text{ times "Y"}}{3750 \text{ GJ}}$$

Where "X" is the total quantity (expressed in GJ) actually delivered by TransCanada to all Shippers at such delivery point during such contract year; and

Where "Y" is 18% of TransCanada's actual original costs of installation of the delivery facilities at such delivery point.

**VIII POSSESSION OF GAS**

TransCanada shall be deemed to be in control and possession of, and responsible for, all gas transported under the Contract from the time that such gas is received by it at the receipt point until such gas is delivered at the delivery point.

**IX MEASURING EQUIPMENT**

1. All meters and measuring equipment for the determination of gross heating value and/or relative density shall be approved pursuant to, and installed and maintained in accordance with, the Electricity and Gas Inspection Act.

Notwithstanding the foregoing, all installation of equipment applying to or affecting deliveries of gas shall be made in such manner as to permit an accurate determination of the quantity of gas delivered and ready verification of the accuracy of measurement. Care shall be exercised by both parties in the installation, maintenance and operation of pressure regulating equipment so as to

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GENERAL TERMS and CONDITIONS

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prevent any inaccuracy in the determination of the volume or quantity of gas delivered under the Contract.

- (a) **Measuring Station:** In accordance with the above, TransCanada will install, maintain and operate, or will cause to be installed, maintained and operated, at or near each delivery point, a measuring station equipped with a meter or meters and other necessary equipment for accurate measurement of the gas delivered under the Contract.

- 2. **Calibration and Test of Measuring Equipment:** The accuracy of measuring equipment shall be verified by TransCanada at reasonable intervals, and if requested, in the presence of representatives of Shipper, but TransCanada shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party shall notify the other that it desires a special test of any measuring equipment the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment is found to be in error by not more than the limits set out as follows:

- (a) 2% for measuring equipment utilized to determine volume,
- (b) 1% for any instrument utilized to determine relative density,
- (c) 0.5% for any instrument utilized to determine gross heating value.

If upon test, any measuring equipment is found to be in error by not more than the limits specified above, the previous readings of such equipment shall be considered accurate in computing deliveries or receipts of gas but such equipment shall be adjusted at once to register accurately.

If, for the period since the last preceding test, it is determined that:

- (a) any measuring equipment, except for those instruments specified in (b) and (c) below, shall be found to be inaccurate by an amount exceeding 2% at a recording corresponding to the average hourly rate of flow for such period, and/or
- (b) any instrument utilized to determine the relative density shall be found to be inaccurate by an amount exceeding 1%, and/or
- (c) any instrument utilized to determine the gross heating value shall be found to be inaccurate by an amount exceeding 0.5%, then the previous readings of measurement equipment and/or instruments utilized to determine the relative density or gross heating

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GENERAL TERMS and CONDITIONS

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value, as the case may be, shall be corrected to zero error for any period which is known definitely but in any case where the period is not known or agreed upon such correction shall be for a period extending over 50% of the time elapsed since the date of the last test.

Notwithstanding the foregoing, when TransCanada and Shipper mutually agree that a measurement instrument inaccuracy occurred at a definite point in time, a quantity correction shall be made even though said inaccuracy is less than the limits specified in (a), (b) and (c) above.

3. **Correction of Metering Errors: Failure of Meters:** In the event a meter is out of service, or registering inaccurately, the volume or quantity of gas delivered shall be determined by the most equitable method. Such methods shall include but not be limited to:
  - (a) mathematical calculations and comparisons including prevailing ratio with a parallel meter,
  - (b) the use of Shipper's check measuring equipment, and
  - (c) comparison to deliveries under similar conditions when the meter was registering accurately.
4. **Preservation of Metering Records:** TransCanada and Shipper shall each preserve for a period of at least six (6) years all test data, charts and other similar records. Microfilms of the original documents shall be considered true records.
5. **Check Measuring Equipment:** Shipper may install, maintain and operate at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of TransCanada's measuring equipment. Any pressure or volume control regulators installed by Shipper shall be operated so as not to interfere with TransCanada's measuring facilities.
6. **Rights of Parties:** The measuring equipment so installed by either party together with any building erected by it for such equipment, shall be and remain its property. However, TransCanada and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of the delivery of gas under the Contract. The records from such measuring



**Transportation Tariff****TransCanada PipeLines Limited**

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**GENERAL TERMS and CONDITIONS**

equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten days after receipt thereof.

**X BILLING**

1. **Monthly Billing Date:** For all contracts in effect prior to the effective date of the NEB's Decision in the RH-2-95 proceeding, TransCanada shall render bills on or before the tenth (10th) day of each month for all transportation services provided by TransCanada to the Canadian Toll Zones ("Domestic Service") and on or before the fifteenth (15th) day of each month for all transportation services provided by TransCanada to any Export Delivery Point ("Export Service"). For gas taken by Shipper in excess of the total daily quantity authorized by TransCanada, TransCanada shall also render bills for charges made pursuant to Section XXII on or before the tenth (10th) day of each month, in respect of Domestic Service, and on or before the fifteenth (15th) day of each month, in respect of Export Service.

For all Export Service Contracts coming into effect after the effective date of the NEB's Decision in the RH-2-95 proceeding, including the renewal of any Export Service Contracts which existed prior to such date, the billing date shall be the tenth (10th) day of each month.

2. **Information:** Shipper hereby undertakes to provide TransCanada with all the information and material required by TransCanada to calculate and verify the quantity of gas actually received by TransCanada from Shipper, and the quality specifications and components thereof.

If such information is not received by TransCanada in sufficient time prior to TransCanada rendering bills to Shipper pursuant to this Section X, such bills shall be calculated based on TransCanada's best estimate of the quantity and quality of gas actually received by TransCanada from Shipper. Any overcharges or undercharges resulting from any differences between the above estimates and the actual amounts shall be adjusted in the subsequent bill without any interest thereon.

**XI PAYMENTS**

1. **Monthly Payment Date:** For all contracts in effect prior to the effective date of the NEB's Decision in the RH-2-95 proceeding, Shipper shall pay to TransCanada, at its address designated in the Contract, or shall pay to the Royal Bank of Canada, Main Branch, Calgary,

Alberta, or at other institutions if agreed to by TransCanada for deposit to the account of TransCanada so that TransCanada shall receive payment from Shipper on or before the twentieth (20th) day of each month for Domestic Service, and by the twenty-fifth (25th) day of each month for Export Service (the "Payment Date") provided by TransCanada to Shipper pursuant to the applicable toll schedules and for any charges made pursuant to Section XXII herein during the preceding month and billed by TransCanada in a statement for such month according to the nominated and/or measured deliveries, computations, prices and tolls provided in the Contract. If the Payment Date is not a Banking Day, then payment must be received by TransCanada on Shipper's account or before the first (1st) Banking Day immediately prior to the Payment Date.

For all Export Service Contracts coming into effect after the effective date of the NEB's Decision in the RH-2-95 proceeding, including the renewal of any Export Service Contracts which existed prior to such date, the payment date shall be the twentieth (20th) day of each month; provided however, if the Payment Date is not a Banking Day, then payment must be received by TransCanada on Shipper's account on or before the first (1st) Banking Day immediately prior to the Payment Date.

2. **Remedies for Non-Payment:** Notwithstanding Section XVII, if Shipper fails to pay the full amount of any bill when payment is due, TransCanada may upon four (4) Banking Days written notice immediately suspend any or all service being or to be provided to Shipper provided however that such suspension shall not relieve Shipper from any obligation to pay any rate, toll, charge or other amount payable to TransCanada. If at any time during such suspension Shipper pays the full amount payable to TransCanada, TransCanada shall within two (2) Banking Days recommence such suspended service.

**Notwithstanding Section XVII** following suspension, TransCanada may, in addition to any other remedy that may be available to it, upon four (4) Banking Days written notice to Shipper immediately:

- (a) terminate any or all service being or to be provided to Shipper; and
- (b) declare any and all amounts payable now or in the future by Shipper to TransCanada for any and all service to be immediately due and payable as liquidated damages and not as a penalty.

In the event Shipper disputes any part of a bill, Shipper shall nevertheless pay to TransCanada the full amount of the bill when payment is due.

If Shipper fails to pay all of the amount of any bill as herein provided when such amount is due, interest on the unpaid portion of the bill accrues daily at a rate of interest equal to the prime rate of interest of the Royal Bank of Canada as it may vary from time to time, plus one percent (1%) and the principle and accrued interest to date shall be payable and due immediately upon demand.

3. **Adjustment of Underpayment, Overpayment or Error in Billing:** If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, then within thirty (30) days after the final determination thereof, TransCanada shall refund the amount of any such overcharge with interest which is equal to the prime rate of interest of the Royal Bank of Canada as it may vary from time to time from the time such overcharge was paid to the date of refund, plus one percent (1%) in addition thereto. If such refund is made by a credit on an invoice from TransCanada to Shipper, then the date of the refund shall be the date upon which the invoice reflecting such credit was rendered to Shipper by TransCanada. Shipper shall pay the amount of any such undercharge, but without interest. Adjustments to the amount billed in any statement rendered by TransCanada shall be made within the following time frames:

- (a) Measurement data corrections shall be processed within six (6) months of the production month with a three (3) month rebuttal period.
- (b) The time limitation for disputes of allocations shall be six (6) months from the date of the initial month-end allocation with a three (3) month rebuttal period.
- (c) Prior period adjustment time limits shall be six (6) months from the date of the initial transportation invoice with a three (3) month rebuttal period, excluding government-required rate changes.

These time limits shall not apply in the case of deliberate omission or misrepresentation or mutual mistake of fact. Parties' other statutory or contract rights shall not be otherwise diminished by these time limits.

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GENERAL TERMS and CONDITIONS

4. **Time of Payment Extended if Bill Delayed:** If presentation of a bill to Shipper is delayed after the tenth (10th) or the fifteenth (15th) day of the month, as applicable for domestic or export service respectively, then the time of payment shall be extended accordingly unless Shipper is responsible for such delay.

**XII DELIVERY PRESSURE**

Subject to the provisions set out in subsections a) and b) below, TransCanada shall deliver gas to Shipper at TransCanada's line pressure at the delivery point or points designated in the Contract, but the minimum pressure at each delivery point shall be not less than a gauge pressure of 4000 kilopascals or such lesser pressure that is agreed to by the parties; provided, however, that:

- (a) the parties shall not be required in any Contract into which these General Terms and Conditions are incorporated, to agree to delivery pressures less than the minimum contractual pressure theretofore applicable at existing delivery point; and
- (b) if the deliveries to Shipper at a delivery point or an agreed upon grouping of delivery points, exceeds the Shipper's Maximum Hourly Flow Rate without the prior consent of TransCanada, and the delivery pressure to Shipper falls below the delivery pressure agreed to in the Contract, despite reasonable preventative measures undertaken by TransCanada, then TransCanada shall, for the period of such excess deliveries, be relieved of its contractual obligation to such Shipper to deliver gas at such delivery point or area affected by the excess deliveries at the delivery pressure stipulated in the Contract.

If the receipt point or points under Shipper's Contract include that point on TransCanada's system which is immediately east of the Alberta/Saskatchewan border ("Empress"), then Shipper agrees to cause NOVA Corporation of Alberta (hereinafter called "NOVA") to design and construct sufficient facilities to allow Shipper's Authorized Quantity to be delivered to TransCanada at Empress at a gauge pressure of 4137 kPa or any greater pressure which may from time to time be specified by TransCanada for all gas to be delivered into TransCanada's system at Empress and to cause NOVA to deliver Shipper's Authorized Quantity to TransCanada at NOVA's line pressure provided that said pressure shall not be less than a gauge pressure of 3792 kPa.

**Transportation Tariff****TransCanada PipeLines Limited**

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**GENERAL TERMS and CONDITIONS**

For any receipt point downstream of Empress, Shipper shall do or cause others to do all that is required to allow Shipper's Authorized Quantity to be delivered to TransCanada at a pressure no less than that prevailing in TransCanada's pipeline at such receipt point at the time of delivery and no greater than the maximum allowable operating pressure of TransCanada's pipeline at such point.

**XIII WARRANTY OF TITLE TO GAS**

Shipper warrants that it owns or controls, has the right to:

1. deliver or have delivered, the gas that is delivered to TransCanada under the Contract;
2. transfer the gas pursuant to Section XXIV of these General Terms and Conditions.

Shipper shall indemnify and hold harmless TransCanada against all claims, actions or damages arising from any adverse claims by third parties claiming an ownership or an interest in the gas delivered for transport to TransCanada under the Contract or transferred pursuant to Section XXIV of these General Terms and Conditions.

**XIV FORCE MAJEURE**

In the event of either Shipper or TransCanada being rendered unable, wholly or in part, by force majeure to perform or comply with any obligation or condition hereof or any obligation or condition in any Contract into which these General Terms and Conditions are incorporated, such party shall give notice and full particulars of such force majeure in writing or by telegraph to the other party as soon as possible thereafter, and the obligations of the party giving such notice, other than obligations to make payments of money then due, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused but for no longer period, and such cause shall as far as possible be remedied with all reasonable dispatch. The term "force majeure" as used herein shall mean acts of God, strikes, lockouts or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, the necessity for making repairs to or alterations of machinery or lines of pipe, freezing of wells or lines of pipe, temporary failure of TransCanada's gas supply, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority, civil or military, any act or omission (including failure to deliver gas) of a

**Transportation Tariff****TransCanada PipeLines Limited**

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**GENERAL TERMS and CONDITIONS**

supplier of gas to, or a transporter of gas to or for, TransCanada which is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar causes not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

The settlement of strikes, lockouts or other labour disputes shall be entirely within the discretion of the party having the difficulty. Under no circumstances will lack of finances be construed to constitute force majeure.

In the event of an occurrence of a force majeure, TransCanada shall curtail delivery of gas to Shipper in accordance with Section XV hereof, and with respect to FST Service Contracts:

- (a) TransCanada's obligation to deliver gas to Shipper during the particular season shall be reduced by the amount of the curtailment under such Contract pursuant to subsection 2(c) of Section XV and,
- (b) For purposes of subsection 2.5 of TransCanada's FST Toll Schedule no quantities curtailed under subsection 2 of Section XV shall be included in determining the accumulative deficiency in delivery.

**XV IMPAIRED DELIVERIES**

For the purposes of this Section XV, TransCanada's minimum obligation to deliver gas under a FST Contract in any season shall be deemed to be an obligation to deliver the Winter Capacity or the Summer Capacity as the case may be.

On each day TransCanada shall determine in respect of all Contracts:

- (i) the total quantities which all Shippers have requested to be delivered on that day, and
- (ii) its available system capacity, including the maximum transportation on TransCanada's behalf under agreements that it has with Great Lakes Gas Transmission Limited Partnership, Union Gas Limited and Trans Québec and Maritimes Pipeline Inc.

If due to any cause whatsoever TransCanada is unable on any day to deliver the quantities of gas Shippers would have received if such disability did not exist, then TransCanada shall order curtailment by

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

all Shippers affected thereby in the following manner to the extent necessary to remove the effect of the disability:

1. If TransCanada estimates that, notwithstanding its then inability to deliver, it nevertheless will be able to meet its total minimum obligations to deliver under all Contracts during the then current season, TransCanada shall order daily curtailment in the following order of priority:

- (a) First under any Shipper's Make-up provided pursuant to the FST Toll Schedule
- (b) Second under interruptible service provided pursuant to the IT and IT Backhaul Toll Schedules.

The toll for STS Overrun is the 100% Load Factor Toll. Therefore when STS Overrun is tolled at an equal or higher price than IT, then the priority of STS Overrun is higher; when the STS Overrun Toll is at a lower price than IT, then the priority of STS Overrun is lower.

- (c) Third under any gas storage program of TransCanada.

- (d) Fourth under:

Diversions made

- A. under FST contracts which:

- (i) cause the flow of gas on a lateral or extension to exceed the capability of the lateral or extension, and/or:
- (ii) cause the actual flow of gas through a metering facility to exceed the capability of the metering facility, and/or
- (iii) cause the actual flow of gas on any segment of TransCanada's integrated pipeline system (including those notional segments comprised of TransCanada's maximum transportation entitlements under transportation agreements that it has with Great Lakes Gas Transmission, L.P., Union Gas Limited and Trans Québec and Maritimes Pipeline Inc.) to exceed the capability of the affected segment by an amount greater than that which would have occurred had the gas which is the subject of the Diversion been delivered at the delivery point(s) or delivery area specified in the FST Contract; and

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- B. to TransCanada's St. Clair export delivery point under FST Contracts.
- (e) Fifth under:
- Alternate Receipts made pursuant to FT, FT-SN or FT-NR Contracts or Diversions made pursuant to FT, FT-SN, FT-NR or LT-WFS Contracts which:
- A. cause the actual flow of gas on a lateral or extension to exceed the capability of the lateral or extension, and/or
  - B. cause the actual flow of gas through a metering facility to exceed the capability of the metering facility, and/or
  - C. cause the actual flow of gas on any segment of TransCanada's integrated pipeline system (including those notional segments comprised of TransCanada's maximum transportation entitlements under transportation agreements that it has with Great Lakes Gas Transmission, L.P., Union Gas Limited and Trans Québec and Maritimes Pipeline Inc.) to exceed the capability of the affected segment by an amount greater than that which would have occurred had the gas which is the subject of an Alternate Receipt and/or a Diversion, been received at the receipt point and delivered at the delivery point(s) or delivery area specified in the FT, FT-SN, FT-NR or LT-WFS Contract. Solely for the purpose of making the aforesaid determination, TransCanada may, for certain quantities, treat the point of interconnection between TransCanada's system and the system of Union Gas Limited at Parkway as a delivery point specified in those FT, FT-SN, FT-NR or LT-WFS Contracts which have delivery points on the segment of TransCanada's integrated system from Kirkwall to Niagara Falls.
- (f) Sixth quantities to be delivered on a best efforts basis under STS and STS-L Contracts.
- (g) Seventh except for Shipper's Make-up quantities curtailed pursuant to 1 (a) above, under any FST Contracts up to the total amount that TransCanada is entitled to curtail under such contracts during such day under the provisions thereof other than under this Section XV; PROVIDED HOWEVER, that subject to TransCanada's seasonal obligations if TransCanada's inability to deliver is due to an occurrence of a force majeure during



GENERAL TERMS and CONDITIONS

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the period May 1 to September 30, then TransCanada shall be entitled to completely interrupt deliveries under such contracts on such day during such period.

(h) Eighth proportionately under:

- (i) FT, FT-SN, FT-NR, FST, STFT, ST-SN, SNB, STS, STS-L and LT-WFS Contracts (other than quantities to be delivered on a best efforts basis under STS and STS-L Contracts) in amounts proportional to the Operating Demand Quantities minus the quantities to be delivered pursuant to an Alternate Receipt or a Diversion of such Contracts.
- (ii) Alternate Receipts made pursuant to FT, FT-SN or FT-NR Contracts and/or Diversions made pursuant to FT, FT-SN, FT-NR, FST, and LT-WFS Contracts not already curtailed pursuant to subsections, (d) and (e) above, in amounts to be delivered pursuant to such Alternate Receipt and/or Diversion.

(For the purpose of this subsection, the Operating Demand Quantity shall be:

- (A) under FT Contracts, the Contract Demand;
- (B) under FT-SN Contracts, the Contract Demand;
- (C) under FT-NR Contracts, the Contract Demand;
- (D) under LT - WFS Contracts, the LT - WFS Maximum Daily Quantity;
- (E) under STS Contracts, the Daily Injection Quantity or the Daily Withdrawal Quantity, as the case may be;
- (F) under STS-L Contracts, the Daily Contract Injection Quantity and the Daily Contract Withdrawal Quantity;
- (G) under FST Contracts, fifty (50%) percent of the winter period average daily winter capacity, or TransCanada's estimate of Shipper's requirement, as the case may be;
- (H) under STFT Contracts, the Maximum Daily Quantity;
- (I) under ST-SN Contracts, the Maximum Daily Quantity;

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- (J) under FBT Contracts, the Maximum Daily Quantity; and
    - (K) under SNB Contracts, the Contract Quantity.
  - (iii) Any forward haul component of an FBT Contract, that are affected by the disability in proportion Operating Demand Quantities of such Contract.
  - (iv) Back haul components of an FBT Contract as required due to any lack of forward haul quantities to support the back haul quantities.
2. If TransCanada estimates that it will be unable to meet its total minimum obligations to deliver under all of its contracts during the then current season, TransCanada shall order seasonal curtailment in the following order of priority:
- (a) First under any Shipper's Make-up pursuant to the FST Toll Schedule
  - (b) Second under interruptible service provided pursuant to the IT and IT Backhaul Toll Schedules.
- The toll for STS Overrun is the 100% Load Factor Toll. Therefore when STS Overrun is tolled at an equal or higher price than IT, then the priority of STS Overrun is higher; when the STS Overrun Toll is at a lower price than IT, then the priority of STS Overrun is lower.
- (c) Third under any gas storage program of TransCanada.
  - (d) Fourth under:
    - Diversions made:
      - (A) under FST Contracts which:
        - (I) cause the actual flow of gas on a lateral or extension to exceed the capability of the lateral or extension, and/or
        - (II) cause the actual flow of gas through a metering facility to exceed the capability of the metering facility, and/or

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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(III) cause the actual flow of gas on any segment of TransCanada's integrated pipeline system (including those notional segments comprised of TransCanada's maximum transportation entitlements under transportation agreements that it has with Great Lakes Gas Transmission, L.P., Union Gas Limited and Trans Québec and Maritimes Pipeline Inc.) to exceed the capability of the affected segment by an amount greater than that which would have occurred had the gas which is the subject of the Diversion been delivered at the delivery point(s) or delivery area specified in the FST Contract; and

(B) to TransCanada's St. Clair export delivery point under FST Contracts.

