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**Union -TCPL 1**

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**Reference:** TransCanada Written Evidence, Section 1, page 1, lines 19-25

**Preamble:** Union capacity is used by TransCanada as part of its integrated Mainline to provide services. TransCanada indicates that the cost of Union's services have a material impact on Mainline tolls and on Ontario gas consumer costs.

**Request:**

- (a) Please list all of the TransCanada transportation contracts on the Union Gas system, including type of service, volume, receipt point, delivery point and contract expiry date.
- (b)
  - (i) Assuming a rate increase of \$0.02/GJ/d to Union's M12 Dawn-Parkway service and M12-X service, please provide the impact to TransCanada short haul and long haul rates in terms of percentage increase?
  - (ii) Please explain in detail why the increases to short haul and long haul rates in b) i) above are material to the competitiveness of the TransCanada Mainline tolls?
  - (iii) Please explain in detail how the increases to short haul and long haul rates in b) i) above are material to Ontario gas consumers, including gas consumers in Southwestern Ontario, Central Ontario, Northern Ontario, and Eastern Ontario.

**Response:**

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**Union -TCPL 1**


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(a)

<b>TRANSCANADA M12/C1 TRANSPORTATION CONTRACTS</b>						
(Volumes in GJ/d )						
CONTRACT	Receipt Point	Delivery Point	Current Expiry Date	Contract Quantity November 1/2011	Commencement of Future Dated Contracts	Quantity of Future Dated Contracts
Nov 1, 2008 - M12124	Dawn	Parkway	31-Oct-13	64 147		
Dec 15, 2004 - M12086	Dawn	Parkway	31-Oct-16	119 787		
April 6, 1992 - M12012	Dawn	Kirkwall	31-Oct-15	125 297		
Nov 1, 2008 - M12122	Dawn	Kirkwall	31-Oct-14	146 560		
Nov 1, 2008 - M12123	Dawn	Kirkwall	31-Oct-14	533 191		
Oct 25, 1995 - M12157	Dawn	Kirkwall	31-Oct-13	53 440		
Nov1, 2012 - M12219	Kirkwall	Parkway	31-Oct-22	0	1-Nov-12	88,497
Nov 1, 2013 - M12220	Kirkwall	Parkway	31-Oct-23	0	1-Nov-13	174,752
Sept 1, 2011 - M12X004	M12X	M12X	31-Aug-21	50 000		
Sept 1, 2011 - M12X005	M12X	M12X	31-Aug-21	78 316		
Dec 17, 2010 - M12X013	M12X	M12X	31-Oct-22	0	1-Nov-12	62,695
June 10, 2010 - C10097	Dawn	Dawn TCPL	31-Oct-15	500 000		

(b)

(i)

<b>M12 &amp; M12X Contracts</b>	<b>Contract Quantity (GJ/d)</b>
M12 : Dawn to Parkway	64,147
M12 : Dawn to Parkway	119,787
M12X : Parkway, Kirkwall , Dawn Facilities	50,000
M12X : Parkway, Kirkwall , Dawn Facilities	78,316
M12X : Parkway, Kirkwall , Dawn Facilities	62,695
M12 : Dawn to Kirkwall	125,297
M12 : Dawn to Kirkwall	146,560
M12 : Dawn to Kirkwall	533,191
M12 : Dawn to Kirkwall	53,440
M12 : Kirkwall to Parkway	88,497
M12 : Kirkwall to Parkway	174,752
<b>Total</b>	<b>1,496,682</b>

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**Union -TCPL 1**

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Using the contract profile in response (a), excluding the Dawn to Dawn contract of 500,000 GJ/d an increase to Union's M12 Dawn-Parkway and M12-X service of \$0.020/GJ/d, an increase to Union's M12 Dawn-Kirkwall service of \$0.017/GJ/d, and an increase to Union's M12 Kirkwall-Parkway service of \$0.003/GJ/d (increase prorated based on the existing Dawn to Parkway / Dawn to Kirkwall and Dawn to Parkway / Kirkwall to Parkway toll ratios) would increase the Mainline's annual cost of service by \$8.2 million. With this cost increase and assuming all other parameters under TransCanada's Restructuring Proposal for 2013, the long haul toll for SMB to Enbridge CDA would increase by 0.42¢/GJ or approximately 0.4%, and the short haul toll for Dawn to Enbridge CDA would increase by 0.13¢/GJ or approximately 0.8%.

- (ii) In the current environment, TransCanada is concerned about the impact of any toll increase on its competitiveness. Further, it is essential that the Board approve facilities that are the most economically efficient option, regardless of toll impact. TransCanada has put forward alternatives to Union's proposed Parkway West project that are more cost effective options. The main point of TransCanada's evidence is that Ontarians should not waste millions of dollars annually on unnecessary infrastructure costs. It is simply a pointless and inefficient waste of money for Ontario to add infrastructure when it can use the infrastructure that it is already paying for.
- (iii) Please refer to the response to (ii) above. In addition, an increase of \$0.02/GJ/d in Union's M12 Dawn-Parkway service represents approximately a 26% increase in costs for M12 customers. It would result in a significant increase in costs to a) EGD customers of approximately \$16 million/yr. as EGD's cost of service would increase and b) other customers who hold Union M12 service such as Ontario power generators and other Direct Purchase customers.

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**Union -TCPL 2**

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**Reference:** TransCanada Written Evidence, Section 2, page 3, lines 4-6

**Preamble:** TransCanada states that Union did not explore LCU options that would use existing infrastructure.

**Request:**

- (a) Please confirm that Union's response in Exhibit J.B-1-1-7 b) includes the evaluation of alternatives that use existing infrastructure.

**Response:**

- (a) Not confirmed. The compressors that would be added at Parkway or Bright would not be existing infrastructure.

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**Union -TCPL 3**

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**Reference:** TransCanada Written Evidence, Section 2, page 3, lines 16-19

**Preamble:** TransCanada asserts that Union's own plans are uncertain and TransCanada is expanding and conducting further open seasons in southern Ontario.

**Request:**

- (a) Please provide the result of all open seasons conducted in 2010, 2011 and 2012 that include transportation capacity in Ontario. For each open season, please provide the following:
  - a. A list of bids by Customer (can identify the customer as A,B,C, etc), identifying volume, receipt point, delivery point (or Delivery Area), start date and term.
  - b. For each bid, please identify the status as:
    - (i) Customer dropped out of open season and is not using bid path (or similar path).
    - (ii) Customer is flowing on path (or similar path) under new capacity.
    - (iii) Customer is flowing on path (or similar path) with existing capacity.
    - (iv) Customer has signed a Precedent Agreement and is waiting for service.
    - (v) Customer has signed an FT contract and is awaiting service.
    - (vi) None of the above.
- (b) Please provide TransCanada's plans for expansion in Ontario as a result of each of those open seasons referenced in a) above.
- (c) Please provide a copy of all presentations made to customers and potential customers regarding those open seasons and TransCanada expansion plans in Ontario.
- (d) Please provide a copy of all internal presentations to senior management regarding TransCanada expansion plans in Ontario.

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**Union -TCPL 3**


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**Response:**

(a)

- a. For information regarding all FT, STS, FT-SN, and FT-NR contracts on the Canadian Mainline, please refer to TransCanada's Contract Demand Energy (CDE) report at:

<http://www.transcanada.com/customerexpress/3531.html>.

The contracts identified in the CDE table referenced above were acquired by customers through New, Existing and Daily Capacity Open Seasons on the TransCanada Mainline.

Please note that TransCanada does not make public information regarding bids for service where no further agreement was executed between TransCanada and the bidding party.

For the New Capacity Open Seasons held in 2010, 2011 and 2012, the following bids resulted in executed Precedent Agreements and the bidders are currently waiting for service to commence. All bids were for a minimum term of 10 year.

Shipper	Volume (GJ/d)	Start Date	End Date	Receipt Point	Delivery Point
A	211,011	Nov 1, 2012	Oct 31, 2022	Niagara Falls	Enbridge CDA
A	126,607	Nov 1, 2012	Oct 31, 2022	Niagara Falls	Enbridge CDA**
B	21, 101	Nov 1, 2012	Oct 31, 2022	Niagara Falls	Kirkwall
C	46,950	Nov 1, 2012	Oct 31, 2032	Parkway	Parkway Consumers
D	3,500	Nov 1, 2013	Oct 31, 2023	Parkway	Philipsburg

\*\*Service will be provided to Kirkwall effective Nov 1, 2012 on an interim basis.

TransCanada's most recent New Capacity Open Season closed on May 4, 2012. Precedent Agreements have yet to be issued to the successful bidders and therefore are not reflected in the table above. While details of the bids received cannot be provided at this time, TransCanada can disclose that it received bids for service in excess of 500,000 GJ/d from a variety of receipt points on the Canadian Mainline including Niagara, Chippawa and Parkway.

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**Union -TCPL 3**

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- b. (i – vi) Please refer to the response to (a) above
- (b) As a result of the New Capacity Open Seasons held in 2010 and 2011, TransCanada filed a Section 58 application with the National Energy Board (NEB) on November 8, 2011. Please refer to Attachment 2, Union 4(a) for an overview of the facilities additions contemplated in that application. The NEB granted TransCanada approval to construct these facilities on May 22, 2012.

As noted in the response to (a) above, TransCanada's most recent New Capacity Open Season closed on May 4<sup>th</sup>, 2012. TransCanada is currently assessing its facilities requirements to serve the bids. Note that Precedent Agreements associated with each bid have yet to be executed. The final facility set will depend on the capacity required to serve the customers whose Precedent Agreements are ultimately executed.

- (c) Please refer to Attachments 1 through 5, Union 3(c), which are copies of presentations given to customers as part of the marketing efforts for TransCanada's New Capacity Open Seasons in 2010, 2011 and 2012.
- (d) Please refer to the Attachment to Union 3(d), which is a copy of a presentation given to TransCanada's Senior Management regarding Eastern Capacity Requirements.



# Canadian Market Opportunities for Marcellus Shale Supplies

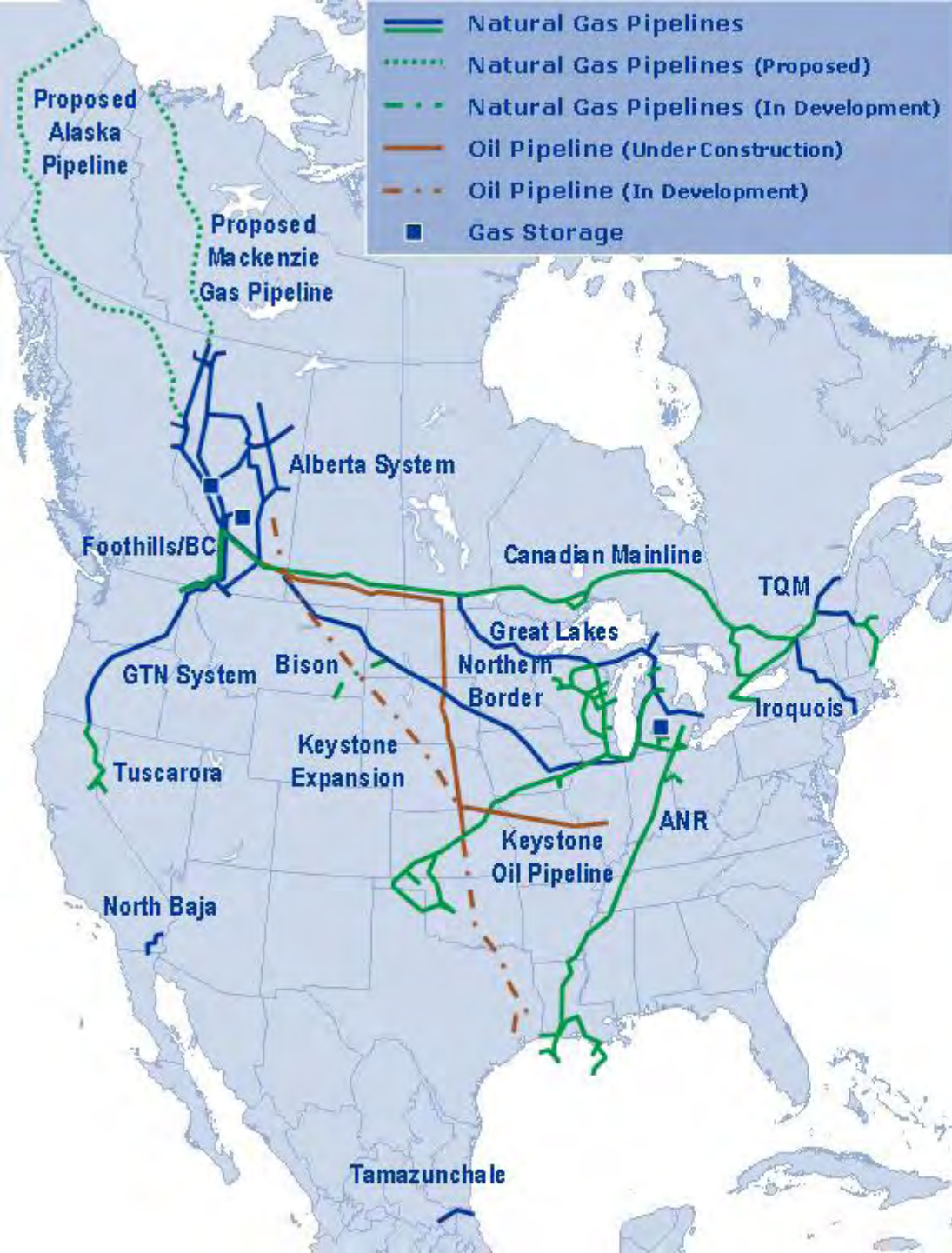
January, 2010



**TransCanada**  
*In business to deliver*

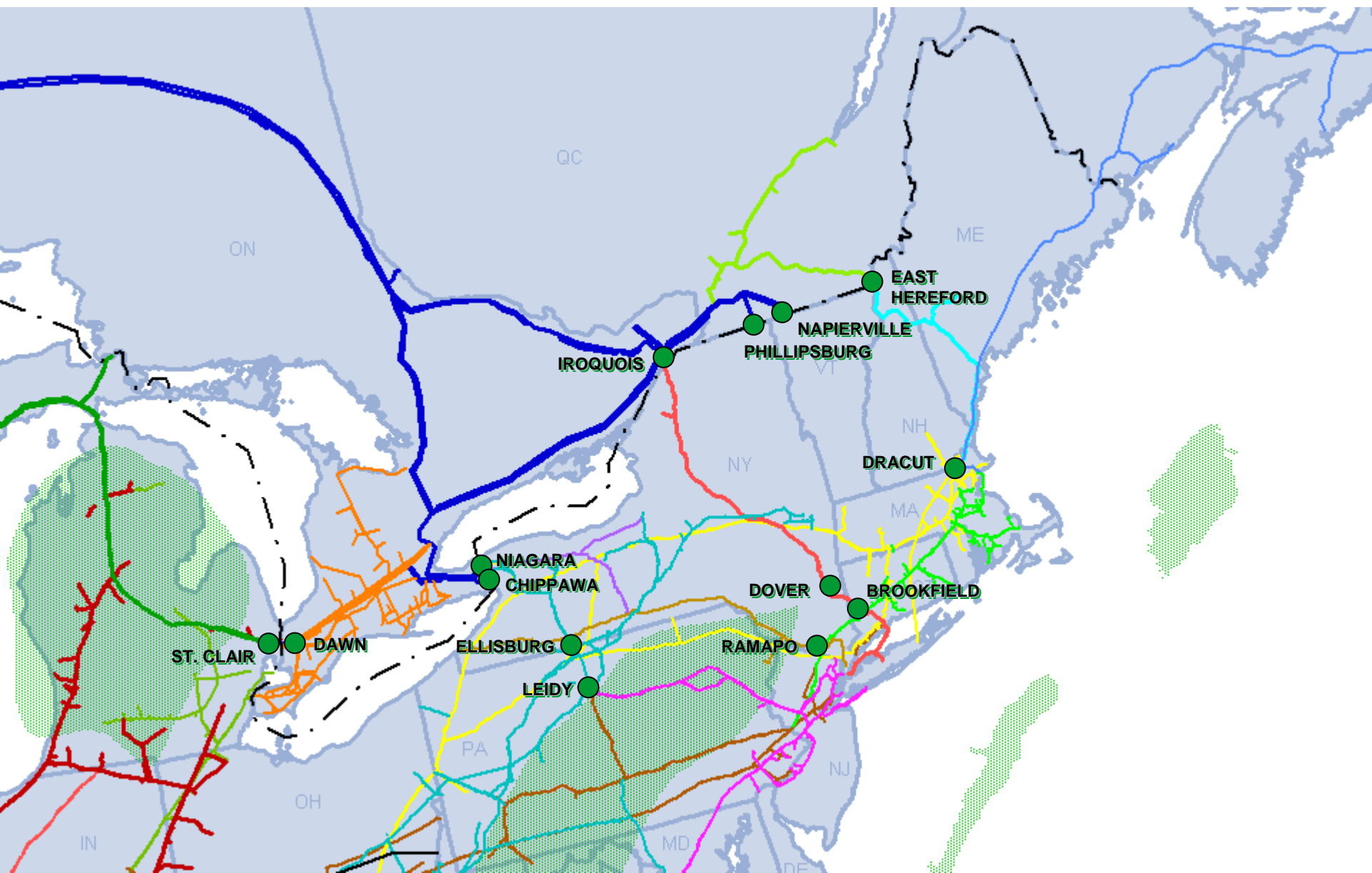
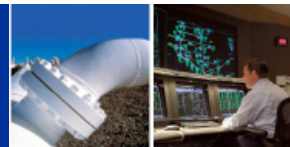


## Pipeline Assets

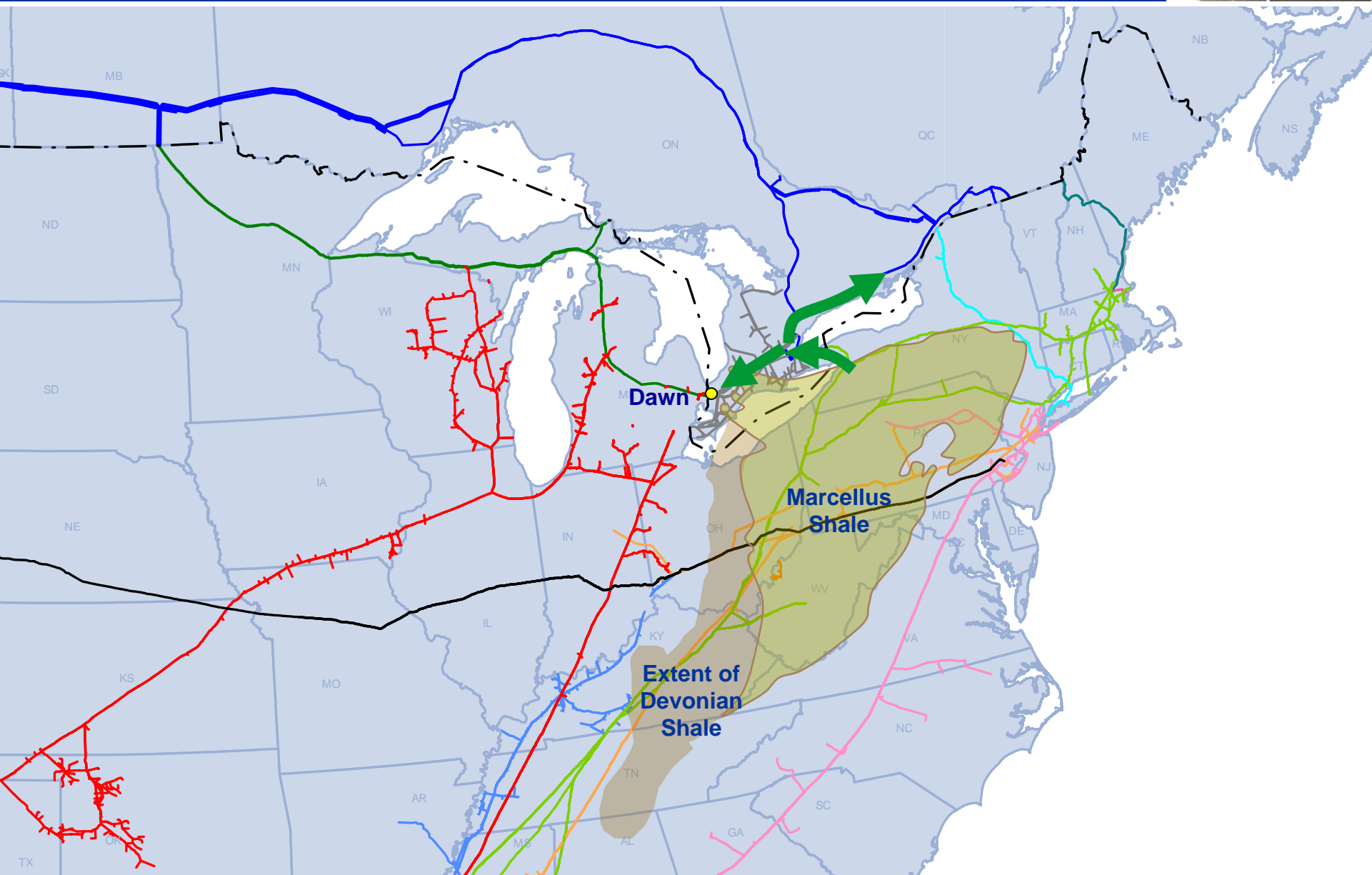


- 59,000 km (36,500 mi) of wholly owned natural gas pipeline
- Interests in an additional 7,800 km (4,800 mi) of natural gas pipeline
- 250 Bcf of regulated natural gas storage capacity
- Unparalleled connections from traditional and emerging basins to growing markets
- Average daily volume of approximately 15 Bcf
- Keystone oil pipeline 1.1 million Bbl/d
- Developing northern frontier pipeline capacity

# Eastern Mainline Export Points and Other Major Pipelines



# Marcellus – Access to Canadian Markets



# Access to Markets



- **Dawn Hub (Storage, Liquidity)**
- **Greater Toronto Area (GTA)**
- **Montreal area markets**
- **Gas-Fired Power Generation**
  - 4800 MW of merchant gas-fired generation by Q2 2010
  - New generators sourcing supply at Dawn
  - 1000 MW of new gas-fired generation expected in service by 2013
- **Export points to high-value U.S. markets**
  - Iroquois – access to NYC & New England markets
  - East Hereford – access to New England markets
  - St. Clair/Dawn – access to Michigan markets and storage

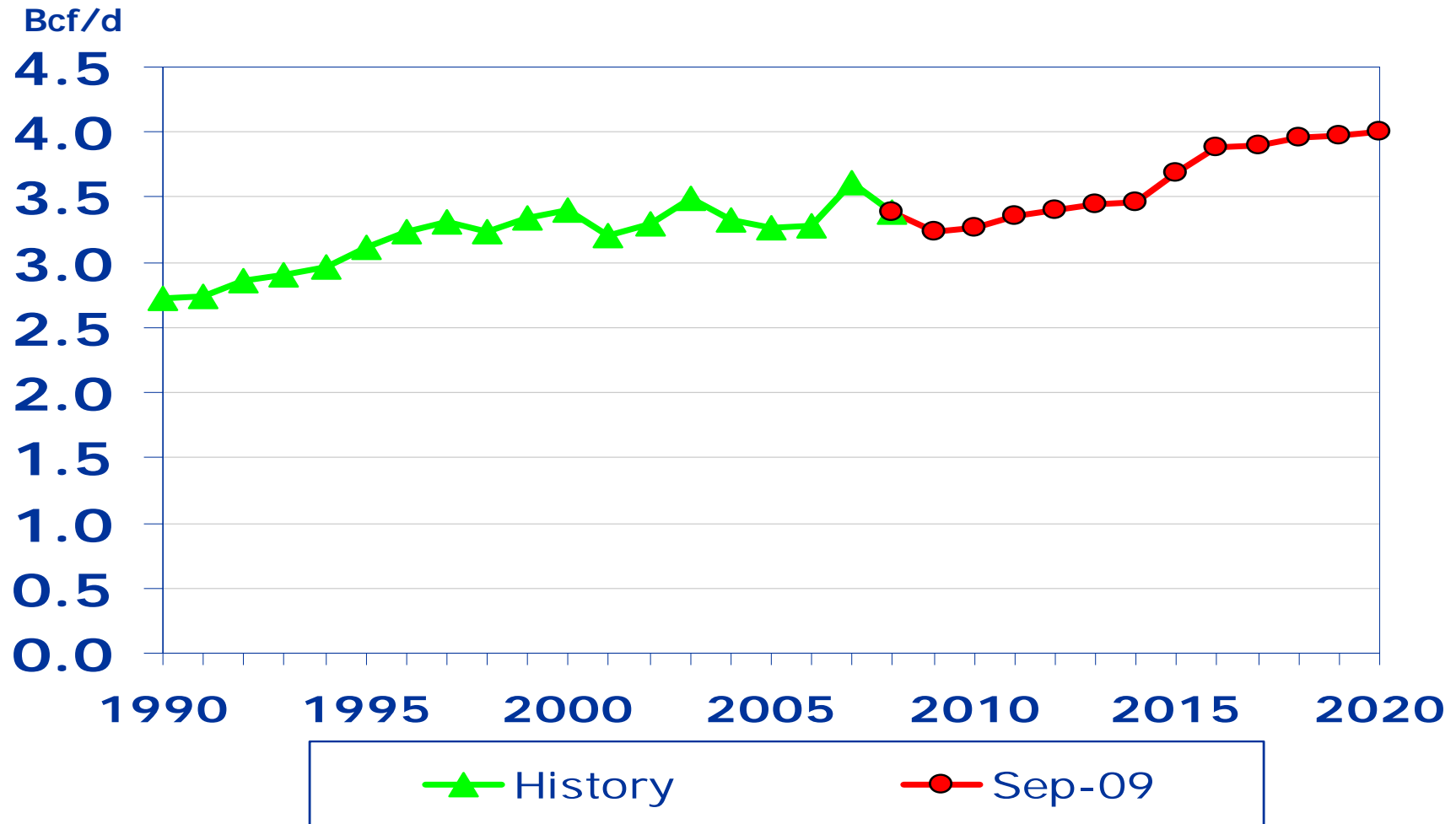


# TransCanada's Customers



- **Large LDC's**
  - Union Gas, Enbridge Gas Distribution, Gaz Metro (Quebec)
- **Industrials**
  - Vale Inco, Xstrata, Nova Chemical, GM, Ford, etc.
- **Gas-Fired Power Generators**
  - Sithe, Northland Power, TransCanada Energy, Greenfield Energy Center, St. Clair Power, Pristine Power
- **Producer/Marketers**
  - Shell, Nexen, Tenaska, BP, etc.