(e) Fifth under:

Alternate Receipts made pursuant to FT, FT-SN or FT-NR Contracts or Diversions made pursuant to FT, FT-SN, FT-NR or LT-WFS Contracts which:

- (A) cause the actual flow of gas on a lateral or extension to exceed the capability of the lateral or extension, and/or
- (B) cause the actual flow of gas through a metering facility to exceed the capability of the metering facility, and/or
- (C) cause the actual flow of gas on any segment of TransCanada's integrated pipeline system (including those notional segments comprised of TransCanada's maximum transportation entitlements under transportation agreements that it has with Great Lakes Gas Transmission, L.P., Union Gas Limited and Trans Québec and Maritimes Pipeline Inc.) to exceed the capability of the affected segment by an amount greater than that which would have occurred had the gas which is the subject of an Alternate Receipt and/or a Diversion, been received at the receipt point and delivered at the delivery point or delivery area specified in the FT, FT-SN, FT-NR or LT-WFS Contract.

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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Solely for the purpose of making the aforesaid determination, TransCanada may, for certain quantities, treat the point of interconnection between TransCanada's system and the system of Union Gas Limited at Parkway as a delivery point specified in those FT, FT-SN, FT-NR or LT-WFS Contracts which have delivery points on the segment of TransCanada's integrated system from Kirkwall to Niagara Falls.

- (f) Sixth Quantities to be delivered on a best efforts basis under STS and STS-L Contracts.
- (g) Seventh under FST Contracts up to the total amount that TransCanada is entitled to curtail under such contracts during such season under the provisions thereof other than under this Section XV.
- (h) Eighth proportionately under:
  - (i) FT, FT-SN, FT-NR, FST, STFT, ST-SN, SNB, STS, STS-L and LT-WFS Contracts (other than quantities to be delivered on a best efforts basis under STS and STS-L Contracts) once the curtailments made in (e) above have taken place, in amounts proportional to the Operating Demand Quantities or Maximum Daily Quantities, as the case may be, minus the quantities to be delivered pursuant to an Alternate Receipt and/or a Diversion of such Contracts,
  - (ii) Alternate Receipts made pursuant to FT, FT-SN or FT-NR Contracts and /or Diversions made pursuant to FT, FT-SN, FT-NR, FST, or LT-WFS Contracts not already curtailed pursuant to subsections (d) and (e) above, in amounts to be delivered pursuant to such Alternate Receipt and/or Diversion.
  - (iii) Any forward haul components of a FBT Contract, that are affected by the disability in proportion Operating Demand Quantities of such Contract.
  - (iv) Back haul components of an FBT Contract as required due to any lack of forward haul quantities to support the back haul quantities.

For this purpose the seasonal requirement shall be:

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- (i) under FST Contracts, the seasonal quantity of the applicable season, less the quantity curtailed pursuant to subsections 2 (a), (d) and (e) above.
- (ii) under FT Contract, FT-SN Contracts, SNB Contracts, FT-NR Contracts, STFT Contracts, ST-SN Contracts, STS Contracts, STS-L Contracts and FBT Contracts, TransCanada's estimate of Shipper's total seasonal requirements under each such Contract.
- (iii) under LT-WFS, the LT-WFS Maximum Daily Quantity, as the case may be, multiplied by the number of days in Shipper's Service Entitlement.

In curtailing deliveries under this subsection 2, TransCanada will endeavor to minimize its daily curtailments under its FT Contracts, FT-SN Contracts, FT-NR Contracts, STFT Contracts, ST-SN Contracts, SNB Contracts, LT-WFS Contracts, STS Contracts, STS-L Contracts and FBT Contracts in an attempt to meet Shipper's daily requirements for deliveries.

**XVI DETERMINATION OF DAILY DELIVERIES**

1. A Shipper taking delivery of gas under contracts and/or toll schedules for more than one class of service in one delivery area or one Export Delivery Point shall be deemed on any day to have taken delivery of Shipper's Authorized Quantity under the applicable contract and/or toll schedule in accordance with such agreement as may exist between TransCanada and the downstream operator(s). Absent such agreement, shipper shall be deemed to have taken delivery of Shipper's Authorized Quantities sequentially as follows:

- (a) IT Backhaul Contract Receipt Quantity
- (b) FT Contract
- (c) FT-SN Contract
- (d) FT-NR Contract
- (e) STFT and ST-SN Contracts
- (f) STS and STS-L Contracts
- (g) FBT Contract

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GENERAL TERMS and CONDITIONS

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- (h) LT- WFS Contract
- (i) firm portion of gas quantities under FST Contract
- (j) interruptible portion of gas quantities under FST Contract, except for any Shippers Make-up
- (k) IT and IT Backhaul Contracts, Delivery Quantity
- (l) Shippers Make-up under FST Contract

**XVII DEFAULT AND TERMINATION**

Subject to the provisions of Section XI, Section XIV, Section XV and Section XXIII of these General Terms and Conditions, if either TransCanada or Shipper shall fail to perform any of the covenants or obligations imposed upon it under any Contract into which these General Terms and Conditions are incorporated, then in such event the other party may, at its option, terminate such Contract by proceeding as follows: the party not in default shall cause a written notice to be served on the party in default stating specifically the default under the Contract and declaring it to be the intention of the party giving the notice to terminate such Contract; thereupon the party in default shall have ten (10) days after the service of the aforesaid notice in which to remedy or remove the cause or causes stated in the default notice and if within the said ten (10) day period the party in default does so remove and remedy said cause or causes and fully indemnifies the party not in default for any and all consequences of such default, then such default notice shall be withdrawn and the Contract shall continue in full force and effect.

In the event that the party in default does not so remedy and remove the cause or causes or does not indemnify the party giving the default notice for any and all consequences of such default within the said period of ten (10) days, then, at the option of the party giving such default notice, the Contract shall terminate. Any termination of the Contract pursuant to the provisions of this Section shall be without prejudice to the right of TransCanada to collect any amounts then due to it for gas delivered or service provided prior to the date of termination, and shall be without prejudice to the right of Shipper to receive any gas which it has not received but the transportation of which has been paid prior to the date of termination, and without waiver of any other remedy to which the party not in default may be entitled for breaches of the Contract.

This Section shall not apply to any default and terminations pursuant to Section XI and Section XXIII.

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GENERAL TERMS and CONDITIONS**XVIII NON-WAIVER AND FUTURE DEFAULT**

No waiver by TransCanada or Shipper of any one or more defaults by the other in the performance of any provisions of the Contract shall operate or be construed as a waiver of any continuing or future default or defaults, whether of a like or different character.

**XIX DELIVERY AREAS**

Deliveries of gas within a delivery area shall be subject to sufficient capacity and facilities within such delivery area.

**XX DELIVERY AREAS, TOLL ZONES AND EXPORT DELIVERY POINTS****1. Delivery Areas**

TransCanada's delivery areas for purposes of determining the Contract Demand applicable to the points of delivery of TransCanada's pipeline system are as follows:

**Saskatchewan Southern Delivery Area or SSDA**

extends from a point on TransCanada's main pipeline at the Alberta- Saskatchewan border near Empress, Alberta to a point on TransCanada's main pipeline at the Saskatchewan-Manitoba border.

**Manitoba Delivery Area or MDA**

extends from a point on TransCanada's main pipeline at the Saskatchewan- Manitoba border to a point on TransCanada's pipeline at the Manitoba-Ontario border to a point on TransCanada's pipeline at the International Border near Emerson, Manitoba.

**Western Delivery Area or WDA**

extends from a point on TransCanada's pipeline at the Manitoba- Ontario border to a point on TransCanada's pipeline 24.99 kilometres east of TransCanada's Station 80 near Geraldton, Ontario.

**Northern Delivery Area or NDA**

extends from a point on TransCanada's pipeline 24.99 kilometres east of TransCanada's Station 80 near Geraldton, Ontario to a point on TransCanada's pipeline 23.09 kilometres south and east respectively of TransCanada's Station 116 near North Bay, Ontario.

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GENERAL TERMS and CONDITIONS

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**Sault Ste. Marie Delivery Area or SSMDA**

any point on TransCanada's Sault Ste. Marie pipeline.

**North Central Delivery Area or NCDA**

extends from a point on TransCanada's pipeline 23.09 kilometres south of TransCanada's Station 116 near North Bay Ontario, to a point on TransCanada's pipeline 0.50 kilometres south of TransCanada's Station 127 near Barrie Ontario, provided that points of delivery to the Enbridge Gas Distribution Inc. Gas within this area are deemed for the purposes of this Tariff to be in the Central Delivery Area.

**Central Delivery Area or CDA**

extends from a point on TransCanada's pipeline 0.50 kilometres south of TransCanada's Station 127 near Barrie Ontario to a point on TransCanada's pipeline at the International Border near Niagara Falls, Ontario and to a point on TransCanada's pipeline 24.99 kilometres east of TransCanada's Station 134 near Bowmanville, Ontario.

**Southwestern Delivery Area or SWDA**

any point on TransCanada's St. Clair to Dawn pipeline.

**Eastern Delivery Area or EDA**

extends from a point on TransCanada's pipeline 24.99 kilometres east of TransCanada's Station 134 near Bowmanville, Ontario and from a point on TransCanada's North Bay Shortcut 23.09 kilometres east of TransCanada's Station 116 near North Bay, Ontario to a point on TransCanada's pipeline at the International Border near Philipsburg, Québec and to a point on the pipeline system of Trans Québec & Maritimes Pipeline Inc. near Québec City, Québec.

**2. Toll Zones**

TransCanada's toll zones for purposes of determining the toll applicable to any point of delivery on TransCanada's pipeline system are as follows:

**Saskatchewan Zone or Zone S**

includes all points in the Saskatchewan Southern Delivery Area.

**Manitoba Zone or Zone M**

includes all points in the Manitoba Delivery Area.



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GENERAL TERMS and CONDITIONS**Western Zone or Zone W**

includes all points in the Western Delivery Area.

**Northern Zone or Zone N**

includes all points in the Northern Delivery Area and the Sault Ste. Marie Delivery Area.

**Eastern Zone or Zone E**

includes all points in the North Central Delivery Area, the Central Delivery Area and the Eastern Delivery Area.

**Southwest Zone or Zone SW**

includes all points in the Southwestern Delivery Area.

**XXI INCORPORATION IN TOLL SCHEDULES AND CONTRACTS**

1. These General Terms and Conditions are incorporated in and are a part of all of TransCanada's Toll Schedules, Contracts and transportation service contracts.
2. These General Terms and Conditions are subject to the provisions of the National Energy Board Act or any other legislation passed in amendment thereto or substitution therefor.

**XXII NOMINATIONS AND UNAUTHORIZED QUANTITIES****1. Nominations**

For service required on any day under each of Shipper's transportation contracts (for the purposes of this Section XXII the "said Contract"), Shipper shall provide TransCanada with a nomination of the quantity of gas, expressed in GJ, it desires TransCanada to deliver at the delivery point ("Shipper's nomination") or Title Transfer pursuant to Section XXIV of these General Terms and Conditions. Unless otherwise provided under the applicable Toll Schedule or as outlined under this section in the Schedule of Nomination Times below, such nominations are to be provided in writing or EDI format, or by other electronic means, so as to be received by TransCanada's Gas Control Department in Calgary on or before 12:00 hours CCT on the day immediately preceding the day for which service is requested. Subject to the provisions of the applicable toll schedules and Sections XIV and XV of these General Terms and Conditions, TransCanada shall determine whether or not all or any portion of Shipper's nomination will be accepted.

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GENERAL TERMS and CONDITIONS

In the event TransCanada determines that it will not accept such nomination, TransCanada shall advise Shipper, (on or before 14:00 hours CCT on the day immediately preceding the day for which service is requested), of the reduced quantity of gas, (if any) (the "quantity available") that TransCanada is prepared to deliver under the said Contract. Forthwith after receiving such advice from TransCanada but no later than 1 hour after receiving such notice on such day, Shipper shall provide a revised nomination to TransCanada which shall be no greater than the quantity available. If such revised nomination is not provided within the time allowed as required above or such revised nomination is greater than the quantity available, then the revised nomination shall be deemed to be the quantity available. If the revised nomination (delivered within the time allowed as required above) is less than the quantity available, then such lesser amount shall be the revised nomination. That portion of a Shipper's nomination or revised nomination, which TransCanada shall accept for delivery shall be known as "Shipper's Authorized Quantity" which authorized quantity shall be limited, for firm services, to Shipper's Contract Demand and, for other services, to such quantity permitted by the provisions of the Contract.

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS****Schedule of Nomination Times (CCT)**

<b>Gas Day Time</b>	<b>Class of Service *</b>	<b>Effective 0900 Hours Next Gas Day</b>
12:00	All Services	Faxed, EBB & EDI (EBB & EDI commencing on October 1, 1997)

Please refer to FST Toll Schedule for appropriate times.

\*\* Effective October 1, 1997 nominations for service must be received by TransCanada through its electronic bulletin board or EDI at the time specified pursuant to Section XXII of the General Terms and Conditions. TransCanada shall not accept nominations by fax unless TransCanada's electronic bulletin board and EDI systems are inoperative, except in the case of FT-SN and SNB Service. Nominations for FT-SN and SNB Service shall be submitted to TransCanada via fax or by other electronic means as determined from time to time by TransCanada.

## **2. Definitions in Section XXII**

In this Section XXII, the following terms shall be construed to have the following meanings:

(a) "Total Allocated Quantity":

- (i) for any receipt point, means the total quantity of gas which TransCanada determines has been received during any time period under all transportation service contracts with a Shipper; and
- (ii) for any delivery point or delivery area, means the total quantity of gas which TransCanada determines has been delivered during any time period under all transportation service contracts with a Shipper.

(b) "Total Authorized Quantity" or "TAQ" for any day:

- (i) for any receipt point, means the sum of the Shipper's Authorized Quantities under all transportation service contracts at that receipt point.

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

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- (ii) for any delivery point or delivery area, means the sum of the Shipper's Authorized Quantities under all transportation service contracts at a delivery point or for that delivery area.
- (c) "Daily Variance" for a Shipper at any receipt or delivery point or delivery area means the absolute difference between the Total Authorized Quantity and the Total Allocated Quantity.
- (d) "FT Daily Demand Charge" or "FTD" means the result when the Demand Toll for Canadian Firm Service to the Eastern Zone Toll, as set out in the List of Tolls, is multiplied by 12 and divided by the number of days in the Year.
- (e) "Average Authorized Quantity" or "AAQ" for a Shipper at any receipt or delivery point or delivery area means the average Total Authorized Quantity during the preceding 30 days.
- (f) "Cumulative Variance" is the absolute value accumulation of the daily differences between the Total Authorized Quantity and the Total Allocated Quantity for a Shipper at any delivery point, delivery area or receipt point.

**3. Emergency Operating Conditions****(a) EOC Definition**

"Emergency Operating Conditions" ("EOC") means that TransCanada determines, in the exercise of its reasonable judgement, that its ability to fulfill its obligations under firm contracts is at risk due, in whole or in part, to Shipper variances during periods of extreme weather changes, and/or supply, market, pipeline interruptions, and TransCanada issues an EOC notice pursuant to subsection 3(b).

**(b) EOC Notices**

If TransCanada determines an EOC exists, TransCanada shall issue notice to all Shippers via High Priority Bulletin on its electronic bulletin board setting out the following information related to the EOC:

- i) EOC effective time, and
- ii) anticipated duration of the EOC, and

**Transportation Tariff****TransCanada PipeLines Limited**

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**GENERAL TERMS and CONDITIONS**

- iii) delivery points and delivery areas where EOC is in effect

In addition to such notice, TransCanada will use reasonable efforts to contact by phone those Shippers directly impacted by the EOC.

(c) **EOC Effective Times**

If TransCanada issues notice of EOC prior to 13:00 Central Clock Time (CCT), then the EOC takes effect on that day. If TransCanada issues notice of EOC after 13:00 CCT, then the EOC takes effect on the next day. The EOC will remain in effect until the operational condition has been remedied.

**4. Daily Balancing Fee**

On each day Shipper shall pay a "Daily Balancing Fee" equal to:

(Tier 1 Quantity times Tier 1 Fee); plus

(Tier 2 Quantity times Tier 2 Fee); plus

(Tier 3 Quantity times Tier 3 Fee); plus

(Tier 4 Quantity times Tier 4 Fee).

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

Where:

(a) Tier 1, 2, 3, 4 Fees and Quantities are set out in the following Table:

	Tier 1	Tier 2	Tier 3	Tier 4
Minimum Quantity	Greater of: 2% of TAQ, or 2% of AAQ or 75 GJ	Greater of: 4% if TAQ, or 4% of AAQ, or 150 GJ	Greater of: 8% of TAQ, or 8% of AAQ, or 302 GJ	Greater of: 10% of TAQ, or 10% of AAQ, or 377 GJ
Maximum Quantity	Greater of: 4% of TAQ, or 4% of AAQ, or 150 GJ	Greater of: 8% of TAQ, or 8% of AAQ, or 302 GJ	Greater of: 10% of TAQ, or 10% of AAQ, or 377 GJ	∞ (Infinity)
Standard Fee	0.2 times FTD	0.5 times FTD	0.75 times FTD	1.0 times FTD
EOC Draft Fee	1.0 times Index	1.25 times Index	1.50 times Index	2.0 times Index
EOC Pack Fee	0	0	0	0

- (a) Quantity for each Tier equals that portion of the Daily Variance which is greater than the Minimum Quantity and less than the Maximum Quantity.
- (b) The applicable Fee for each Tier equals:
- (i) Standard Fee for days and locations where EOC are not in effect,
  - (ii) EOC Draft Fee for days and locations where EOC are in effect and where Shipper's Total Authorized Quantity is less than Shipper's Total Allocated Quantity, and
  - (iii) EOC Pack Fee for days and locations where EOC are in effect and where Shipper's Total Authorized Quantity is greater than Shipper's Total Allocated Quantity.
- (c) No Daily Balancing Fee is payable on the portion of a Daily Variance which is less than 75 GJ.
- (d) The Daily Balancing Fee is added to the bill for the month in which the day is included.

**Transportation Tariff****TransCanada PipeLines Limited**

## GENERAL TERMS and CONDITIONS

- (e) "Index" means the highest price of gas on the day among all receipt and delivery points on the TransCanada pipeline system as published by Platts Gas Daily or such other recognized industry publication.

### 5. Cumulative Balancing Fee

On each day Shipper shall pay a "Cumulative Balancing Fee" equal to:

(Tier 1 Quantity times Tier 1 Fee); plus

(Tier 2 Quantity times Tier 2 Fee).

Where:

- (a) Tier 1, 2 Fees and Quantities are set out in the following Table:

	<b>Tier 1</b>	<b>Tier 2</b>
Minimum Quantity	Greater of: 4% of TAQ, or 4% of AAG, or 150 GJ	Greater of: 6% of TAQ, or 6% of AAQ, or 225 GJ
Maximum Quantity	Greater of: 6% of TAQ, or 6% of AAQ, or 225 GJ	∞ (Infinity)
Standard Fee	0.15 times FTD	0.25 times FTD
EOC Draft Fee	0.15 times FTD	0.25 times FTD
EOC Pack Fee	0	0

- (b) Quantity for each Tier equals that portion of the Cumulative Variance which is greater than the Minimum Quantity and less than the Maximum Quantity.
- (c) The applicable Fee for each Tier equals:
- (i) Standard Fee for days and locations where EOC are not in effect,

**Transportation Tariff****TransCanada PipeLines Limited****GENERAL TERMS and CONDITIONS**

- (ii) EOC Draft Fee for days and locations where EOC are in effect and where Shipper's accumulated Total Authorized Quantity is less than Shipper's accumulated Total Allocated Quantity, and
- (iii) EOC Pack Fee for days and locations where EOC are in effect and where Shipper's accumulated Total Authorized Quantity is greater than Shipper's accumulated Total Allocated Quantity.
- (d) No Cumulative Balancing Fee is payable on the portion of an Absolute Cumulative Variance which is less than 150 GJ.
- (e) The Cumulative Balancing Fee is added to the bill for the month in which the day is included.
- (f) A Cumulative Balancing Fee is in addition to Daily Balancing Fees payable under subsection 4 of Section XXII, and an additional Cumulative Balancing Fee is payable on each day where there is an Absolute Cumulative Variance.

**6. Payback Provisions**

- (a) Shippers may reduce Cumulative Variances through nomination of "Payback Quantities" which shall be nominated and authorized in accordance with these General Terms and Conditions.

TransCanada is not obligated to provide additional transportation capacity to deliver Payback Quantities.

- (b) If, on any day, a Shipper nominates a Payback Quantity under subsection (d), and TransCanada is unable to deliver or receive a quantity ("Minimum Payback Quantity") equal to the lesser of:
  - (i) Shipper's nominated Payback Quantities, or
  - (ii) the greater of:
    - (a) two percent of the Total Authorized Quantity,
    - (b) two percent of the Average Authorized Quantity, and
    - (c) 75 GJ



GENERAL TERMS and CONDITIONS

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then Shipper is relieved from the Cumulative Balancing Fee by a quantity ("Payback Relief Quantity") equal to the difference between:

- (iii) the Minimum Payback Quantity, and
- (iv) The level of Payback Quantities which TransCanada was able to deliver or receive.

The relief from Cumulative Balancing Fees shall apply for each day until TransCanada delivers or receives the Payback Relief Quantity. No Payback Relief will be granted as a result of TransCanada not authorizing a transportation service.

- (c) If TransCanada determines, in its sole discretion, that its ability to meet firm obligations is at risk due to Shipper variances, and after curtailment of all discretionary transportation services that are hindering TransCanada's ability to meet its firm obligations, TransCanada may, without further notice, adjust Shipper's nominations for any day in order to reduce Shipper's Cumulative Variance to zero.

## **7. Obligation to Balance Accounts**

Payments of balancing fees under this Section XXII do not give Shipper the right to receive or deliver unauthorized quantities, or incur Cumulative or Daily Variances, nor shall payment of the balancing fees be a substitute for other remedies available to TransCanada.

## **8. Energy Imbalance Recovery**

- (a) Cumulative energy imbalances that result from energy in transit, accumulated fuel imbalances and imbalances held under other applicable accounts, shall be recovered in the following manner:
  - (i) on the 20th Day of each month, TransCanada shall advise Shipper in writing of all cumulative energy imbalances attributed to Shipper arising up to the end of the 19<sup>th</sup> Day of such month and carried forward or arising from previous months, provided however that such cumulative energy imbalances for export delivery points referred to in subsection 8(b) shall be the amount by which the cumulative energy imbalance at such points exceed 50 GJ;

**Transportation Tariff****TransCanada PipeLines Limited**

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GENERAL TERMS and CONDITIONS

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- (ii) the cumulative energy imbalance reported to Shipper shall be aggregated at each applicable location from all of Shipper's Contracts, nomination groups and other applicable accounts;
- (iii) on or before the 3<sup>rd</sup> last Day of each month, Shipper may reduce the cumulative energy imbalances reported by TransCanada.
- (iv) The cumulative energy imbalance after giving effect to applicable offsetting transactions (the "Net Imbalance"), shall be determined on:

(A) the end of the 3<sup>rd</sup> last Day of such month if the cumulative energy imbalance is less than the cumulative energy imbalance on the 19<sup>th</sup> Day of such month; or

(B) the 19<sup>th</sup> Day of such month if the cumulative energy imbalance on the 3<sup>rd</sup> last Day of such month is greater than the energy balance on the 19<sup>th</sup> Day of such month.

The Net Imbalance shall be scheduled and recovered in equal amounts on each Day over the first 15 Days, or a lesser number of Days as mutually agreed to by Shipper and TransCanada, of next month (the "Recovery Period"). The amount of the Net Imbalance to be recovered each Day of the Recovery Period (the "Daily Imbalance Recovery") will be determined by TransCanada and verbally communicated to Shipper on the 2<sup>nd</sup> last Day of each month. Shipper shall nominate the Daily Imbalance Recovery on each Day of the Recovery Period as an "Imbalance Payback" under the Shipper account (nomination group) with the largest energy imbalance as determined by TransCanada based on the most recent monthly statements available.

- (vi) in nominating the Daily Imbalance Recovery, Shipper will ensure that all nominations remain in balance. Any nomination received from Shipper which does not include the required Daily Imbalance Recovery will, at TransCanada's sole discretion, be either rejected or forced to balance by TransCanada. TransCanada is authorized to curtail Shipper's gas supply and market, as necessary, to balance the nomination after accounting for the Daily Imbalance Recovery;
- (vii) where applicable, deliveries of the Daily Imbalance Recovery shall be the first deliveries made under the nomination on each Day of the Recovery Period; and

**Transportation Tariff****TransCanada PipeLines Limited**

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**GENERAL TERMS and CONDITIONS**

- (viii) any imbalance shall be deemed to have occurred and shall be held at the primary receipt point specified in the transportation service agreement.
- (b) Cumulative energy imbalances at export delivery points that result from rounding when converting between energy units used for daily scheduling purposes shall be subject to the following:
  - (i) Each Day Shipper shall be entitled to an energy imbalance of up to 5 GJ provided however, Shipper's cumulative energy imbalance at any time shall not exceed 50 GJ;
  - (ii) Shipper may reduce its cumulative energy imbalance on any Day by up to 10 GJ provided however, such reduction shall not result in the cumulative energy imbalance moving from a positive imbalance to a negative imbalance, or from a negative imbalance to a positive imbalance.

**XXIII FINANCIAL ASSURANCES**

1. **Financial Assurance for Performance of Obligations:** TransCanada may request that Shipper (or any assignee) at any time from time to time prior to and during service, provide TransCanada with an irrevocable letter of credit or other assurance acceptable to TransCanada, in form and substance satisfactory to TransCanada and in an amount determined in accordance with subsection XXIII(3) hereof (the "Financial Assurance").
2. **Failure to Provide Financial Assurance:** TransCanada may withhold the provision of new service until TransCanada has received a requested Financial Assurance.

**Notwithstanding Section XVII,** if Shipper fails to provide a requested Financial Assurance to TransCanada within four (4) Banking Days of TransCanada's request, TransCanada may upon four (4) Banking Days written notice immediately suspend any or all service being or to be provided to Shipper provided however that any such suspension shall not relieve Shipper from any obligation to pay any rate, toll, charge or other amount payable to TransCanada. If at any time during such suspension Shipper provides such Financial Assurance to TransCanada, TransCanada shall within two (2) Banking Days recommence such suspended service.

**Notwithstanding Section XVII**, if Shipper fails to provide such Financial Assurance during such suspension, TransCanada may, in addition to any other remedy that may be available to it, upon four (4) Banking Days written notice to shipper immediately:

- a) Terminate any or all service being or to be provided to Shipper; and
- b) Declare any and all amounts payable now or in the future by Shipper to TransCanada for any and all service to be immediately due and payable as liquidated damages and not as a penalty.

Any notice provided by TransCanada to Shipper to withhold, suspend or terminate service pursuant to **sub-Section XXIII(2) hereof** shall be filed concurrently with the NEB.

**3. Amount of Financial Assurance:** The maximum amount of Financial Assurance TransCanada may request from a Shipper (or assignee) shall be as determined by TransCanada an amount equal to:

- a) for the provision of all gas transportation and related services, other than such services referred to in **sub-Section XXIII(3)(b)**, the aggregate of all rates, tolls, charges or other amounts payable to TransCanada for a period of seventy (70) days. Provided however, the amount of the Financial Assurance for all rates, tolls and charges other than demand charges shall be based on the daily average of the actual charges billed for service for the preceding twelve (12) month period with the initial forecast to be provided by Shipper; and
- b) for the provision of any gas transportation and related services where TransCanada determines it must construct facilities and Shipper has executed the Financial Assurances Agreement defined in Section 4.4(c)(ii) of the Transportation Access Procedure, the aggregate of all rates, tolls, charges or other amounts payable to TransCanada for a period of seventy (70) days plus one (1) month for each remaining year of the term of such service, up to a maximum of twelve (12) months total.

Nothing in this Section XXIII shall limit Shipper's right to request the NEB to issue an order, under sub-section 71(2) of the National Energy Board Act, requiring TransCanada to receive, transport and deliver gas offered by Shipper for transmission, or to grant such other relief as Shipper may request under the circumstances, notwithstanding Shipper's default under this Section XXIII.

**XXIV TITLE TRANSFERS**

Shippers may request and TransCanada shall authorize Title Transfers subject to the following:

- a. TransCanada receives a nomination satisfactory to TransCanada from each Shipper that is a party to a Title Transfer;
- b. If TransCanada determines at any time that any title transfer account of a Shipper is out of balance, TransCanada may, without notice to the title transfer account holder, curtail transfers up to such amounts as TransCanada deems necessary to bring all affected title transfer accounts into balance. In so doing, TransCanada shall have no liability whatsoever to Shipper or any third party claiming through Shipper for any claims, actions or damages of any nature arising out of or in any way related to such curtailment

**XXV LIABILITY AND LIMITATION OF LIABILITY**

TransCanada's and Shipper's liability to each other is limited to direct damages only. In no event, other than in the case of gross negligence or wilful default, shall either TransCanada or Shipper be liable for loss of profits, consequential, incidental, punitive, or indirect damages, in tort, contract or otherwise.

**HV-97 SCHEDULE**

## Transportation Tariff

## TransCanada PipeLines Limited

## GENERAL TERMS and CONDITIONS

Area	Heating Value MJ/m3
CHIPPAWA	37.77
CORNWALL	37.69
EMERSON 1	37.68
EMERSON 2	37.68
EMPRESS	37.73
IROQUOIS-EXP.	37.68
NAPIERVILLE	37.68
NIAGARA FALLS	37.75
PARKWAY ENBRIDGE	37.69
PARKWAY UNION	37.68
PHILIPSBURG	37.68
ST-LAZARE	37.69
SABREVOIS	37.69
SPRUCE	37.68
ST. CLAIR	37.72
NCD, UNION GAS LIMITED	37.69
CDA, ENBRIDGE GAS DISTRIBUTION INC.	37.69
CDA, UNION GAS LIMITED	37.68
EDA, UNION GAS LIMITED	37.68
EDA, GAZ METROPOLITAIN & CO. L.P.	37.69
EDA, KINGSTON PUBLIC UTILITIES COMM	37.68
EDA, ENBRIDGE GAS DISTRIBUTION INC.	37.69
MDA, CENTRA GAS MANITOBA INC	37.68
MDA, CENTRA TRANSMISSION HOLDINGS	37.68
MDA, GLADSTONE AUSTIN	37.68
NDA, UNION GAS LIMITED	37.68
NDA, GAZ METROPOLITAIN & CO. L.P.	37.68
NDA, TRANSCANADA POWER, L.P.	37.68
SSDA, CENTRA GAS MANITOBA INC	37.67
SSDA, TRANSGAS LTD.	37.66
SSMDA UNION GAS LIMITED	37.71
SWDA, ENBRIDGE GAS DISTRIBUTION INC	37.68
SWDA, UNION GAS LIMITED	37.71
WDA, UNION GAS LIMITED	37.68
WDA, TRANSCANADA POWER, L.P.	37.67

Long-term Transportation Contracting Analysis - TCPL 2012 Approved Interim Tolls

Route (A)	Point of Supply (B)	Basis Differential \$US/mmBtu (C)	Supply Cost \$US/mmBtu (D) = Nymex + C	Unitized Demand Charge \$US/mmBtu (E)	Commodity Charge \$US/mmBtu (F)	Fuel Charge \$US/mmBtu (G)	100% LF Transportation Inclusive of Fuel \$US/mmBtu (I) = E + F + G	Landed Cost \$US/mmBtu (J) = D + I	Landed Cost \$Cdn/Gj (K)	Point of Delivery (L)
Dawn to NDA	Dawn	0.58	7.09	0.5141	0.0272	0.0878	0.6291	\$7.72	\$7.22	NDA
Dawn to MDA	Dawn	0.58	7.09	1.5189	0.0980	0.1691	1.7861	\$8.88	\$8.31	MDA
Dawn to NCDA	Dawn	0.58	7.09	0.2678	0.0092	0.0661	0.3431	\$7.44	\$6.96	NCDA
Dawn to EDA	Dawn	0.58	7.09	0.3683	0.0164	0.0752	0.4599	\$7.55	\$7.07	EDA
Dawn to SSMDA	Dawn	0.58	7.09	0.7267	0.0415	0.1043	0.8725	\$7.97	\$7.45	SSMDA
Dawn to WDA	Dawn	0.58	7.09	1.1769	0.0731	0.1424	1.3924	\$8.49	\$7.94	WDA
TCPL to NDA	Empress	-0.40	6.11	1.7449	0.1186	0.1049	1.9685	\$8.08	\$7.56	NDA
TCPL to MDA	Empress	-0.40	6.11	0.6834	0.0437	0.0397	0.7668	\$6.88	\$6.44	MDA
TCPL to NCDA	Empress	-0.40	6.11	2.2439	0.1537	0.1368	2.5343	\$8.65	\$8.09	NCDA
TCPL to EDA	Empress	-0.40	6.11	2.2439	0.1537	0.1368	2.5343	\$8.65	\$8.09	EDA
TCPL to SSMDA	Empress	-0.40	6.11	1.7449	0.1186	0.1049	1.9685	\$8.08	\$7.56	SSMDA
TCPL to WDA	Empress	-0.40	6.11	1.1348	0.0762	0.0688	1.2798	\$7.39	\$6.92	WDA

Assumptions used in Deveolping Long-term Transportation Contracting Analysis:

Annual Gas Supply & Fuel Ratio Forecasts	Point of Supply Col (B) above	2014 \$US/mmBtu	2015 \$US/mmBtu	2016 \$US/mmBtu	2017 \$US/mmBtu	2018 \$US/mmBtu	2019 \$US/mmBtu	2020 \$US/mmBtu	2021 \$US/mmBtu	2022 \$US/mmBtu	2023 \$US/mmBtu	Average Annual Gas Supply Cost \$US/mmBtu Col (D) above	Fuel Ratio Forecasts Col (G) above
Henry Hub (NYMEX) \$US/mmBtu		\$4.49	\$4.96	\$6.42	\$6.75	\$6.24	\$6.28	\$6.83	\$7.32	\$7.79	\$8.08	\$6.52	
Dawn to NDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.23%
Dawn to MDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	2.35%
Dawn to NCDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	0.93%
Dawn to EDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.05%
Dawn to SSMDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.46%
Dawn to WDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.90%
TCPL Empress to Union NDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	1.72%
TCPL Empress to Union MDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	0.65%
TCPL Empress to Union NCDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	2.24%
TCPL Empress to Union EDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	2.24%
TCPL Empress to Union SSMDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	1.72%
TCPL Empress to Union WDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	1.13%

Sources for Assumptions:

Gas Supply Prices (Col D):  
ICF International : April 2012.

Fuel Ratios (Col G):  
Average ratio over the previous 12 months or Pipeline Forecast

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

Foreign Exchange (Col K)  
\$1 US = \$0.987 CDN

Energy Conversions (Col K)  
1 dth = 1 mmBtu = 1.055056 GJ

Union's Analysis Completed:  
May-12



Long-term Transportation Contracting Analysis - TCPL 2013 Proposed Tolls with Throughput Adjustments (06-29-2012)

Route (A)	Point of Supply (B)	Basis Differential \$US/mmBtu (C)	Supply Cost \$US/mmBtu (D) = Nymex + C	Unitized Demand Charge \$US/mmBtu (E)	Commodity Charge \$US/mmBtu (F)	Fuel Charge \$US/mmBtu (G)	100% LF Transportation Inclusive of Fuel \$US/mmBtu (I) = E + F + G	Landed Cost \$US/mmBtu (J) = D + I	Landed Cost \$Cdn/Gj (K)	Point of Delivery (L)
Dawn to NDA	Dawn	0.58	7.09	0.3986	0.0000	0.0878	0.4864	\$7.58	\$7.09	NDA
Dawn to MDA	Dawn	0.58	7.09	1.0575	0.0000	0.1691	1.2266	\$8.32	\$7.78	MDA
Dawn to NCDA	Dawn	0.58	7.09	0.2265	0.0000	0.0661	0.2926	\$7.39	\$6.91	NCDA
Dawn to EDA	Dawn	0.58	7.09	0.2940	0.0000	0.0752	0.3692	\$7.46	\$6.98	EDA
Dawn to SSMDA	Dawn	0.58	7.09	0.5344	0.0000	0.1043	0.6387	\$7.73	\$7.23	SSMDA
Dawn to WDA	Dawn	0.58	7.09	0.8394	0.0000	0.1424	0.9818	\$8.08	\$7.55	WDA
TCPL to NDA	Empress	-0.40	6.11	1.4834	0.0000	0.1049	1.5883	\$7.70	\$7.20	NDA
TCPL to MDA	Empress	-0.40	6.11	0.6620	0.0000	0.0397	0.7017	\$6.81	\$6.38	MDA
TCPL to NCDA	Empress	-0.40	6.11	1.6981	0.0000	0.1368	1.8349	\$7.95	\$7.44	NCDA
TCPL to EDA	Empress	-0.40	6.11	1.8790	0.0000	0.1368	2.0158	\$8.13	\$7.60	EDA
TCPL to SSMDA	Empress	-0.40	6.11	1.3514	0.0000	0.1049	1.4562	\$7.57	\$7.08	SSMDA
TCPL to WDA	Empress	-0.40	6.11	0.9582	0.0000	0.0688	1.0269	\$7.14	\$6.68	WDA

Assumptions used in Developing Long-term Transportation Contracting Analysis:

Annual Gas Supply & Fuel Ratio Forecasts	Point of Supply Col (B) above	2014 \$US/mmBtu	2015 \$US/mmBtu	2016 \$US/mmBtu	2017 \$US/mmBtu	2018 \$US/mmBtu	2019 \$US/mmBtu	2020 \$US/mmBtu	2021 \$US/mmBtu	2022 \$US/mmBtu	2023 \$US/mmBtu	Average Annual Gas Supply Cost \$US/mmBtu Col (D) above	Fuel Ratio Forecasts Col (G) above
Henry Hub (NYMEX) \$US/mmBtu		\$4.49	\$4.96	\$6.42	\$6.75	\$6.24	\$6.28	\$6.83	\$7.32	\$7.79	\$8.08	\$6.52	
Dawn to NDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.23%
Dawn to MDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	2.35%
Dawn to NCDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	0.93%
Dawn to EDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.05%
Dawn to SSMDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.46%
Dawn to WDA	Dawn	\$5.03	\$5.49	\$6.95	\$7.32	\$6.82	\$6.88	\$7.42	\$7.91	\$8.41	\$8.72	\$7.09	1.90%
TCPL Empress to Union NDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	1.72%
TCPL Empress to Union MDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	0.65%
TCPL Empress to Union NCDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	2.24%
TCPL Empress to Union EDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	2.24%
TCPL Empress to Union SSMDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	1.72%
TCPL Empress to Union WDA	Empress	\$4.12	\$4.56	\$6.00	\$6.33	\$5.82	\$5.91	\$6.43	\$6.91	\$7.38	\$7.68	\$6.11	1.13%

Sources for Assumptions:

Gas Supply Prices (Col D): ICF International : April 2012.  
Fuel Ratios (Col G): Average ratio over the previous 12 months or Pipeline Forecast  
Transportation Tolls (Cols E & F): Tolls in effect on Alternative Routes at the time of Union's Analysis  
Foreign Exchange (Col K) \$1 US = \$0.987 CDN  
Energy Conversions (Col K) 1 dth = 1 mmBtu = 1.055056 GJ  
Union's Analysis Completed: Jun-12

UNION GAS LIMITED  
Union North - Reconciliation of Gas Transport, Storage and Commodity Cost Savings

Line No.	Particulars (\$ Millions)	Cost of Gas Figure 11.4.2 (1) (a)	Updated for Board-Approved Gas Supply Plan (2) (b)	Variance (c) = (a - b)	Cost of Gas for Rate Impacts (3) (d)	Variance (e) = (b - d)
<u>Transportation</u>						
1	FT Demand & Diversions	(43.1)	(41.6)	(1.5)	(41.6)	0.0
2	FT Commodity	(2.8)	(2.8)	0.0	(2.8)	0.0
3	Total Transportation	(45.9)	(44.4)	(1.5)	(44.4)	0.0
<u>Storage</u>						
4	STS and Related Services	(1.1)	(1.9)	0.8	(1.9)	0.0
5	Union Dawn-Parkway (4)	2.7	2.7	0.0	2.5	0.2
6	Total Storage	1.6	0.8	0.8	0.6	0.2
7	Total Transportation and Storage (line 3 + line 6)	(44.3)	(43.6)	(0.7)	(43.8)	0.2
<u>Commodity</u>						
8	Commodity (5)	18.4	18.7	(0.3)	13.3	5.5
9	FT Fuel	(2.3)	(0.7)	(1.6)	(0.7)	0.0
10	Total Commodity	16.1	18.0	(1.9)	12.5	5.5
11	Union North Annual Savings (line 7 + line 10)	(28.2)	(25.6)	(2.6)	(31.3)	5.7

Notes:

- (1) The cost of gas savings provided at Figure 11.4.2 are based on the forecast information available at May 2012 for the respective gas year.
- (2) The cost of gas savings from Figure 11.4.2 updated to reflect the Board-approved 2013 Gas Supply Plan in EB-2011-0210.
- (3) The gas transport, storage and commodity details used to calculate rate impacts are provided at Schedule 11 - 8.
- (4) The estimated Dawn to Parkway transportation cost from Figure 11.4.2 was based on the 2013 Board approved M12 D-P toll of \$0.078 per GJ and winter fuel of \$0.7 million. The Dawn to Parkway transportation costs used for rate impact calculations have been updated to reflect the allocated Dawn to Parkway costs for Union North, including the incremental costs for the Brantford to Kirkwall and Parkway D Compressor project in the highest year revenue requirement.
- (5) The supply commodity from Figure 11.4.2 includes gas supply purchases of \$12.9 million for system customers and \$5.5 million for direct purchase bundled customers. The bundled customer commodity costs are excluded from rate calculations. There is also an incremental \$0.3 million in commodity costs associated with the change in Union North inventory as compared to the Board approved gas supply plan.

UNION GAS LIMITED  
2013 Board Approved Allocation of Union North Gas Supply Firm Transportation Demand and Diversion Costs

Line No.	Particulars (\$000's)	Total (a)	Rate 01 (b)	Rate 10 (c)	Rate 20 (d)	Rate 100 (e)	Rate 25 (f)
<u>Base Load Volume Allocation to Firm Service</u>							
1	Gas Supply Firm Transportation Demand Costs to be Allocated to Firm Service (1)	96,635					
2	Firm Sales Volumes (excluding T-Service) (10 <sup>3</sup> m <sup>3</sup> )	1,330,188	884,421	322,156	123,611	0	0
3	Average Day Volumes (10 <sup>3</sup> m <sup>3</sup> ) (line 2 / 365)	3,644	2,423	883	339	0	0
4	TCPL Contracted Demand Capacity (10 <sup>3</sup> m <sup>3</sup> )	4,424					
5	Proportion of TCPL Capacity Used in Base Load (line 3 / line 4)	82.37%					
6	TCPL Capacity Costs Used in Base Load (line 1 x line 5)	79,602					
7	Base Load Cost Allocation (2)	79,602	52,926	19,279	7,397	0	0
<u>Remaining Peak Volume Allocation to Firm Service</u>							
8	Remaining Capacity in Excess of Average Day Volumes (10 <sup>3</sup> m <sup>3</sup> ) (line 4 - line 3)	780					
9	Excess Peak over Annual Average Demand (XSPK&AVG) (10 <sup>3</sup> m <sup>3</sup> )	8,433	6,498	1,701	234	0	0
10	Remaining Transportation Demand Costs (line 1 - line 6)	17,032					
11	Peak Cost Allocation (3)	17,032	13,124	3,436	473	0	0
12	Direct Assignment to Rate 25 (4)	1,961	0	0	0	0	1,961
13	Total Capacity Costs (TRANSALLO) (line 7 + line 11 + line 12)	98,596	66,050	22,715	7,870	0	1,961
14	Diversion Costs (5)	504	338	116	40	0	10
15	Total Costs Allocated	99,100	66,388	22,831	7,910	0	1,971

Notes:

- (1) Gas Supply Firm Transportation Demand costs to be allocated to firm service are \$98,596 million less \$1,961 million in direct assigned costs to Rate 25.
- (2) The TCPL base load costs are allocated in proportion to the average day volumes for sales service and bundled direct purchase customers, as provided at line 3.
- (3) The remaining transportation demand costs are allocated in proportion to the excess of peak day demands over average annual day demands, as provided at line 9.
- (4) The direct assignment of Rate 25 costs is calculated based on Rate 25 winter volumes by zone applied to the respective TCPL demand toll.
- (5) Diversion costs are allocated in proportion to total capacity costs, as provided at line 13.