# Eastern Canadian Demand



# TransCanada Mainline Services



- **Firm Transportation (FT)**
  - Secondary market access; assignable (similar to capacity release)
- **Short-Term Firm (STFT)**
  - Biddable service; Shorter-term commitment (7-364 days)
  - No secondary market access
- **Interruptible Transportation (IT)**
  - Biddable one-day service; floor price is 110% of FT rate
- **Parking and Loan Service**
  - Negotiated rates
- **TransCanada is currently evaluating a number of new service opportunities aimed at enhancing value for shippers**
  - Target implementation - 2011

# Rates



- **Cost-based tolling**
- **FT rates composed of demand (reservation) & commodity charges**
- **TransCanada is reviewing its business model and rate structure in an effort to further enhance shipper value and competitiveness**
- **2010 100% LF rates from Chippawa/Niagara to markets (\$Cdn/GJ)**

	Chippawa Receipt	Niagara Receipt
Kirkwall	.0917	.0905
Dawn	.1943	.1931
Iroquois	.3231	.3219



# Conclusion



- Natural gas demand in Canada continues to grow, led by gas-fired power generation
- The TransCanada system provides access to a variety of premium markets (Dawn Hub, Michigan, Toronto, Montreal, New York, Boston)
- Initial flows from the U.S. into Canada via Chippawa/Niagara can be quickly accommodated with modest facility additions
- TransCanada is reviewing its business model, rate structure and services in an effort to further enhance shipper value and competitiveness



Thank you.



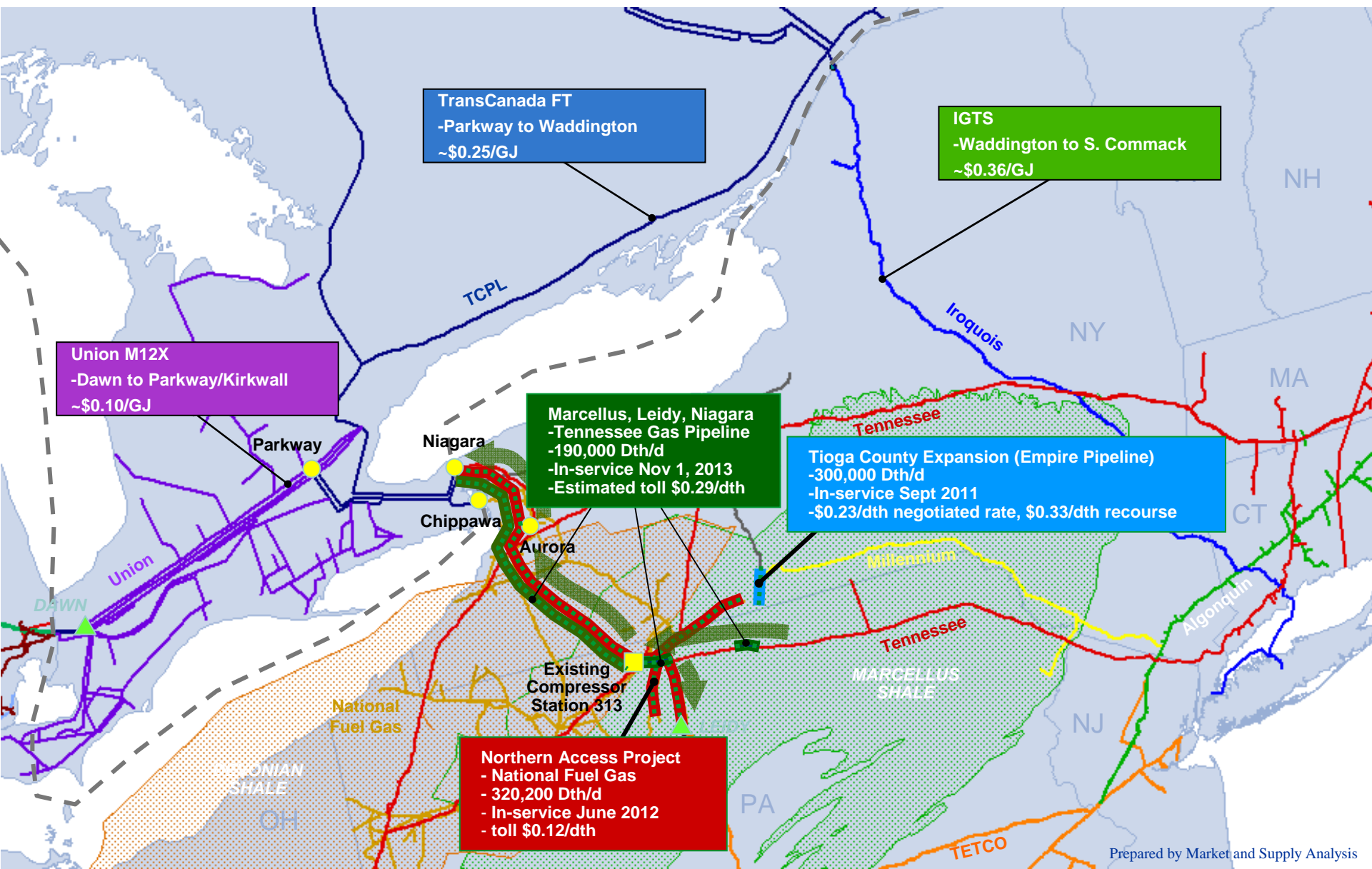
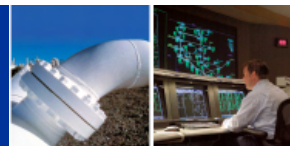
## July 2010

## Marcellus and the Mainline - Background



- In late 2009 / early 2010, Empire Pipeline and National Fuel Supply Corp. initiated open seasons to move Marcellus shale to Chippawa and Niagara Falls
- In response, TransCanada met jointly with Marcellus producers and representatives of Empire, National Fuel and Union Gas
- Purpose of meetings was to promote access to markets (e.g. IGTS) and storage via the Canadian Mainline
- TransCanada held a New Capacity Open Season in January 2010 to align with Empire and National Fuel open seasons:
  - Initial interest of 241,750 GJ/d
  - 100,000 GJ/d of transportation from Niagara secured for a 10 year term

# Proposed Projects to Bring Marcellus Gas to Canadian Markets





# TransCanada Mainline Open Season



- TransCanada recently received customer requests to hold another New Capacity Open Season to bring Marcellus supply to the Mainline
- TransCanada has commenced a second New Capacity Open Season:
  - Closes Aug 25, 2010
  - Coordinating with Union Gas, potentially Empire Pipeline and TGP
  - Service offering includes transport from Niagara and Chippawa with a start date of Sept 2011
  - Other paths, including paths out of Parkway, have a start date of November 2013.
  - Term is minimum 10 years

# TransCanada is the Preferred Path from the Marcellus



- Least expensive
- No minimum threshold for expansions; greater certainty of in-service compared to Greenfield alternatives
- Backed by diverse, secure supply at Dawn, which includes WCSB and US supply

# Capacity to Iroquois/Waddington



- **Mainline currently has 600,000 GJ/d of available long-haul capacity to Iroquois**
  - Total capacity to Iroquois is ~1.2 Bcf/d
- **TransCanada will hold open seasons and address facilities requirements as required to enable Marcellus supply to reach Iroquois**
  - Will seek lowest cost solution to minimize impact to tolls
  - Lower threshold volumes and greater certainty of in-service than Greenfield projects



# Key Messages



- **Waddington is the low hanging fruit for next tranche of Marcellus supply**
  - Higher value and backed by diverse supplies other than Marcellus
  - Reduced term commitment
- **TransCanada is the preferred path to the Marcellus:**
  - Cheapest option
  - Backed at Dawn by secure, diverse supply sources including the WCSB and U.S. supply; liquidity at Dawn backed by access to storage (Dawn and Michigan)
  - No minimum subscription level for service on the Mainline, whether existing or new
  - Marcellus supply can be attached quickly (as early as 2011) and at low cost, with the greatest certainty of in-service



Thank you.



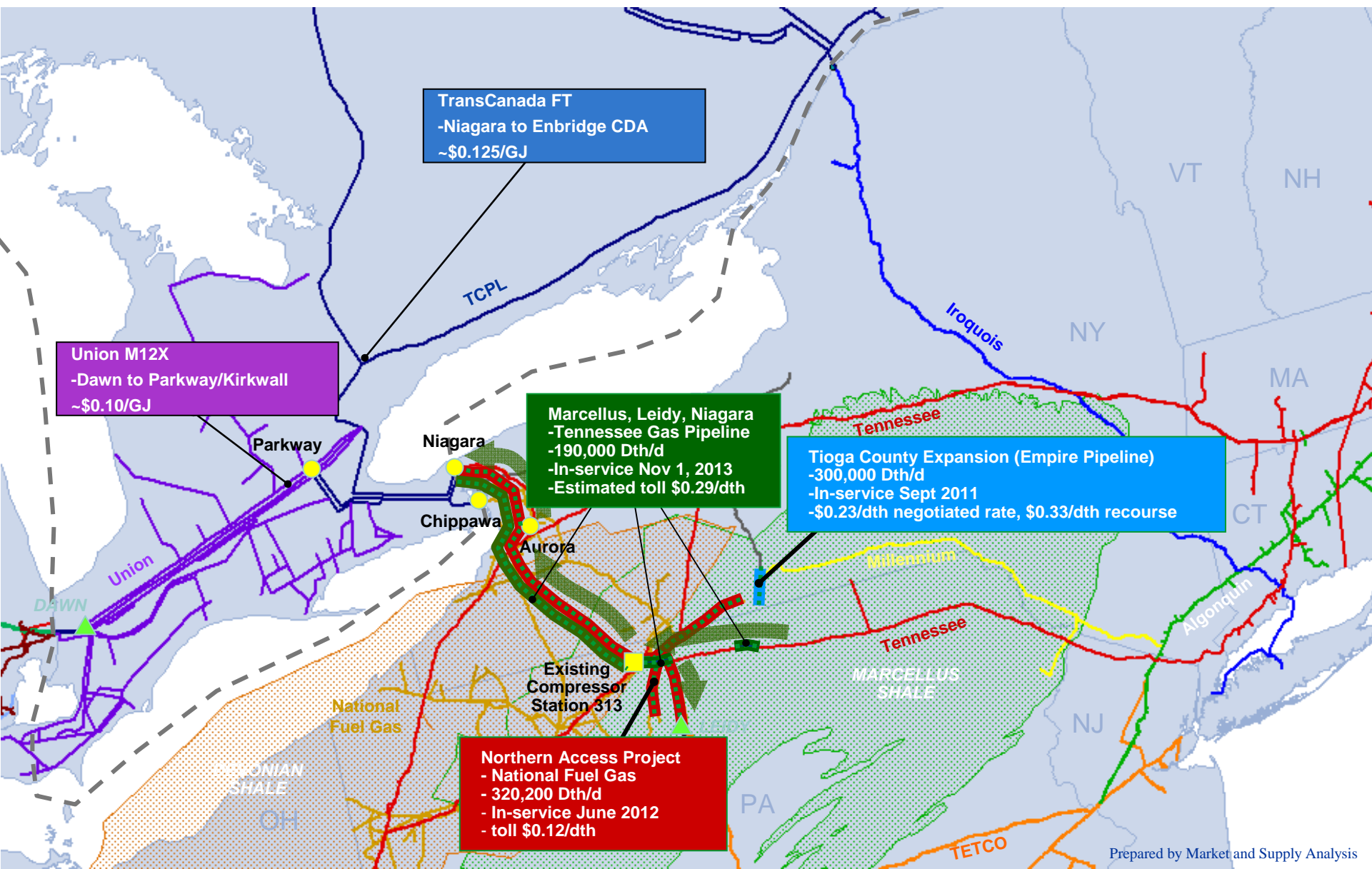
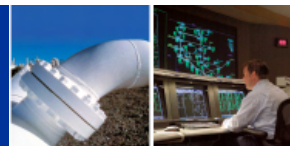
# August 4, 2010

## Marcellus and the Mainline - Background



- In late 2009 / early 2010, Empire Pipeline and National Fuel Supply Corp. initiated open seasons to move Marcellus shale to Chippawa and Niagara Falls
- In response, TransCanada met jointly with Marcellus producers and representatives of Empire, National Fuel and Union Gas
- Purpose of meetings was to promote access to markets (e.g. IGTS) and storage via the Canadian Mainline
- TransCanada held a New Capacity Open Season in January 2010 to align with Empire and National Fuel open seasons:
  - Initial interest of 241,750 GJ/d
  - 100,000 GJ/d of transportation from Niagara secured for a 10 year term

# Proposed Projects to Bring Marcellus Gas to Canadian Markets





# TransCanada Mainline Open Season



- TransCanada recently received customer requests to hold another New Capacity Open Season to bring Marcellus supply to the Mainline
- **TransCanada has commenced a second New Capacity Open Season:**
  - Closes Aug 25, 2010
  - Coordinating with Union Gas, Empire Pipeline and Tennessee Gas Pipeline
  - Service offering includes transport from Niagara and Chippawa with a start date of Sept 2011
  - Other paths, including paths out of Parkway, have a start date of November 2013.
  - Term is minimum 10 years

# TransCanada is the Preferred Path from the Marcellus



- **Least expensive**
- **Backed by diverse, secure supply at Dawn, which includes WCSB and US supply**
- **TransCanada will hold open seasons and address facilities requirements as required to enable Marcellus supply to reach market**
  - No minimum threshold for expansions; greater certainty of in-service compared to Greenfield alternatives
  - Will seek lowest cost solution to minimize impact to tolls
  - Supply can be attached quickly (as early as 2011 to Kirkwall)



Thank you.





# Accessing Marcellus Shale via TransCanada's Canadian Mainline

July 2011

# Key Messages



- **TransCanada is the most economic path to IGTS zones 1 & 2 from the Marcellus**
  - Path is economic with current rates; filing for lower and more certain rates in September
- **Significant liquidity along the path between Niagara / Chippawa and Waddington**
  - Storage and major Canadian markets; arbitrage opportunities
  - Backed by secure supplies at Dawn and the WCSB
- **TransCanada will add facilities where required to ensure Marcellus supply can access Waddington**
  - Minimal subscription level for facility expansions
  - Greater certainty of meeting in-service requirements

## Marcellus and the Mainline - Background



- In late 2009 / early 2010, Empire Pipeline and National Fuel Supply Corp. initiated open seasons to move Marcellus shale to Chippawa and Niagara Falls, respectively; Tennessee Gas Pipeline subsequently initiated its Supply Diversification project which enables delivery of Marcellus supply to Niagara
- TransCanada held New Capacity Open Seasons in January 2010, August 2010 and March 2011 to respond to interest in moving these Marcellus supplies to markets served by the Mainline

## Precedent Agreements Executed



- To date, TransCanada has executed Precedent Agreements for approximately 350,000 GJ/d for service between Niagara Falls and Eastern Canadian markets
  - Bids with 10 year terms
- Interest in Mainline transport is strong, as shippers on National Fuel, Empire and TGP continue their efforts to market their supply at the Canada/U.S. border.
  - Up to 500,000 Dth/day remains available at the border
  - More service requests expected
- In the most recent open season, bidders explored opportunities to move Marcellus shale supply to Waddington via the Mainline

# TransCanada is the Preferred Path to IGTS Z1/Z2 from the Marcellus



- **Least expensive path**
  - Accessing Marcellus supply at Waddington (via Niagara/Chippawa) is more economic than greenfield alternatives under current Mainline rates
  - The Mainline will file a rates application in September that will offer both lower rates and rate certainty
- **Low volume threshold for expansions; greater certainty of in-service compared to Greenfield alternatives**
- **Backed by diverse, secure supply at Dawn, including WCSB and US supply**

# Waddington Competitiveness - Future T-Values



- **Forward basis numbers support purchasing gas at Waddington**
- Forward Prices relative to Henry Hub (2012-2016)
  - Waddington +35
  - Leidy +35
  - NYC +61
- Leidy to NYC: Basis spread / T-value is **\$0.26**
- Waddington to NYC: Basis spread / T-value = **\$0.26**
- **No liquidity in forward markets; basis numbers expected to tighten when new infrastructure is built into the region**



# T-Values to NYC versus various tolling options



- Leidy to NYC: basis spread / T-value is \$0.26
- **Toll Comparison inclusive of variable costs (commodity and fuel):**
  - Tolls on Inergy/Millennium/NYMarc/IGTS Z2 are  $\$0.19/0.67/.43/.25 = \mathbf{\$1.54 (-1.28)}$
  - Tolls on National Fuel/TC/IGTS (Zones 1 & 2) =  $\$.32/.57/.43 = \mathbf{\$1.32 (-1.06)}$
- **TransCanada will file for reduced Mainline rates and rate certainty in September**

# Capacity to Waddington & IGTS



- Mainline currently has ~500,000 GJ/d of available capacity at TransCanada's Iroquois export point (i.e. Waddington)
- TransCanada will continue to hold open seasons and address facilities requirements as required to enable Marcellus supply to reach Iroquois
  - Parkway (interconnect with Union) to Maple corridor is current system bottleneck
  - Will seek lowest cost facilities solution to minimize impact to tolls
  - Lower threshold volumes and greater certainty of in-service than Greenfield projects



# Conclusions



- **TransCanada is the most economic path to IGTS zones 1 & 2 from the Marcellus**
  - Path is economic with current rates; filing for lower and more certain rates in September
- **Significant liquidity along the path between Niagara/Chippawa and Waddington**
  - Storage and major Canadian markets; arbitrage opportunities
  - Backed by secure supplies at Dawn and the WCSB
- **TransCanada will add facilities where required to ensure Marcellus supply can access Waddington**
  - Minimal subscription level for facility expansions
  - Greater certainty of meeting in-service requirements



Thank you.





# TransCanada's New Capacity Open Season – Accessing Marcellus Shale

April 2012

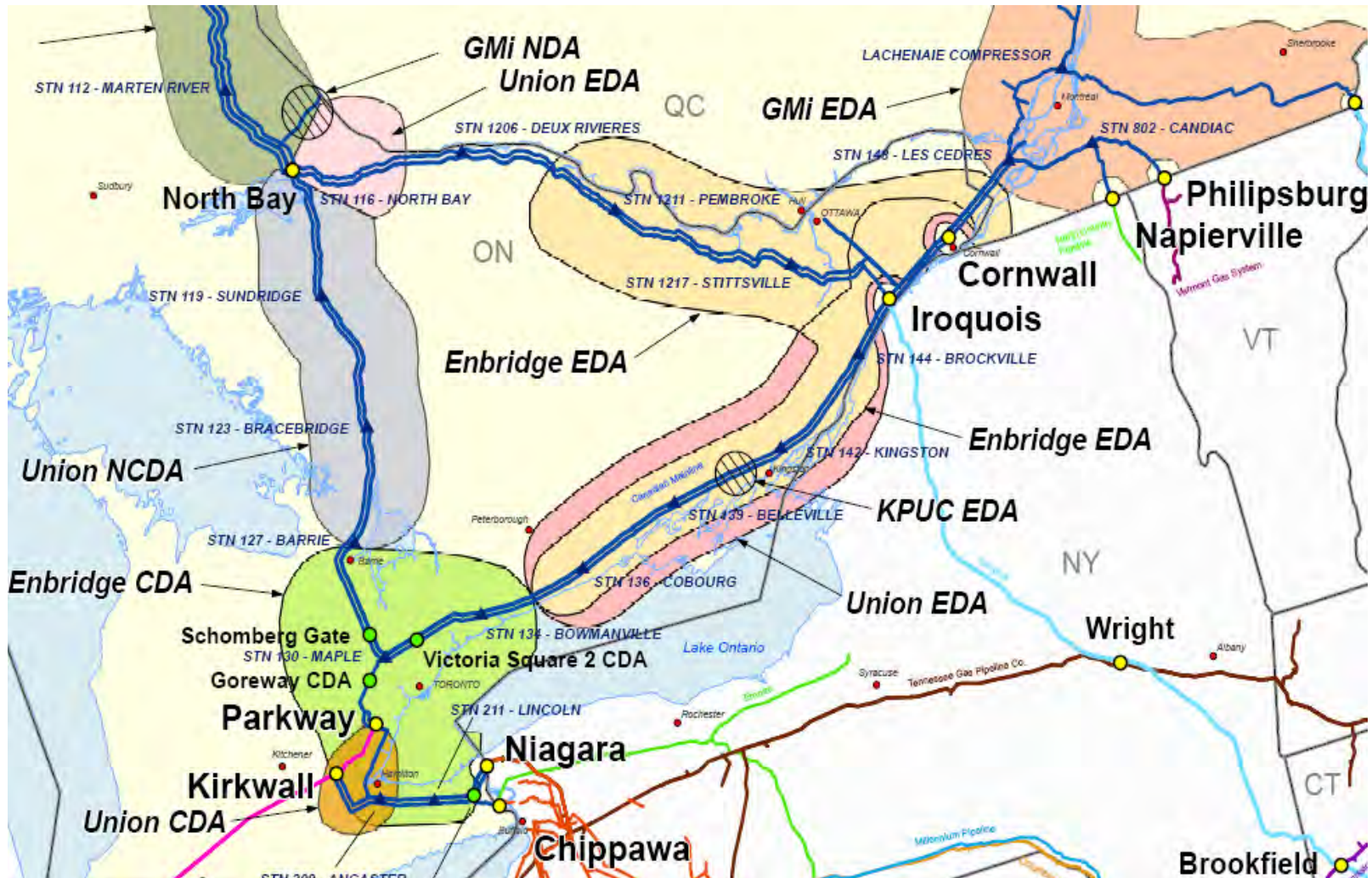
# Key Messages



- **TransCanada provides an economic link between Marcellus production and key Eastern Canadian and U.S. markets**
  - TC has filed for lower and more certain rates
- **Significant liquidity along the path between Niagara / Chippawa and key markets (e.g. Iroquois/Waddington)**
  - Storage and major Canadian markets; arbitrage opportunities
  - Backed by secure supplies at Dawn and the WCSB
- **TransCanada will add system capacity where required to ensure Marcellus supply can access key markets in a timely fashion**
  - Minimal subscription level for facility expansions
  - Greater certainty of meeting in-service requirements



# Canadian Mainline – Eastern Triangle



# Marcellus and the Mainline



- **To date, TransCanada has executed Precedent Agreements for approximately 350,000 GJ/d of long-term service between Niagara Falls and Eastern Canadian markets**
  - Bids with 10+ year terms
  - Facilities projected to be installed effective November 1, 2012 upon NEB approval
- **Current NCOS results from further expressions of interest in Mainline transport**
  - Shippers on National Fuel, Empire and TGP continue their efforts to market their supply at the Canada/U.S. border.
  - TransCanada can install capacity from Niagara/Chippawa for November 1, 2013 and/or November 1, 2014

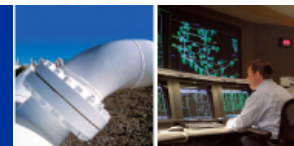


# Mainline Rates to Key Markets



Path	2012 Interim	Restructuring
Niagara to EGD CDA	\$0.17	\$0.14
Niagara to Union CDA	\$0.10	\$0.11
Niagara to Iroquois	\$0.45	\$0.32
Niagara to GMi EDA	\$0.59	\$0.39
Niagara to GMi TQM EDA		\$0.70

# Niagara to Market vs. Dawn to Market



Path	TransCanada (via Niagara)	Union (via Dawn)
To Union CDA	\$0.11	\$0.16
To Enbridge CDA	\$0.14	\$0.22
To Iroquois	\$0.33	\$0.39

TranCanada's tolls based on Restructuring Application. All rates inclusive of fuel

# Toll Comparison to NYC



Path	Toll*	In Service
National Fuel/ <u>TransCanada</u> /IGTS (Zones 1 & 2)	<b>\$1.06</b>	<b>2013/2014</b>
Constitution / IGTS Zones 1 & 2	<b>\$1.24</b>	<b>2016?</b>
Inergy / Millennium / NYMarc /IGTS Z2	<b>\$1.52</b>	<b>2016?</b>

**TransCanada can provide service to market faster and for the lowest cost**

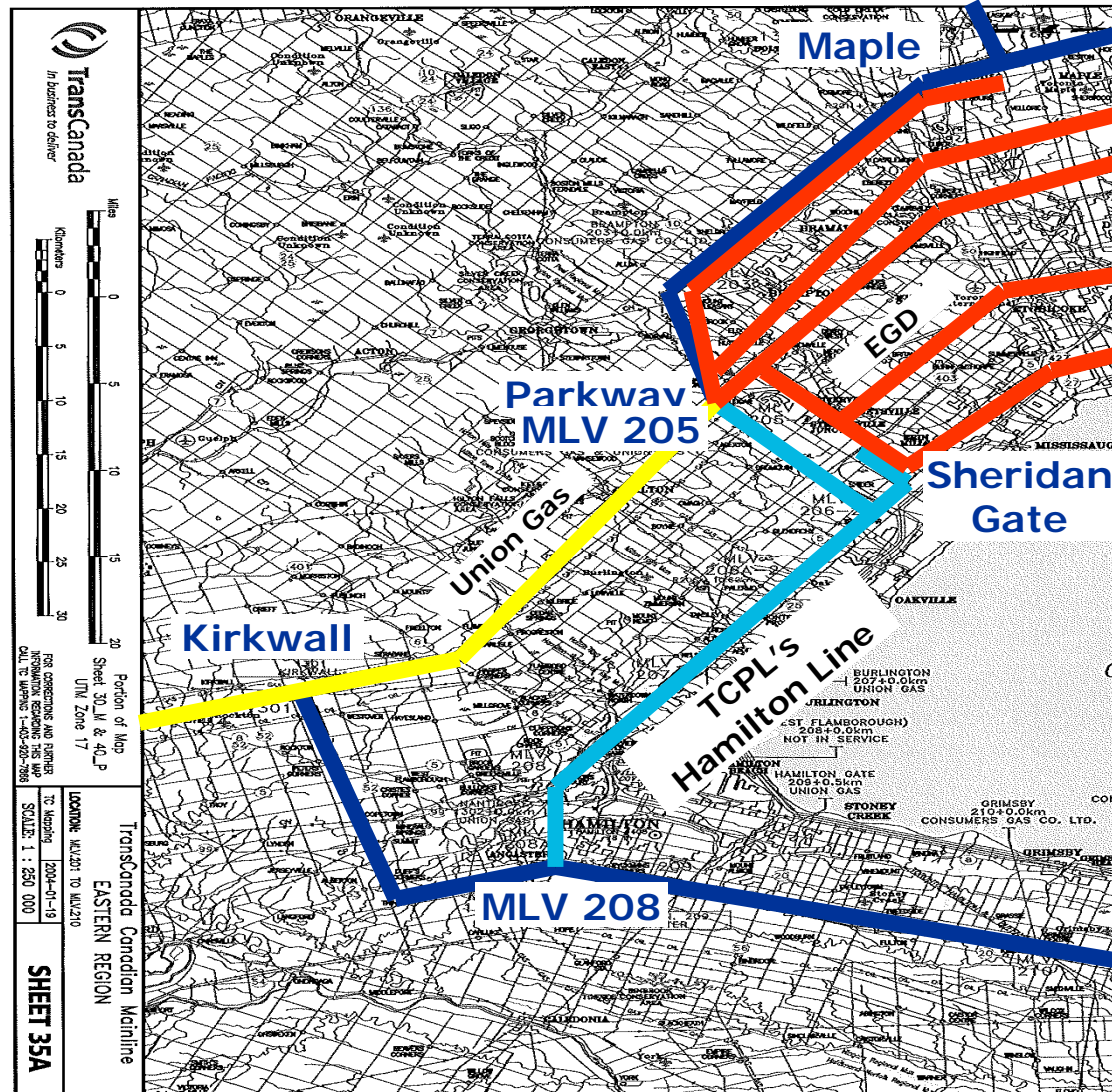
\* TransCanada tolls based on Restructuring Proposal – all rates inclusive of variable costs (commodity and fuel)

# Capacity to Key Markets



- **TransCanada will expand system capacity as required to enable Marcellus supply to reach Canadian and Eastern U.S. markets**
  - Current expansion between Parkway and Maple projected to be in service November 2012
  - Existing NCOS will meet incremental service requests for November 2013 and November 2014
  - TransCanada seeks lowest cost expansion solutions to minimize impact to tolls
  - Lower threshold volumes required for expansion relative to Greenfield projects
    - Greater certainty of in-service

# Niagara to GTA via the Hamilton Line



## Benefits :

- Efficient
  - Low capital versus capacity
- Flexible
  - Capacity ramp-up
- Lower toll to EGD Pkwy if meter separated from broader EGD CDA
- Estimated Niagara to EGD Parkway DDA = \$0.105/GJ



# New Capacity Open Season



- Service from all Receipt Points including Niagara Falls, Chippawa and Parkway to delivery points downstream of Parkway
- New service for Nov. 1/13 or Nov. 1/14
- Minimum ten year commitment
- Open Season closes at 8:00 a.m. (MST) May 4, 2012

# Conclusions



## Access to Marcellus Supply

- TransCanada's Mainline connects suppliers to premium markets within Ontario, Quebec and the U.S. Northeast

## Competitive Option

- TransCanada's seamless service provides a competitive option to markets looking to access Marcellus supply

## Operational Excellence

- Secure and reliable annual firm service
- Flexible and easy to use transactional systems
- Strong record of safety and technical excellence



Thank you.