UNION GAS LIMITED  
Union North  
Gas Supply Charges for Rate 01 (1)  
Excluding Gas Supply Optimization

Line No.	Particulars	Rate 01	
		Transport (a)	Storage (b)
1	Allocated Costs	70,278	28,084
2	Change in Costs	-	-
3	Total Allocated Costs (\$000's)	<u>70,278</u>	<u>28,084</u>
	<u>Western District Adjustment</u>		
4	Volume (10 <sup>3</sup> m <sup>3</sup> )	171,280	171,280
5	Zonal Commodity Differential (cents / m <sup>3</sup> )	<u>0.6014</u>	<u>0.2403</u>
6	Cost (\$000's)	1,030	412
	<u>Northern Zone Adjustment</u>		
7	Volume (10 <sup>3</sup> m <sup>3</sup> )	384,941	384,941
8	Zonal Commodity Differential (cents / m <sup>3</sup> )	<u>2.6888</u>	<u>1.0745</u>
9	Cost (\$000's)	10,350	4,136
	<u>Eastern Zone Adjustment</u>		
10	Volume (10 <sup>3</sup> m <sup>3</sup> )	315,903	315,903
11	Zonal Commodity Differential (cents / m <sup>3</sup> )	<u>3.5766</u>	<u>1.4292</u>
12	Cost (\$000's)	11,298	4,515
13	Total Cost Differential (\$000's)	<u>22,679</u>	<u>9,063</u>
14	Remaining Cost (\$000's) (line 3 - line 13)	<u>47,599</u>	<u>19,021</u>
15	Total Volume (10 <sup>3</sup> m <sup>3</sup> )	884,421	884,421
	<u>Rate By Zone (cents/m<sup>3</sup>)</u>		
16	Avg. Ft. Frances (line 14 / line 15 *100)	5.3819	2.1507
17	Western District	5.9834	2.3910
18	Northern Zone	8.0707	3.2252
19	Eastern Zone	8.9585	3.5799

Notes:

(1) EB-2011-0210, Rate Order, Working Papers, Schedule 21, Page 4 of 9, columns (a & b).

UNION GAS LIMITED  
Union North - Gas Transport and Storage Cost Savings Detail

Line No.	Particulars	Annual Volume TJ	Board-Approved Gas Supply Plan		Annual Volume TJ	Proposed Update to Gas Supply Plan		Variance
			Rates (\$ / GJ)	Costs (\$000's)		Rates (\$ / GJ)	Costs (\$000's)	Costs (\$000's)
		(a)	(b)	(c) = (a x b)	(d)	(e)	(f) = (d x e)	(g) = (f - c)
<b>Transportation Costs</b>								
<u>FT Demand Costs</u>								
1	TCPL NCDA	3,211	63.848	6,739	3,211	63.848	6,739	-
2	TCPL EDA	21,473	63.848	45,075	365	63.848	766	(44,309)
3	TCPL MDA	1,651	19.445	1,055	1,651	19.445	1,055	-
4	TCPL NDA	17,913	49.652	29,241	14,263	49.652	23,283	(5,958)
5	TCPL SSM DA	730	49.652	1,192	730	49.652	1,192	-
6	TCPL WDA	13,352	32.291	14,174	13,352	32.291	14,174	-
7	TCPL PKWY EDA	0	8.158	-	21,108	8.158	5,661	5,661
8	TCPL PKWY NDA	0	12.306	-	3,650	12.306	1,477	1,477
9	Michcon/TCPL SSM DA	2,242	5.207	384	2,242	5.207	384	-
10	CTHI/CPMI	3,093	6.986	710	3,093	6.986	710	-
11	LBA			1,200			1,200	-
12	TCPL Minimum Flow Charge			54			54	-
13	Supply Transportation Demand			99,825			56,695	(43,129)
14	Company Used	(226)	63.848	(473)	(226)	63.848	(473)	-
15	Inventory Change	(293)	63.848	(616)	(161)	63.848	(338)	278
16	Adjustment			(139)			(139)	-
17	FT Demand Costs in Rates			98,596			55,745	(42,851)
18	Union North Diversion Costs			504			1,787	1,282
19	Total FT Demand Costs Including Diversions			99,100			57,532	(41,569)
<u>FT Commodity Costs</u>								
20	TCPL NCDA	3,063	0.144	440	3,211	0.144	462	21
21	TCPL EDA	20,184	0.144	2,902	365	0.144	53	(2,849)
22	TCPL MDA	518	0.041	21	782	0.041	32	11
23	TCPL NDA	16,724	0.110	1,836	14,263	0.110	1,566	(270)
24	TCPL SSM DA	713	0.110	78	730	0.110	80	2
25	TCPL WDA	8,811	0.071	628	10,938	0.071	779	152
26	TCPL PKWY EDA	0	0.015	-	5,933	0.015	91	91
27	TCPL PKWY NDA	0	0.026	-	0	0.026	-	-
28	Michcon/TCPL SSM DA	1,275	0.001	1	1,373	0.001	1	0
29	CTHI/CPMI	577	0.000	-	782	0.000	-	-
30	Supply Transportation Commodity			5,907			3,064	(2,843)
31	Company Used	(226)	0.144	(32)	(226)	0.144	(32)	-
32	Inventory Change	(293)	0.144	(42)	(161)	0.144	(23)	19
33	Adjustment			(4)			(4)	-
34	FT Commodity Costs			5,829			3,004	(2,824)
35	Total Union North Transportation Costs			\$ 104,929			\$ 60,537	\$ (44,393)
<u>Storage Costs</u>								
<u>Demand Costs</u>								
36	TCPL NDA STS Injection	17,922	12.306	7,251	14,263	12.306	5,771	(1,480)
37	TCPL WDA STS Injection	1,150	31.415	1,187	1,150	31.415	1,187	(0)
38	TCPL EDA STS Withdrawal	25,010	8.001	6,579	9,845	8.001	2,590	(3,989)
39	TCPL Pkwy to EDA	12,775	8.158	3,426	12,775	8.158	3,426	-
40	TCPL PKWY to EDA Redelivery (bi-directional)	0	8.974	-	9,125	8.974	2,692	2,692
41	TCPL PKWY to EDA Redelivery	0	8.158	-	6,267	8.158	1,681	1,681
42	TCPL Dawn to Pkwy	3,801	0.239	907	0	0.239	-	(907)
43	3rd Party Storage			42			40	(2)
44	Storage Demand Costs			19,393			17,387	(2,006)
<u>Commodity Costs</u>								
45	TCPL NDA STS Injection	5,789	0.025	147	3,810	0.025	97	(50)
46	TCPL WDA STS Injection	769	0.069	53	769	0.069	53	-
47	TCPL NCDA STS Injection	749	0.009	6	749	0.009	6	-
48	TCPL EDA STS Withdrawal	3,559	0.018	65	0	0.018	-	(65)
49	TCPL PKWY to EDA Redelivery	0	0.000	-	9,604	0.015	148	148
50	Storage Commodity Costs			272			305	32
<u>Fuel Costs</u>								
51	TCPL NDA STS Injection	5,789	0.584%	163	3,810	0.584%	107	(56)
52	TCPL WDA STS Injection	769	1.240%	46	769	1.240%	46	-
53	TCPL EDA STS Withdrawal	3,559	0.359%	62	0	0.359%	-	(62)
54	TCPL PKWY to EDA Redelivery	0	0.400%	-	9,604	0.400%	185	185
55	Storage Fuel Costs			271			339	68
56	Total Union North STS and Related Services			19,936			18,030	(1,906)
57	Allocation of Dawn to Parkway Demand Costs			8,136			10,653	2,517
58	Total Union North Storage Costs			\$ 28,072			\$ 28,683	\$ 611

		<b>Board-Approved Gas Supply Plan</b>			<b>Proposed Update to Gas Supply Plan</b>		<b>Variance</b>
Line		Annual Volume	Rates	Costs	Annual Volume	Rates	Costs
No.	Particulars	TJ	(\$ / GJ)	(\$000's)	TJ	(\$ / GJ)	(\$000's)
		(a)	(b)	(c) = (a x b)	(d)	(e)	(f) = (d x e)
						(g) = (f - c)	
	<b><u>Commodity Costs</u></b>						
	<b><u>FT Fuel Costs</u></b>						
59	TCPL NCDA	1,586	2.092%	84	1,733	2.092%	92
60	TCPL EDA	13,888	2.092%	734	365	2.092%	19
61	TCPL MDA	331	0.603%	5	595	0.603%	9
62	TCPL NDA	10,150	1.603%	411	7,689	1.603%	311
63	TCPL SSMDA	0	1.603%	-	0	1.603%	-
64	TCPL WDA	5,206	1.049%	138	7,333	1.049%	194
65	TCPL PKWY EDA	0	0.000%	-	3,502	0.340%	57
66	TCPL PKWY NDA	0	0.000%	-	0	0.560%	-
67	Michcon/TCPL SSMDA	1,275	1.693%	115	1,373	1.693%	59
68	CTHI/CPMI	577	0.153%	2	782	0.153%	3
69	Supply Transportation Fuel	32,435		1,490	22,590		745
70	Company Used			(12)			(12)
71	Inventory Change			(16)			(9)
72	Deferral Adjustment			-			-
73	Transportation FT Fuel Costs			1,463			725
	<b><u>Gas Supply Commodity</u></b>						
74	Commodity						12,928
75	Inventory Change						335
76	Commodity Costs						13,263
77	<b>Total Union North Commodity Costs</b>						\$ 12,525
78	<b>Total Union North Cost Savings</b>						\$ (31,256)

UNION GAS LIMITED  
Union North - Gas Transport, Storage and Commodity Cost Savings by Rate Class

Line No.	Particulars (\$ Millions)	R01 (a)	R10 (b)	R20 (c)	R100 (d)	R25 (e)	Total (f)
<u>Transportation</u>							
1	FT Demand & Diversions	(28.4)	(9.8)	(3.4)	0.0	0.1	(41.6)
2	FT Commodity	(1.9)	(0.7)	(0.3)	0.0	0.0	(2.8)
3	Total Transportation	(30.3)	(10.5)	(3.7)	0.0	0.1	(44.4)
<u>Storage</u>							
4	STS and Related Services	(1.4)	(0.4)	(0.1)	(0.0)	0.0	(1.9)
5	Union Dawn-Parkway	1.9	0.5	0.1	0.0	0.0	2.5
6	Total Storage	0.4	0.1	0.0	0.0	0.0	0.6
7	Total Transportation and Storage (line 3 + line 6)	(29.9)	(10.3)	(3.6)	0.0	0.1	(43.8)
<u>Commodity</u>							
8	Commodity	10.0	2.4	0.2	0.0	0.7	13.3
9	FT Fuel	(0.6)	(0.1)	(0.0)	0.0	0.0	(0.7)
10	Total Commodity	9.4	2.3	0.2	0.0	0.7	12.5
11	Union North Annual Savings (line 7 + line 10)	(20.5)	(8.1)	(3.4)	0.0	0.7	(31.3)

UNION GAS LIMITED  
Rate 01 Gas Transportation and Storage Rate Impacts  
Including Brantford to Kirkwall and Parkway D Compressor Project,  
Parkway West Project and Long Term Contracting Proposal

Line No.	Rate 01 Particulars	EB-2011-0210 Approved Rate (cents/m <sup>3</sup> )	EB-2013-0074 Estimated Rate (1) (cents/m <sup>3</sup> )	Variance (cents/m <sup>3</sup> )	Percent Change (%)
		(a)	(b)	(c) = (b-a)	(d) = (c/a)
<u>Gas Transportation</u>					
1	Fort Frances Zone	4.9387	1.5103	(3.4284)	-69.4%
2	Western Zone	5.5401	2.1118	(3.4284)	-61.9%
3	Northern Zone	7.6275	4.1992	(3.4284)	-44.9%
4	Eastern Zone	8.5153	5.0869	(3.4284)	-40.3%
<u>Gas Storage</u>					
5	Fort Frances Zone	2.1507	2.2524	0.1017	4.7%
6	Western Zone	2.3910	2.4927	0.1017	4.3%
7	Northern Zone	3.2252	3.3269	0.1017	3.2%
8	Eastern Zone	3.5799	3.6816	0.1017	2.8%

Notes:

(1) Includes Brantford to Kirkwall and Parkway D Compressor Project, Parkway West Project and Long Term Contracting proposal.



UNION GAS LIMITED  
General Service Bill Impacts  
Includes Brantford to Kirkwall and Parkway D Compressor Project and Long Term Contracting Proposal  
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Particulars	(Fort Frances)				(Western)			
		Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )		Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )		Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )		Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )	
		EB-2011-0210 Approved 01-Jan-13 Total Bill (\$)(1)	(a)	EB-2013-0074 Estimated Total Bill (\$)	(b)	EB-2011-0210 Approved 01-Jan-13 Total Bill (\$)(1)	(d)	EB-2013-0074 Estimated Total Bill (\$)	(e)
	<u>Delivery Charges</u>								
1	Monthly Charge	252.00		252.00	-	252.00		252.00	-
2	Delivery Commodity Charge	207.52		206.36	(1.16)	207.52		206.36	(1.16)
3	Total Delivery Charge	459.52		458.36	(1.16)	459.52		458.36	(1.16)
									-0.3%
	<u>Supply Charges</u>								
4	Transportation to Union	108.65		33.23	(75.42)	121.88		46.44	(75.44)
5	Prospective Recovery - Transportation	-		-	-	-		-	-
6	Storage Services	47.32		47.71	0.39	52.60		52.99	0.39
7	Prospective Recovery - Storage	-		-	-	-		-	-
8	Subtotal	155.97		80.94	(75.03)	174.48		99.43	(75.05)
									-43.0%
9	Commodity & Fuel	276.77		310.01	33.24	277.98		311.20	33.22
10	Prospective Recovery - Commodity & Fuel	-		-	-	-		-	-
11	Subtotal	276.77		310.01	33.24	277.98		311.20	33.22
12	Total Gas Supply Charge (line 8 + line 11)	432.74		390.95	(41.79)	452.46		410.63	(41.83)
13	Total Bill	892.26		849.31	(42.95)	911.98		868.99	(42.99)
									-4.7%
14	Impacts for Customer Notices - Sales (line 13)				(42.95)				(42.99)

Notes:  
(1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).

Notes:  
(1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).

UNION GAS LIMITED  
General Service Bill Impacts  
Includes Brantford to Kirkwall and Parkway D Compressor Project and Long Term Contracting Proposal  
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Rate M1 - Particulars (\$)	EB-2011-0210 Approved 01-Jan-13 Total Bill (1) (a)	EB-2013-0074 Estimated Total Bill (b)	Impact (c) = (b - a)
	<u>Delivery Charges</u>			
1	Monthly Charge	252.00	252.00	-
2	Delivery Commodity Charge	78.66	77.69	(0.97)
3	Storage Services	16.23	16.09	(0.14)
4	Total Delivery Charge (line 1 + line 2 + line 3)	<u>346.89</u>	<u>345.78</u>	<u>(1.11)</u>
	<u>Supply Charges</u>			
5	Transportation to Union	96.80	96.80	-
6	Commodity & Fuel (2)	280.77	280.76	(0.01)
7	Total Gas Supply Charge (line 5 + line 6)	<u>377.57</u>	<u>377.56</u>	<u>(0.01)</u>
8	Total Bill (line 4 + line 7)	<u>724.46</u>	<u>723.34</u>	<u>(1.12)</u>
9	Impacts for Customer Notices - Sales (line 8)			(1.12)

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).  
(2) Reflects changes in the Gas Supply Administration charge only.

UNION GAS LIMITED  
General Service Bill Impacts  
Includes Brantford to Kirkwall and Parkway D Compressor Project and Parkway West Project with Gas Supply and Long Term Contracting Proposal  
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Particulars	(Fort Frances)				(Western)			
		Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )				Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )			
		EB-2011-0210 Approved 01-Jan-13 Total Bill (\$)(1)	EB-2013-0074 Estimated Total Bill (\$)	Impact (\$)	(c) = (b) - (a)	EB-2011-0210 Approved 01-Jan-13 Total Bill (\$)(1)	EB-2013-0074 Estimated Total Bill (\$)	Impact (\$)	(f) = (e) - (d)
		(a)	(b)	(c) = (b) - (a)		(d)	(e)		
	<u>Delivery Charges</u>								
1	Monthly Charge	252.00	252.00	-		252.00	252.00	-	
2	Delivery Commodity Charge	207.52	204.68	(2.84)		207.52	204.68	(2.84)	
3	Total Delivery Charge	459.52	456.68	(2.84)	-0.6%	459.52	456.68	(2.84)	-0.6%
	<u>Supply Charges</u>								
4	Transportation to Union	108.65	33.23	(75.42)		121.88	46.44	(75.44)	
5	Prospective Recovery - Transportation	-	-	-		-	-	-	
6	Storage Services	47.32	49.56	2.24		52.60	54.85	2.25	
7	Prospective Recovery - Storage	-	-	-		-	-	-	
8	Subtotal	155.97	82.79	(73.18)	-46.9%	174.48	101.29	(73.19)	-41.9%
9	Commodity & Fuel	276.77	309.99	33.22		277.98	311.19	33.21	
10	Prospective Recovery - Commodity & Fuel	-	-	-		-	-	-	
11	Subtotal	276.77	309.99	33.22		277.98	311.19	33.21	
12	Total Gas Supply Charge (line 8 + line 11)	432.74	392.78	(39.96)		452.46	412.48	(39.98)	
13	Total Bill	892.26	849.46	(42.80)	-4.8%	911.98	869.16	(42.82)	-4.7%
14	Impacts for Customer Notices - Sales (line 13)			(42.80)				(42.82)	

Notes:  
(1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).

UNION GAS LIMITED  
General Service Bill Impacts  
Includes Brantford to Kirkwall and Parkway D Compressor Project and Parkway West Project with Gas Supply and Long Term Contracting Proposal  
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Particulars	(Northern) Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )				(Eastern) Rate 01 - Residential (Annual Consumption of 2,200 m <sup>3</sup> )			
		EB-2011-0210		EB-2013-0074		EB-2011-0210		EB-2013-0074	
		Approved 01-Jan-13		Estimated		Approved 01-Jan-13		Estimated	
		Total Bill (\$)	(1)	Total Bill (\$)	(2)	Total Bill (\$)	(1)	Total Bill (\$)	(2)
		(a)		(b)		(d)		(e)	(f) = (e) - (d)
	Delivery Charges								
1	Monthly Charge	252.00		252.00	-	252.00		252.00	-
2	Delivery Commodity Charge	207.44		204.60	(2.84)	207.15		204.30	(2.85)
3	Total Delivery Charge	459.44		456.60	(2.84)	459.15		456.30	(2.85)
									-0.6%
	Supply Charges								
4	Transportation to Union	167.80		92.39	(75.41)	187.35		111.90	(75.45)
5	Prospective Recovery - Transportation	-		-	-	-		-	-
6	Storage Services	70.97		73.18	2.21	78.75		81.01	2.26
7	Prospective Recovery - Storage	-		-	-	-		-	-
8	Subtotal	238.77		165.57	(73.20)	266.10		192.91	(73.19)
									-27.5%
9	Commodity & Fuel	279.46		312.65	33.19	280.77		313.96	33.19
10	Prospective Recovery - Commodity & Fuel	-		-	-	-		-	-
11	Subtotal	279.46		312.65	33.19	280.77		313.96	33.19
12	Total Gas Supply Charge (line 8 + line 11)	518.23		478.22	(40.01)	546.87		506.87	(40.00)
13	Total Bill	977.67		934.82	(42.85)	1,006.02		963.17	(42.85)
									-4.3%
14	Impacts for Customer Notices - Sales (line 13)				(42.85)				(42.85)

Notes:  
(1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).

UNION GAS LIMITED  
General Service Bill Impacts  
Includes Brantford to Kirkwall and Parkway D Compressor Project and Parkway West Project with Gas Supply and Long Term Contracting Proposal  
Annual Consumption of 2,200 m<sup>3</sup>

Line No.	Rate M1 - Particulars (\$)	EB-2011-0210 Approved 01-Jan-13 Total Bill (1)	EB-2013-0074 Estimated Total Bill	Impact (c) = (b - a)
		(a)	(b)	
	<u>Delivery Charges</u>			
1	Monthly Charge	252.00	252.00	-
2	Delivery Commodity Charge	78.66	77.02	(1.64)
3	Storage Services	16.23	15.98	(0.25)
4	Total Delivery Charge (line 1 + line 2 + line 3)	346.89	345.00	(1.89)
				-0.5%
	<u>Supply Charges</u>			
5	Transportation to Union	96.80	96.80	-
6	Commodity & Fuel (2)	280.77	280.76	(0.01)
7	Total Gas Supply Charge (line 5 + line 6)	377.57	377.56	(0.01)
8	Total Bill (line 4 + line 7)	724.46	722.56	(1.90)
				-0.3%
9	Impacts for Customer Notices - Sales (line 8)			(1.90)

Notes:  
(1) EB-2011-0210, Rate Order, Working Papers, Schedule 16, excluding Prospective Recovery and Temporary Charges/(Credits).  
(2) Reflects changes in the Gas Supply Administration charge only.

## BRANTFORD - KIRKWALL PROJECT SCHEDULE

[illegible]

## **GENERAL TECHNIQUES AND METHODS OF CONSTRUCTION**

1. Pipeline construction is divided into several crews that create a mobile assembly line. Each crew performs a different function, with a finished product left behind when the last crew has completed its work.
2. Union Gas will provide its own inspection staff to ensure the contractor meets its contractual obligations.
3. Where possible, trees are cleared in the winter before construction to avoid avian nesting concerns. If the land cannot be accessed in the winter due to incomplete easement negotiations or other reason, an ornithologist will inspect the site and direct any avian mitigation needed. Logs are stacked at the side of the easement for landowner use, if requested.
4. The contractor's clearing crew braces and cuts all fences crossing the easement and installs any required temporary gates. This crew clears small brush and crops on the easement and temporary working areas.
5. The grading crew constructs approaches through road, highway, and railway ditches to allow equipment onto the working side of the easement. This crew also builds roads through wet areas to allow heavy equipment operation. The grading crew strips a certain width of topsoil with bulldozers and graders so that it will not be mixed with the subsoil later removed from the trench. In hilly terrain, the grade is levelled to provide a stable working surface.
6. The contractor erects safety barricades around excavations adjacent to roads. Flagmen and signs are used for traffic control. The easement is fenced nightly at all access points.
7. The stringing crew then lays pipe on wooden skids on the working side of the easement adjacent to the proposed trench area. Wherever possible, the stringing trucks hauling the pipe travel down the centre of the proposed trench to minimize compaction effects.



8. The contractor, by use of a trenching machine or hoe excavator, will excavate a trench approximately 1.7 metre in width for the pipeline, depending on ground conditions at the time. Accesses across the easement including laneways are left unexcavated where requested by the landowner. All tile cut during trench excavation is flagged at the trench and easement limits to signify to the tile repair crew that a repair is required. All tile is measured and recorded as to size, location, depth, type and quality. This information is kept on file with the Company. If a repair is necessary in the future, Union has an accurate method of locating the tile. All utilities that will be crossed or paralleled closely by the pipeline will be located prior to trenching.
9. Bedrock will be removed by mechanical means such as a “hoe ram” where practical. Where rock is encountered that is too hard to mechanically excavate, blasting will be conducted in accordance with Union’s construction procedures and the *Canadian Explosives Act*. The contractor will obtain all necessary permits and comply with all legal requirements in connection with the use, storage and transportation of explosives. All blasts will be matted and vibrations will be monitored to ensure there is no damage to adjacent pipelines, utilities and dwellings.
10. Concurrent to trenching, the contractor may have a boring crew install the pipe at road and railway crossings. This operation involves a large excavation on both sides of the proposed crossing to allow room for the boring equipment to be operated and the pipe to be installed at the proper elevation. Augers placed in a bore pipe are used to bore beneath the proposed crossing thereby not disrupting the surface features at the crossing site. When the bore pipe exits on the far side of the crossing, the augers are removed, the carrier pipe or casing pipe is attached to the bore pipe, and the bore pipe is pulled back, drawing the carrier pipe or casing pipe into place.
11. Next, the pipe between roads, accesses, laneways, and streams is welded into one continuous length. All welds are ultrasonically and/or radiographically inspected and then coated and lowered into the trench. After sections of pipe are lowered into the trench, subsoil is backfilled by a drag line, bulldozer or backhoe. If the excavated material contains too much rock for direct backfilling, it may be sifted to separate the fine parts from the rock. If such separation is

not possible due to the consistency of the material or if a large quantity of rock remains, the unsuitable materials will be hauled away and sand brought in for backfilling.

12. The tie-in crew is responsible for the installation of pipe across accesses and laneways to minimize the length of time that these accesses are out of service to the landowner. The tie-in crew is also responsible for the pipeline installation at most river and stream crossings.
13. The pipe is filled with water and hydrostatically tested to prove its integrity. After the test water is removed and the line dried, an electronic sizing tool is run through the pipeline to check for ovality and dents. Cathodic protection is applied to the completed pipeline.
14. After the trench is backfilled, any cut cross-easement tile is repaired. Unless otherwise specified by the landowner or municipality, tile repairs are made by excavating back into the bank along the tile run a minimum distance of 1.2 metres and placing clear stone as a foundation for a high density or perforated steel drainage pipe. The new drainage pipe is cut to the appropriate length and installed between the two exposed tile ends. Prior to actual setting of the support pipe, the existing tile run is checked to ensure that it is clear and undamaged within the limits of the easement. If it is not, further tile is excavated and the damaged tile is replaced to the edge of the easement. The area is then backfilled to the degree necessary to hold the tile and secure the support pipe. The landowner or municipal representative is asked to inspect each tile repair prior to backfill completion. Union undertakes that it is responsible for the tile repair resulting from construction and will stand good for the tile repairs at any further date after construction of the pipeline. Union retains the services of a tile consultant to determine if it is better to repair individual tiles crossing the easement or install a header system. Where a header system is used, additional tiles running parallel to the pipeline on the easement are installed during final clean-up activities.
15. The clean-up crew is the last crew on the property. On farmland, it prepares the subsoil on the stripped portion of the easement by subsoiling or deep chisel ploughing to break up compaction and picking all stones down to 100 millimetres in diameter. The trench line is crowned with enough subsoil to allow for trench settlement. Excess subsoil is removed to an acceptable location on the landowner's property or hauled to a disposal site. Topsoil is then replaced

using a drag line or backhoe and small bulldozers to minimize compaction. The working side of the easement is then chisel ploughed and stone picked. The entire easement may be cultivated and stone picked again if requested by the landowner. The clean-up crew will also repair fences, pick up debris, replace sod in landscaped areas and reseed sensitive areas such as woodlots, ditch banks and stream crossings.

16. When the clean-up is completed, the landowner is asked by a Company representative to sign a clean-up acknowledgement form if satisfied with the clean-up. This form, when signed, allows release of payment for the clean-up to the contractor. This form in no way releases the Company from its obligation for tile repairs, compensation for damages and/or further clean-up as required due to erosion or subsidence directly related to pipeline construction.

## **TOTAL ESTIMATED ENVIRONMENTAL COSTS**

### **BRANTFORD – KIRKWALL PIPELINE PROJECT**

#### **Pre-Construction**

Environmental Assessment and Addendum	\$	110,000
Archaeology		250,000
Soil Sampling		10,000
Watercourse Survey		10,000
Vegetation Survey		10,000
Hearing Costs (Environmental Consultant)		20,000
Permits (Environmental Consultant)		20,000
Species at risk survey		<u>60,000</u>

**Total Pre-Construction** **\$ 490,000**

#### **Construction**

Environmental Inspection	\$	300,000
Wet Soil Shutdown		2,100,000
Site Restoration		850,000
Topsoil Stripping and Replacement		360,000
Water Well Sampling		<u>50,000</u>

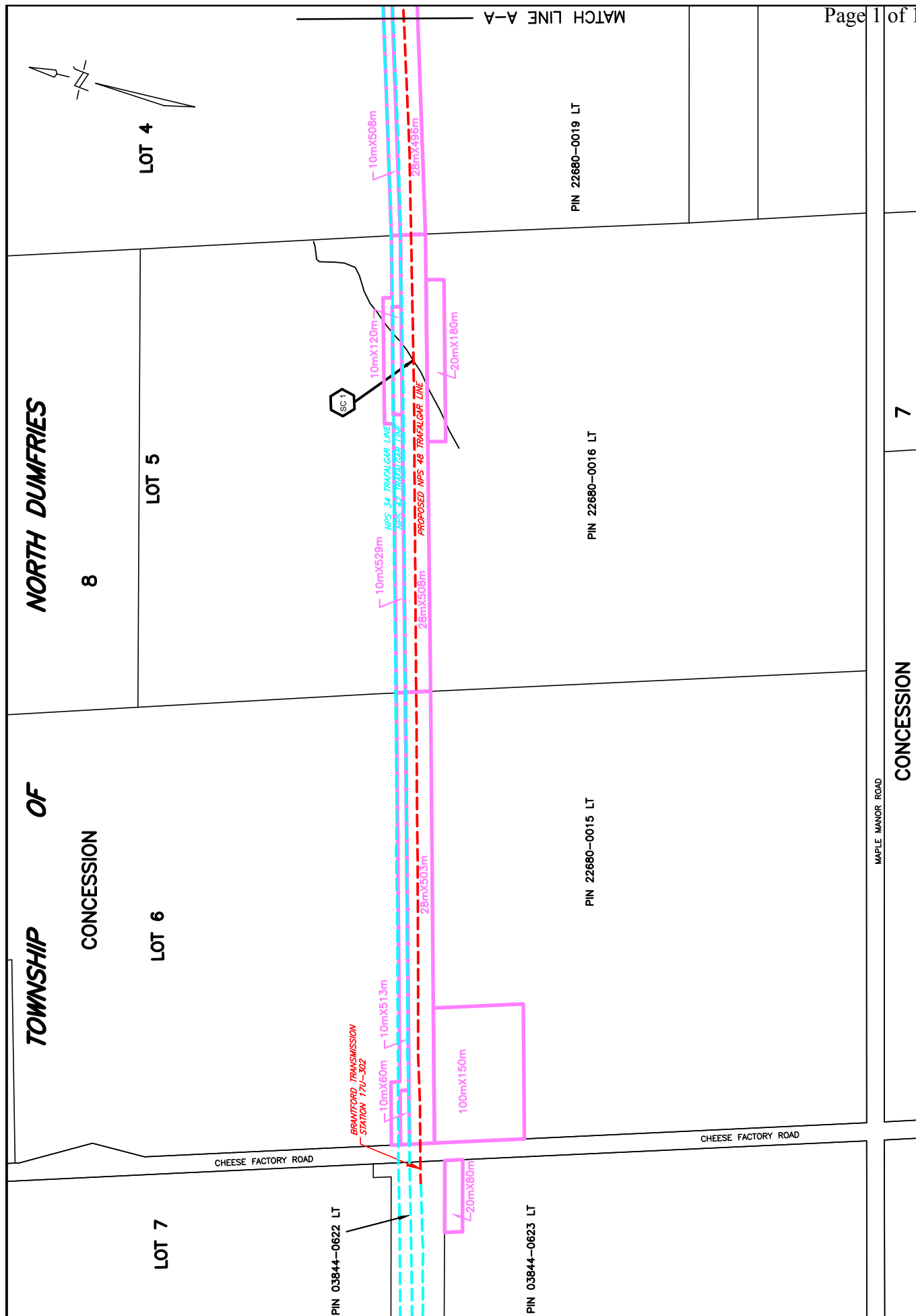
**Total Construction** **\$ 3,660,000**

#### **Post Construction**

Site Restoration	\$	210,000
Reforestation		<u>50,000</u>

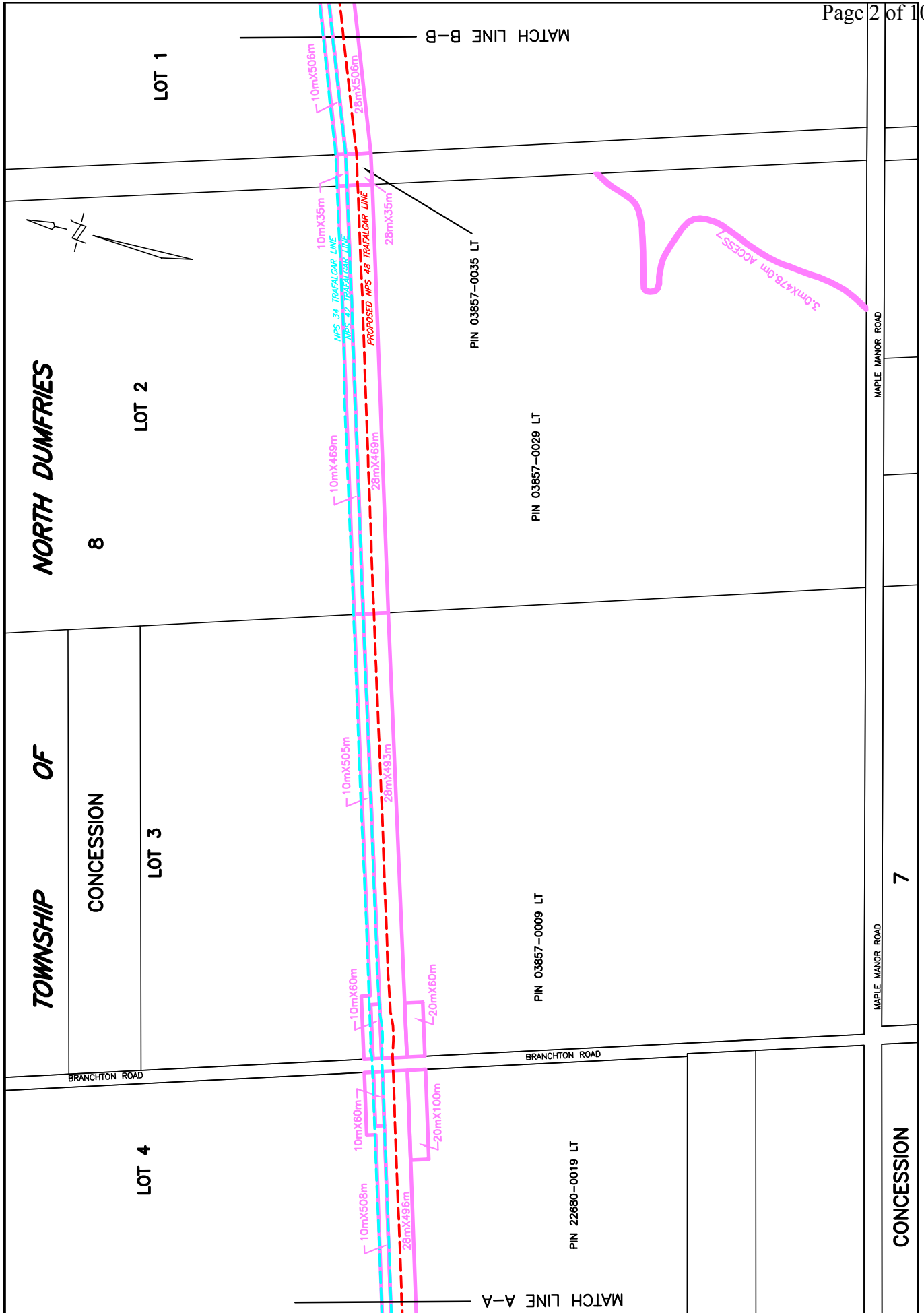
**Total Post Construction** **\$ 260,000**