# October 25th, 2010

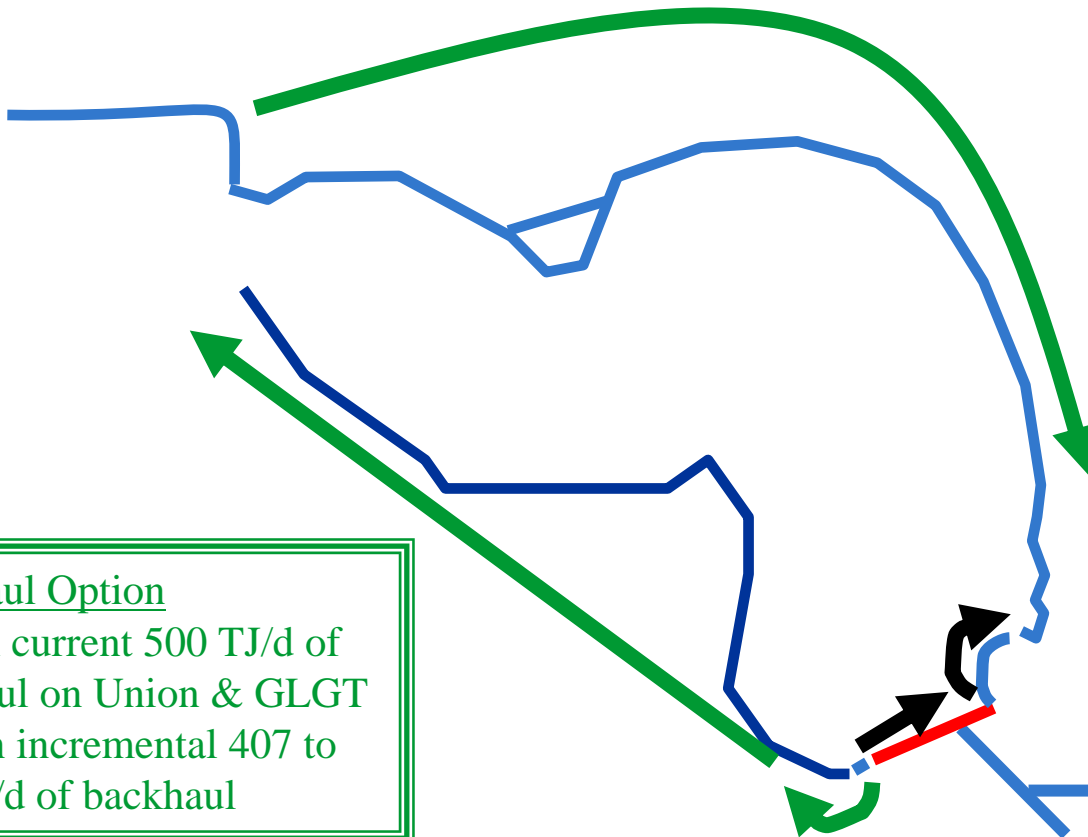
# Purpose



- **Seek approval:**
  - To countersign the P.A.s for transportation of Marcellus gas from Niagara/Chippawa (and Parkway) to points east of Parkway
    - 210 to 379 TJ/d
  - To proceed with Parkway–Maple Loop Project
    - \$293 million of capital
    - Incremental Union TBO of \$19.8 / year



# Requirements and Options for November 2013



## Backhaul Option

- Retain current 500 TJ/d of backhaul on Union & GLGT
- Obtain incremental 407 to 575 TJ/d of backhaul

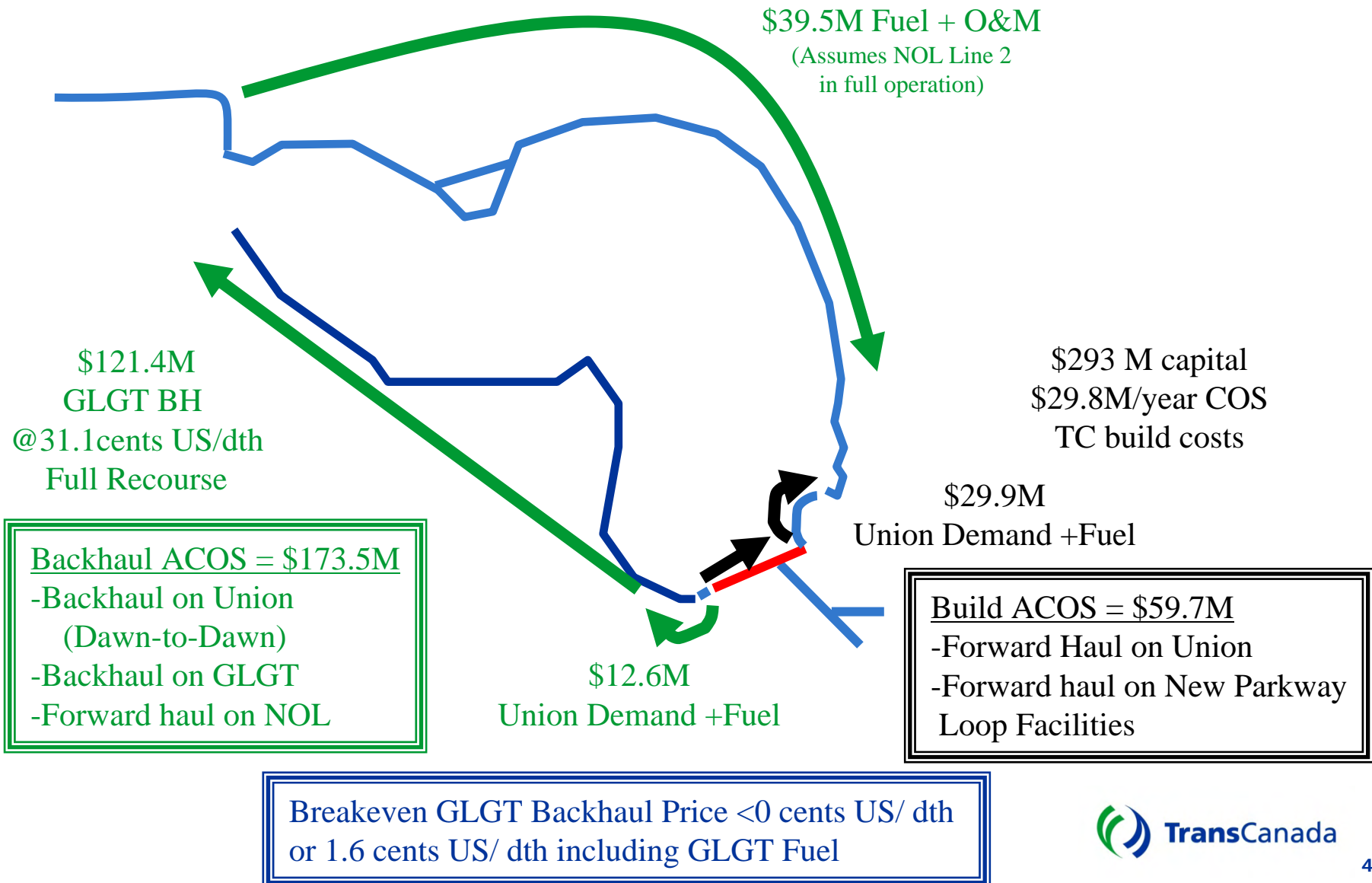
## Build Option

- Drop 500 TJ/d of Backhaul
- Expand Parkway to Maple by 907 to 1,075 TJ/d
- Contract for Union TBO

## Incremental Requirements out of Dawn Area:

- 247 TJ/d – Executed Incremental FT and PAs
- 210 to 378 TJ/d – New PAs for Marcellus Gas
- 457 to 625 TJ/d – Total

# Build versus Backhaul Annual Costs



# Sensitivities



	<u>Base Case</u>	<u>Most Favorable GLGT Backhaul</u>	<u>Components</u>
<b>Fuel Cost at Emerson (\$CDN)</b>	TSO \$8.345	\$4.345 (-\$4)	~ 4.5 cents
<b>Build Capital Cost (\$M)</b>	\$293	\$366	~ 1.9 cents
<b>Lower NOL fuel due to LH turn-back (TJ/d)</b>	n/a	-642 LH	~ 4.1 cents
<b>Max GLGT Rate for Breakeven economics (Cents US/dth)</b>	<b>1.6 (Fuel Included)</b>	<b>10.5 (Fuel Included)</b>	<b>10.5 (Fuel Included)</b>

- GLGT Maximum (recourse) rate = 31 cents/Dth
- GLGT expansion costs for incremental 500 Dth of backhaul = ~\$600 million?

# Timeline



- **Required Capital Spend Profile**
  - ~ \$3M for 2010
  - ~ \$34M cumulative by Q1, 2011
- **Notice to Union of Non-renewal Dawn to Kirkwall**
  - Non-renew 375 TJ/d (~ \$9M per year)
  - By October 31, 2010 for November 2012
- **Notice of Renewal to GLGT**
  - Required by October 31, 2010 for November 2011
  - Initiate ROFR process with final decision in January

# Risks and Considerations



- **Other Sources Of Eastern Supply – Low Risk to SH contract renewals due to LH being displaced first**
  - IGTS Backhaul to Canada
  - Utica Shale
    - GMI EDA 280 TJ/d of 828 TJ/d is LH as of Nov. 2010
- **Non-renewal of current Dawn Area Contracts**
  - One year contracts – 525 TJ/d of the current 862 TJ/d
- **Bypasses**
  - Enbridge Reinforcement 200 TJ/d by 2014
  - Other bypass risks driven by higher tolls
- **Marcellus Precedent Agreements Not Executed**
  - Not fully Binding Until January 31–Effective Date
  - TC BOD approval condition precedent – January 28th



## Additional Requirements-Union M12



- **Requires TC to take on additional obligations;**
  - approximately 700 TJ/d Union M12 Capacity for 10 years
- **Negotiate to reduce term;**
  - leverage; Union wants a Parkway expansion
- **Negotiate a Kirkwall to Parkway Service (lower rate);**
  - leverage; Union message to the OEB shorthaul toll must be competitive.

## Other Commercial Considerations



- **Building To Capture Marcellus and Other Shale;**
  - will further off load the NOL
  - May be perceived by some as further eroding the competitiveness of long haul
- **Marcellus and other supply will get to market with or without TC (further bypass);**
- **Short haul is better than no haul;**
  - maintains access to market,
  - maintains billing determinants
- **Building is the least cost alternative**

# Conclusion



- **Full Build is the most economic relative to full backhaul**
- **Market uncertainties exist**
  - Still assessing partial build

# Recommendation



- **Commence Parkway looping activities ASAP to preserve required schedule**
- **Preserve GLGT backhaul through 2012**
  - Continue commercial negotiations regarding price and continue to assess future requirements
- **Request incremental TBO on Union**
- **Countersign incremental P.A.s for transportation of Marcellus gas**

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**Union -TCPL 4**

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**Reference:** TransCanada Written Evidence, Section 2, page 3, lines 19-22

**Preamble:** TransCanada asserts that it has consulted and deliberated with Union throughout the development of the TransCanada and Union systems.

**Request:**

- (a) Please provide a copy of all presentations made to Union regarding the TransCanada open seasons and expansion plans in Ontario referenced in Question 4 a) above.
- (b) Please provide any other evidence of TransCanada's consultation and deliberation with Union on open seasons and expansion plans within Ontario referenced in Question 4 (a) above.
- (c) Please provide a copy of all presentations made to Union regarding alternatives to the Parkway West Project.

**Response:**

- (a) TransCanada assumes that Union is requesting copies of all presentations related to the open season and expansion plans referenced in Question 3 a). Please refer to the following Attachments:
  - TransCanada Interrogatory Response to Union – Question 4(a) – Attachment 1
  - TransCanada Interrogatory Response to Union – Question 4(a) – Attachment 2
  - TransCanada Interrogatory Response to Union – Question 3(c) – Attachment 5

Attachment 5 to TransCanada interrogatory response to Union 3(c) is a copy of a January 2010 presentation that TransCanada used when it engaged in joint marketing efforts with Union, National Fuel and Empire State Pipeline to highlight Canadian market opportunities to Marcellus producers. Union and TransCanada shared the content of their respective presentations prior to the

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**Union -TCPL 4**

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customer meetings so that each party would be comfortable with what the other party was presenting. Although the presentation was not made directly to Union (and it should be noted that neither party made direct marketing presentations to each other), Union was well aware of TransCanada's marketing efforts as they pertain to Marcellus shale by virtue of having seen this presentation. Union subsequently bid in TransCanada's New Capacity Open Season in August 2010 and has executed a Precedent Agreement in support of TransCanada's Section 58 application.

- (b) In 2010, TransCanada had numerous phone and email discussions with Union with respect to coordinating visits with potential customers that might be interested in transporting Marcellus supply from the Niagara and Chippawa interconnect points to Eastern Canadian and U.S. markets via the TransCanada and Union Gas systems. Both companies also coordinated the start and end dates of their respective open seasons to attract the aforementioned volumes at Niagara and Chippawa. As noted in the response to (a) above, TransCanada and Union developed marketing presentations that were jointly presented to customers highlighting opportunities in the Canadian marketplace along with toll and service information on the TransCanada and Union systems. TransCanada and Union reviewed their respective presentations with each other prior to beginning prospective customer visits. Please refer to the response to (a) above for details on the TransCanada presentation.

In 2012, there has been no coordination between the two companies with respect to open seasons. Union commenced its open season a few days before the commencement of TransCanada's planned new open season which TransCanada had been discussing with customers. Union informed TransCanada of its Parkway Extension Open Season, which began on March 13, 2012, only a few hours before the open season was posted on the Union Gas website. While Union's open season was underway, TransCanada initiated its own New Capacity Open Season in response to customer requests for service.

With respect to discussions concerning expansion plans, TransCanada presented information on its proposed expansion between Parkway and Maple at its 2011 Annual Customer Meeting, which was held on April 20, 2011. TransCanada also presented its facility expansion plans to its customers, including Union, at a meeting of its Tolls Task Force on July 6, 2011. Please refer to the response to (a) above.



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**Union -TCPL 4**

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There was also discussion between Union and TransCanada regarding TransCanada's system capacity requirements when TransCanada approached Union for TBO service to facilitate the firm transportation requests it had received on its system. In August 2010 TransCanada held a New Capacity Open Season that resulted in a Precedent Agreement for service from Niagara to the Enbridge CDA. To satisfy this request TransCanada required firm transportation on the Union System from Kirkwall to Parkway. At that time, the only service offered by Union that provided firm transportation was M12X, which is priced at a premium to Union's M12 service and which provides transportation service between Kirkwall, Parkway and Dawn,.

In order to meet its firm service requirements between Niagara and the Enbridge CDA at the lowest cost, TransCanada requested that Union develop a Kirkwall to Parkway service as this was the least cost option. Although Union initially refused to develop the service, customer pressure on Union prevailed and TransCanada and Union were able to work collaboratively to develop a service that met both parties' and their customers' requirements. TransCanada subsequently acquired the Kirkwall to Parkway service on the Union system.

- (c) To date, TransCanada has made no formal presentations to Union with respect to alternatives to the Parkway West project. Union made a presentation outlining the Parkway West concept to TransCanada on October 28, 2011, . At this presentation Union was not seeking TransCanada's input and never did, which is not surprising because at the time of the presentation, unbeknownst to TransCanada, this Application for the Parkway West Project was being finalized and was filed 12 days after the presentation. Prior to making its presentation to TransCanada, there had been no communication from Union that there was any potential Loss of Critical Unit (LCU) issue at the existing Parkway compressor station. As a result, TransCanada was not in a position to assess alternatives and discuss them with Union prior to the filing of the EB-2011-0210 application.



## Commercial East Update

Steve Pohlod, Vice-President, Commercial East, Canadian and Eastern  
U.S. Pipelines

April 20, 2011



# Agenda

- **2011-2013 Mainline Competitiveness Settlement**
  - Background and Current Status
- **2010/11 Winter Review**
  - Winter flows
- **Open Season Update**



# Mainline Competitiveness Initiative /Settlement Negotiations



- **Commitment to present comprehensive competitiveness package by end of Q1 2010 and file by end of Q3 2010**
  - Business model, rate design, services
  - Numerous concepts discussed with stakeholders in late 2009/Q1 2010
- **Initial proposal presented to TTF end of Q1 2010**
- **Modified settlement proposal presented to TTF in November 2010**
  - CAPP support for producer contribution
  - Not supported at TTF in December 2010
- **TransCanada filed 2011 interim rates based on contested settlement**
  - Not approved by NEB
- **Revised interim rates filed Feb 2011 – approved effective Mar 1**
  - TC instructed to file final 2011 tolls by May 2

# Mainline Competitiveness Initiative /Settlement Negotiations



- Settlement discussions continued with stakeholders throughout Jan & Feb 2011
- Market-area shippers developed settlement revisions that substantially broadened market support
- Revised settlement proposal presented to TTF members in early March



# Settlement Proposals



- **Three year term**
- **Alberta System Receipt Surcharge**
- **TransCanada direct financial contribution**
- **Depreciation expense reduction**
- **2010 Deferral Account amortization**
- **Rate design change vs. negotiated rates at reduced levels**
- **Discretionary service changes**
- **Open Season at reduced rates to attract incremental volumes**

# Benefits of Settlement

- Substantial decrease in Mainline tolls
- Improved toll certainty and stability
- Open season– opportunity for fixed rates
- Additional revenue generation opportunity from service changes – further reduction to LH and SH tolls
- Allow for focus on longer term
- Avoid contentious litigation



# Current Status

- **March Settlement not supported at TTF**
- **May 2<sup>nd</sup> NEB application**
- **NEB process**
- **Ongoing initiative to adapt to market evolution**





- **2010/2011 Winter Review**



## Summary: Winter 2010/2011

- ✓ Flows > Forecast
- ✓ All firm obligations met

Prairies Line

Northern  
Ontario Line

Eastern  
Delivery Area

GLGT

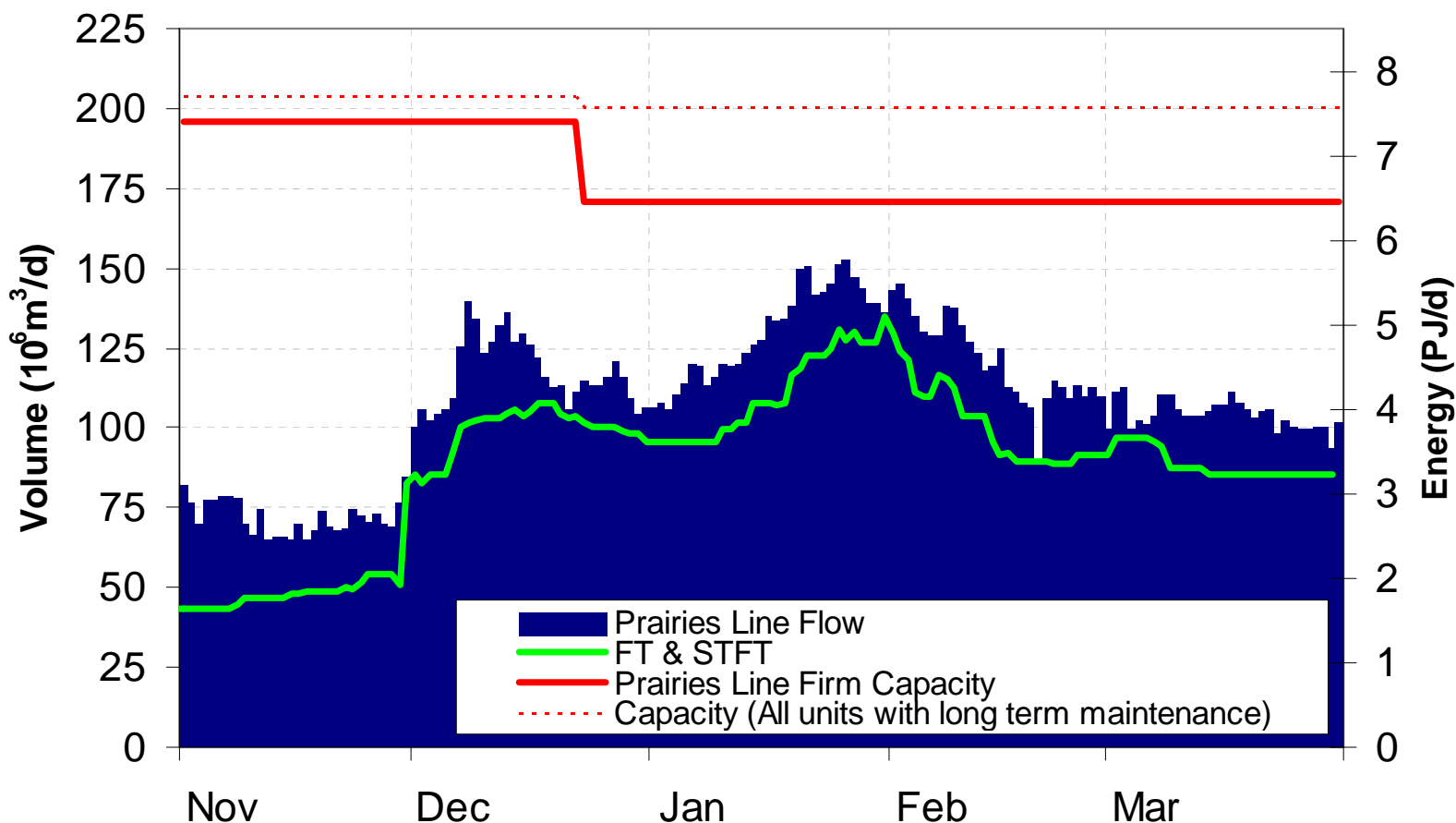
### Discretionary flow restrictions

- Sault Ste Marie
- NOL
- Parkway to Maple
- Montreal Line / North Bay SC
- Iroquois
- East Hereford



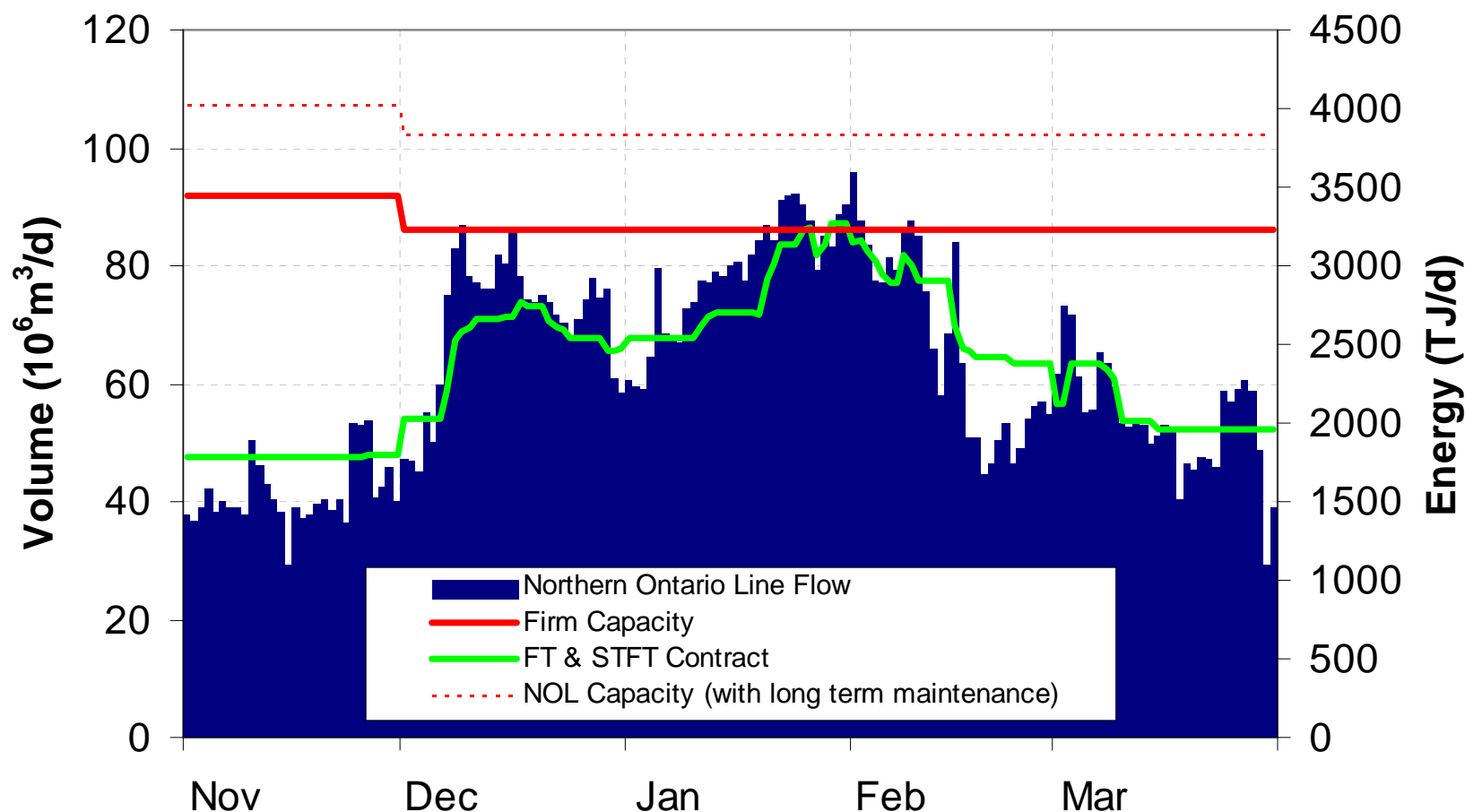
# Prairies Line: Winter Actuals

## Actual flow, contract & capacity



# Northern Ontario Line: Winter Actuals

## Actual flow, contract & capacity



# NOL Linebreak – Feb 19 2011



- **Occurred near Beardmore, Ontario**
  - Line 2 – NPS 36 pipeline
  - Actions taken and valve isolation commenced within 4 minutes of notification
  - Gas flowing about 9 hours after line break – no restrictions to firm service
  - Non-firm discretionary services through the bottleneck available for Feb 24
- **Root cause investigation continuing**
- **Line 2 repair complete**
- **NO FIRM SERVICES RESTRICTED AND NO FORCE MAJEURE REQUIRED**



- Open Seasons

# Short-Term Firm Open Seasons



- **2011 sales of STFT have been very successful to date**
  - Strong flows in January and February
  - Currently exceeding forecast of discretionary revenue for 2011
- **Summer STFT capacity currently available**
  - Bids can be submitted on a daily basis
- **Winter STFT capacity will be sold as a full winter block commencing July 1<sup>st</sup>**
  - Monthly blocks available July 16-31



# New Capacity Open Season (NCOS)



- **In January 2011, TransCanada executed Precedent Agreements with bidders from 2010 NCOS for ~200,000 GJ/d of incremental capacity**
  - Niagara to Enbridge CDA & Kirkwall
  - PAs will underpin facilities application – expected to file in Q3
- **In response to market interest, another NCOS commenced April 1**
  - Open season closed April 15
  - Interest related to Marcellus shale production

# Facilities Addition – Parkway Pipeline





- Thank You



## Facilities Notification Mainline 2012 Expansion

Tolls Task Force Meeting, Canmore

July 6, 2011

# TTF Update on 2012 expansion



- **Provide the TTF an update on the status of TransCanada's 2012 facility expansion plans**
  - NEB requirement to notify commercial third parties of the facility expansion plans
  - Please advise TransCanada of any concerns within the next week. If there are any concerns TransCanada must identify the parties with outstanding concerns and discussion of the unresolved concern.