**Total Estimated Environmental Costs** **\$ 4,410,000**

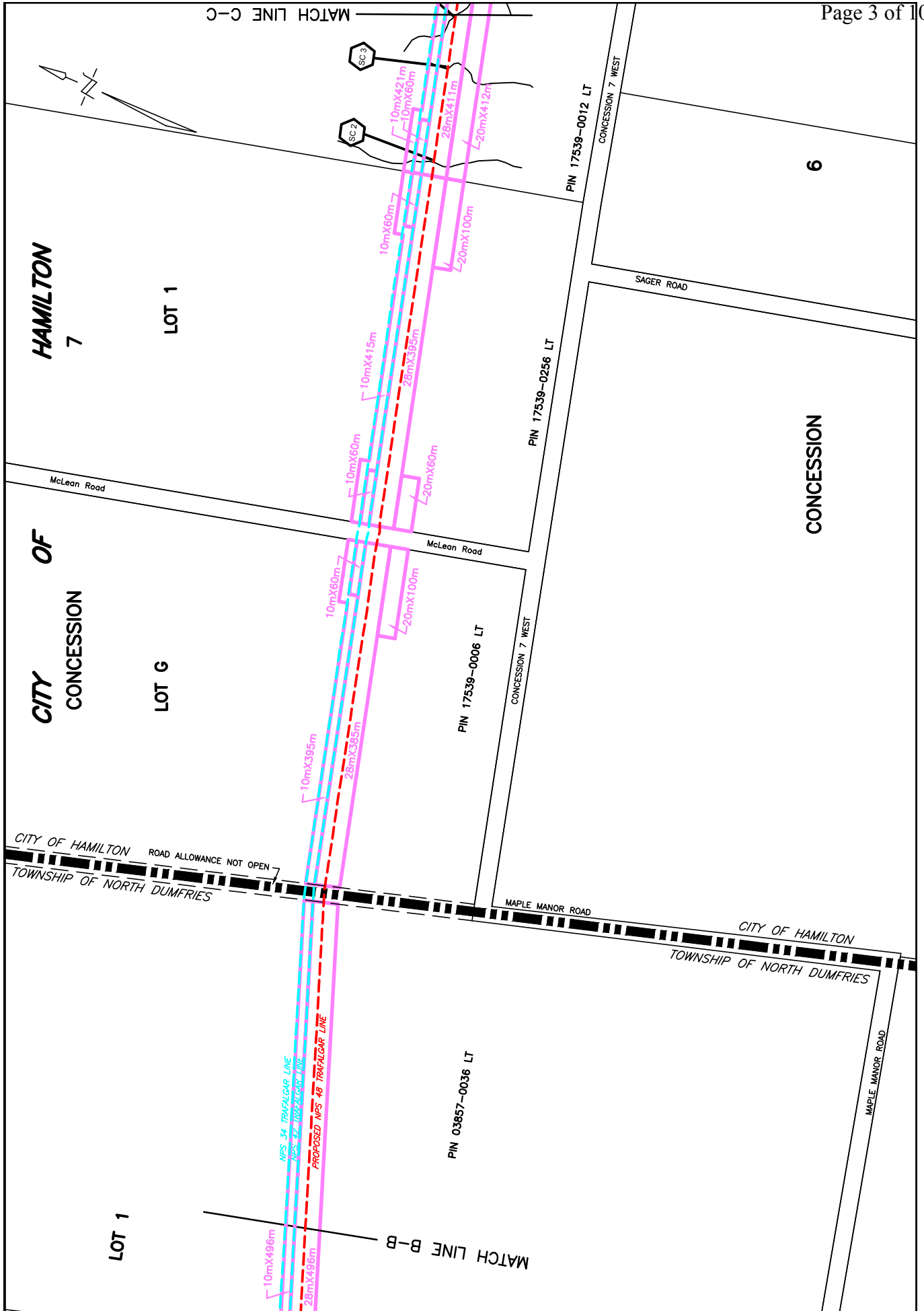




TRAFALGAR LINE – NPS 48  
BRANTFORD TO KIRKWALL SECTION  
N061–F02



TRAFALGAR LINE – NPS 48  
BRANTFORD TO KIRKWALL SECTION  
N061–F03

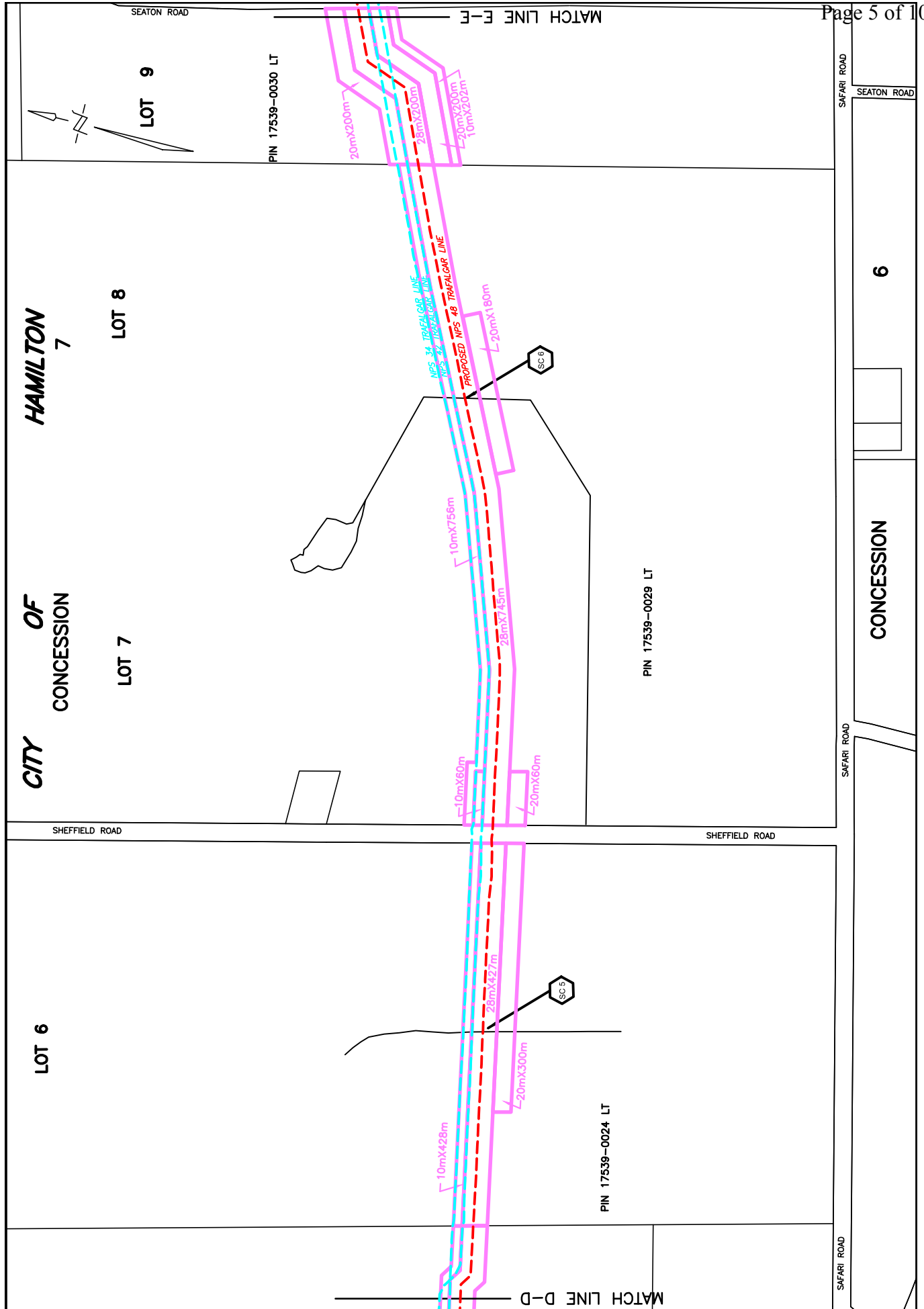








TRAFALGAR LINE – NPS 48  
BRANTFORD TO KIRKWALL SECTION  
N061–F05

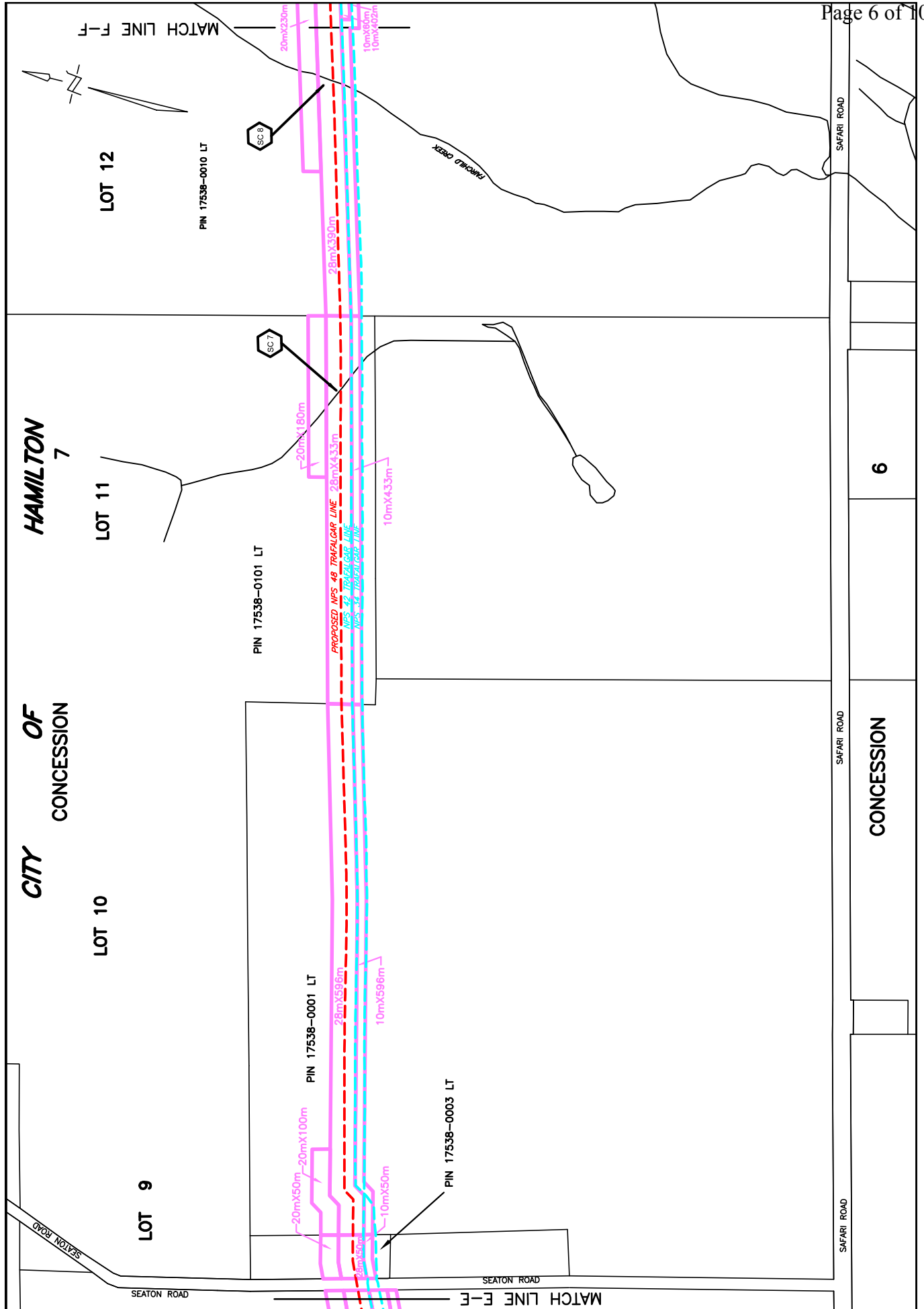


6

CONCESSION



**TRAFALGAR LINE – NPS 48  
BRANTFORD TO KIRKWALL SECTION  
N061–F06**



6

CONCESSION

SAFARI ROAD

SAFARI ROAD

SEATON ROAD

SEATON ROAD

PIN 17538-0003 LT

PIN 17538-0001 LT

PIN 17538-0101 LT

PIN 17538-0010 LT

LOT 11

LOT 10

LOT 9

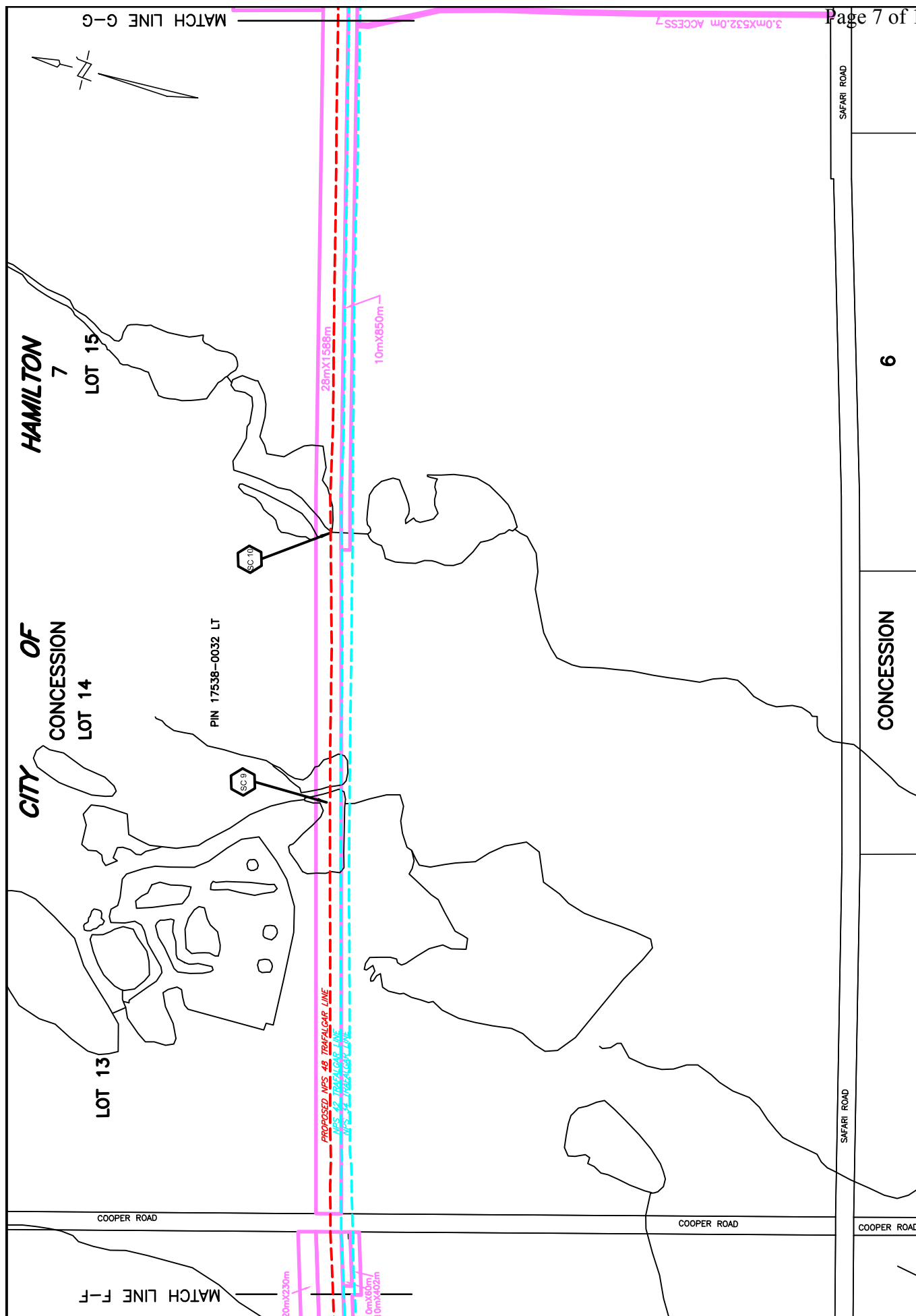
**CITY OF HAMILTON  
CONCESSION**

MATCH LINE F-F

MATCH LINE E-E

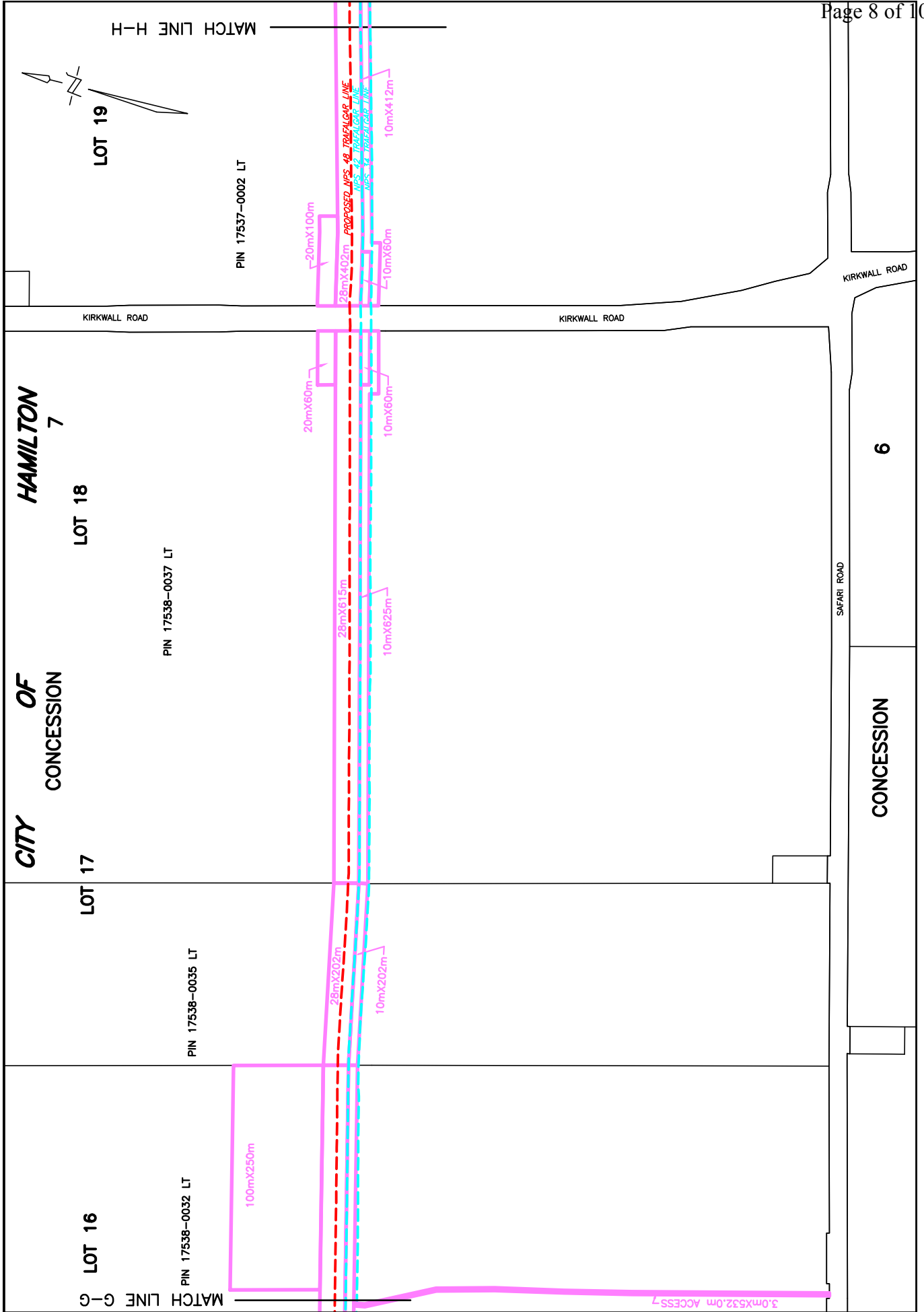


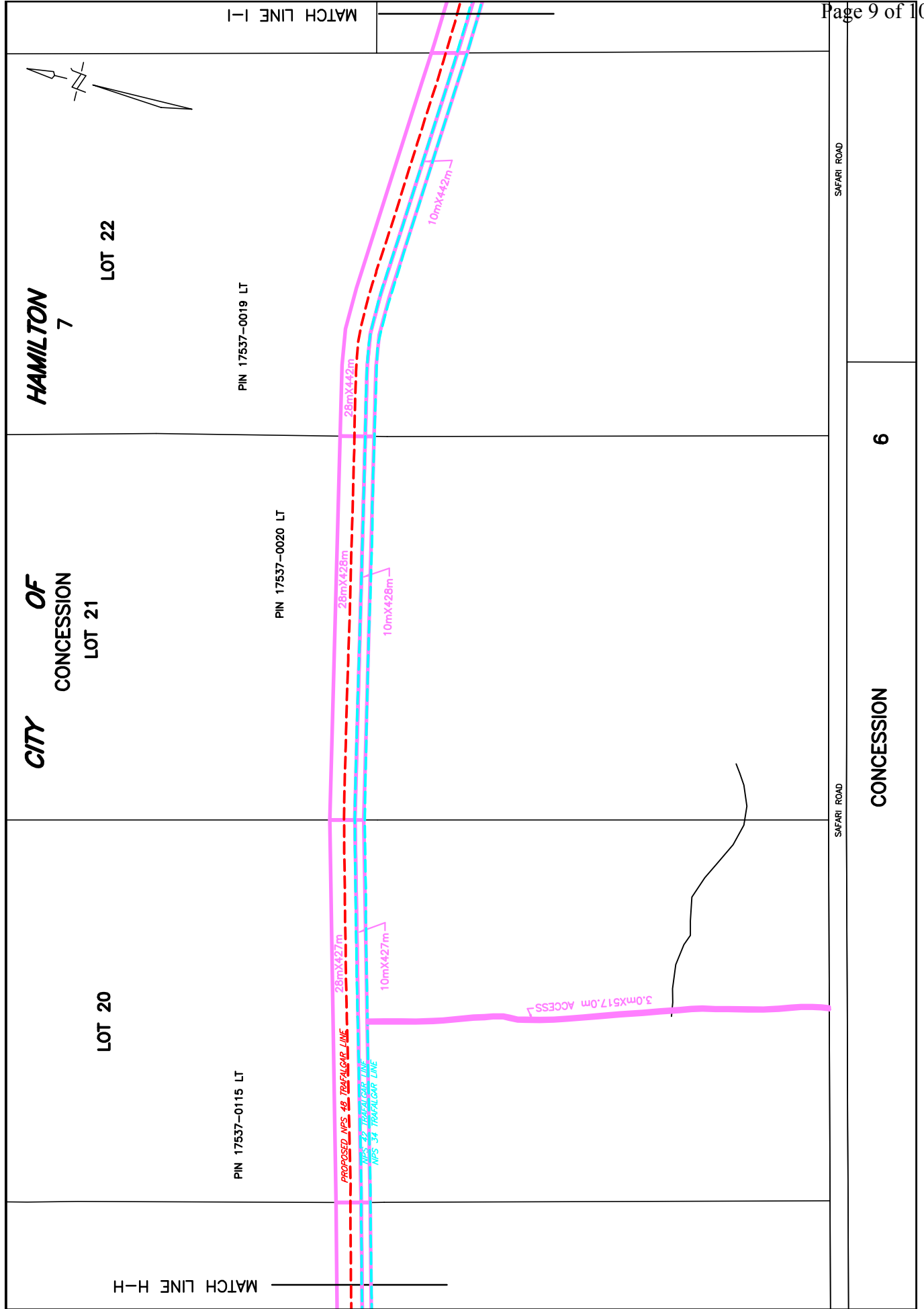
TRAFALGAR LINE - NPS 48  
BRANTFORD TO KIRK WALL SECTION  
N061-F07





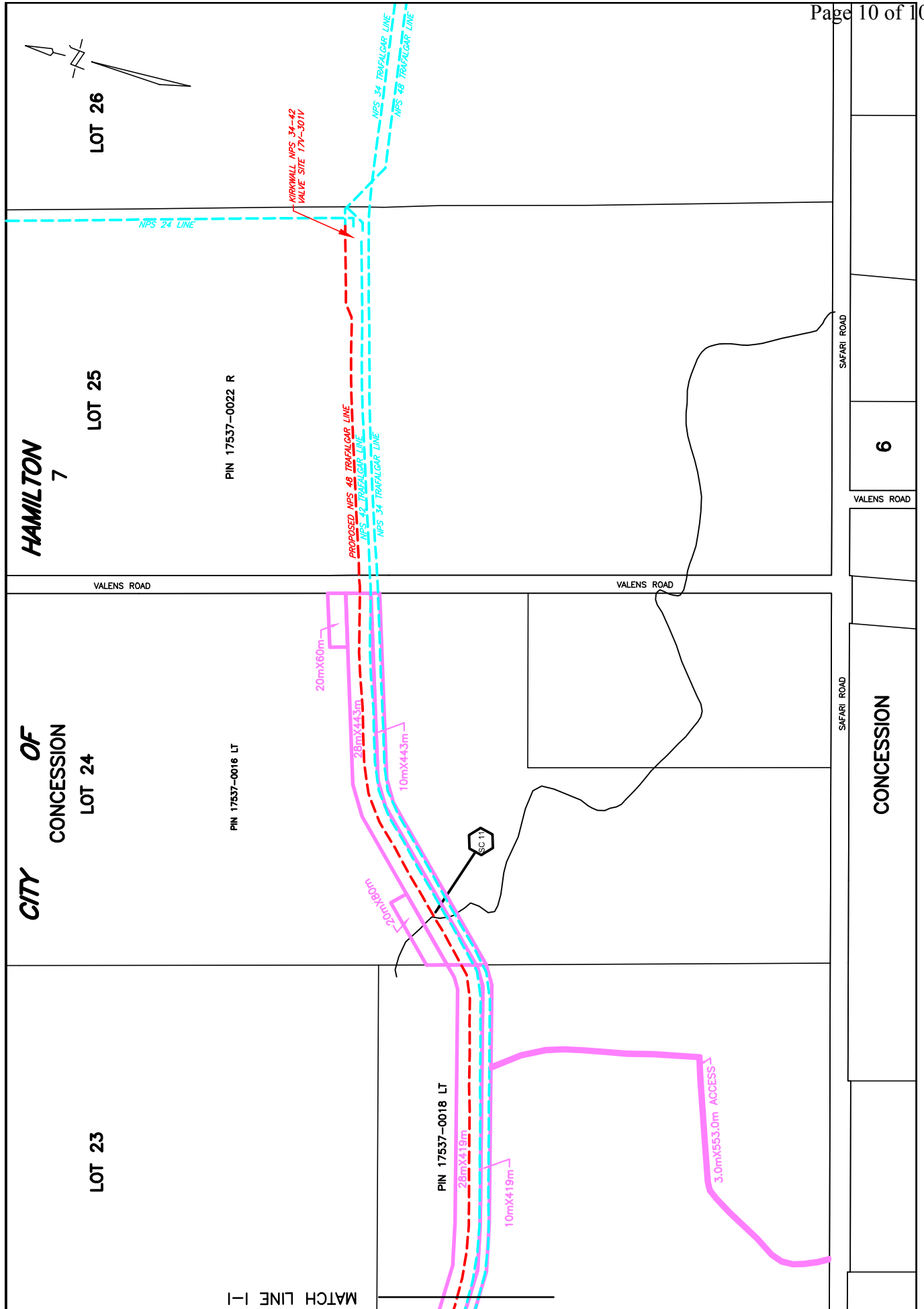
TRAFALGAR LINE – NPS 48  
BRANTFORD TO KIRKWALL SECTION  
N061–F08

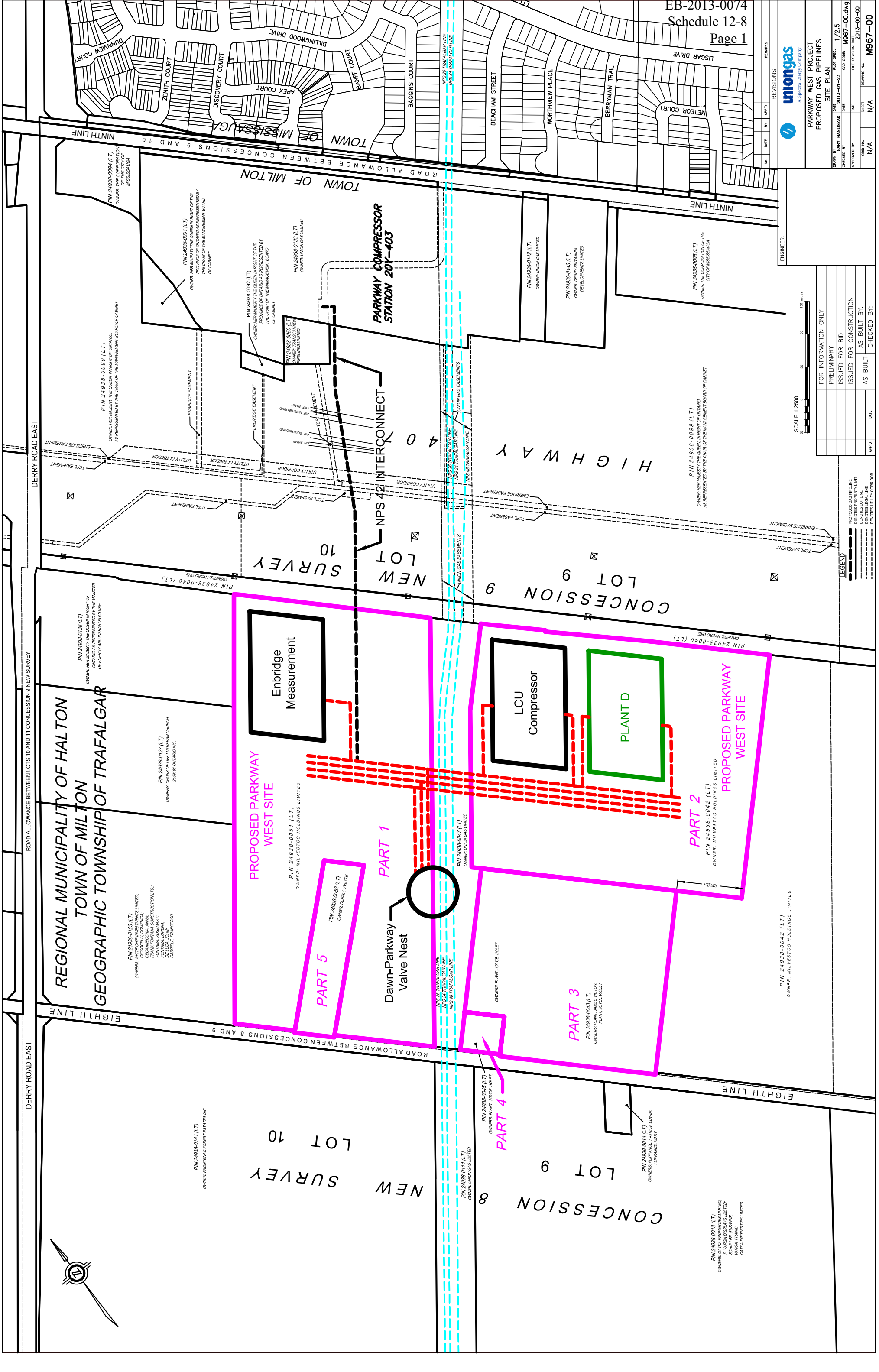
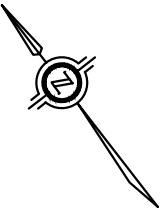







TRAFALGAR LINE – NPS 48  
BRANTFORD TO KIRKWALL SECTION  
N061–F10





EB-2013-0074  
Schedule 12-8  
Page 1



**uniongas**  
A Spectra Energy Company

ENGINEER:

NO.	DATE	BY	APPROVED	REMARKS

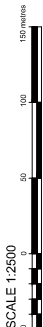
**PARKWAY WEST PROJECT**  
**PROPOSED GAS PIPELINES**

**SITE PLAN**

DATE: 2013-01-23  
DRAWN: GARY HANUSZAK  
CHECKED BY:    
APPROVED BY:  

PLOT SPEC: 1/2.5  
CAD CODE: M967-00.dwg  
FILE REVISION DATE: 2013-00-00  
SHEET:    
ORD NO.: N/A  
DRAWING NO.: N/A

SCALE 1:2500



**LEGEND**

- PROPOSED GAS PIPELINE
- PROPOSED PROPERTY LIMIT
- EXISTING PROPERTY LIMIT
- EXISTING LEGAL LINE
- PROPOSED UTILITY CORRIDOR

**FOR INFORMATION ONLY**

	PRELIMINARY	ISSUED FOR BID	ISSUED FOR CONSTRUCTION	AS BUILT	AS BUILT BY:	CHECKED BY:

PIN 24938-0013 (LT)  
OWNERS: GATYA PROPERTIES LIMITED;  
F. MARCOSPILAS LIMITED;  
MARCO F. MARCOSPILAS;  
MARCO F. MARCOSPILAS;  
GATYA PROPERTIES LIMITED

PIN 24938-0014 (LT)  
OWNERS: GATYA PROPERTIES LIMITED;  
F. MARCOSPILAS LIMITED;  
MARCO F. MARCOSPILAS;  
MARCO F. MARCOSPILAS;  
GATYA PROPERTIES LIMITED

PIN 24938-0045 (LT)  
OWNERS: PLANT, JOYCE VOLET;  
OWNERS: PLANT, JOYCE VOLET;

PIN 24938-0114 (LT)  
OWNER: UNION GAS LIMITED

PIN 24938-0043 (LT)  
OWNERS: PLANT, JAMES VICTOR;  
PLANT, JOYCE VOLET

OWNERS: PLANT, JOYCE VOLET

PIN 24938-0047 (LT)  
OWNER: UNION GAS LIMITED

PIN 24938-0052 (LT)  
OWNER: DERRICK YETIE

PIN 24938-0051 (LT)  
OWNER: MILVESTCO HOLDINGS LIMITED

PIN 24938-0127 (LT)  
OWNERS: CROSS OF LIFE LUTHERAN CHURCH;  
216181 ONTARIO INC.

PIN 24938-0138 (LT)  
OWNER: HER MAJESTY THE QUEEN IN RIGHT OF  
ONTARIO AS REPRESENTED BY THE MINISTER  
OF ENERGY AND INFRASTRUCTURE

PIN 24938-0099 (LT)  
OWNER: HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO,  
AS REPRESENTED BY THE CHAIR OF THE MANAGEMENT BOARD OF CABINET

PIN 24938-0095 (LT)  
OWNER: THE CORPORATION OF THE  
CITY OF MISSISSAUGA

PIN 24938-0143 (LT)  
OWNER: DERRY BRITANNIA  
DEVELOPMENTS LIMITED

PIN 24938-0142 (LT)  
OWNER: UNION GAS LIMITED

PIN 24938-0133 (LT)  
OWNER: UNION GAS LIMITED

PIN 24938-0092 (LT)  
OWNER: HER MAJESTY THE QUEEN IN RIGHT OF THE  
PROVINCE OF ONTARIO AS REPRESENTED BY  
THE CHAIR OF THE MANAGEMENT BOARD  
OF CABINET

PIN 24938-0091 (LT)  
OWNER: HER MAJESTY THE QUEEN IN RIGHT OF THE  
PROVINCE OF ONTARIO AS REPRESENTED BY  
THE CHAIR OF THE MANAGEMENT BOARD  
OF CABINET

PIN 24938-0098 (LT)  
OWNER: HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO,  
AS REPRESENTED BY THE CHAIR OF THE MANAGEMENT BOARD OF CABINET

Temp File #	NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Length x Width Hectares	TEMPORARY EASEMENT Dimensions (Metres) Length x Width Hectares	MORTGAGE, LIEN/LEASE, EASEMENT
F22-010		PIN: 03844-0062 LT: Pt Lt 7, Con 8, Pt 1, 67R-1302 lying to the south of 58R-9636, Township of North Dumfries, Regional Municipality of Waterloo			
CHEESE FACTORY ROAD					
BK 1		PIN: 03844-0623 LT: Pt Lt 7, Con 8, Pt 1, 67R-1302 lying to the south of 58R-9636, Township of North Dumfries, Regional Municipality of Waterloo		80 x 20 0.16	
BK 2		PIN: 22680-0015 LT Pt Lt 6, Con 8, Township of North Dumfries, Regional Municipality of Waterloo	503 x 28 1.41	60 x 10 0.06 513 x 10 0.51 150 x 100 1.5	
BK 3		PIN: 22680-0016 LT Pts 1, 2, 3, 4, & 5, PL 58R-11343, Township of North Dumfries, Regional Municipality of Waterloo	508 x 28 1.43	120 x 10 0.12 180 x 20 0.36 529 x 10 0.53	(m) The Toronto Dominion Bank 81 Main Street Cambridge, ON N1R 1W1 Inst. #WR687385
BK 4		PIN: 22680-0019 LT Pt Lt 4, Con 8, Pts. 1, 2 & 3, 67R-564, Township of North Dumfries, Regional Municipality of Waterloo	496 x 28 1.39	508 x 10 0.51 60 x 10 0.06 100 x 20 0.2	
BRANCHTON ROAD					
BK 5		PIN: 03857-0009 LT Pt Lt 3, Con 8 as in 424079, Township of North Dumfries, Regional Municipality of Waterloo	493 x 28 1.38	60 x 10 0.06 60 x 20 0.12 505 x 10 0.51	(m) CoOperatieve Rababank Weeterland En Cranendonck U.A. PO Box 218 6000 AE Weert The Netherlands Inst. WR614315
BK 6		PIN: 03857-0029 LT Pt Lt 2, Con 8, Township of North Dumfries, Regional Municipality of Waterloo	469 x 28 1.31	469 x 10 0.47 478 x 3 0.14	(e) Bell Canada Inst. #W5656526 (m) Brigitte Hartinger R. R. #1, 1033 Morrison Road Branchton, ON N0B 1L0 Inst. #1420050
BK 7		PIN: 03857-0035 LT Pt Lt 2, Con 8 as in 437273, Township of North Dumfries, Regional Municipality of Waterloo	35 x 28 0.1	35 x 10 0.035	
BK 8		PIN: 03857-0036 Pt Lt 1, Con 8, Township of North Dumfries, Regional Municipality of Waterloo	506 x 28 1.42	506 x 10 0.51	(m) Brigitte Hartinger R. R. #1, 1033 Morrison Road Branchton, ON N0B 1L0 Inst. #1420050  (m) Royal Bank of Canada 226 Main St., PO Box 2406 Exeter, ON N0M 1S7 Inst. #1332230
ROAD ALLOWANCE (UNOPENED)					
BK 9		PIN: 17539-0006 LT Pt Lt G, Con 7, as in VM51506, Beverly, City of Hamilton	395 x 28 1.11	60 x 10 0.06 405 x 10 0.41 100 x 20 0.20	



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	MCLEAN ROAD				
BK 10		PIN: 17539-0256 LT Pt Lt 1, Con 7, Beverly, City of Hamilton	395 x 28 1.11	60 x 10 0.06 60 x 20 0.12 60 x 10 0.06 100 x 20 0.2 415 x 10 0.42	Notice - Severance The Regional Municipality of Waterloo 150 Frederick St., 3rd Floor Kitchener, ON N2G 4J3 Inst. #W/E505165
BK 11		PIN: 17539-0012 LT Pt Lt 2, Con 7, Beverly as in VM276914 City of Hamilton	411 x 28 1.15	60 x 10 0.06 421 x 10 0.43 412 x 20 0.85	
BK 12		PIN: 17539-0016 LT Pt Lt 3, Con 7, Beverly as in CD318051, City of Hamilton	435 x 28 1.22	30 x 10 0.03 50 x 20 0.10 445 x 10 0.45	(m) Royal Bank of Canada 10 York Mills Road - 3rd Floor Toronto, ON M2P 0A2 Inst. #W/E872480
BK 13		PIN: 17539-0020 LT Pt Lt 4, Con 7, Beverly as in CD512114, City of Hamilton	57 x 28 0.16	30 x 10 0.03 70 x 20 0.14 25 x 10 0.03	(m) Bank of Montreal Mortgage Service Centre, 865 Harrington Court Burlington, ON L7N 3P3 Inst. #W/E874184
	HIGHWAY 8 (Dundas Street)				
BK 14		PIN: 17539-0019 LT Pt Lt 4, Con 7 Beverly as in CD359506, City of Hamilton	330 x 28 0.93	60 x 10 0.06 100 x 20 0.20 363 x 10 0.37	(m) CIBC Mortgages Inc. PO Box 115, Commerce Court Postal Station Toronto, ON M5L 1E5 Inst. #W/M268721  (m) Canadian Imperial Bank of Commerce 11 Main Street Cambridge, ON N1R 5V5 Inst. #W/M268862
BK 15		PIN: 17539-0022 LT Pt Lt 5 Con 7 Beverly as in AB74520 & AB331911, s/t AB324114, BV19783, BV19903, BV19982, CD456941; City of Hamilton	411 x 28 1.15	200 x 10 0.20 200 x 20 0.40 422 x 10 0.43 200 x 20 0.40	(e) Hydro One Networks Inc 185 Clegg Road Markham, ON L6G 1B7 Attn: Roman Dorfman Inst. #BV19783, BV19903, BV19982, AB324114  (l) Microcell Connexions Inc c/o Minden, Gross, Grafstein, Greensteind LLP Place Bonaventure, Floor A 800 de La Gauchetière St. W. Montreal, Quebec H5A 1K3 Inst. #W/M253379

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BK 16		PIN: 17539-0024 LT Pt Lt 6 Con 7 Beverly as in AB351079 s/t CD43147, VM244793, VM246150, VM279249, City of Hamilton	427 x 28 1.2	428 x 10 0.43 300 x 20 0.60	(l) Canada Post Corporation Real Estate, Huron Division 300 Wellington St., London, ON N6B 3P2 Inst. #VM55076  (m) J. B. Bayus Holdings Ltd. 35 Lowery Ave. South Cambridge, ON N1R 5Z4 Inst. # VM244185  (n) BXB Holdings Inc. 35 Lowery Ave. South Cambridge, ON N1R 5Z4 Inst. #VM256861  (e) Bell Canada 277 Blackwell Drive Kitchener, ON N2N 2T1 Inst. #VM244793, VM246150  (e) Hydro One Networks Inc 185 Clegg Road Markham, ON L6G 1B7 Attn: Roman Dorfman Inst. #VM279249
	SHEFFIELD ROAD				
BK 17		PIN: 17539-0029 LT Pt Lt 7-8 Con 7 Beverly as in CD458788 s/t CD458788, CD457922, CD457925 City of Hamilton	745 x 28 2.1	60 x 10 0.06 60 x 20 0.12 180 x 20 0.36 756 x 10 0.76	(m) Canadian Imperial Bank of Commerce 11 Main St. Cambridge, ON N1R 1V5 Inst. #VM100722, VM254914  Well Agreement - Kathy Rowat Hankinson R. R. #1 Cambridge, ON Inst. # CD245912  Agreement - No additional Dwellings The Corporation of the Township of Flamborough Box 50 Waterdown, ON Inst. #CD245913
BK 18		PIN: 17539-0030 LT Pt Lt 9 Con 7 Beverly as in CD449003 s/t AB42885, CD450528 Flamborough City of Hamilton	200 x 28 0.56	200 x 20 0.40 200 x 20 0.40 202 x 10 0.21	(m) Canadian Imperial Bank of Commerce 11 Main Street Cambridge, ON N1R 1V5 Inst. #WE121916
	SEATON ROAD				
BK 19		PIN: 17538-0003 LT Pt Lt 9 Con 7 Beverly as in VM167862 s/t AB22085, CD449688 Flamborough City of Hamilton	50 x 28 0.14	50 x 20 0.10 50 x 10 0.05	(m) Canada Trustco Mortgage Company 305 King St. W. Kitchener, ON N2G 1B9 Inst. #L1611544  (m) The Toronto Dominion Bank 4720 Tahoe Blvd., Building 1 Mississauga, ON L4W 5P2 Inst. # WE49002

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BK 20	PIN: 17538-0001 LT Pt Lts 9 & 10 Con 7 Beverly as in CD472486 s/t AB42886, CD452187 Flamborough City of Hamilton		596 x 28 1.7	100 x 20 0.20 596 x 10 0.60	(m) The Toronto Dominion Bank 130 Cedar Street, Unit 1 Cambridge, ON N1S 1W4 Inst. #WE283243
BK 21	PIN: 17538-0101 LT Pt Lt 9 - 11 Con 7 Beverly Pts 1, 3, 4, 5, 6 on 62R-5815 except Pt 1 to 7 on 62R-18393 s/t BV17540, CD449689 Flamborough		443 x 28 0.12	180 x 20 0.36 433 x 10 0.44	(e) The Hydro Electric Power Commission of Ontario 185 Clegg Road Markham, ON L6G 1B7 Attn: Roman Dorfman Inst # 8V17540  (n) Farm Credit Canada Suite 200, 1133 St. George Blvd., Moncton, New Brunswick E1E 4E1 Inst. #WN276257
BK 22	PIN: 17538-0010 LT Pt Lt 12 Con 7 Beverlys in VM276739 s/t CD449690 City of Hamilton		390 x 28 1.1	230 x 20 0.46 60 x 10 0.06 402 x 10 0.41	
COOPER ROAD					
BK 23	PIN: 17538-0032 LT Pt Lt 13 Con 7 Beverly as in VM200284, AB141282, AB152375 Except Pt 1, 62R-6581 Pt Lt 15 Con 7 Beverlys in AB177634, AB153220, Pt 4, 62R- 4217 Pt Lt 16 Con 7 Beverly, Pt 1, 62R-1617 Pt Lt 16 Con 7 Beverly, Pt 1, 2, 3, 4, 62R-4129; Lt 14 Con 7 Beverly S/t interest ins VM139244; s/t AB22086, AB27951, AB42887, CD460892, HL24371, HL24372, HL24373, HL24393 Flamborough City of Hamilton		1588 x 28 4.45	850 x 10 0.85 250 x 100 2.5 532 x 3 0.16	Agreement - Train in Park Conklin & Garret Limited Inst. #AB263304  Debuture - Ontario Development Corporation Queens Park Toronto, ON Inst. #AB363127  (c) Bank of Montreal 50 Bay Street South Hamilton, ON L8P 4V9 Inst. #LT539737  Site Plan - City of Hamilton 71 Main Street West Hamilton, ON L8P 4Y5 Inst. #WE150204, WE150472
BK 24	PIN: 17538-0035 LT Pt Lt 17 Con 7 Beverly as in AB209912 s/t AB27952, CD452348 Flamborough City of Hamilton		202 x 28 0.57	202 x 10 0.21	

Temp File #	NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Length x Width Area Hectares	TEMPORARY EASEMENT Dimensions (Metres) Length x Width Area Hectares	MORTGAGE, LIEN/LEASE, EASEMENT
BK 25		PIN: 17538-0037 LT P/Lts 17 & 18 Con 7 Beverly as in VM125399 Except CD81185 s/t AB29075, CD449691 s/t Vendors Lien AB390732 s/t AB29075, CD449691 Flamborough City of Hamilton	61.5 x 28 1.73	62.5 x 10 60 x 20 60 x 10 0.63 0.12 0.06	(e) Ontario Hydro 700 University Ave Toronto, ON M5G 1X6 Inst. #LT470237  (m) Canada Trustco Mortgage Company 305 King St. W., 3rd Floor Kitchener, ON N2G 1B9 Inst. #LT508566  Tax Lien - Continental Trust Company Inst. #CD269272  Vendors Lien - Howard S. Pickard R. R. #1 Galt, ON Inst. #AB390732
	KIRK WALL ROAD				
BK 26		PIN: 17537-0002 LT Lt 19 Con 7 Beverly except CD352827, CD83818, CD147419, AB15488, AB342924, HL321121, Pt 1, 62R-2462 s/t AB32257, BV21046, CD449692, HL33021 Flamborough City of Hamilton	402 x 28 1.13	60 x 10 100 x 20 412 x 10 0.06 0.20 0.42	(e) Hydro Electric Power Commission of Ontario 185 Clegg Rd Markham, ON L6G 1B7 Attn: Roman Dorfman Inst. #BV21046  Notice of Security Interest Irwin Commercial Finance Canada Corporation 515--1 University Ave Toronto, ON M5J 2P1 Attn: Nancy Biggs, Vendor Sales Representative Inst. #WE352161  (c) The Toronto Dominion Bank 200 Franklin Blvd, Cambridge, ON N1R 8N8 Inst. #WE683516, WE740507
BK 27		PIN: 17537-0115 LT P/Lt 20 Con 7 Beverly as in CD344332, except Pts 1 & 2 on 62R-14279 s/t BV21048, AB24413, CD457921, VM223345 Flamborough City of Hamilton	427 x 28 1.2	427 x 10 517 x 3 0.43 0.16	(e) The Hydro Electric Power Commission of Ontario 185 Clegg Road Markham, ON L6G 1B7 Attn: Roman Dorfman Inst. #BV17540

Temp File #	NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Length x Width Area Hectares	TEMPORARY EASEMENT Dimensions (Metres) Length x Width Area Hectares	MORTGAGE, LIEN/LEASE, EASEMENT
BK 28		PIN: 17537-0020 LT Pt Lt 21 Con 7 Beverly as in CD424161 Except VM72061 (Secondly) s/t AB27949, CD457929 Flamborough City of Hamilton	428 x 28 1.2	428 x 10 0.43	(m) Scotia Mortgage Corporation 72 Main Street, Box 22142 G.C.P. O. Cambridge, ON N1R 8E3 Inst. #VM226450  (m) Joseph Arriaga 35 Church St Barrington U.S.A. 02806 Inst. #WE55366  Lien - Her Majesty the Queen in Right of Canada as represented by The Minister of National Revenue, Canada Revenue Agency 166 Frederick St. Kitchener, ON N2G 4N1 Inst. #WE396189, WE398966  Appl Government Order The Corporation of the City of Hamilton 71 Main St. W. Hamilton, ON L8P 4Y5 Inst. #WE308471  Restrictions - No dealings Ontario Superior Court of Justice 45 Main St E Hamilton, ON L8N 2B7 Inst. #WE360201, WE362567, WE363635, WE369081, WE858422
BK 29		PIN: 17537-0019 LT Pt Lt 22 Con 7 Beverly as in AB12933 s/t AB27948, CD449693 Flamborough City of Hamilton	442 x 28 1.24	442 x 10 0.45	(m) Royal Bank of Canada 180 Wellington Street West, 2nd Floor Toronto, ON M5J 1J1 Inst. #WE688910
BK 30		PIN: 17537-0018 LT Pt Lt 23 Con 7 Beverly as in CD485510 s/t AB27941, CD456945 Flamborough City of Hamilton	419 x 28 1.18	419 x 10 0.42 553 x 3 0.17	(m) Royal Bank of Canada 311 Dundas St. S., R. #1 Cambridge, ON N1T 1P8 Inst. #WE125224
BK 31		PIN: 17537-0016 LT Pt Lt 24 Con 7 Beverly as in CD338353 (Fifthly) s/t AB45645, BV21051, VM3618 Flamborough City of Hamilton	443 x 28 1.24	80 x 20 0.16 443 x 10 0.45 60 x 20 0.12	(e) The Hydro Electric Power Commission 185 Clegg Rd Markham, ON Attn: Roman Dorfman Inst. #BV21051  Agreement - Re: Forestry Act The Corporation of the County of Wentworth Inst. #HL244016
F22-010	VALENS ROAD	PIN: 17537-0022 R Pt Lt 25 Con 7 Beverly Flamborough City of Hamilton			



## PIPELINE EASEMENT

(the "Easement")

Between

**Insert name here**  
(hereinafter called the "Transferor")

and

**UNION GAS LIMITED**  
(hereinafter called the "Transferee")

This easement is an Easement in Gross

WHEREAS the Transferor is the owner in fee simple of those lands and premises more particularly described as: **PIN:** [Click here to enter text.](#) **Legal Description:** [Click here to enter text.](#) (hereinafter called the "Transferor's Lands").