# Contractual underpinning behind expansion plans



- Open Season requests for New Capacity driving 2012 and 2013 expansions

NCOS Open	NCOS Close	Executed Precedent Agreements				
		Service	Start Date	End Date	Path	Volume (GJ/d)
12-Aug-09	26-Aug-09	FT-SN	1-May-12	01-Apr-22	Parkway – Schomberg CDA	87,645
5-Jul-10	25-Aug-10	FT	1-Nov-12	31-Oct-22	Niagara Falls - Enbridge CDA	211,011
		FT	1-Nov-12	31-Oct-22	Niagara Falls – Kirkwall	21,101
30-Mar-11	15-Apr-11	FT-SN	1-Nov-12	31-Oct-32	Parkway – Parkway Consumers	46,950
		FT	1-Nov-12	31-Oct-23	Niagara Falls - Enbridge CDA***	126,607
		FT	1-Nov-13	31-Oct-23	Parkway to Phillipsburg	3,500

\*\*\* Interim to Kirkwall for November 2012

# Annual Requirements from Niagara and Parkway in 2012



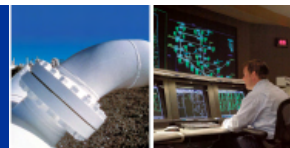
Start date	Receipt Location	Delivery location	Volume (TJ/d)	Notes
November 2012	Niagara Falls	Enbridge CDA	211.0	
		Kirkwall	147.7	Note: 126.6 TJ/d is an interim delivery to Kirkwall until Nov 2013 then EGD CDA
		Total through Niagara in 2012	358.7	= 211.0 +147.7
	Parkway	Schomberg CDA	87.7	
		Total through Parkway in 2012	298.7	= 211.0 +87.7

Note: 46.9 TJ/d FT-SN Parkway to Parkway Consumers not included

For Discussion Purposes of the TTF – Confidential Communication



# Economics of expansion



- **Annual Revenues from 2012 Expansion Contracts = ~ \$17M per year**
- **Annual Cost of Service associated with Expansion Facilities = ~\$13M per year**

## Recent / planned expansion activities



- **On-going consultation program**

- Working with landowners, developers, municipalities & government agencies

- **Currently planned activities**

- Commencing field surveys and environmental studies early July
- Purchase long lead items July 2011
- Purchase line pipe September 2011
- Complete land appraisals mid-September
- Finalize acquisition negotiations by end of year 2011
- Begin Fabrication May 2011
- Begin Construction Q3 2012

- **Regulatory**

- S.58 Application for November 2012 facilities is currently under development
- Targeting mid to late July, 2011 filing

## 2013 Expansion plans



- **Based upon incremental Parkway requirements of 130 TJ/d**
  - Continuing to assess options
    - Options include:
      - Additional Compression at Maple
      - Additional pipeline looping
    - Options depend upon other factors such as:
      - Additional requests for service
      - Contract renewals
- **Expect NEB filing for 2013 Facilities in Q1/Q2 2012**



# Questions



**Any Concerns / Questions?**

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**Union -TCPL 5**

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**Reference:** TransCanada Written Evidence, Section 3.1, page 5, lines 11-13

**Preamble:** TransCanada states its IT service is essentially firm due to under-contracting on the system.

**Request:**

- (a) Please confirm that interruptible capacity on the TransCanada system is not treated as firm and can be interrupted.
- (b) What was the scheduled long haul flow the day that the Beardmore, Ontario outage occurred? What was the scheduled amount of long haul interruptible flow on that day? How much actual long haul flow occurred on that day? How much actual long haul interruptible flow occurred on that day? How much actual long haul interruptible flow occurred on the next day?
- (c) For each day during the period November 1 to March 31 in each of the years 2000-01, 2001-02, 2002-03, 2003-2004, 2004-05, 2005-2006, 2006-07, 2007-08, 2008-2009, 2009- 10, 2010-11 and 2011-12, please provide for Empress to CDA and Empress to EDA the maximum amount of IT on each day that was i) available, ii) nominated and iii) flowed, based on each of the four NAESB nomination windows.
- (d) Please list all specific dates during these periods where less than 1 PJ was available to flow IT from Empress to Union CDA after i) all contracted FT, STFT and STS was accommodated and ii) all contracted FT, STFT and STS as well as nominated IT was accommodated.
- (e) Please list in a table the number of times each year for the last five years IT services into each of Union's Delivery areas of NDA, EDA and CDA have been curtailed?

**Response:**

- (a) One of the reasons that TransCanada has had declining long-haul firm transportation is that its long-haul IT is treated by the market as essentially firm because of the amount of available capacity on the Mainline. Also, while interruptible capacity is not contractually firm, TransCanada is a non-bumping

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**Union -TCPL 5**

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pipeline and authorized IT is not interrupted on subsequent nomination windows to accommodate other service requests, including firm.

Given the current levels of available long-haul capacity on the Canadian Mainline, TransCanada's IT service originating at Empress for delivery to Eastern markets is very reliable. Once IT is authorized through the nominations process on the TransCanada Mainline, it is essentially firm and historically has only been curtailed when a large operational upset such as a linebreak occurs coincident with high flow. As seen in the response to Union TCPL 8(i), this is rare.

- (b) What was the scheduled long haul flow the day that the Beardmore, Ontario outage occurred? – 1,775,917 gigajoules

What was the scheduled amount of long haul interruptible flow on that day? – 108,581 gigajoules

How much actual long haul flow occurred on that day? – 1,728,213 gigajoules

How much actual long haul interruptible flow occurred on that day? – 70,656 gigajoules

How much actual long haul interruptible flow occurred the next day? – 43,027

Long Haul Assumptions: Receipts west of Station 41 or Emerson, and deliveries east of Station 41 excluding Emerson, and Spruce Export.[gkc: I think that the assumption changed to Emerson]

- (c) i) Data is not available to determine how much IT was available per day on all NAESB nomination windows.
- ii) Nomination records are available in end of day scheduled quantities not as nominated for all NAESB nomination windows.
- iii) Please refer to Attachment Union 5(c). End of day scheduled quantities have been provided in gigajoules. All scheduled quantities by cycle are not available for all NAESB nomination windows. Days where zero nominations from Empress to CDA or EDA have not been included in the output[put spaces between these paragraphs]

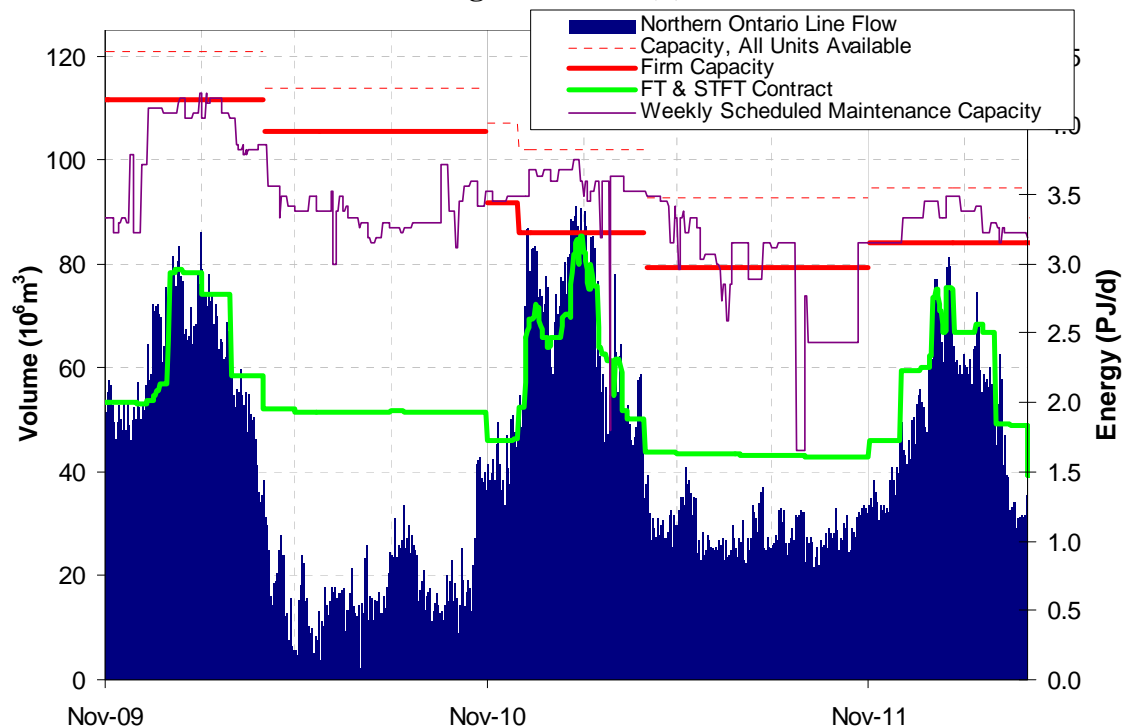
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**Union -TCPL 5**


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- (d) Figure Union 5(d) below provides the firm contract, LOU capacity, all unit capacity, weekly maintenance capacity and NOL flow from November 2009. It must be noted that capacity represented by the Weekly Scheduled Maintenance Capacity line does not reflect the capacity that could have been made available should there have been demand for it. TransCanada routinely changes its planned maintenance to accommodate shipper requests for transportation service. Further, should a shipper have nominated significant longhaul IT flow, it would have displaced any shorthaul IT; accordingly, there would have been more capacity available to a shipper wishing to flow longhaul IT than is demonstrated on this chart.

**Figure Union 5(d)**



From 2007 to 2012 Curtailment or reduction of previously authorized quantities to Union NDA, EDA, and CDA, occurred only once on the Evening cycle of Feb 20, 2012 due to the Beardmore line break.

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA		Sum of EDA	
Day	Total	Day	Total
11/21/2000	14770	11/21/2000	5230
11/25/2000	17125	11/30/2000	22
11/26/2000	17125	1/1/2001	5743
12/1/2000	18921	1/2/2001	5743
12/6/2000	5386	1/5/2001	50000
12/7/2000	50000	1/9/2001	379
12/23/2000	16504	1/17/2001	3600
12/24/2000	16504	1/22/2001	10550
12/25/2000	16504	2/6/2001	39
12/26/2000	16504	2/16/2001	1063
12/28/2000	18921	3/7/2001	942
1/1/2001	108025	12/1/2001	363
1/2/2001	79735	12/2/2001	182
1/3/2001	87899	1/1/2002	2900
1/4/2001	146203	1/2/2002	28523
1/5/2001	306930	1/3/2002	57212
1/6/2001	100000	1/4/2002	55388
1/7/2001	111579	1/5/2002	94855
1/8/2001	147248	1/6/2002	94855
1/9/2001	254805	1/7/2002	94855
1/10/2001	71748	1/8/2002	102548
1/11/2001	60075	1/9/2002	146657
1/12/2001	60657	1/10/2002	162593
1/13/2001	56948	1/11/2002	244694
1/14/2001	49784	1/12/2002	249970
1/15/2001	110106	1/13/2002	249970
1/16/2001	114265	1/14/2002	147133
1/17/2001	69193	1/15/2002	239419
2/1/2001	1055	1/16/2002	131356
2/5/2001	3000	1/17/2002	221093
2/6/2001	3961	1/18/2002	360075
2/7/2001	2000	1/19/2002	344314
3/7/2001	105	1/20/2002	341766
11/17/2001	70551	1/21/2002	291766
11/18/2001	65275	1/22/2002	291766
11/19/2001	30551	1/23/2002	273291
12/3/2001	2489	1/24/2002	315587
12/4/2001	830	1/25/2002	279011
1/1/2002	34281	1/26/2002	262709
1/2/2002	47017	1/27/2002	237709
1/3/2002	42712	1/28/2002	197709
1/4/2002	138644	1/29/2002	255940
1/5/2002	174956	1/30/2002	225306
1/6/2002	175727	1/31/2002	163714
1/7/2002	226569	2/1/2002	296214
1/8/2002	157166	2/2/2002	274382

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
1/9/2002	167803
1/10/2002	139871
1/11/2002	188561
1/12/2002	151171
1/13/2002	148703
1/14/2002	148703
1/15/2002	197274
1/16/2002	178318
1/17/2002	188437
1/18/2002	157427
1/19/2002	162477
1/20/2002	162477
1/21/2002	162477
1/22/2002	162477
1/23/2002	177999
1/24/2002	205247
1/25/2002	187139
1/26/2002	121618
1/27/2002	91618
1/28/2002	131618
1/29/2002	237519
1/30/2002	286048
1/31/2002	197380
2/1/2002	321767
2/2/2002	214744
2/3/2002	214744
2/4/2002	204830
2/5/2002	194898
2/6/2002	256978
2/7/2002	337496
2/8/2002	390583
2/9/2002	412308
2/10/2002	403376
2/11/2002	428525
2/12/2002	294990
2/13/2002	204417
2/14/2002	298417
2/15/2002	372559
2/16/2002	312012
2/17/2002	269745
2/18/2002	320232
2/19/2002	320232
2/20/2002	286268
2/21/2002	366764
2/22/2002	281456
2/23/2002	317718

Sum of EDA	
Day	Total
2/3/2002	306150
2/4/2002	309348
2/5/2002	131086
2/6/2002	172941
2/7/2002	240130
2/8/2002	164111
2/9/2002	211870
2/10/2002	211914
2/11/2002	161150
2/12/2002	270949
2/13/2002	179725
2/14/2002	267863
2/15/2002	299649
2/16/2002	309603
2/17/2002	311102
2/18/2002	250166
2/19/2002	296291
2/20/2002	345338
2/21/2002	292354
2/22/2002	320439
2/23/2002	277469
2/24/2002	277469
2/25/2002	276188
2/26/2002	284306
2/27/2002	212601
2/28/2002	293670
3/1/2002	347079
3/2/2002	317079
3/3/2002	327375
3/4/2002	377375
3/5/2002	352941
3/6/2002	327375
3/7/2002	332922
3/8/2002	226226
3/9/2002	284714
3/10/2002	314714
3/11/2002	304418
3/12/2002	319115
3/13/2002	296618
3/14/2002	315411
3/15/2002	329722
3/16/2002	316869
3/17/2002	316869
3/18/2002	316869
3/19/2002	298229
3/20/2002	317099



**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA		Sum of EDA	
Day	Total	Day	Total
2/24/2002	259974	3/21/2002	336835
2/25/2002	248550	3/22/2002	336835
2/26/2002	158620	3/23/2002	315253
2/27/2002	270221	3/24/2002	315253
2/28/2002	255809	3/25/2002	315253
3/1/2002	377087	3/26/2002	304627
3/2/2002	281664	3/27/2002	282271
3/3/2002	281664	3/28/2002	311657
3/4/2002	366664	3/29/2002	240765
3/5/2002	269481	3/30/2002	250665
3/6/2002	300117	3/31/2002	250659
3/7/2002	312910	11/1/2002	230290
3/8/2002	311173	11/2/2002	259257
3/9/2002	223689	11/3/2002	259257
3/10/2002	193689	11/4/2002	259257
3/11/2002	193689	11/5/2002	270203
3/12/2002	173474	11/6/2002	260344
3/13/2002	443595	11/7/2002	260502
3/14/2002	235167	11/8/2002	294566
3/15/2002	231469	11/9/2002	245003
3/16/2002	284277	11/10/2002	245003
3/17/2002	284277	11/11/2002	245003
3/18/2002	284277	11/12/2002	261003
3/19/2002	352832	11/13/2002	239946
3/20/2002	270395	11/14/2002	385690
3/21/2002	361081	11/15/2002	412856
3/22/2002	329644	11/16/2002	375886
3/23/2002	376135	11/17/2002	385690
3/24/2002	325168	11/18/2002	385690
3/25/2002	336931	11/19/2002	390019
3/26/2002	522148	11/20/2002	384825
3/27/2002	422408	11/21/2002	380845
3/28/2002	294873	11/22/2002	303889
3/29/2002	323977	11/23/2002	380544
3/30/2002	308959	11/24/2002	380544
3/31/2002	316492	11/25/2002	310989
11/1/2002	67537	11/26/2002	242060
11/2/2002	114050	11/27/2002	189212
11/3/2002	114952	11/28/2002	198367
11/4/2002	114952	11/29/2002	313264
11/5/2002	218751	11/30/2002	335594
11/6/2002	193995	12/1/2002	186495
11/7/2002	201094	12/2/2002	59321
11/8/2002	197801	12/3/2002	32025
11/9/2002	230779	12/5/2002	17332
11/10/2002	231760	12/6/2002	83507

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
11/11/2002	262159
11/12/2002	270400
11/13/2002	196254
11/14/2002	199557
11/15/2002	193651
11/16/2002	210135
11/17/2002	208896
11/18/2002	204074
11/19/2002	200908
11/20/2002	201767
11/21/2002	211739
11/22/2002	205162
11/23/2002	196068
11/24/2002	236842
11/25/2002	236842
11/26/2002	180191
11/27/2002	206303
11/28/2002	213572
11/29/2002	213630
11/30/2002	215860
12/1/2002	111941
12/2/2002	112044
12/3/2002	320221
12/4/2002	71325
12/5/2002	99118
12/6/2002	74065
12/7/2002	44374
12/8/2002	43774
12/9/2002	68774
12/10/2002	46888
12/11/2002	69582
12/12/2002	46730
12/13/2002	52688
12/14/2002	118328
12/15/2002	120670
12/16/2002	112163
12/17/2002	94243
12/18/2002	70196
12/19/2002	84991
12/20/2002	60639
12/21/2002	34469
12/22/2002	34469
12/23/2002	34469
12/24/2002	137866
12/25/2002	40629
12/26/2002	38595

Sum of EDA	
Day	Total
12/7/2002	108321
12/8/2002	81053
12/10/2002	115723
12/11/2002	185291
12/12/2002	199934
12/13/2002	162315
12/14/2002	333866
12/15/2002	216662
12/19/2002	340091
12/20/2002	340089
12/21/2002	272657
12/22/2002	344501
12/23/2002	329248
12/24/2002	339530
12/25/2002	334623
12/26/2002	347171
12/27/2002	347170
12/28/2002	347170
12/29/2002	347170
12/30/2002	347170
12/31/2002	350270
1/3/2003	499
1/7/2003	1884
1/21/2003	2500
1/22/2003	23601
1/23/2003	30000
2/4/2003	586
2/5/2003	331
2/6/2003	60
2/8/2003	35
2/9/2003	35
2/10/2003	35
2/17/2003	4500
2/18/2003	35
2/22/2003	4471
2/23/2003	4471
3/5/2003	10551
3/8/2003	829
3/13/2003	6170
3/14/2003	6170
3/15/2003	1200
3/17/2003	6000
3/18/2003	3391
11/3/2004	10056
11/26/2004	14122
11/27/2004	14122

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA		Sum of EDA	
Day	Total	Day	Total
12/27/2002	89170	11/28/2004	14122
12/28/2002	91196	11/29/2004	14122
12/29/2002	88890	11/30/2004	14122
12/30/2002	138890	12/1/2004	1041
12/31/2002	84357	11/15/2005	872
1/1/2003	2	11/19/2005	500
1/2/2003	2	11/20/2005	500
1/3/2003	13910	11/21/2005	500
1/4/2003	11647	2/17/2006	7691
1/5/2003	11647	2/18/2006	7691
1/6/2003	21647	2/19/2006	7691
1/7/2003	17977	2/20/2006	7691
1/8/2003	17977	2/21/2006	7691
1/9/2003	6118	11/2/2006	2424
1/10/2003	12133	11/15/2006	1000
1/14/2003	124273	12/6/2006	3000
1/15/2003	64260	12/13/2006	823
1/16/2003	371	1/9/2007	1000
1/21/2003	3727	1/16/2007	8000
1/23/2003	102589	1/17/2007	12004
1/24/2003	18390	1/18/2007	22991
1/25/2003	1837	2/5/2007	20777
1/26/2003	3086	2/13/2007	2160
1/27/2003	74908	3/5/2007	50000
1/28/2003	21975	11/1/2007	9066
1/29/2003	143176	11/2/2007	9066
1/31/2003	7933	11/3/2007	8566
2/1/2003	45953	11/4/2007	8566
2/2/2003	46903	11/5/2007	8566
2/3/2003	68945	11/6/2007	8866
2/4/2003	120743	11/7/2007	8566
2/5/2003	73024	11/8/2007	9566
2/6/2003	56597	11/9/2007	8566
2/7/2003	135515	11/10/2007	8566
2/8/2003	134655	11/11/2007	8566
2/9/2003	131807	11/12/2007	8566
2/10/2003	168453	11/13/2007	8566
2/11/2003	208431	11/14/2007	9316
2/12/2003	210001	11/15/2007	8566
2/13/2003	133177	11/16/2007	9066
2/14/2003	49846	11/22/2007	1
2/15/2003	20678	11/23/2007	1
2/16/2003	19545	11/24/2007	1
2/17/2003	19545	11/25/2007	1
2/18/2003	31015	11/26/2007	1
2/19/2003	89286	11/27/2007	1

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA		Sum of EDA	
Day	Total	Day	Total
2/20/2003	263498	11/28/2007	1
2/21/2003	264745	11/29/2007	1
2/22/2003	140987	11/30/2007	1
2/23/2003	199333	12/3/2007	12284
2/24/2003	77137	12/5/2007	2000
2/25/2003	100000	12/6/2007	500
2/26/2003	102000	12/12/2007	500
2/27/2003	100000	12/15/2007	500
3/3/2003	212128	12/16/2007	1000
3/5/2003	60000	12/17/2007	1000
3/6/2003	58856	12/19/2007	4000
3/7/2003	30446	12/27/2007	1200
3/8/2003	15844	1/8/2008	571
3/9/2003	15844	1/9/2008	1142
3/10/2003	117039	1/12/2008	1142
3/11/2003	15349	1/13/2008	1142
3/13/2003	30379	1/14/2008	1142
3/15/2003	150	1/18/2008	1142
3/16/2003	150	1/23/2008	28003
3/17/2003	150	1/24/2008	9376
3/21/2003	13153	2/1/2008	1213
12/12/2004	10000	2/6/2008	1213
12/20/2004	14660	2/8/2008	1213
12/21/2004	200000	2/20/2008	12157
1/1/2005	8	2/21/2008	44823
1/2/2005	8	2/28/2008	13906
1/3/2005	8	3/1/2008	641
1/18/2005	212	3/2/2008	641
1/19/2005	13	3/3/2008	1441
1/20/2005	8000	3/4/2008	641
1/21/2005	24615	3/5/2008	641
1/22/2005	8858	3/6/2008	641
1/23/2005	100000	3/17/2008	3000
1/26/2005	31665	3/26/2008	641
1/30/2005	268	3/27/2008	1100
2/1/2005	100	11/1/2008	1031
2/2/2005	100	11/2/2008	1031
2/24/2005	1007	11/3/2008	1031
11/1/2005	20000	12/7/2008	30000
11/2/2005	154405	12/8/2008	112
11/3/2005	252173	1/14/2009	750
11/4/2005	257942	1/24/2009	5000
11/5/2005	252928	1/25/2009	5000
11/6/2005	88762	1/26/2009	5000
11/7/2005	71273	1/31/2009	8833
11/9/2005	95622	2/3/2009	20000

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA		Sum of EDA	
Day	Total	Day	Total
11/10/2005	13517	2/7/2009	2166
11/11/2005	154620	2/8/2009	2166
11/12/2005	22447	2/9/2009	2366
11/13/2005	17447	2/14/2009	1000
11/14/2005	108567	2/15/2009	1000
11/15/2005	400	2/16/2009	1000
11/17/2005	155143	2/17/2009	1000
11/19/2005	600	2/23/2009	1000
11/20/2005	600	2/26/2009	3641
11/21/2005	600	3/3/2009	6052
11/22/2005	700	3/6/2009	2000
11/24/2005	120362	3/23/2009	15000
11/25/2005	201504	11/17/2009	1276
11/26/2005	170689	12/16/2009	20000
11/27/2005	130626	12/22/2009	7000
11/28/2005	153941	12/29/2009	3750
12/17/2005	2000	1/13/2010	1000
12/18/2005	2000	1/21/2010	1000
12/19/2005	2000	1/29/2010	1
12/20/2005	1300	1/30/2010	2
12/21/2005	1300	1/31/2010	2
12/22/2005	800	2/1/2010	12191
12/25/2005	76153	2/2/2010	25090
12/26/2005	90582	2/3/2010	2431
12/27/2005	27130	2/4/2010	90
1/5/2006	1900	2/5/2010	4290
1/26/2006	900	2/6/2010	46
1/27/2006	900	2/7/2010	46
1/28/2006	6574	2/8/2010	46
1/29/2006	6574	2/9/2010	90
1/30/2006	6574	2/10/2010	90
1/31/2006	6574	2/11/2010	90
2/1/2006	900	2/12/2010	90
2/2/2006	900	2/13/2010	252
2/3/2006	1000	2/14/2010	252
2/4/2006	500	2/15/2010	252
2/5/2006	500	2/16/2010	552
2/6/2006	15500	2/17/2010	18561
2/7/2006	500	2/18/2010	18561
2/8/2006	1000	2/19/2010	52
2/9/2006	2300	2/22/2010	500
2/10/2006	2300	3/1/2010	82
2/11/2006	1800	3/2/2010	82
2/12/2006	6800	3/3/2010	1000
2/13/2006	1800	3/4/2010	3000
2/14/2006	1000	3/5/2010	1000

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
3/8/2006	600
3/31/2006	500
11/1/2006	1
11/2/2006	1
12/5/2006	1000
12/6/2006	400
12/7/2006	900
12/8/2006	500
12/9/2006	500
12/10/2006	500
12/11/2006	500
12/16/2006	350
12/17/2006	350
12/18/2006	350
1/26/2007	57000
1/28/2007	102
1/29/2007	102
2/5/2007	13564
2/8/2007	23
2/14/2007	3109
3/5/2007	150000
3/7/2007	4532
3/28/2007	20000
3/31/2007	15871
11/3/2007	400
11/4/2007	400
11/5/2007	400
11/13/2007	400
11/15/2007	3138
11/29/2007	52381
11/30/2007	52381
12/3/2007	2328
12/4/2007	33882
12/5/2007	55381
12/7/2007	9551
12/12/2007	9551
12/13/2007	9551
12/14/2007	9551
12/16/2007	114907
12/17/2007	42259
12/18/2007	442
12/20/2007	9551
12/21/2007	9551
12/22/2007	7641
12/23/2007	7641
12/24/2007	7641

Sum of EDA	
Day	Total
3/6/2010	1000
3/7/2010	1000
3/8/2010	1000
3/9/2010	1000
12/14/2010	24394
12/15/2010	12650
1/16/2011	40000
1/17/2011	30000
2/9/2011	2296
3/2/2011	8050
3/3/2011	29205
12/17/2011	35000
12/28/2011	5154
12/29/2011	460
1/3/2012	13902
1/14/2012	35352
1/15/2012	37046
1/16/2012	37852
1/17/2012	31653
1/18/2012	21
1/19/2012	7
1/21/2012	9900
3/1/2012	11
3/4/2012	12000
3/5/2012	15000
3/8/2012	6
3/9/2012	1
3/27/2012	1
3/28/2012	1
3/29/2012	1



**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
12/25/2007	7641
12/26/2007	7641
12/28/2007	48265
12/29/2007	400
12/30/2007	400
12/31/2007	400
1/2/2008	25235
1/15/2008	62
1/24/2008	3628
1/30/2008	1700
1/31/2008	42202
2/10/2008	41988
2/11/2008	33992
2/12/2008	53282
2/13/2008	5239
2/15/2008	43285
2/20/2008	348
2/27/2008	53870
3/3/2008	1100
3/9/2008	2494
3/10/2008	2286
3/21/2008	400
3/22/2008	400
3/23/2008	400
3/24/2008	400
3/29/2008	500
3/30/2008	500
3/31/2008	500
12/8/2008	5389
12/10/2008	27474
12/11/2008	87919
12/12/2008	22062
12/19/2008	54591
12/20/2008	135961
12/21/2008	199092
12/22/2008	54363
12/23/2008	38
1/12/2009	2
1/14/2009	44911
2/4/2009	13064
2/28/2009	26743
3/2/2009	396
11/2/2009	21101
11/3/2009	1
11/4/2009	8746
11/30/2009	1661

Sum of EDA	
Day	Total

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
12/18/2009	607
12/19/2009	3
12/25/2009	1055
12/29/2009	300
1/1/2010	8745
1/5/2010	13593
1/6/2010	10346
1/7/2010	1
1/12/2010	5843
1/21/2010	9571
2/1/2010	4504
2/3/2010	10348
2/4/2010	100
2/6/2010	500
2/7/2010	500
2/8/2010	500
2/10/2010	249
2/13/2010	150
2/14/2010	150
2/15/2010	150
2/16/2010	150
2/20/2010	500
2/21/2010	500
2/22/2010	500
2/23/2010	500
2/24/2010	500
2/27/2010	200
2/28/2010	200
3/2/2010	11733
3/3/2010	400
3/5/2010	500
3/6/2010	2309
3/7/2010	2309
3/8/2010	2309
3/9/2010	158
3/19/2010	8799
3/20/2010	17599
3/21/2010	13201
3/22/2010	11404
3/23/2010	300
3/27/2010	150
3/28/2010	150
3/29/2010	150
3/31/2010	500
11/24/2010	4537
12/7/2010	12109

Sum of EDA	
Day	Total

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
12/8/2010	1287
12/9/2010	2740
12/10/2010	306
12/13/2010	3457
12/14/2010	544
12/15/2010	4719
12/16/2010	800
12/24/2010	331
12/25/2010	331
12/26/2010	448
12/27/2010	4976
12/28/2010	3800
12/29/2010	8318
1/5/2011	8
1/6/2011	16
1/7/2011	1016
1/10/2011	679
1/12/2011	1821
1/13/2011	1058
1/14/2011	1396
1/16/2011	678
1/17/2011	107
1/18/2011	830
1/19/2011	3734
1/20/2011	2581
1/21/2011	204
1/22/2011	500
1/24/2011	531
1/26/2011	1
1/27/2011	2
1/29/2011	1
1/30/2011	3999
1/31/2011	1
2/4/2011	1
2/5/2011	1
2/6/2011	1
2/7/2011	1
2/8/2011	8413
2/9/2011	17525
2/10/2011	12391
2/19/2011	995
3/3/2011	81
3/22/2011	5
3/23/2011	5
12/28/2011	16798
12/29/2011	2222

Sum of EDA	
Day	Total

**Winter 2000-2012 Empress to CDA/EDA IT**

Sum of CDA	
Day	Total
1/1/2012	7817
1/2/2012	1175
1/3/2012	6110
1/14/2012	15016
1/15/2012	55228
1/16/2012	18584
1/17/2012	34331
1/18/2012	61952
1/19/2012	28643

Sum of EDA	
Day	Total

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**Reference:** i) TransCanada Written Evidence, Section 3.1, page 5, lines 11-13;  
ii) “TransCanada seeks switch from Gas to Oil”, The Globe and Mail  
(<http://www.theglobeandmail.com/globe-investor/transcanada-seeks-switch-from-gas-tooil/article2415779/>), 27 April 2012

**Preamble:** In reference i) TransCanada states its IT service is essentially firm due to undercontracting on the system; in reference ii) TransCanada acknowledges it is actively pursuing the concept of converting a portion of the Mainline’s capacity to oil service.

**Request:**

- (a) Please describe which of the Mainline and NOL pipelines would be converted to oil service.
- (b) Please show a schematic of the TransCanada Mainline System showing each line and size of line following conversion of facilities to oil service.
- (c) What is the earliest date that conversion to oil service could occur?
- (d) Who will own the oil pipeline facilities after conversion to oil service?
- (e) Assuming the largest pipeline on the NOL and the largest pipeline on the North Bay shortcut is converted to oil service, what is the capacity of the remaining system? Please specifically reference firm and interruptible capacity in the response.
- (f) Assuming the smallest pipeline on the NOL and the smallest pipeline on the North Bay shortcut is converted to oil service, what is the capacity of the remaining system? Please specifically reference firm and interruptible capacity in the response.
- (g) In each case of e) and f) above, what would be the capacity for transportation from Empress to Union CDA and to Union EDA? Would there be any capital cost associated with achieving that capacity? If so, what is the capital cost?

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- (h) What is the Book Value of the assets that are converted to oil service under e) and f) above?
- (i) What is the impact to the long haul and short haul TransCanada tolls under e) and f) above?
- (j) How would converting a portion of the Mainline capacity to oil service change the statement TransCanada made regarding IT service being essentially firm?
- (k) Please provide all internal and external presentations that address the conversion of Mainline facilities to oil service.

**Response:**

(a) through (c):

TransCanada has commenced work to assess the operational and commercial viability of converting portions of Mainline infrastructure to oil service. The work involved is extensive, and will include, among other significant tasks, consideration of the engineering suitability of facilities for oil service, impacts to TransCanada's ability to meet existing and forecast Mainline service requirements, and the level of commercial interest in an oil pipeline utilizing these facilities. As part of this assessment, TransCanada is evaluating whether the project could successfully proceed on a schedule that would result in an in-service date by 2016/2017.

TransCanada expects it will not complete its assessment work and be in a position to determine whether conversion of infrastructure is operationally and commercially viable until late 2012. Consequently, TransCanada is not presently in a position to definitively state whether it will seek to convert existing Mainline facilities to oil service by 2017, a different date or not at all. Please refer to Attachment Union 6.

- (d) If the conversion to oil was determined viable and the project did proceed, TransCanada or a TransCanada affiliate would own the oil pipeline facilities.

(e) through (h) :

TransCanada has not evaluated the removal of the NOL largest or smallest pipelines. However analysis to date included in Attachment Union 6 provides the



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impact on capacity and book value associated with the removal of various segments of the NOL from service.

- (i) TransCanada is unable to calculate the impact to long haul and short haul tolls as there are too many unknown variables. However, the redeployment of either the largest or smallest pipeline on the NOL is expected to reduce the Mainline revenue requirement and tolls below current levels.
- (j) The potential of converting a portion of the Mainline capacity to oil service does not impact the current viability of the LCU alternatives proposed by TransCanada. If a decision is made to proceed with a conversion to oil service, there will be ample time to assess whether this has an impact on whichever LCU protection alternative or alternatives are in place and make any necessary adjustments.
- (k) TransCanada has identified seven documents created over the last three years which relate to potential disposition or redeployment of Mainline facilities. These documents are presentations prepared for TransCanada senior management, and cannot be provided on the grounds of privilege, confidentiality and commercial sensitivity. TransCanada is providing one internal presentation as Attachment Union 6 entitled "Impact of Removing Canadian Mainlines".



System Design and Commercial Operations

## Impact of Removing Canadian Mainlines

Due to declining flows and expected low utilization of various sections on the Canadian Mainline, System Design has completed a high level estimate of the impact of removing some of the Canadian Mainline pipes from gas service. In the event that a business opportunity arises to convert one or more lines to an alternative service, then a much more rigorous analysis will need to be performed.

This document summarizes the information requested, such as pipe size, length, MAOP, and feasibility in the 2012 timeframe. A map of the areas studied is attached to the end of this report.

The Feasibility scale provides a high level view, but does not make a commitment that removal from gas service is either possible or impossible. For any area (s) that shows promise from a Business Development point of view, SDCO would recommend further discussion and analysis on the specific section be undertaken to see if the gas impacts can be overcome.

### Feasibility Scale:

- **High** – unlikely to impact any flows and thus would be a candidate for other use. Recent historical flows are below the capability impact level
- **Medium** – may require adjustments to the system to avoid impacting flows on a peak day
- **Low** – will likely impact flows in the 2012 timeframe and would require flows to be significantly below historical levels to avoid impacting peak day flows. May be a potential candidate in future years if the forecast flow continues to decline

The following factors influenced the feasibility rating:

- TSO Forecast flows<sup>1</sup>
- Historical flows
- Capability impact
- Fuel impact
- Number of parallel lines

<sup>1</sup>Note that the TSO flow forecast on its own is not sufficient because it does not show the daily and hourly flow fluctuations. As a result, a historical comparison is used to help estimate future daily and seasonal flows fluctuations.

Not included were factors such as:

- Firm contracting levels
- Toll impact
- Alaska gas
- Shipper viewpoint
- View of other owners (TQM, PNGTS)
- Conversion costs such as meter reconnections

The following table summarizes the resulting feasibility that is detailed in this report:

	<b>Feasibility of Line Removal</b>
Prairies	High
Northern Ontario	Medium
Barrie Line	Medium
North Bay Short Cut	Low
Montreal Line	Low

Trans Quebec and Maritimes	Low
PNGTS and TQM PNGTS Extension	Low to Medium

## Prairies Section

Section: Empress to Stn 41 (not Emerson): 944 km, MAOP (lines 1-5) 6070 kPa

Line Sizes: NPS 34, 36, 42, 48, 48

Capability Impact:

Remove only line 2: NPS 34, 600 MMcfd

Remove only line 3: NPS 36, 700 MMcfd

Fuel Impact:

Remove only line 2: 25-30% increase (6-8 mmcfd at 4.25 bcf, approximately \$20M/yr<sup>2</sup>)

Remove only line 3: 30-35% increase (7-9 mmcfd at 4.25 bcf, approximately \$23M/yr<sup>2</sup>)

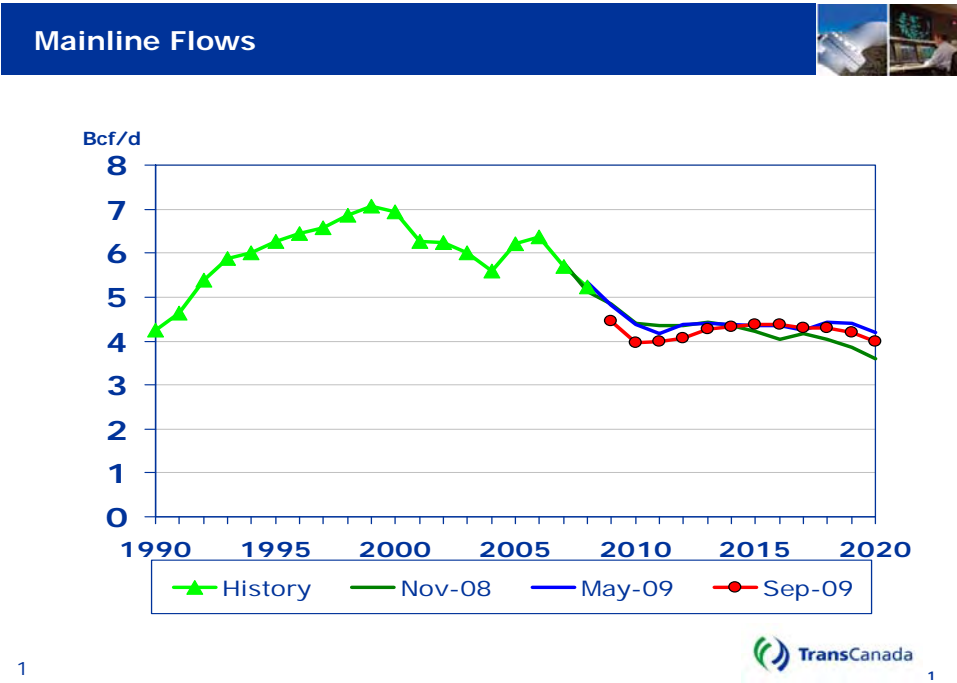
Book Value (to Station 41):

Line 2: \$54 million (as of Sept 2009)

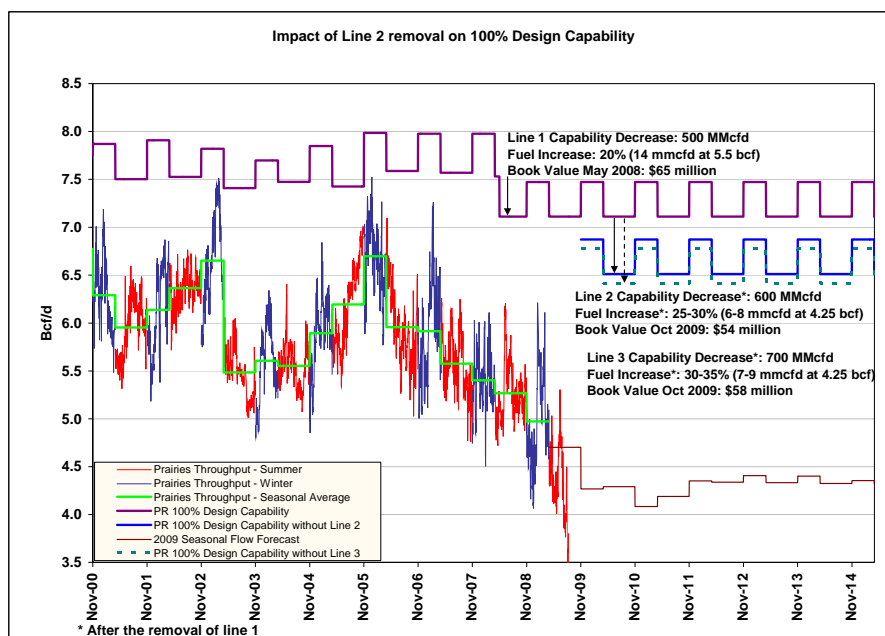
Line 3: \$58 million (as of Sept 2009)

### Feasibility: High

The forecast and historical flows on the Prairies line are well within the capability without either line 2 or line 3. Five complete lines lessen the impact of the removal of any single line.



<sup>2</sup> Based on \$8/mcf gas price



The Prairies capability quoted assumes all facilities available. The capacity available for firm service assumes consideration for loss of unit and so is lower than specified here.

## Northern Ontario Line

Section: Station 41 East to Station 116, 1706 km, MAOP 6895 kPa

Line Sizes: NPS 30, 36, 42

### Capability Impact:

- Remove only line 1: NPS 30, 400 MMcfd
- Remove only line 2: NPS 36, 920 MMcfd
- Remove only line 3: NPS 42, 1400 MMcfd

### Fuel Impact:

- Remove only line 1: 6.4 mmcfd at 2.0 bcf/d or approximately \$19M/yr
- Remove only line 2: 7.8 mmcfd at 2.0 bcf/d or approximately \$23M/yr
- Remove only line 3: 11.6 mmcfd at 2.0 bcf/d or approximately \$34M/yr

### Book Value:

- Line 1: \$245 million (as of Sept 2009)
- Line 2: \$217 million (as of Sept 2009)
- Line 3: \$936 million (as of Sept 2009)

### Feasibility: Medium

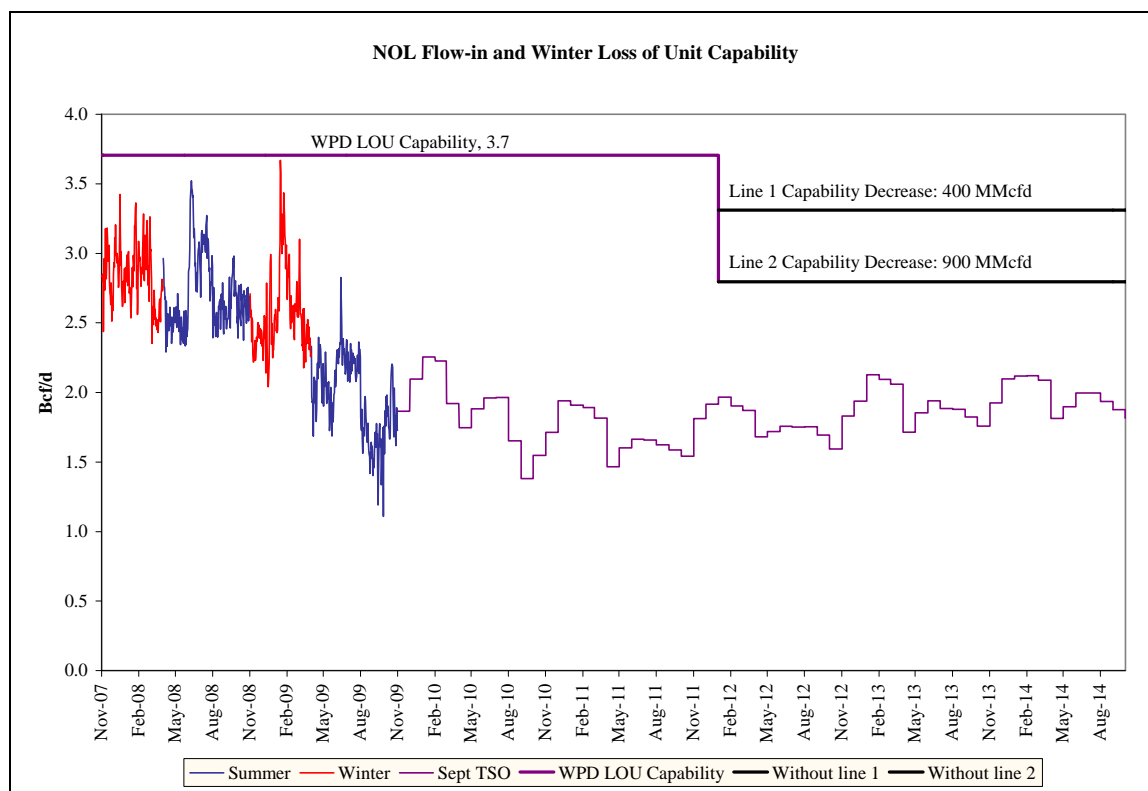
On an average day basis, the Northern Ontario line is able to handle the capability impact of the removal of line 2. But flows fluctuate considerably throughout the year and the historical peak days of the last two Januarys would have been impacted by the removal of line 1. Because there are only three complete lines, the impact of any single line is greater than on the Prairies system. The original line (line 1) goes by Thunder Bay, where as lines 2 and 3 short cut across. To ensure deliveries to the Thunder Bay area, line 1 must remain in place in this section, or be replaced (110 km NPS 20). Alternatively a line 1 conversion project could switch to line 2 or 3 in the Thunder Bay area.

### Northern Ontario and Great Lakes Gas Transmission/Union Gas

TransCanada holds transportation on Great Lakes Gas Transmission (GLGT TBO) and Union Gas that is used together with the Northern Ontario Line to provide transport to eastern markets. As a result, the

utilization of the GLGT TBO affects the flows on Northern Ontario. By utilizing more GLGT TBO, TransCanada can reduce the requirement on the Northern Ontario Line, making conversion more feasible. This option may however require incremental Union Gas transportation as well as the need for additional TransCanada facilities from Parkway. In the event that the conversion of one of the NOL lines is deemed attractive, then a further assessment maximizing the GLGT route should be undertaken to quantify the associated expansion costs and facility requirements.

The graph below assumes the September 2009 TSO levels of GLGT TBO (Winter GLGT flows of 2.0 bcf/d and summer flows of 1.2 bcf/d)



Note that the capabilities shown in the chart above are the Winter Peak Day (WPD) with a loss of the most critical unit (LOU), which is the capability available for Firm Service. The capability with all facilities available would be higher, resulting in a greater excess available for discretionary services.

## Ontario Triangle

The Ontario Triangle is made of three pipes: The North Bay Short Cut, the Barrie line, and the Montreal line. In the winter these three pipes work together to move gas from Northern Ontario and Parkway towards Quebec. In summer, gas is sent towards Dawn storage through Parkway. As a result, flows on the Montreal and Barrie lines switch direction seasonally as the flow to and from storage changes the direction of flows at Parkway.

Because these three pipes work together, there is some ability to switch gas from one pipe to another to increase the feasibility of removing a line from gas service. As a result of this ability and the bi-directional nature of the Barrie and Montreal lines, MLPE has chosen to compare historical flows, rather than TSO projected flow, to capability as an indication of the relative utilization of the lines.

The three pipe sections are described in detail in the following.