The Transferor does hereby GRANT, CONVEY, TRANSFER AND CONFIRM unto the Transferee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands, the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Transferor's Lands more particularly described as: **Being Part of the PIN:** [Click here to enter text.](#) **Legal Description:** [Click here to enter text.](#) (hereinafter referred to as the "Lands") to survey, lay, construct, maintain, brush, clear trees and vegetation, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use and/or operate one Pipeline for the transmission of Pipeline quality natural gas as defined in The Ontario Energy Board Act S.O. 1998 (hereinafter referred to as the "Pipeline") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Transferee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the Lands for its servants, agents, employees, those engaged in its business, contractors and subcontractors on foot and/or with vehicles, supplies, machinery and equipment for all purposes necessary or incidental to the exercise and enjoyment of the rights, liberty, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:

1. In consideration of the sum of **TWO Dollars** (\$2.00) of lawful money of Canada (hereinafter called the "Consideration"), which sum is payment in full for the rights and interest hereby granted and for the rights and interest, if any, acquired by the Transferee by expropriation, including in either or both cases payment in full for all such matters as injurious affection to remaining lands and the effect, if any, of registration on title of this document and where applicable, of the expropriation documents, subject to Clause 12 hereof to be paid by the Transferee to the Transferor within 90 days from the date of these presents or prior to the exercise by the Transferee of any of its rights hereunder other than the right to survey (whichever may be the earlier date), the rights, privileges and easement hereby granted shall continue in perpetuity or until the Transferee, with the express written consent of the Transferor, shall execute and deliver a surrender thereof. Prior to such surrender, the Transferee shall remove all debris as may have resulted from the Transferee's use of the Lands from the Lands and in all respects restore the Lands to its previous productivity and fertility so far as is reasonably possible, save and except for items in respect of which compensation is due under Clause 2, hereof. Transferor and Transferee hereby agree that nothing herein shall oblige Transferee to remove the Pipeline from the Lands as part of Transferee's obligation to restore the Lands.
2. The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any damages to the Lands resulting from the exercise of any of the rights herein granted, and if the compensation is not agreed upon by the Transferee and the Transferor, it shall be determined by arbitration in the manner prescribed by the Expropriations Act, R.S.O. 1990, Chapter E-26 or any Act passed in amendment thereof or substitution therefore. Any gates, fences and tile drains curbs, gutters, asphalt paving, lockstone, patio tiles interfered with by the Transferee shall be restored by the Transferee at its expense as closely as reasonably possible to the condition

and function in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice and applicable government regulations.

3. The Pipeline (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 9 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the Lands nor ordinary cultivation of the Lands nor any tile drainage system existing in the Lands at the time of installation of the Pipeline nor any planned tile drainage system to be laid in the Lands in accordance with standard drainage practice, if the Transferee is given at least thirty (30) days notice of such planned system prior to the installation of the Pipeline; provided that the Transferee may leave the Pipeline exposed in crossing a ditch, stream, gorge or similar object where approval has been obtained from the Ontario Energy Board or other Provincial Board or authority having jurisdiction in the premises. The Transferee agrees to make reasonable efforts to accommodate the planning and installation of future tile drainage systems following installation of the Pipeline so as not to obstruct or interfere with such tile installation.
4. As soon as reasonably possible after the construction of the Pipeline, the Transferee shall level the Lands and unless otherwise agreed to by the Transferor, shall remove all debris as may have resulted from the Transferee's use of the Lands therefrom and in all respects restore the Lands to its previous productivity and fertility so far as is reasonably possible, save and except for items in respect of which compensation is due under Clause 2 hereof.
5. It is further agreed that the Transferee shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this easement or anything done or maintained by the Transferee hereunder or intended so to be and the Transferee shall at all times indemnify and save harmless the Transferor from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Transferee shall not be liable under the Paragraph to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Transferor.
6. In the event that the Transferee fails to comply with any of the requirements set out in Clause 2, 3, or 4 hereof within a reasonable time of the receipt of notice in writing from the Transferor setting forth the failure complained of, the Transferee shall compensate the Transferor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure and the reasonable costs if any, incurred in the recovery of those damages.
7. Except in case of emergency, the Transferee shall not enter upon any of the Transferor's Lands, other than the Lands, without the consent of the Transferor. In case of emergency the right of entry upon the Transferor's Lands for ingress and egress to and from the Lands is hereby granted. The determination of what circumstances constitute an emergency, for purposes of this paragraph is within the absolute discretion of the Transferee, but is a situation in which the Transferee has a need to access the Pipeline in the public interest without notice to the Transferor, subject to the provisions of clause 2 herein. The Transferee will, within 72 hours of entry upon such lands, advise the Transferor of the said emergency circumstances and thereafter provide a written report to Transferor with respect to the resolution of the emergency situation. The Transferee shall restore the lands of the Transferor at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.
8. The Transferor shall have the right to fully use and enjoy the Lands except for planting trees over the lesser of the Lands or a six (6) metre strip centered over the Pipeline, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that without the prior written consent of the Transferee, the Transferor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the Lands any pit, well, foundation, pavement, building, mobile homes or other structure or installation. Notwithstanding the foregoing the Transferee upon request shall consent to the Transferor erecting or repairing fences, hedges, pavement, lockstone constructing or repairing tile drains and domestic sewer pipes, water pipes, and utility pipes and constructing or repairing lanes, roads, driveways, pathways, and walks across, on and in the Lands or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Transferor shall (a) give the Transferee at least (30) clear days notice in writing describing the work desired so as to enable the Transferee to evaluate and comment on the work proposed and to have a representative inspect the site and/or be present at any time or times during the performance of the work, (b) shall follow the instructions of such representative as to the performance of such work without damage to the Pipeline, (c) shall

exercise a high degree of care in carrying out any such work and, (d) shall perform any such work in such a manner as not to endanger or damage the Pipeline as may be required by the Transferee.

9. The rights, privileges and easement herein granted shall include the right to install, keep, use, operate, service, maintain, repair, remove and/or replace in, on and above the Lands any valves and/or take-offs subject to additional agreements and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Transferee shall pay to the Transferor (or the person or persons entitled thereto) such additional compensation as may be agreed upon and in default of agreement as may be settled by arbitration under the provisions of The Ontario Energy Board Act, S.O. 1998, or any Act passed in amendment thereof or substitution therefore. The Transferee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the Lands.
10. Notwithstanding any rule of law or equity and even though the Pipeline and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Transferee.
11. Neither this Agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Transferee's rights to acquire the Lands or any other portion or portions of the Transferor's lands under the provisions of The Ontario Energy Board Act, S.O. 1998, or any other laws, which rights the Transferee may exercise at its discretion in the event of the Transferor being unable or unwilling for any reason to perform this Agreement or give to the Transferee a clear and unencumbered title to the easement herein granted.
12. The Transferor covenants that he has the right to convey this easement notwithstanding any act on his part, that he will execute such further assurances of this easement as may be requisite and which the Transferee may at its expense prepare and that the Transferee, performing and observing the covenants and conditions on its part to be performed, shall have quiet possession and enjoyment of the rights, privileges and easement hereby granted. If it shall appear that at the date hereof the Transferor is not the sole owner of the Lands, this Easement shall nevertheless bind the Transferor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all moneys payable hereunder shall be paid to the Transferor only in the proportion that his interest in the Lands bears to the entire interest therein.
13. In the event that the Transferee fails to pay the consideration as hereinbefore provided, the Transferor shall have the right to declare this easement cancelled after the expiration of 15 days from personal service upon the Manager, Land Services of the Transferee at its Executive Head Office in Chatham, Ontario, (or at such other point in Ontario as the Transferee may from time to time specify by notice in writing to the Transferor) of notice in writing of such default, unless during such 15 day period the Transferee shall pay the said consideration; upon failing to pay as aforesaid, the Transferee shall forthwith after the expiration of 15 days from the service of such notice execute and deliver to the Transferor at the expense of the Transferee, a valid and registrable release and discharge of this easement.
14. All payments under these presents may be made either in cash or by cheque of the Transferee and may be made to the Transferor (or person or persons entitled thereto) either personally or by mail. All notices and mail sent pursuant to these presents shall be addressed to:

the Transferor at: [Click here to enter text.](#)  
[Click here to enter text.](#)  
[Click here to enter text.](#)

and to the Transferee at: Union Gas Limited  
P.O. Box 2001  
50 Keil Drive North  
Chatham, Ontario N7M 5M1  
Attention: Manager, Land Services

or to such other address in either case as the Transferor or the Transferee respectively may from time to time appoint in writing.

15. The rights, privileges and easement hereby granted are and shall be of the same force and effect as a covenant running with the Transferor's Land and this easement, including all the covenants and conditions herein contained, shall extend to, be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the Parties hereto respectively; and, wherever the singular or masculine is used it shall, where necessary, be construed as if the plural, or feminine or neuter had been used, as the case may be.



16. The Transferee represents that it is registered for the purposes of the Harmonized Goods and Services Tax (hereinafter called “HST”) in accordance with the applicable provisions in that regard and pursuant to the Excise Tax Act, (R.S.C., 1985, c. E-15), (hereinafter called “Excise Tax Act”), as amended. The Transferee covenants to deliver a Statutory Declaration, Undertaking and Indemnity confirming its HST registration number, which shall be conclusive of such HST registration, and shall preclude the Transferor from collection of HST from theTransferee. The Transferee shall undertake to self-assess the HST payable in respect of this transaction pursuant to subparagraphs 221(2) and 228(4) of the Excise Tax Act, and to remit and file a return in respect of HST owing as required under the said Act for the reporting period in which the HST in this transaction became payable. The Transferee shall indemnify and save harmless the Transferor from and against any and all claims, liabilities, penalties, interest, costs and other legal expenses incurred, directly or indirectly, in connection with the assessment of HST payable in respect of the transaction contemplated by this easement. The Transferee’s obligations under this Paragraph shall survive this easement.
17. The Transferor hereby acknowledges that this easement will be registered electronically.

DATED this            day of            20            .

Signature (Transferor)

Insert name here

Print Name(s) (and position held if applicable)

Choose an item.

Enter Text here

Address (Transferor)

Signature (Transferor)

Insert name here

Print Name(s) (and position held if applicable)

Choose an item.

Enter Text here

Address (Transferor)

UNION GAS LIMITED

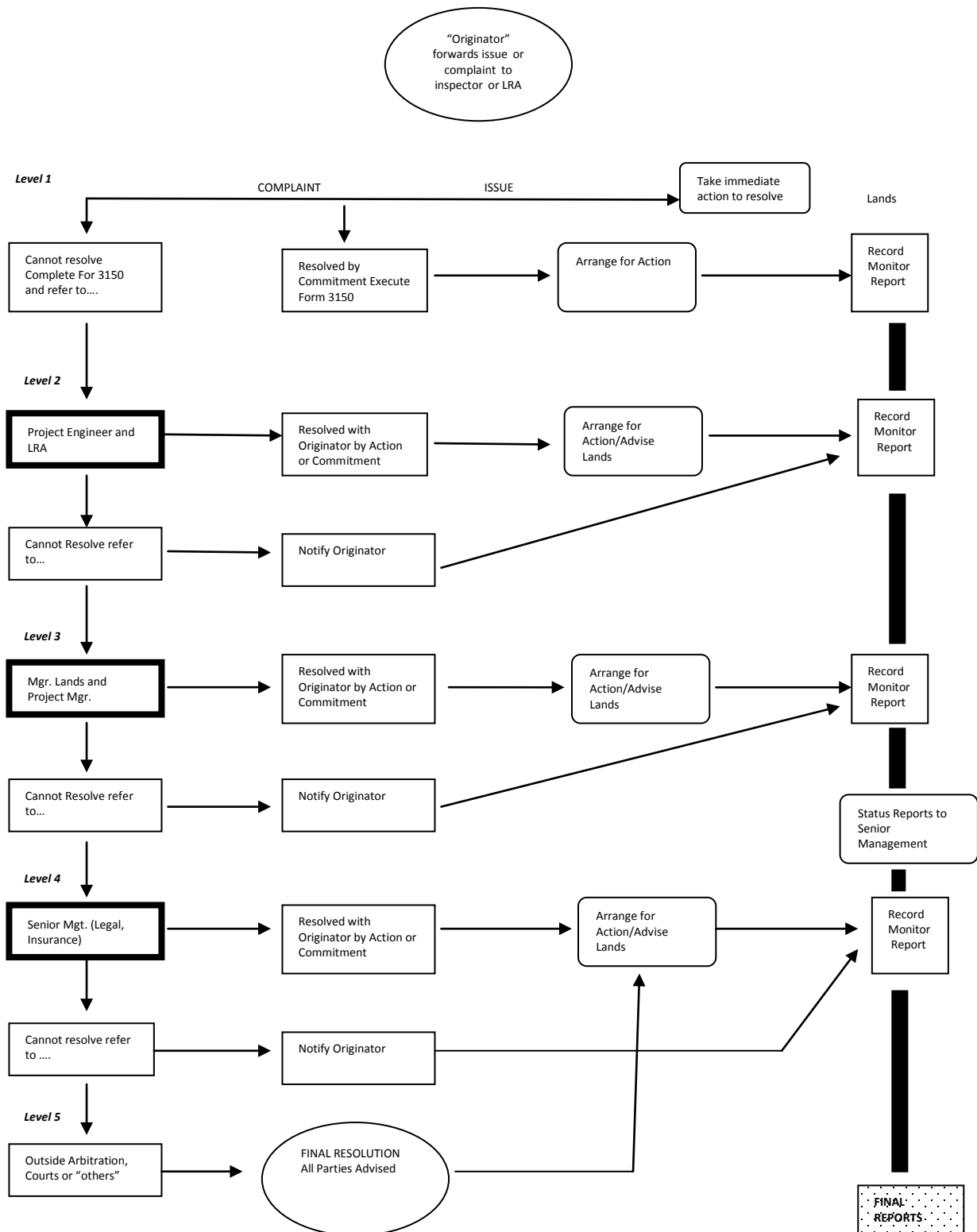
Signature (Transferee)

Insert name here, Choose an item.

Name & Title (Union Gas Limited)

I have authority to bind the Corporation.

Telephone Number (Union Gas Limited)



1. "originator" of complaint or issue may be landowner or company representative
2. Parties indicated in heavy outlined boxes shall assume responsibility for actions subsequently required in the resolution process. Parties identified in brackets may only be required for resolution or specific technical concerns
3. "L.R.A." refers to Landowner Relations Agent

## **LANDOWNER COMPLAINT RESOLUTION SYSTEM EXPLANATION OF PROCESS CHART**

### **Key Definitions**

**Originator** – The originator of a complaint or issue is the landowner or Union Gas personnel who initiates a complaint or issue by making it known to the Landowner Relations Agent or a company inspector.

**Landowner Relations Agent (LRA)** – A person assigned on a full time or part time basis to record, monitor, and ensure follow-up on any complaint or issue received by Union related to construction, to address questions and concerns of the landowners, and to act as a liaison between landowners and the contractor and engineering personnel.

**Issue** – A concern of a landowner which can be resolved within three ( 3 ) working days. Immediate action is taken to resolve such matters.

**Complaint** – A concern of a landowner which cannot be resolved within three ( 3 ) working days.

**Commitment** – If an issue or complaint is resolved at any level of the Complaint Resolution system through the efforts and liaison activities of the Landowner Relations Agent or other personnel, the resolution is recorded to ensure proper future follow-up.

**Outside Arbitration** – includes the Board of Negotiation, O.M.B., and O.E.B.

**Others** – refers to other regulatory bodies and tribunals

### **Levels of the Complaint Resolution System**

**Level 1:** The LRA or company inspector receives issues or complaints, and the following can happen:

- a) Immediate action could be arranged by the LRA or inspector to resolve the issue or complaint; or
- b) A complaint can be resolved by a commitment in which case the LRA is responsible for arranging for the committed action and having the commitment recorded in the Complaint Resolution system; or
- c) If a complaint cannot be resolved through the efforts of the LRA or inspector, the applicable form ( Form 3150 ) is completed and then recorded, and the complaint is referred to **Level 2**.

**Level 2:** The LRA and the Construction Supervisor work together to develop a resolution for the complaint, and the following can happen:

- a) the complaint may be resolved with the originator by action or commitment and the action or commitment is recorded in the Complaint Resolution System; or
- b) if the complaint cannot be resolved, the originator is notified, the non-resolution is recorded, and the complaint is referred to **Level 3**.

**Level 3:** The Manager, Lands and the Project Manager work together to develop a resolution for the complaint, and the following can happen:

- a) complaint may be resolved with the originator by action or commitment and the action or commitment is recorded in the Complaint Resolution System; or
- b) if the complaint cannot be resolved, the originator is notified, the non-resolution is recorded, and the complaint is referred to **Level 4**;

When complaints reach this level, status reports are generated through the Complaint Resolution System and are forwarded to Senior Management.

**Level 4:** Senior Management (with possible input from the Legal and Risk and Claims Departments) attempts to develop a resolution to the complaint, and the following can happen:

- a) the complaint may be resolved with the originator by action or commitment and the action or commitment is recorded in the Complaint Resolution System; or
- b) if the complaint cannot be resolved, the originator is notified, the non-resolution is recorded, and the complaint is referred to **Level 5**;

**Level 5:** Involves the resolution of a complaint by outside arbitration or others, and the following will happen:

A final resolution will occur, all parties will be advised, and any action required will be arranged by the LRA or other Lands Department personnel.

**Note:** the Complaint Resolution System is used to generate final reports to the Ontario Energy Board

July 16, 2012

Director Lands Resources and Consultation  
Métis Nation of Ontario  
75 Sherbourne St  
Suite 311  
Toronto, Ontario M5A 2P9

Dear Mark Bowler

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with the Mississaugas of New Credit. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with the Métis Nation and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager of Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063



July 16, 2012

Chief Joel Abrams  
Oneida Nation of the Thames First Nation  
2212 Elm Ave  
Southwold Ontario  
N0L 2G0

Dear Chief Abrams

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with the Mississaugas of New Credit. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with the Oneida Nation and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager of Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063







July 16, 2012

Chief Bryan LaForme  
Mississaugas of New Credit First Nation  
8545 Townline Road  
RR 1, Hagersville, Ontario  
N0A 1H0

Dear Chief LaForme

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with the Mississaugas of New Credit. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with the Mississaugas of New Credit and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager of Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063



July 16, 2012

Chief Patrick Waddilove  
Munsee Delaware First Nation  
RR#1  
Muncey, ON  
NOL 1Y0

Dear Chief Waddilove

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with the Mississaugas of New Credit. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with the Munsee Delaware Nation and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager of Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063





July 16, 2012

Chief William Montour  
Six Nations of the Grand River First Nation  
1695 Chiefswood  
Box 5000  
Ohsweken On N0A 1M0

Dear Chief Montour

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with the Mississaugas of New Credit. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with the Six Nations of the Grand and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager of Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063





July 16, 2012

Chief William Montour  
Six Nations of the Grand River First Nation  
1695 Chiefswood  
Box 5000  
Ohsweken On N0A 1M0

Dear Chief Montour

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with the Mississaugas of New Credit. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with the Six Nations of the Grand and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager of Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063







September 10, 2012

Hazel Hill  
Haudenosaunee Development Institute  
Interim Executive Director  
16 Sunrise Court, Suite 417  
P.O. Box 714  
Ohsweken, Ontario  
N0A 1M0

Dear Hazel;

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd. At that time, Union Gas had engaged the Six Nations Consultation Committee in consultations and discussions on the proposed pipeline.

A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map). The pipeline will parallel our existing pipeline corridor and will be located on private agricultural lands that we have acquired an easement for.

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve the demand for transportation services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for late 2012 or early in 2013. A Stage 2 Archeology Assessment will be required to complete the report. We have initiated discussions with the Six Nations Consultation Committee

The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014 and/or 2015.

Should you have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager First Nations and Métis Affairs, Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063

P.O. Box 2001, 50 Keil Drive North, Chatham, ON, N7M 5M1 [www.uniongas.com](http://www.uniongas.com)  
Union Gas Limited





Aug. 20, 2012

Chief Phyllis Williams  
Curve Lake First Nation  
22 Wiinookeeda Road,  
Curve Lake, On  
KOL 1R0

Dear Chief Williams;

**Reference: Union Gas Limited – Brantford Take-Off to Kirkwall Valve Site Project**

I would like to share with you an update on a proposed Union Gas pipeline project to expand the natural gas pipeline system located southeast of the City of Cambridge along an existing natural gas transmission corridor, known as the Trafalgar pipeline system.

In 2008, Union Gas initiated planning for an expansion of the Trafalgar pipeline system. A comprehensive Environmental Assessment was completed by an independent environmental consultant, Stantec Consulting Ltd., which included consultation with Curve Lake First Nation. A Preferred Route for the pipeline was chosen which is approximately 13.6 kilometres in length, begins at the existing Union Gas Brantford Take-Off located about 700 metres north of Maple Manor Road along Cheese Factory Road, and ends at the existing Union Gas Kirkwall Valve Site located northeast of the intersection of Safari Road and Valens Road (see enclosed map).

In 2010 a review of natural gas transportation requirements indicated that these needs could be temporarily served without the proposed expansion and the project was deferred.

To serve an increase in the demand for transportations services, Union Gas is now moving forward with the project. The final preferred route for this pipeline has not changed and will be included as part of the Environmental Assessment Report in an application to the Ontario Energy Board (OEB), which is planned for the winter of 2012. The OEB's approval is required before this project can proceed. If approved, construction is planned for 2014.

We value our relationship with Curve Lake First Nation and I hope the above information is helpful. Should you or your staff have any questions or comments, please do not hesitate to contact me at the number listed below.

Sincerely,

John Bonin  
Manager Aboriginal Affairs  
Union Gas  
Box 5353 Station A  
London Ont. N6A 4P1  
Phone: 519-539-8509 ext 5021063