## Barrie Line

Section: Stn 116 to Stn 130, 302 km, MAOP 6450 kPa north of Station 127, 6895 kPa south of Station 127

Line Sizes: NPS 30, 36

Capability Impact:

Line 1, NPS 30: 580 mmcf/d

Fuel Impact:

Line 1: 1 mmcf/d at average 2008/09 levels (10.5 E6m3/d through Stn 116) or approximately \$2.9M per year

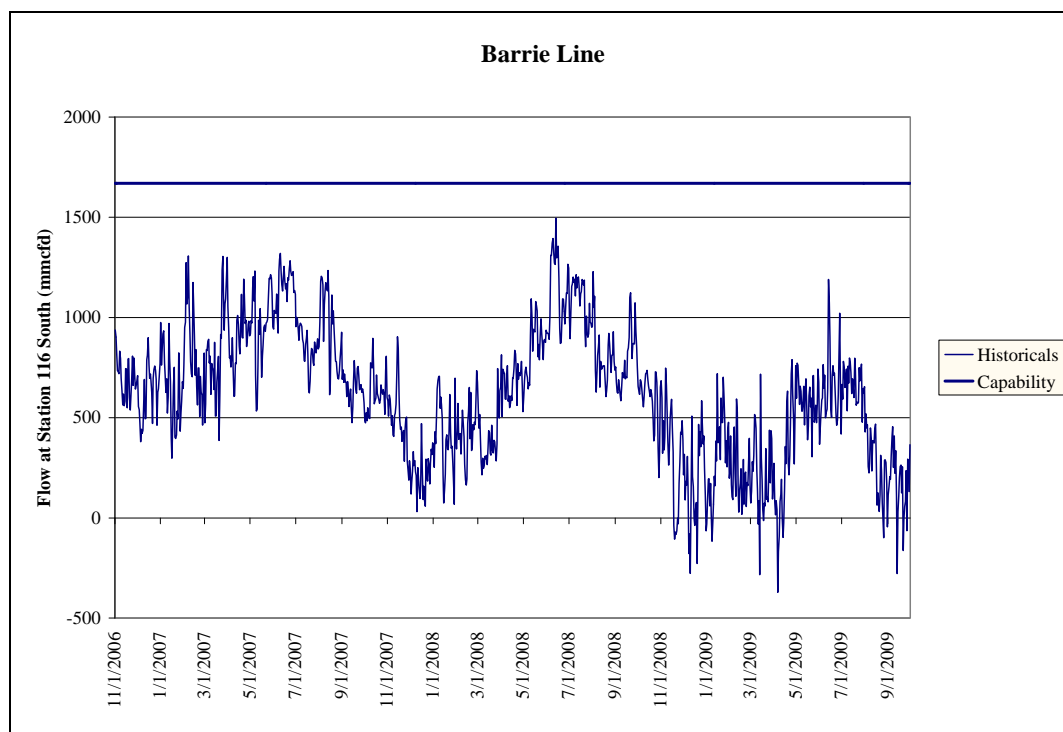
Book Value:

Line 1: \$46 million (as of Sept 2009)

### Feasibility: Medium

The Barrie line is mainly used to deliver gas to and from Union Gas at Parkway, and to meet the Toronto market. The Barrie line is used in the southbound direction in the summer, with an increasing amount of northbound flow in the winter. Because of this change in flow, the feasibility of removing a line from the Barrie line is increasing over time.

To change the operation to a single line, the compression at some of the stations will need to be reconfigured to operate in the northbound direction, something that is currently achieved by using 2 lines. A single line may create a concern of less reliability to delivery points. Note that line 1 (30") and line 2 (36") extend across Northern Ontario and down the Barrie line to Stn 130 without changing size.



Note that the chart above depicts the capability available on a summer peak day with a loss of the most critical unit, the constraining season for firm service. The capability with all facilities available would be higher, resulting in a greater excess available for discretionary services.

## North Bay Short Cut (NBSC)

Section: from Station 116 to the Iroquois junction, 426 km, MAOP 6895 kPa

Line Sizes: NPS 36, 42

Capability Impact:

Line 1, NPS 36: 835 MMcfd

Fuel Impact:

Not identified due to low feasibility

Book Value:

Line 1: \$147 million (Sept 2009)

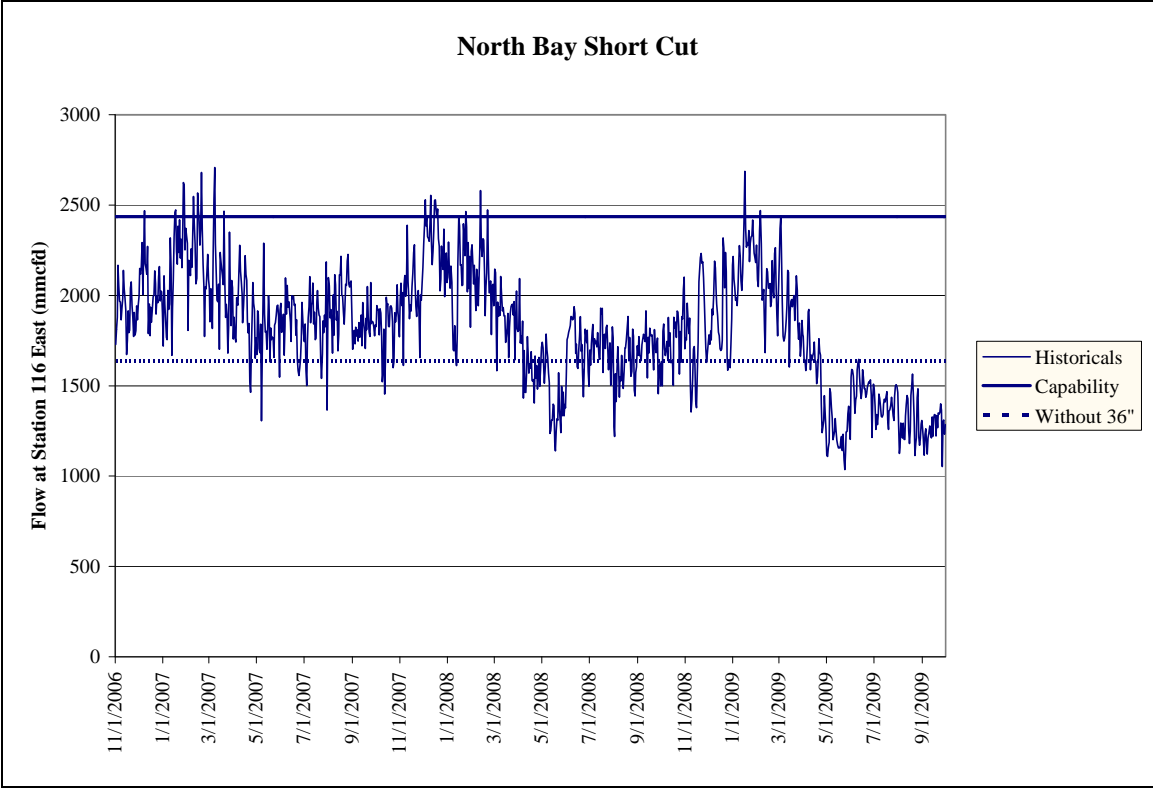
### **Feasibility: Low**

The NBSC is the main route to meet markets in the EDA, Iroquois, TQM, and others. Iroquois and PNGTS markets have been decreasing over time, but are currently not sufficiently low enough to manage with an 800 MMcfd drop in capability. Apart from Iroquois and PNGTS, domestic demand is expected to gradually increase over time. The TSO forecast suggests a combined seasonal drop of about 600 MMcfd (400 Iroquois+200 EH) that would almost be enough to avoid an impact, but peak daily flows may not drop to the same extent.

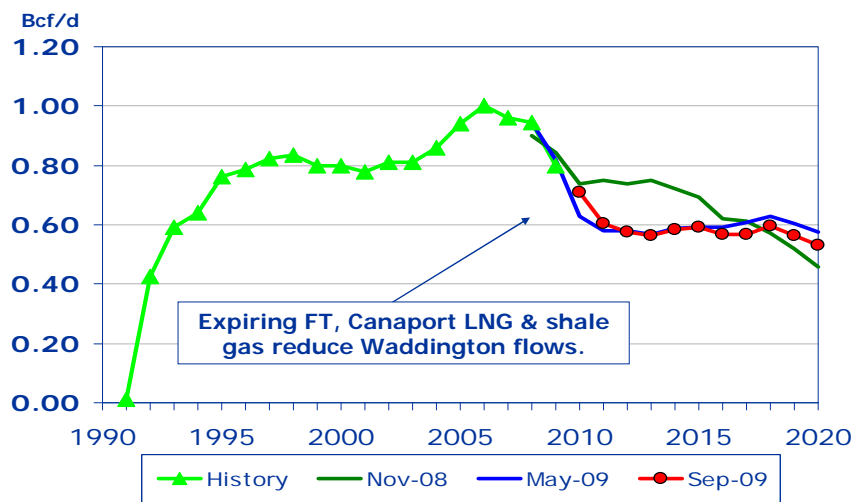
Note that to get to TQM via the NBSC, the NBSC is NPS 36 and 42 from North Bay Junction to roughly Iroquois and then gas would have to switch to the Montreal line, which from Iroquois to Les Cèdres is NPS 20, 24 and 36. This route, from North Bay Junction to Les Cèdres is a total of 525 km.

Because the two lines of the NBSC connect to slightly different points on the Montreal line, removal of the NPS 36 creates extra strain on the 9 km of un-looped pipe between the Iroquois Junction and the Ottawa Junction (i.e. between the Winchester Short Cut and the Winchester Long Cut). Looping this remaining 9 km would improve capability to Iroquois or Les Cèdres.





**Waddington – Iroquois Exports**



**Montreal Line**

Section 1: from Station 130 to roughly the Iroquois junction, 385 km, MAOP 6450 kPa  
Section 2: from the Iroquois junction to Les Cèdres (TQM), 99 km, MAOP 6450 kPa

Line Sizes:

Section 1: NPS 20, 24

Section 2: NPS 20, 24, 36

Capability Impact:

Line 1 (section 1), NPS 20: 200 MMcfd

Fuel Impact:

Not identified due to low feasibility

Book Value:

Line 1: \$71 million (Sept 2009)

**Feasibility: Low**

The capability impact of removing the 20" Montreal line is relatively low, but it is the most efficient path from Parkway to eastern markets. To enable removal of one of the Montreal lines, compressor reversals on the Barrie line would be required to divert gas around to the NBSC. A single line may create a perception of less reliability to key delivery points along this path. Deliveries to the Lennox power plant (in the Union EDA) would be more difficult with a single line.

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**Union -TCPL 7**

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**Reference:** i) TransCanada Written Evidence, Section 3.1, page 5, lines 17-26;  
ii) Exhibit J.B-1-7-12

**Preamble:** TransCanada states its availability and response time to an outage at Parkway during peak winter period using STFT Services.

**Request:**

- (a) If TransCanada lost Union deliveries at Parkway, is there any scenario under which TransCanada would issue an Operational Flow Order or call Force Majeure.
- (b) If there is an outage of the deliveries from Union to TransCanada at Parkway, please provide the impacts to the TransCanada system assuming an outage of i) 1 hour, ii) 4 hours, iii) 24 hours, and iv) 144 hours. Please include all assumptions used in the analysis, including modeled Mainlines pressures and flows.
- (c) After how many hours of an outage of Parkway deliveries to TransCanada would the delivery pressure at TransCanada's interconnections with the Enbridge system drop below minimum pressure requirements. Please include all assumptions used in the analysis, including modeled Mainlines pressures and flows.

**Response:**

- (a) Union has not described the circumstance under which its deliveries would be impaired. However, if Union declared a force majeure and restricted TransCanada's M-12 nomination, it may cause a force majeure declaration by TransCanada affecting receipts onto TransCanada's integrated system at Union Dawn., St. Clair and Niagara. This could be mitigated in its entirety by nominating and flowing longhaul transport on TransCanada to the Union CDA, thus reducing Union's delivery requirement at Parkway.

The Canadian Mainline does not use Operational Flow orders however does have an "Emergency Operating Condition" (EOC) which helps ensure shippers do not consume more gas than was authorized. To the extent that shippers consume more gas than was authorized, regardless of supply source, it may trigger an EOC.

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**Union -TCPL 7**

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- (b) Assuming the question refers to a loss of the larger Parkway B unit, Union has indicated the flow through Parkway A is 1.409 PJ [J-B-1-7-12]. Additionally, assuming a starting requirement of 1.9 PJ [Union interrogatory response filed as Exhibit J.B-4-3-2J.B-1-7-4 (d)(iii)], a high level impact assessment would be as follows:
- i) A 1 hour outage correlates to volumetric shortfall of  $0.5 \times 10^6 \text{m}^3$  (20 TJ).  
TransCanada may slow down its Maple compressor and possibly compression on the Barrie Line to ensure the system doesn't draft but more likely it would be a non-event as 20 TJ represents a very small linepack quantity.
  - ii) A 4 hour outage correlates to a volumetric shortfall of  $2.2 \times 10^6 \text{m}^3$  (80 TJ).  
TransCanada would likely slow down its Maple compressor and any compression on the Barrie Line to ensure the system in the Maple region doesn't draft. Should pressures lag on other areas of the Mainline, NOL compression may need to run a little harder. At this point Union might consider exploring the non-facilities alternatives presented by TransCanada if the outage is expected to continue.
  - iii) A 24 hour outage correlates to a volumetric shortfall of  $13 \times 10^6 \text{m}^3$  (500 TJ).  
TransCanada expects that Union would be exploring the alternatives presented by TransCanada. A nomination of a like quantity of gas on TransCanada sourced from Empress would reduce the shortfall to zero.
  - iv) A 6 day outage is of sufficient length that TransCanada expects Union would take corrective actions. TransCanada has presented several of these non-facility options and is aware of several other potential alternative measures in Union's toolkit such as restrictions to interruptible in franchise customers or implementation of the "Parkway Call" [Union interrogatory response filed as Exhibit J.B-4-3-2 and J.D-18-9-7].
- (c) It is expected that Union would be working with Enbridge and TransCanada to mitigate any negative effects of a Parkway outage, several of which have already been discussed such as the "Parkway Call" and longhaul IT or STFT.

Additionally, TransCanada would be taking actions to protect its system and deliveries to its customers. The Barrie Line is bi-directional and compresses

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**Union -TCPL 7**

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north to pull gas from Parkway during high Parkway flow days. If Union's deliveries to TransCanada were to decrease, such as in a LOU condition, one of the first actions TransCanada would take would be to slow or stop Barrie Line compression to ensure linepack stays within the Parkway / Maple area. Should this be insufficient, the Barrie Line compression would be reversed and start compressing gas south to ensure deliveries are met.

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**Union -TCPL 8**

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**Reference:** i) TransCanada Written Evidence, Section 3.1, page 5, lines 11-17;  
ii) TransCanada Written Evidence, Section 3.1.1, page 6, lines 5-6;  
iii) TransCanada Written Evidence, Section 3.1.1, page 6, lines 10-12;  
iv) TransCanada Written Evidence, Section 3.1.5, page 8, lines 7-8

**Preamble:** TransCanada has substantial capacity to assist Union immediately in the event of a critical unit failure and TransCanada infrastructure can reliably deliver Empress supply to the Ontario markets during an LCU event at Parkway from the onset of the event.

**Request:**

- (a) TransCanada states IT could be available in as little as four hours. Is it possible that IT is not available within four hours based on standard NAESB nomination windows?
- (b) How much notice does TransCanada give its customers prior to interrupting?
- (c) If TransCanada lost all Union deliveries at Parkway for an extended period would TransCanada cut all IT volumes on the next available window, or next day(s).
- (d) Please provide a table or graph which details daily Empress receipts and Emerson receipts for transportation to markets east from January 1, 2005 to the present. Please indicate which days those receipts were less than 1 PJ?
- (e) How long does it take a molecule of gas to travel from Empress to Maple? What assumptions did TransCanada make in that calculation, including line pack pressure, firm quantities and IT quantities?
- (f) Please provide a schematic of all of TransCanada's facilities in Ontario indicating size of pipe, line valve locations and compressor plants with Horsepower.
- (g) Please provide system capacity from Station 116 to Parkway and Parkway to Union EDA for each year from 2000 to 2012. For each of the above, provide the forecast capacity in each year from 2013 to 2020.

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**Union -TCPL 8**

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- (h) In total, how many sections and kilometres of TransCanada Mainline and NOL pipe has had the pressure derated on the Mainline between Empress and Parkway due to system integrity concerns? Based on integrity modelling, how many sections and kilometres of pipe are forecast to be pressure derated over the next 10 years?
- (i) For the assets in Ontario please provide a list of any incident since January 1, 2000 on the Mainline or NOL systems that resulted in a partial or full loss of capacity. For each incident please provide a description of the incident, the duration of the incident, and the impact on the TransCanada system during the incident.
- (j) Please provide the capacity on the NOL between Station 45 and Station 116 for each month between January 1, 2000 and May 1, 2012 and for every change in capacity, please explain.
- (k) Since January 1, 2000, on a monthly basis, please provide the Maximum Allowable Operating Pressure (MAOP) for each line between Station 45 and Station 116. Please identify the MAOP for each segment between main line valves on each line, noting the changes along the length.

**Response:**

- (a) IT may be available to nominate in as little as four hours, however based on NAESB timelines between certain cycles this availability may exceed four hours. TransCanada is willing to work with Union and other stakeholders, with the flexibility of the market at NIT, to shorten this time frame during emergency situations.
- (b) For Unplanned Interruption TransCanada will notify customers via NrG Highway bulletin as soon as the impact of the incident that is creating the potential for interruption is known.
- (c) TransCanada authorizes shipper nomination requests based on TransCanada's Mainline capacity and the defined Tariff priority of service. If Union provided confirmation of a reduced Parkway delivery volume to TransCanada, TransCanada would confirm to the lesser number and schedule confirming parties accordingly.



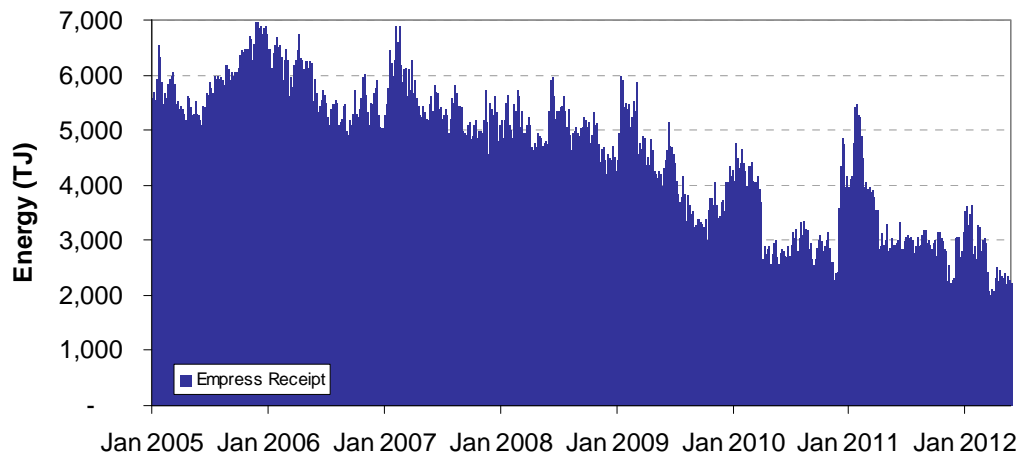
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**Union -TCPL 8**

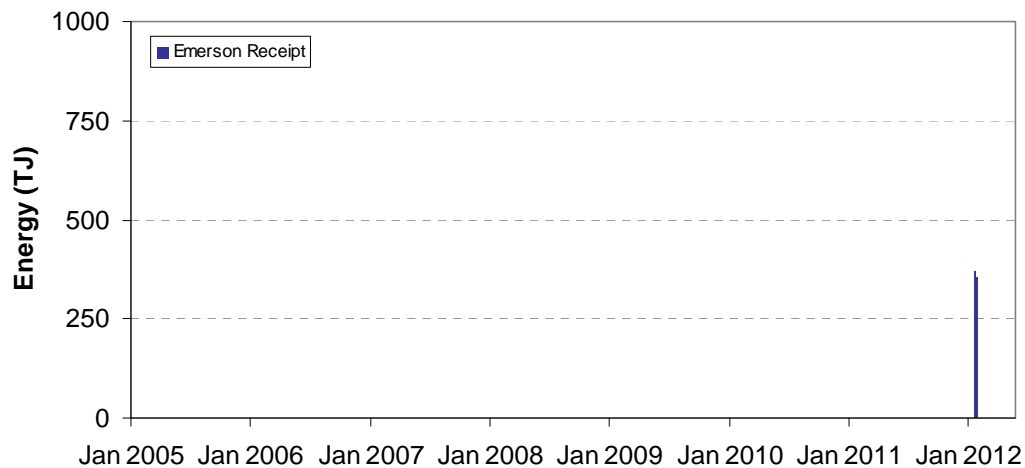
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- (d) Please see Figures 8 (d)(i) and 8(d)(ii) below for Empress and Emerson Physical Receipts

**Figure 8 (d)(i) – Empress Receipts from January 1, 2005 to present**



**Figure 8 (d)(ii) – Emerson Receipts from January 1, 2005 to present**



- (e) The delivery of a molecule of gas near Maple is made at the same instant a molecule is received at Empress, all else being equal. All deliveries are accommodated using system linepack, of which the Canadian Mainline holds approximately 22 Bcf. The Empress receipt helps replenish this linepack. The

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**Union -TCPL 8**

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speed of the physical molecule is irrelevant, however, at an average speed of 18 km/hr a molecule would take approximately a week to physically arrive in the Maple region. 22 Bcf of linepack gas will have been delivered in the meantime.

- (f) Please refer to Attachment 1, Union 8(f) for the schematic of pipe size and valve and compressor location. Please refer to Attachment 2, Union 8(f) for the compressor plant power.
- (g) The following table lists the capacity available from Station 116 to Parkway on an average winter day with capability factor design basis for the 2000/01 to 2006/07 gas years.

Average Winter Design Capability from Station 116 to Parkway (PJ/d)							
Gas Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Capability	1.1	1.1	1.1	1.1	1.0	0.9	1.0
Gas Year	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	
Capability	0.9	0.9	0.9	0.9	0.9	0.9	

It should be noted that in the event of the loss of a compressor unit by Union at Parkway there will still be a net receipt of gas from Union to TransCanada at Parkway so there is no requirement for TransCanada to physically deliver gas to Union at Parkway.

For Parkway to the EDA TransCanada does not have a historical record of that capability as it was not a design constraint. For the 2011/12 gas year the Peak Winter (LCU) capability from Parkway to the EDA is 2.0 TJ/d. For the 2012/13 gas year the Peak Winter (LCU) capability from Parkway to the EDA is 2.3 TJ/d.

TransCanada has not finalized facilities for the 2013/14 gas year and beyond. Facilities will be based on Precedent Agreements resulting from new capacity open seasons and any non-renewals or turnback of existing contracts.

- (h) Since January 2001, the pipeline sections where the pressure was temporarily derated are as follows:

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**Union -TCPL 8**


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<b>Section</b>	<b>Count</b>	<b>Distance [km]</b>
MLV 2 to MLV 41	28	802
MLV 41 to MLV 116	65	1732
MLV 116 to MLV 130	4	53
<b>Total</b>	<b>97</b>	<b>2588</b>

TransCanada does not forecast any sections of pipe to be pressure derated. TransCanada's integrity modeling identifies the pipeline maintenance activities including the timing for the activities. Pressure derates are commonly implemented to enable deferral of maintenance activities to enable cost savings through bundling of activities. On occasion a pressure derate is implemented due to the findings from an inline inspection and would be removed once the required response has been completed.

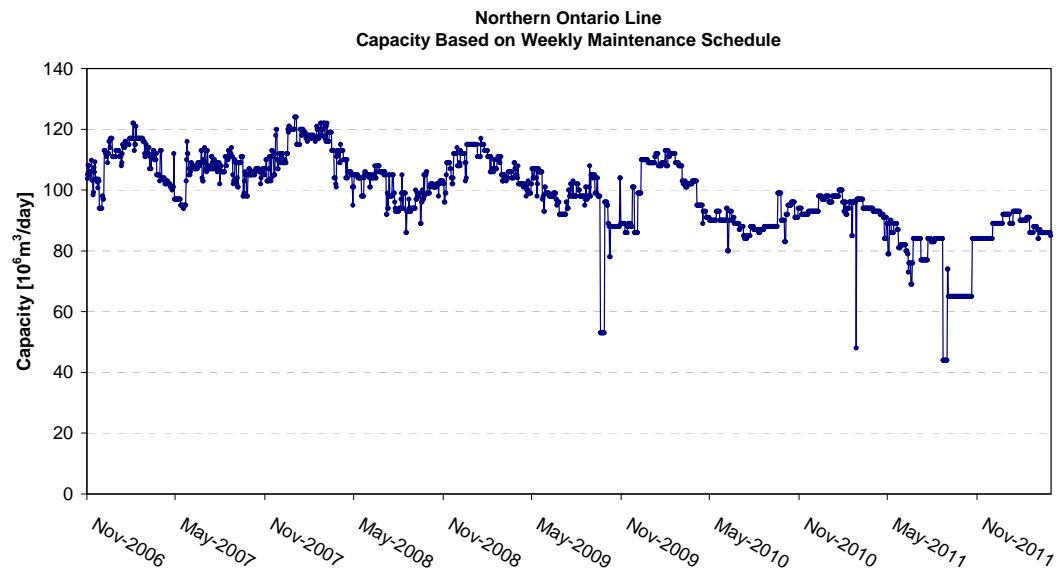
- (i) TransCanada assumes "incident" is meant to mean linebreak. TransCanada reviewed the period of November 1, 2006 to present over which time there were 3 linebreaks.
- September 12, 2009 [107-108-2] no shipper impact
  - September 26, 2009 [111A-112-1] no shipper impact
  - February 20, 2011 [76A-77-2] no firm services impacted
- (j) Data prior to 2006 is not readily available so has been provided from that date forward. TransCanada's capacity based on its weekly maintenance schedule can be seen in Figure 8(j) below. The changes in capacity are based on many factors including ambient and ground temperature changes, delivery volume distribution, available compression, scheduled maintenance and the upstream/downstream pressures. Please see Union 5(d) for additional information regarding this capacity.

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**Union -TCPL 8**

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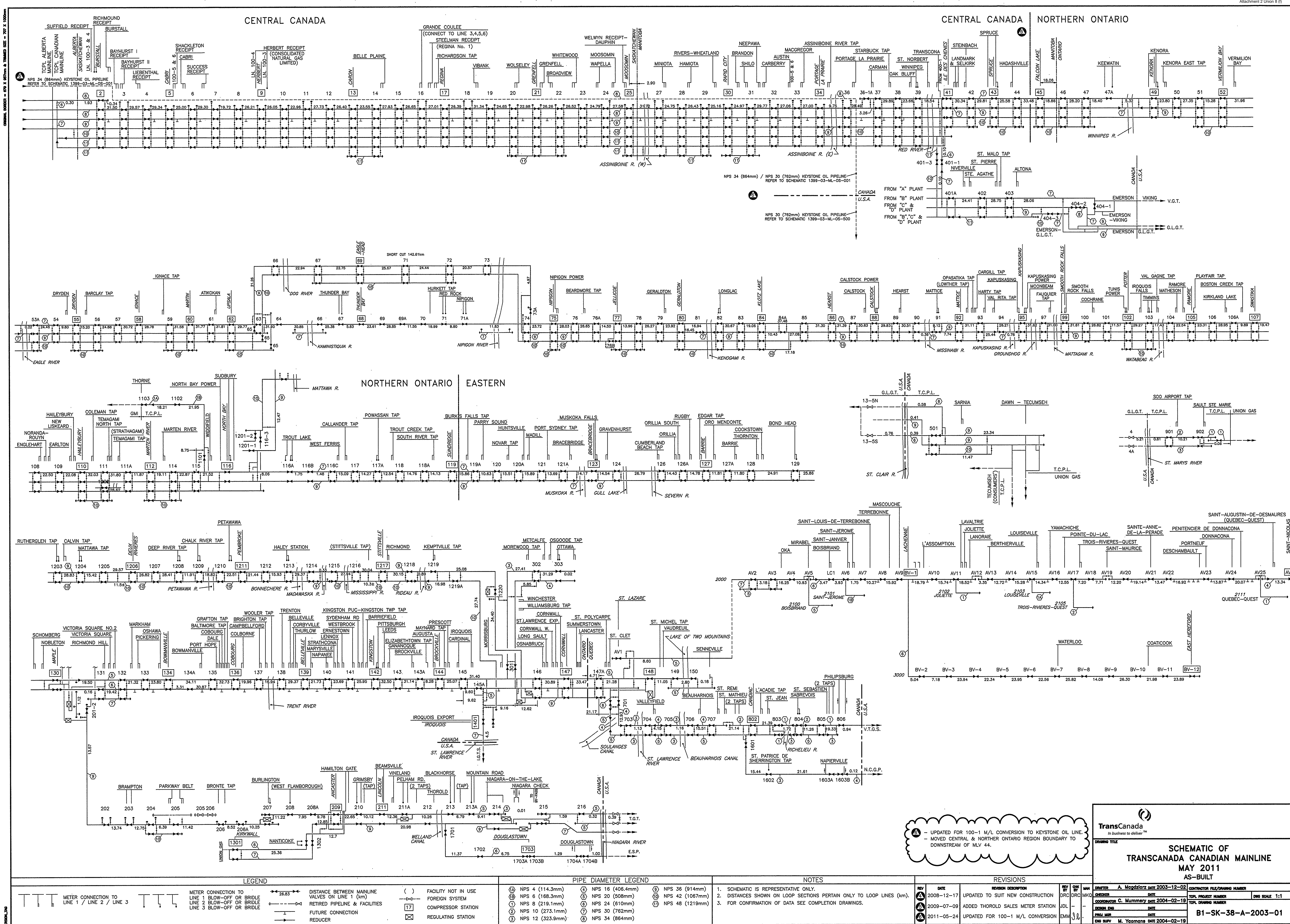
Figure 8 (j) - Weekly Scheduled NOL Capacity



- (k) The MAOP of every section of the NOL between Station 45 and Station 116 is 6895 kPa.

Actual Unit No.	Compressor Station	Power	Comments
		ISO MW	
2049B1	49 (Kenora)	21.6	
2052A1	52 (Vermilion Bay)	15.2	
2052B1	52 (Vermilion Bay)	10.5	This unit is planned for relocation to Station 130
2052C1	52 (Vermilion Bay)	30.6	
3055B1	55 (Dryden)	14.1	This unit is being deactivated
3055C1	55 (Dryden)	28.3	
3058B1	58 (Ignace)	21.6	
3058C1	58 (Ignace)	30	
3060A1	60 (Martin)	15.2	This unit is being deactivated
3060B1	60 (Martin)	10.5	
3060C1	60 (Martin)	28.3	
3062B1	62 (Upsala)	10.5	
3062C1	62 (Upsala)	28.3	
3062D1	62 (Upsala)	28.3	
3069A1	69 (Eaglehead)	20	
3069B1	69 (Eaglehead)	22.8	
3075B1	75 (Nipigon)	26.1	
3075C1	75 (Nipigon)	28.3	
3077A1	77 (Jellicoe)	13.6	
3077B1	77 (Jellicoe)	10.5	
3077C1	77 (Jellicoe)	28.3	
3080B1	80 (Geraldton)	20	
3080C1	80 (Geraldton)	30	
3084A1	84 (Klotz Lake)	15.2	
3084B1	84 (Klotz Lake)	10.5	This unit is planned for relocation to Station 130
4086B1	86 (Hearst)	22.8	
4088A1	88 (Calstock)	15.2	
4088B1	88 (Calstock)	14.2	
4088C1	88 (Calstock)	28.3	
4092B1	92 (Mattice)	15.2	This unit is being deactivated
4092C1	92 (Mattice)	28.3	
4095B1	95 (Kapuskasing)	24.9	
4095C1	95 (Kapuskasing)	28.3	
4099B1	99 (Smooth Rock Falls)	13.6	
4099C1	99 (Smooth Rock Falls)	28.3	
4102A1	102 (Tunis)	15.2	
4102B1	102 (Tunis)	10.5	
4102C1	102 (Tunis)	28.3	
4105D1	105 (Ramore)	28.3	
4107B1	107 (Tarzwell)	26.1	
4107C1	107 (Tarzwell)	30	
4110B1	110 (Haileybury)	15.2	
4110C1	110 (Haileybury)	28.3	
4112B1	112 (Marten River)	26.1	
4112C1	112 (Marten River)	30	
4116C1	116 (North Bay)	26.1	
9006	116 (North Bay)	10.5	
5119B1	119 (Sunridge)	28.3	
5123B1	123 (Bracebridge)	10.6	

Actual Unit No.	Compressor Station	Power	Comments
5123C1	123 (Bracebridge)	30.6	
5127B1	127 (Barrie)	28.3	
5130A1	130 (Maple)	1.1	
5130A2	130 (Maple)	1.1	
5130A3	130 (Maple)	1.1	
5130A4	130 (Maple)	2.5	
9004	130 (Maple)	6.3	
5134A1	134 (Bowmanville)	2.2	
5134A2	134 (Bowmanville)	2.2	
5134B1	134 (Bowmanville)	7	
5136A1	136 (Cobourg)	2.2	
5136A2	136 (Cobourg)	2.2	
5136B1	136 (Cobourg)	2.2	
5139A1	139 (Belleville)	2.2	
5139A2	139 (Belleville)	2.2	
5142A1	142 (Kingston)	2.2	
5142A2	142 (Kingston)	2.2	
5142B1	142 (Kingston)	2.2	
5144A1	144 (Brockville)	1.1	
5144A2	144 (Brockville)	1.1	
5144B1	144 (Brockville)	2.2	
5147B1	147 (Cornwall)	4.1	
5147B2	147 (Cornwall)	4.1	
5147C1	147 (Cornwall)	4.3	
41206A1	1206 (Deux Rivières)	14.2	
41206B1	1206 (Deux Rivières)	14.1	
41211A1	1211 (Pembroke)	14.1	
41211B1	1211 (Pembroke)	14.1	
41217A1	1217 (Stittsville)	14.1	
41217B1	1217 (Stittsville)	14.2	
51401A1	1401 (Iroquois)	14.2	
51401B1	1401 (Iroquois)	14.2	
51401C1	1401 (Iroquois)	14.2	
51301A1	1301 (Kirkwall)	6.3	
51301A2	1301 (Kirkwall)	6.3	
51301B1	1301 (Kirkwall)	10.7	
51301C1	1301 (Kirkwall)	11.2	
9005	1301 (Kirkwall)	6.3	
5209A1	209 (Ancaster)	3	
5209A2	209 (Ancaster)	3	
5209B1	209 (Ancaster)	3.2	
5211B1	211 (Lincoln)	11.2	
5211C1	211 (Lincoln)	11.2	
51703A1	1703 (Douglastown)	10.7	
51703B1	1703 (Douglastown)	10.7	
51703C1	1703 (Douglastown)	11.2	





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**Union -TCPL 9**

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**Reference:** i) TransCanada Written Evidence, Section 3.1.2, page 7, lines 2-6;  
ii) TransCanada Written Evidence, Section 3.1, page 5, lines 11-13;  
ii) “TransCanada seeks switch from Gas to Oil”, The Globe and Mail  
(<http://www.theglobeandmail.com/globeinvestor/transcanada-seeks-switch-from-gas-to-oil/article2415779/>), 27 April 2012

**Preamble:** TransCanada states the quantity of STFT available is sufficient to mitigate the LCU shortfall.

**Request:**

- (a) For STFT from i) Empress to Union CDA, ii) Empress to Union EDA and iii) Empress to Enbridge CDA for each day for the months of December, January, February, and March for the years 2005 to 2012 inclusive:
  - a. What was Quantity Available?
  - b. What was Quantity Sold?
  - c. What was Quantity Remaining?
- (b) What would be the quantities of STFT available in a) above assuming that the largest mainline gas pipeline is converted to oil service?
- (c) What would be the quantities of STFT available of a) above assuming that the smallest gas pipeline is converted to oil service?
- (d) What is the maximum term of STFT?
- (e) Please explain TransCanada’s method of selling STFT. When does it formally become available to be bought and under what condition? What are the Terms & Conditions of purchasing STFT if purchased during the winter period?
- (f) Please describe any proposals TransCanada has made to change the Terms & Conditions of STFT in RH-003-2011.
- (g) Please describe any proposals other intervenors have proposed to change the Terms & Conditions of service for STFT in RH-003-2011.

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**Union -TCPL 9**

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**Response:**

- (a) Please refer to Attachment Union 9(a) – STFT Capacity Available Sold Remaining.
- (b) TransCanada has commenced work to assess the operational and commercial viability of converting portions of Mainline infrastructure to oil service. The work involved is extensive, and will include consideration of the engineering suitability of facilities for oil service, impacts to TransCanada's ability to meet existing and forecast Mainline service requirements, and the level of commercial interest in an oil pipeline project utilizing these facilities. As part of its assessment, TransCanada is evaluating whether the project could proceed on a schedule that would result in an in-service date by 2017.

TransCanada expects it will not complete its assessment work and be in a position to determine whether conversion of infrastructure is operationally and commercially viable until late 2012. Consequently, TransCanada is not at present in a position to definitively state whether it will seek to convert existing Mainline facilities to oil service by 2017, a different date or at all.

In any event, if TransCanada decides to proceed with conversion of any Mainline facilities, it would ensure that it is able to meet its contractual obligations and would work with stakeholders to address their peaking and other needs including Unions LCU requirements.

- (c) Please refer to the response to (b) above.
- (d) The maximum term of STFT service is one year less one day.
- (e) The terms for the sale of STFT are described below. TransCanada notes that as indicated in its Evidence (Section 3.1.1) that it is willing to develop a customized service for Union if required.

TransCanada offers STFT service for purchase each and every business day of the year for service starting as soon as the next day. Each morning at 8:00 am Calgary time, TransCanada reviews all STFT bids and awards contracts based on a maximization of revenue and the capacity available. Service is awarded as quickly as possible to facilitate a nomination on the timely cycle (11:00 am Calgary time).

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**Union -TCPL 9**

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Seasonal and monthly blocks of STFT capacity are made available in the months leading up the winter or summer season on a rolling daily basis. Once within the season, capacity remains available in seasonal or monthly blocks but is also available for next day service for as short a term as 7 days.

- (f) TransCanada has proposed the following changes to STFT service in the RH-003-2011 proceeding:
- raising the level of the STFT service bid floor to either 140%, 150% or 160% of the FT toll depending on the term of the STFT contract;
  - introducing flexibility that would allow TransCanada to lower the bid floor for STFT service on any Mainline path at any time of year to a level no lower than the FT toll; and
  - changing the bid mechanism for STFT service to reflect the percentage of the FT toll in effect at the time service is provided, rather than the current bid mechanism that reflects the FT toll at the time a bid for STFT service takes place.
- (g) Several intervenors in the RH-003-2011 proceeding have proposed changes to the terms and conditions of STFT service:
- Tenaska Marketing Canada (Tenaska) has suggested adding the Risk Alleviation Mechanism (RAM), Diversion and Alternate Receipt Point flexibility to STFT service;
  - The Market Area Shippers (Enbridge, Union and Gaz Métro) have proposed additional nomination windows for STFT service;
  - Association of Power Producers of Ontario (APPrO) has suggested market-based pricing for STFT service; and
  - Alberta Northeast Gas Limited (ANE) has suggested increasing the minimum term for STFT service to five months.

	Union CDA			Enbridge CDA			Union EDA		
	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT
	Available	Sold	Remaining	Available	Sold	Remaining	Available	Sold	Remaining
1-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
2-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
3-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
4-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
5-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
6-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
7-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
8-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
9-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
10-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
11-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
12-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
13-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
14-Dec-05	100,000	90,000	-	100,000	23,743	-	-	-	-
15-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
16-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
17-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
18-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
19-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
20-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
21-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
22-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
23-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
24-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
25-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
26-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
27-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
28-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
29-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
30-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
31-Dec-05	100,000	90,000	-	100,000	28,213	-	-	-	-
1-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
2-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
3-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
4-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
5-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
6-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
7-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
8-Jan-06	100,000	90,000	-	100,000	20,900	-	-	-	-
9-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
10-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
11-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
12-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
13-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
14-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
15-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
16-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
17-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
18-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
19-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
20-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
21-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
22-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
23-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
24-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
25-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
26-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
27-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
28-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
29-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
30-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-
31-Jan-06	100,000	90,000	-	100,000	21,900	-	-	-	-

	Union CDA			Enbridge CDA			Union EDA		
	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT
	Available	Sold	Remaining	Available	Sold	Remaining	Available	Sold	Remaining
1-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
2-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
3-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
4-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
5-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
6-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
7-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
8-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
9-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
10-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
11-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
12-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
13-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
14-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
15-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
16-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
17-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
18-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
19-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
20-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
21-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
22-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
23-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
24-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
25-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
26-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
27-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
28-Feb-06	100,000	90,000	-	100,000	22,108	-	-	-	-
1-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
2-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
3-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
4-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
5-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
6-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
7-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
8-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
9-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
10-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
11-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
12-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
13-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
14-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
15-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
16-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
17-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
18-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
19-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
20-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
21-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
22-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
23-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
24-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
25-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
26-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
27-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
28-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
29-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
30-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
31-Mar-06	100,000	90,000	-	100,000	20,800	-	-	-	-
1-Dec-06	700,000	-	315,000	700,000	-	315,000	-	-	-
2-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-

	Union CDA			Enbridge CDA			Union EDA		
	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT
	Available	Sold	Remaining	Available	Sold	Remaining	Available	Sold	Remaining
3-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
4-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
5-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
6-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
7-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
8-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
9-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
10-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
11-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
12-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
13-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
14-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
15-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
16-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
17-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
18-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
19-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
20-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
21-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
22-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
23-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
24-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
25-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
26-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
27-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
28-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
29-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
30-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
31-Dec-06	700,000	-	300,000	700,000	-	300,000	-	-	-
1-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
2-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
3-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
4-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
5-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
6-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
7-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
8-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
9-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
10-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
11-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
12-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
13-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
14-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
15-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
16-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
17-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
18-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
19-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
20-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
21-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
22-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
23-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
24-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
25-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
26-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
27-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
28-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
29-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
30-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
31-Jan-07	700,000	163,000	300,000	700,000	-	300,000	-	-	-
1-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-
2-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-

	Union CDA			Enbridge CDA			Union EDA		
	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining
3-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-
4-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-
5-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-
6-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-
7-Feb-07	700,000	164,150	300,000	700,000	-	300,000	-	-	-
8-Feb-07	700,000	164,150	289,000	700,000	-	289,000	-	-	-
9-Feb-07	700,000	164,150	269,000	700,000	-	269,000	-	-	-
10-Feb-07	700,000	164,150	269,000	700,000	-	269,000	-	-	-
11-Feb-07	700,000	164,150	269,000	700,000	-	269,000	-	-	-
12-Feb-07	700,000	164,150	269,000	700,000	-	269,000	-	-	-
13-Feb-07	700,000	164,150	269,000	700,000	-	269,000	-	-	-
14-Feb-07	700,000	164,150	269,000	700,000	-	269,000	-	-	-
15-Feb-07	700,000	164,150	280,000	700,000	-	280,000	-	-	-
16-Feb-07	700,000	164,150	280,000	700,000	-	280,000	-	-	-
17-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
18-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
19-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
20-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
21-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
22-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
23-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
24-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
25-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
26-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
27-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
28-Feb-07	700,000	164,150	230,000	700,000	-	230,000	-	-	-
1-Mar-07	700,000	-	230,000	700,000	-	230,000	-	-	-
2-Mar-07	700,000	-	230,000	700,000	-	230,000	-	-	-
3-Mar-07	700,000	-	230,000	700,000	-	230,000	-	-	-
4-Mar-07	700,000	-	230,000	700,000	-	230,000	-	-	-
5-Mar-07	700,000	-	230,000	700,000	-	230,000	-	-	-
6-Mar-07	700,000	-	230,000	700,000	-	230,000	-	-	-
7-Mar-07	700,000	68,500	230,000	700,000	-	230,000	-	-	-
8-Mar-07	700,000	68,500	210,000	700,000	-	210,000	-	-	-
9-Mar-07	700,000	68,500	210,000	700,000	-	210,000	-	-	-
10-Mar-07	700,000	68,500	210,000	700,000	-	210,000	-	-	-
11-Mar-07	700,000	68,500	210,000	700,000	-	210,000	-	-	-
12-Mar-07	700,000	68,500	210,000	700,000	-	210,000	-	-	-
13-Mar-07	700,000	68,500	210,000	700,000	-	210,000	-	-	-
14-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
15-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
16-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
17-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
18-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
19-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
20-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
21-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
22-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
23-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
24-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
25-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
26-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
27-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
28-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
29-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
30-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
31-Mar-07	700,000	-	210,000	700,000	-	210,000	-	-	-
1-Dec-07	1,088,949	1,000	821,463	1,088,949	-	821,463	-	-	-
2-Dec-07	1,088,949	1,000	821,463	1,088,949	-	821,463	-	-	-
3-Dec-07	1,088,949	1,000	821,463	1,088,949	-	821,463	-	-	-
4-Dec-07	1,088,949	1,000	821,463	1,088,949	-	821,463	-	-	-



	Union CDA			Enbridge CDA			Union EDA		
	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining
5-Dec-07	1,088,949	1,000	821,463	1,088,949	-	821,463	-	-	-
6-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
7-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
8-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
9-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
10-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
11-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
12-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
13-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
14-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
15-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
16-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
17-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
18-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
19-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
20-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
21-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
22-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
23-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
24-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
25-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
26-Dec-07	1,088,949	1,000	782,839	1,088,949	-	782,839	-	-	-
27-Dec-07	1,088,949	23,837	782,839	1,088,949	-	782,839	-	-	-
28-Dec-07	1,088,949	23,837	782,839	1,088,949	-	782,839	-	-	-
29-Dec-07	1,088,949	23,837	782,839	1,088,949	-	782,839	-	-	-
30-Dec-07	1,088,949	23,837	782,839	1,088,949	-	782,839	-	-	-
31-Dec-07	1,088,949	23,837	782,839	1,088,949	-	782,839	-	-	-
1-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
2-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
3-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
4-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
5-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
6-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
7-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
8-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
9-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
10-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
11-Jan-08	1,088,949	71,034	663,760	1,088,949	-	663,760	-	-	-
12-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
13-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
14-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
15-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
16-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
17-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
18-Jan-08	1,088,949	176,540	623,522	1,088,949	-	623,522	-	-	-
19-Jan-08	1,088,949	202,916	623,522	1,088,949	-	623,522	-	-	-
20-Jan-08	1,088,949	202,916	623,522	1,088,949	-	623,522	-	-	-
21-Jan-08	1,088,949	202,916	623,522	1,088,949	-	623,522	-	-	-
22-Jan-08	1,088,949	202,916	623,522	1,088,949	-	623,522	-	-	-
23-Jan-08	1,088,949	202,916	623,522	1,088,949	-	623,522	-	-	-
24-Jan-08	1,088,949	202,916	623,522	1,088,949	-	623,522	-	-	-
25-Jan-08	1,088,949	97,410	623,522	1,088,949	-	623,522	-	-	-
26-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
27-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
28-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
29-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
30-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
31-Jan-08	1,088,949	71,034	623,522	1,088,949	-	623,522	-	-	-
1-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
2-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
3-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
4-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000

	Union CDA			Enbridge CDA			Union EDA		
	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT
	Available	Sold	Remaining	Available	Sold	Remaining	Available	Sold	Remaining
5-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
6-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
7-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
8-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
9-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
10-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
11-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
12-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
13-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
14-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
15-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
16-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
17-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
18-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
19-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
20-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
21-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
22-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
23-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
24-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
25-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
26-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
27-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
28-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
29-Feb-08	1,088,949	48,197	663,761	1,088,949	-	663,761	50,000	-	50,000
1-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
2-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
3-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
4-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
5-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
6-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
7-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
8-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
9-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
10-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	50,000
11-Mar-08	1,088,949	1,000	839,311	1,088,949	-	839,311	50,000	-	

	Union CDA			Enbridge CDA			Union EDA		
	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining
6-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
7-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
8-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
9-Dec-08	1,550,000	-	1,430,349	1,550,000	-	1,430,349	345,000	-	288,765
10-Dec-08	1,550,000	-	1,430,349	1,550,000	-	1,430,349	345,000	-	288,765
11-Dec-08	1,550,000	-	1,430,349	1,550,000	-	1,430,349	345,000	-	288,765
12-Dec-08	1,550,000	-	1,430,349	1,550,000	-	1,430,349	345,000	-	288,765
13-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
14-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
15-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
16-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
17-Dec-08	1,550,000	-	1,451,653	1,550,000	-	1,451,653	345,000	-	288,765
18-Dec-08	1,550,000	-	1,430,349	1,550,000	-	1,430,349	345,000	-	288,765
19-Dec-08	1,550,000	-	1,346,781	1,550,000	-	1,346,781	345,000	-	285,989
20-Dec-08	1,550,000	-	1,346,781	1,550,000	-	1,346,781	345,000	-	285,989
21-Dec-08	1,550,000	-	1,346,781	1,550,000	-	1,346,781	345,000	-	285,989
22-Dec-08	1,550,000	-	1,346,781	1,550,000	-	1,346,781	345,000	-	285,989
23-Dec-08	1,550,000	-	1,346,781	1,550,000	-	1,346,781	345,000	-	285,989
24-Dec-08	1,550,000	-	1,256,545	1,550,000	-	1,256,545	345,000	-	285,989
25-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
26-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
27-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
28-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
29-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
30-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
31-Dec-08	1,550,000	-	1,340,133	1,550,000	-	1,340,133	345,000	-	288,765
1-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
2-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
3-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
4-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
5-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
6-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
7-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
8-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
9-Jan-09	1,550,000	-	985,236	1,550,000	-	985,236	345,000	-	-
10-Jan-09	1,550,000	-	373,993	1,550,000	-	373,993	345,000	-	-
11-Jan-09	1,550,000	-	373,993	1,550,000	-	373,993	345,000	-	-
12-Jan-09	1,550,000	-	373,993	1,550,000	-	373,993	345,000	-	-
13-Jan-09	1,550,000	345,000	315,138	1,550,000	-	315,138	345,000	-	-
14-Jan-09	1,550,000	374,092	140,138	1,550,000	-	140,138	345,000	-	-
15-Jan-09	1,550,000	374,092	140,138	1,550,000	-	140,138	345,000	-	-
16-Jan-09	1,550,000	374,092	-	1,550,000	-	-	345,000	-	-
17-Jan-09	1,550,000	414,092	482,534	1,550,000	-	482,534	345,000	-	-
18-Jan-09	1,550,000	414,092	482,534	1,550,000	-	482,534	345,000	-	-
19-Jan-09	1,550,000	414,092	482,534	1,550,000	-	482,534	345,000	-	-
20-Jan-09	1,550,000	69,092	422,618	1,550,000	-	422,618	345,000	-	-
21-Jan-09	1,550,000	125,000	497,618	1,550,000	-	497,618	345,000	-	-
22-Jan-09	1,550,000	125,000	637,756	1,550,000	-	637,756	345,000	-	-
23-Jan-09	1,550,000	125,000	544,618	1,550,000	-	544,618	345,000	-	-
24-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
25-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
26-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
27-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
28-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
29-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
30-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
31-Jan-09	1,550,000	85,000	657,791	1,550,000	-	657,791	345,000	-	-
1-Feb-09	1,550,000	-	1,001,448	1,550,000	-	1,001,448	345,000	-	-
2-Feb-09	1,550,000	-	1,001,448	1,550,000	-	1,001,448	345,000	-	-
3-Feb-09	1,550,000	-	1,001,448	1,550,000	-	1,001,448	345,000	-	-
4-Feb-09	1,550,000	-	1,001,448	1,550,000	-	1,001,448	345,000	-	-
5-Feb-09	1,550,000	-	1,001,448	1,550,000	-	1,001,448	345,000	-	-



	Union CDA			Enbridge CDA			Union EDA		
	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT
	Available	Sold	Remaining	Available	Sold	Remaining	Available	Sold	Remaining
8-Dec-09	2,100,000	-	1,854,928	2,100,000	-	1,854,928	710,000	-	694,928
9-Dec-09	2,100,000	-	1,854,928	2,100,000	-	1,854,928	710,000	-	694,928
10-Dec-09	2,100,000	-	1,854,928	2,100,000	-	1,854,928	710,000	-	694,928
11-Dec-09	2,100,000	-	1,829,928	2,100,000	-	1,829,928	710,000	-	694,928
12-Dec-09	2,100,000	-	1,829,928	2,100,000	-	1,829,928	710,000	-	694,928
13-Dec-09	2,100,000	-	1,829,928	2,100,000	-	1,829,928	710,000	-	694,928
14-Dec-09	2,100,000	-	1,829,928	2,100,000	-	1,829,928	710,000	-	694,928
15-Dec-09	2,100,000	-	1,829,928	2,100,000	-	1,829,928	710,000	-	694,928
16-Dec-09	2,100,000	-	1,829,928	2,100,000	-	1,829,928	710,000	2,000	692,928
17-Dec-09	2,100,000	-	1,787,726	2,100,000	-	1,787,726	710,000	8,100	650,726
18-Dec-09	2,100,000	-	1,787,726	2,100,000	-	1,787,726	710,000	8,100	650,726
19-Dec-09	2,100,000	-	1,753,726	2,100,000	-	1,753,726	710,000	8,100	650,726
20-Dec-09	2,100,000	-	1,753,726	2,100,000	-	1,753,726	710,000	8,100	650,726
21-Dec-09	2,100,000	-	1,753,726	2,100,000	-	1,753,726	710,000	8,100	650,726
22-Dec-09	2,100,000	-	1,753,726	2,100,000	-	1,753,726	710,000	8,100	650,726
23-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
24-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
25-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
26-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
27-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
28-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
29-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
30-Dec-09	2,100,000	-	1,731,513	2,100,000	-	1,731,513	710,000	8,149	650,677
31-Dec-09	2,100,000	-	1,524,198	2,100,000	-	1,524,198	710,000	12,149	514,032
1-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
2-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
3-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
4-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
5-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
6-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
7-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
8-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
9-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
10-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
11-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
12-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
13-Jan-10	2,100,000	-	1,006,804	2,100,000	-	1,006,804	710,000	25,101	320,765
14-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
15-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
16-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
17-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
18-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
19-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
20-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
21-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
22-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
23-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
24-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
25-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
26-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
27-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
28-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
29-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
30-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
31-Jan-10	2,100,000	-	1,031,752	2,100,000	-	1,031,752	710,000	25,101	320,765
1-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833
2-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833
3-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833
4-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833
5-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833
6-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833
7-Feb-10	2,100,000	-	1,137,572	2,100,000	-	1,137,572	710,000	25,101	424,833

	Union CDA			Enbridge CDA			Union EDA		
	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT	STFT
	Available	Sold	Remaining	Available	Sold	Remaining	Available	Sold	Remaining
8-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
9-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
10-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
11-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
12-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
13-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
14-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
15-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
16-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
17-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
18-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
19-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
20-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
21-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
22-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
23-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
24-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
25-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
26-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
27-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
28-Feb-10	2,100,000	-	1,143,972	2,100,000	-	1,143,972	710,000	25,101	424,833
1-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
2-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
3-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
4-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
5-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
6-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
7-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
8-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
9-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
10-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
11-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
12-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
13-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
14-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
15-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
16-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
17-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
18-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
19-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
20-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
21-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
22-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
23-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
24-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
25-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
26-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
27-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
28-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
29-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
30-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
31-Mar-10	2,100,000	-	1,663,844	2,100,000	-	1,663,844	710,000	4,000	690,552
1-Dec-10	1,550,000	-	1,227,390	1,550,000	200,000	1,227,390	1,060,000	6,000	559,147
2-Dec-10	1,550,000	-	1,227,390	1,550,000	200,000	1,227,390	1,060,000	6,000	559,147
3-Dec-10	1,550,000	-	1,233,390	1,550,000	200,000	1,233,390	1,060,000	-	565,147
4-Dec-10	1,550,000	-	1,233,390	1,550,000	200,000	1,233,390	1,060,000	-	565,147
5-Dec-10	1,550,000	-	1,233,390	1,550,000	200,000	1,233,390	1,060,000	-	565,147
6-Dec-10	1,550,000	-	1,233,390	1,550,000	200,000	1,233,390	1,060,000	-	565,147
7-Dec-10	1,550,000	-	1,055,951	1,550,000	200,000	1,055,951	1,060,000	-	387,708
8-Dec-10	1,550,000	-	731,442	1,550,000	254,000	731,442	1,060,000	19,348	137,199
9-Dec-10	1,550,000	-	684,038	1,550,000	254,000	684,038	1,060,000	19,348	89,795

	Union CDA			Enbridge CDA			Union EDA		
	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining
10-Dec-10	1,550,000	-	656,714	1,550,000	254,000	656,714	1,060,000	19,348	62,471
11-Dec-10	1,550,000	-	599,518	1,550,000	254,000	599,518	1,060,000	19,348	5,275
12-Dec-10	1,550,000	-	599,518	1,550,000	254,000	599,518	1,060,000	19,348	5,275
13-Dec-10	1,550,000	-	594,243	1,550,000	254,000	594,243	1,060,000	19,348	-
14-Dec-10	1,550,000	-	594,243	1,550,000	254,000	594,243	1,060,000	19,348	-
15-Dec-10	1,550,000	-	587,243	1,550,000	261,000	587,243	1,060,000	13,348	-
16-Dec-10	1,550,000	-	587,445	1,550,000	261,000	587,445	1,060,000	13,348	93,952
17-Dec-10	1,550,000	-	491,806	1,550,000	261,000	491,806	1,060,000	13,348	-
18-Dec-10	1,550,000	-	514,645	1,550,000	261,000	514,645	1,060,000	13,348	21,152
19-Dec-10	1,550,000	-	512,441	1,550,000	261,000	512,441	1,060,000	13,348	18,948
20-Dec-10	1,550,000	-	512,441	1,550,000	261,000	512,441	1,060,000	13,348	18,948
21-Dec-10	1,550,000	-	608,375	1,550,000	261,000	608,375	1,060,000	13,348	114,882
22-Dec-10	1,550,000	-	649,375	1,550,000	200,000	649,375	1,060,000	13,348	74,882
23-Dec-10	1,550,000	-	662,723	1,550,000	200,000	662,723	1,060,000	-	88,230
24-Dec-10	1,550,000	-	723,274	1,550,000	200,000	723,274	1,060,000	-	448,781
25-Dec-10	1,550,000	-	724,525	1,550,000	200,000	724,525	1,060,000	-	450,032
26-Dec-10	1,550,000	-	724,525	1,550,000	200,000	724,525	1,060,000	-	450,032
27-Dec-10	1,550,000	-	724,525	1,550,000	200,000	724,525	1,060,000	-	450,032
28-Dec-10	1,550,000	-	724,525	1,550,000	200,000	724,525	1,060,000	-	450,032
29-Dec-10	1,550,000	-	794,525	1,550,000	200,000	794,525	1,060,000	-	520,032
30-Dec-10	1,550,000	-	794,525	1,550,000	200,000	794,525	1,060,000	-	520,032
31-Dec-10	1,550,000	-	788,525	1,550,000	200,000	788,525	1,060,000	6,000	514,032
1-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
2-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
3-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
4-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
5-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
6-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
7-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
8-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
9-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
10-Jan-11	1,550,000	-	727,576	1,550,000	200,000	727,576	1,060,000	6,000	448,336
11-Jan-11	1,550,000	-	642,210	1,550,000	243,164	642,210	1,060,000	6,000	406,134
12-Jan-11	1,550,000	-	589,280	1,550,000	243,164	589,280	1,060,000	6,000	353,204
13-Jan-11	1,550,000	-	568,178	1,550,000	243,164	568,178	1,060,000	6,000	332,102
14-Jan-11	1,550,000	-	564,178	1,550,000	243,164	564,178	1,060,000	6,000	328,102
15-Jan-11	1,550,000	-	564,178	1,550,000	243,164	564,178	1,060,000	6,000	328,102
16-Jan-11	1,550,000	-	564,178	1,550,000	243,164	564,178	1,060,000	6,000	328,102
17-Jan-11	1,550,000	-	564,178	1,550,000	243,164	564,178	1,060,000	6,000	328,102
18-Jan-11	1,550,000	-	564,178	1,550,000	243,164	564,178	1,060,000	6,000	328,102
19-Jan-11	1,550,000	-	585,831	1,550,000	243,164	585,831	1,060,000	6,000	359,755
20-Jan-11	1,550,000	-	345,170	1,550,000	243,164	345,170	1,060,000	12,945	119,094
21-Jan-11	1,550,000	-	262,204	1,550,000	275,664	262,204	1,060,000	12,945	78,628
22-Jan-11	1,550,000	-	133,647	1,550,000	365,344	133,647	1,060,000	24,853	39,751
23-Jan-11	1,550,000	-	133,647	1,550,000	365,344	133,647	1,060,000	24,853	39,751
24-Jan-11	1,550,000	-	133,647	1,550,000	365,344	133,647	1,060,000	24,853	39,751
25-Jan-11	1,550,000	-	43,355	1,550,000	382,180	43,355	1,060,000	24,853	-
26-Jan-11	1,550,000	-	24,632	1,550,000	382,180	24,632	1,060,000	24,853	21,030
27-Jan-11	1,550,000	-	199,469	1,550,000	382,180	199,469	1,060,000	17,908	195,867
28-Jan-11	1,550,000	-	137,546	1,550,000	349,680	137,546	1,060,000	26,558	89,343
29-Jan-11	1,550,000	-	-	1,550,000	354,955	-	1,060,000	14,650	-
30-Jan-11	1,550,000	-	-	1,550,000	354,955	-	1,060,000	14,650	-
31-Jan-11	1,550,000	-	-	1,550,000	354,955	-	1,060,000	14,650	-
1-Feb-11	1,550,000	-	115,005	1,550,000	304,955	115,005	1,060,000	8,650	-
2-Feb-11	1,550,000	-	113,022	1,550,000	304,955	113,022	1,060,000	8,650	-
3-Feb-11	1,550,000	-	170,775	1,550,000	304,955	170,775	1,060,000	21,998	57,753
4-Feb-11	1,550,000	-	237,550	1,550,000	304,955	237,550	1,060,000	13,348	136,629
5-Feb-11	1,550,000	-	328,126	1,550,000	294,404	328,126	1,060,000	13,348	226,385
6-Feb-11	1,550,000	-	380,879	1,550,000	252,202	380,879	1,060,000	13,348	236,936
7-Feb-11	1,550,000	-	380,879	1,550,000	252,202	380,879	1,060,000	13,348	236,936
8-Feb-11	1,550,000	-	204,873	1,550,000	252,202	204,873	1,060,000	13,348	60,930
9-Feb-11	1,550,000	-	267,172	1,550,000	260,551	267,172	1,060,000	13,348	132,778



	Union CDA			Enbridge CDA			Union EDA		
	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining
10-Feb-11	1,550,000	-	358,783	1,550,000	260,551	358,783	1,060,000	-	234,389
11-Feb-11	1,550,000	-	358,783	1,550,000	260,551	358,783	1,060,000	-	234,389
12-Feb-11	1,550,000	-	358,783	1,550,000	260,551	358,783	1,060,000	-	234,389
13-Feb-11	1,550,000	-	358,783	1,550,000	260,551	358,783	1,060,000	-	234,389
14-Feb-11	1,550,000	-	358,783	1,550,000	260,551	358,783	1,060,000	-	234,389
15-Feb-11	1,550,000	-	652,642	1,550,000	260,551	652,642	1,060,000	-	528,248
16-Feb-11	1,550,000	-	795,146	1,550,000	210,000	795,146	1,060,000	-	588,281
17-Feb-11	1,550,000	-	805,146	1,550,000	210,000	805,146	1,060,000	-	588,281
18-Feb-11	1,550,000	-	850,242	1,550,000	210,000	850,242	1,060,000	-	633,377
19-Feb-11	1,550,000	-	848,132	1,550,000	210,000	848,132	1,060,000	-	631,267
20-Feb-11	1,550,000	-	848,132	1,550,000	210,000	848,132	1,060,000	-	631,267
21-Feb-11	1,550,000	-	848,132	1,550,000	210,000	848,132	1,060,000	-	631,267
22-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
23-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
24-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
25-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
26-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
27-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
28-Feb-11	1,550,000	-	-	1,550,000	210,000	-	1,060,000	-	-
1-Mar-11	1,550,000	-	1,152,947	1,550,000	142,906	1,152,947	1,060,000	27,208	889,405
2-Mar-11	1,550,000	-	1,149,367	1,550,000	142,906	1,149,367	1,060,000	27,208	889,405
3-Mar-11	1,550,000	-	886,999	1,550,000	142,906	886,999	1,060,000	27,208	637,037
4-Mar-11	1,550,000	-	886,999	1,550,000	142,906	886,999	1,060,000	27,208	637,037
5-Mar-11	1,550,000	-	886,999	1,550,000	142,906	886,999	1,060,000	27,208	637,037
6-Mar-11	1,550,000	-	886,999	1,550,000	142,906	886,999	1,060,000	27,208	637,037
7-Mar-11	1,550,000	-	886,999	1,550,000	142,906	886,999	1,060,000	27,208	637,037
8-Mar-11	1,550,000	-	932,905	1,550,000	120,000	932,905	1,060,000	24,208	660,037
9-Mar-11	1,550,000	-	984,545	1,550,000	120,000	984,545	1,060,000	24,208	711,677
10-Mar-11	1,550,000	-	1,250,493	1,550,000	120,000	1,250,493	1,060,000	24,208	964,045
11-Mar-11	1,550,000	-	1,250,493	1,550,000	120,000	1,250,493	1,060,000	24,208	964,045
12-Mar-11	1,550,000	-	1,250,493	1,550,000	120,000	1,250,493	1,060,000	24,208	964,045
13-Mar-11	1,550,000	-	1,250,493	1,550,000	120,000	1,250,493	1,060,000	24,208	964,045
14-Mar-11	1,550,000	-	1,250,493	1,550,000	120,000	1,250,493	1,060,000	24,208	964,045
15-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
16-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
17-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
18-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
19-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
20-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
21-Mar-11	1,550,000	-	1,310,886	1,550,000	120,000	1,310,886	1,060,000	14,548	1,024,438
22-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
23-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
24-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
25-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
26-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
27-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
28-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
29-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
30-Mar-11	1,550,000	-	1,313,886	1,550,000	120,000	1,313,886	1,060,000	11,548	1,027,438
31-Mar-11	1,550,000	-	1,663,844	1,550,000	120,000	1,663,844	1,060,000	11,548	1,027,438
1-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
2-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
3-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
4-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
5-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
6-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
7-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
8-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
9-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
10-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
11-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179

	Union CDA			Enbridge CDA			Union EDA		
	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining	STFT Available	STFT Sold	STFT Remaining
12-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
13-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
14-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
15-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
16-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
17-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
18-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
19-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
20-Dec-11	1,290,000	-	726,772	1,290,000	202,000	726,772	900,000	-	574,179
21-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
22-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
23-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
24-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
25-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
26-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
27-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
28-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
29-Dec-11	1,290,000	-	706,772	1,290,000	202,000	706,772	900,000	-	574,179
30-Dec-11	1,290,000	-	613,896	1,290,000	202,000	613,896	900,000	-	481,303
31-Dec-11	1,290,000	-	613,896	1,290,000	202,000	613,896	900,000	-	481,303
1-Jan-12	1,290,000	-	195,489	1,290,000	324,388	195,489	900,000	-	195,489
2-Jan-12	1,290,000	-	195,489	1,290,000	324,388	195,489	900,000	-	195,489
3-Jan-12	1,290,000	-	195,489	1,290,000	324,388	195,489	900,000	-	195,489
4-Jan-12	1,290,000	-	195,489	1,290,000	324,388	195,489	900,000	-	195,489
5-Jan-12	1,290,000	-	139,589	1,290,000	324,388	139,589	900,000	-	139,589
6-Jan-12	1,290,000	-	190,232	1,290,000	324,388	190,232	900,000	-	190,232
7-Jan-12	1,290,000	-	23,344	1,290,000	324,388	23,344	900,000	-	239,344
8-Jan-12	1,290,000	-	23,344	1,290,000	324,388	23,344	900,000	-	239,344
9-Jan-12	1,290,000	-	23,344	1,290,000	324,388	23,344	900,000	-	239,344
10-Jan-12	1,290,000	-	391,479	1,290,000	324,388	391,479	900,000	-	391,479
11-Jan-12	1,290,000	-	447,379	1,290,000	324,388	447,379	900,000	-	433,938
12-Jan-12	1,290,000	-	447,379	1,290,000	324,388	447,379	900,000	-	433,938
13-Jan-12	1,290,000	-	447,379	1,290,000	324,388	447,379	900,000	-	433,938
14-Jan-12	1,290,000	-	242,727	1,290,000	324,388	242,727	900,000	-	229,286
15-Jan-12	1,290,000	-	242,727	1,290,000	324,388	242,727	900,000	-	229,286
16-Jan-12	1,290,000	-	242,727	1,290,000	324,388	242,727	900,000	-	229,286
17-Jan-12	1,290,000	-	130,304	1,290,000	324,388	130,304	900,000	-	130,304
18-Jan-12	1,290,000	-	130,304	1,290,000	324,388	130,304	900,000	-	130,304
19-Jan-12	1,290,000	-	130,304	1,290,000	324,388	130,304	900,000	-	130,304
20-Jan-12	1,290,000	-	140,504	1,290,000	324,388	140,504	900,000	-	140,504
21-Jan-12	1,290,000	-	140,504	1,290,000	324,388	140,504	900,000	-	140,504
22-Jan-12	1,290,000	-	140,504	1,290,000	324,388	140,504	900,000	-	140,504
23-Jan-12	1,290,000	-	140,504	1,290,000	324,388	140,504	900,000	-	140,504
24-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
25-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
26-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
27-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
28-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
29-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
30-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
31-Jan-12	1,290,000	-	445,979	1,290,000	324,388	445,979	900,000	-	433,938
1-Feb-12	1,290,000	-	461,690	1,290,000	324,388	461,690	900,000	-	433,917
2-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
3-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
4-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
5-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
6-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
7-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
8-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
9-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
10-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917
11-Feb-12	1,290,000	-	449,375	1,290,000	324,388	449,375	900,000	-	433,917



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**Union -TCPL 10**

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**Reference:** TransCanada Written Evidence, Section 3.1.4, page 7, lines 19-27

**Preamble:** TransCanada estimates the cost of acquiring STFT capacity.

**Request:**

- (a) Please provide the detailed calculation of TransCanada's estimate of \$8 million to \$12 million as well as the net cost of using STFT presumed as \$2-\$8 million. In so doing, please outline all assumptions made in the calculation.
- (b) Please provide the estimated cost using TransCanada's Approved Mainline Interim Tolls effective January 1, 2012.

**Response:**

- (a) TransCanada's estimate of \$8 - \$12 million for the cost of transportation tolls for 0.9 PJ/d of 7 day STFT from NIT to Union CDA was determined by applying the forecast 2014 Restructuring Proposal tolls for STFT service. This includes the NGTL 100% FT toll from NIT to SMB plus the Mainline range of 100% FT toll to 160% FT toll from SMB to Union CDA. This is consistent with TransCanada's Mainline STFT pricing flexibility proposal as described in TransCanada's response to Union 9 (f).
  - o Mainline STFT priced 100% FT:  $900,000 \text{ GJ/d} \times \$1.27/\text{GJ}^1 \times 7 \text{ days} = \text{\$8 million}$
  - o Mainline STFT priced 160% FT:  $900,000 \text{ GJ/d} \times \$1.85/\text{GJ}^2 \times 7 \text{ days} = \text{\$12 million}$

The net cost of using 7 day STFT of \$2 - \$8 million for 0.9 PJ/d was determined by taking the cost of STFT above and subtracting off the additional savings that would arise from purchasing supply at NIT rather than Dawn in the range of \$4 - \$6 million. The range of \$4 - 6 million supply purchase benefit was determined by applying a range of NIT to Dawn price differentials of \$0.70 - \$0.90/GJ using recent historical price differential information within the past 5 years.

- o 70¢ NIT - Dawn price differential:  $900,000 \text{ GJ/d} \times \$0.70/\text{GJ} \times 7 \text{ days} = \text{\$4 million}$
- o 90¢ NIT - Dawn price differential:  $900,000 \text{ GJ/d} \times \$0.90/\text{GJ} \times 7 \text{ days} = \text{\$6 million}$

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<sup>1</sup> Based on NIT to SMB toll of \$0.30/GJ plus SMB to Union CDA toll at 100% FT of \$0.97/GJ

<sup>2</sup> Based on NIT to SMB toll of \$0.30/GJ plus SMB to Union CDA toll at 160% FT of \$1.55/GJ

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Therefore, the net cost of using STFT will be approximately \$2 – 8 million determined by:

- o \$8 million STFT cost *less* \$6 million supply savings = **\$2 million**
- o \$12 million STFT cost *less* \$4 million supply savings = **\$8 million**

(b) Using TransCanada's approved Mainline Interim tolls effective January 1, 2012 where STFT bid floor is 100% FT toll, and applying the same potential supply savings as determined in response (a), the estimated cost of transportation tolls for 0.9 PJ/d of 7 day STFT from NIT to Union CDA would be:

- o Mainline STFT priced 100% FT:  $900,000 \text{ GJ/d} \times \$2.42/\text{GJ}^3 \times 7 \text{ days} = \textbf{\$15 million}$   
*Less*
- o 70¢ NIT - Dawn price differential:  $900,000 \text{ GJ/d} \times \$0.70/\text{GJ} \times 7 \text{ days} = \textbf{\$4 million}$
- o 90¢ NIT - Dawn price differential:  $900,000 \text{ GJ/d} \times \$0.90/\text{GJ} \times 7 \text{ days} = \textbf{\$6 million}$

Therefore, the net cost of using 7 day STFT would be approximately \$9 - \$11 Million under current 2012 interim tolls, which continues to compare favorably with the annual cost of service impact of Union's proposed compressor addition estimated by Union to be approximately \$16 million,<sup>4</sup> especially when considering the cost of STFT is unlikely to be incurred every year, but the annual cost of facilities proposed by Union would be incurred annually.

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<sup>3</sup> Based on NIT to Empress toll of \$0.17/GJ plus Empress to Union CDA toll at 100% FT of \$2.24/GJ

<sup>4</sup> Exhibit J.B-1-7-8b

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**Union -TCPL 11**

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**Reference:** TransCanada Written Evidence, Section 3.2, page 8, lines 14-20

**Preamble:** TransCanada states that it can transfer existing equipment from another location to Parkway, thus using existing infrastructure. TransCanada states that could install the compressor adjacent to the existing TransCanada lines.

**Request:**

- (a) Please confirm what equipment TransCanada refers to that could be moved from one location to a location near Parkway.
- (b) Specifically which lands would TransCanada propose to locate the compressor on at or near Parkway? Has TransCanada inquired into the availability of that land?
- (c) How much property does TransCanada currently own at or near Parkway?
- (d) Please describe the current facilities TransCanada owns and operates at Parkway.
- (e) Where would TransCanada propose to locate an LCU compression unit at Parkway to utilize existing infrastructure? What would be the separation distance from Union's existing compressor plants?
- (f) How does TransCanada estimate that the capital cost savings for the TransCanada proposal is 50%?
- (g) Please list all compressors that TransCanada considers to be excess to current operation requirements. For each compressor please provide:
  - a. Date Manufactured and Installed.
  - b. Current Location.
  - c. Hours of Operation per Generator (since installation).
  - d. Dates of any Major Overhauls.
  - e. Horsepower Rating.
  - f. Design Flows, including minimum suction and maximum discharge capabilities.
  - g. Whether these units are used or useful and could be sold to another party.

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**Union -TCPL 11**

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- (h) TransCanada states a cost of \$70 million for relocating compressor units to Maple as part of their expansion plans. Please provide the following:
  - a. Detailed breakdown of the \$70 million cost.
  - b. Amount of horsepower per unit being relocated.
  - c. The sites from which the compressor units are being relocated.
  - d. The cost of the changes required at each of those sites.
  - e. Impact to the capacity of the Mainline and NOL system after the compressors are relocated.
  - f. Please confirm that the Maple expansion has land readily available and piping infrastructure for expansion within its property.
- (i) How are the costs for spare compressors on the Mainline system allocated? Are Ontario consumers the only consumers to pay for spare compressors on the Mainline system?
- (j) Please provide any internal or external presentations, analysis or communications in relation to TransCanada's assertion that it could transfer existing equipment to Parkway.
- (k) Would TCPL sell a used compressor to Union.

**Response:**

- (a) The equipment that TransCanada would propose to relocate would be dependent on the requirements at the new location such as the total power required and the operational flexibility benefits of two or more units versus one unit. Once that is determined TransCanada will assess the existing fleet of compressors and pick the unit(s) which could be relocated based on the cost to relocate, the impact to capacity as a result of the relocation, the impact to operating costs as a result of the relocation and the impact to service reliability as a result of the relocation.
- (b) TransCanada has not done a detailed evaluation of specific projects but has provided alternatives to Union's proposal based on estimated costs. Through a collaborative process, TransCanada and Union would be able to determine an appropriate site for the compression.
- (c) The TransCanada property at Parkway is approximately 4731 square meters or 1.17 acres.
- (d) At Parkway TransCanada has a delivery meter station that delivers gas to Enbridge, a delivery meter station that delivers gas to Union, a receipt meter

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**Union -TCPL 11**


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station that receives gas from Union and piping and valves associated with those facilities.

- (e) TransCanada accepts Union's assessment that there is insufficient room at the existing Parkway facility for the LCU compression. The distance from Union's existing compression is unknown at this time but can be assessed through a collaborative process between Union and TransCanada.
- (f) Based on rule of thumb costs there is a possibility that TransCanada could construct the LCU compression for \$90 million which is 50% of the \$181 million cost which appears to be the cost of Union's LCU proposal. Please refer to the response to OEB #1 a) for an explanation of the derivation of the \$181 million cost.
- (g) TransCanada has received approval to deactivate four units on the Canadian Mainline. The units are 21C, 55B, 60A and 92B.

	Unit 21C	Unit 55B	Unit 60A	Unit 92B
Date installed	1969	1992	1964	1973
Current location	Station 21	Station 55	Station 60	Station 92
Hours of operation since installation <sup>1</sup>	185,984	64,502	217,281	196,912
Date of last major overhaul	Sept. 2002	2005	April 1998	April, 1998
Power Rating	10 MW	14 MW	15 MW	15 MW
Maximum Flow <sup>2</sup>	10.7 m <sup>3</sup> /s	11.5 m <sup>3</sup> /s	11.9 m <sup>3</sup> /s	9.7 m <sup>3</sup> /s
MAOP <sup>3</sup>	6205	7100	7030	7030
Used and useful	These units are in a deactivated state within the terms of the Onshore Pipeline Regulations. They could be sold to another party.			

Note 1: The hours provided are hours of operation at the berth, not hours of operation for the engine that was in the berth at the time of the deactivation as engines are frequently moved from location to location.



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**Union -TCPL 11**

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Note 2: TransCanada is providing the maximum flow through the compressor aero assembly at the time of deactivation.

Note 3: TransCanada is not aware of any minimum pressure limitations and is providing only the MAOP.

- (h) A. The costs consist of \$62 million for the installation at Station 130 and \$4 million each for the decommissioning of the units at the existing sites.
- B. Two 11 MW units are being relocated for a total of 22 MW.
- C. The compressors are being relocated from Station 52 and Station 84.
- D. The decommissioning costs are estimated as \$4 million per site.
- E. There is approximately 30 TJ/d reduction in Peak Winter Design capability across the NOL as a result of the relocation of the two units to Maple.
- F. The installation at Station 130 is occurring on existing TransCanada land at the site. There will be additional piping required within the existing site.
- (i) There are no “spare compressors on the Mainline system.”
- (j) Relocation of existing compressors is a standard alternative that TransCanada routinely considers for capacity additions. TransCanada has recently relocated or is in the process of relocating four compressors to locations where they have higher utilization rates. There has been no analysis specific to relocating any compressors to Parkway, but this work would be an easily accomplished component of a collaborative process between Union and TransCanada.
- (k) Yes.

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**Union -TCPL 12**

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**Reference:** TransCanada Written Evidence, Section 3.3, page 9, lines 12-19 and page 10, lines 1-8

**Preamble:** TransCanada offers as an alternative to LCU protection at Parkway, transportation from Kirkwall to Parkway via the TransCanada system.

**Request:**

- (a) Has TransCanada reviewed this with any customer?
- (b) Has TransCanada ever discussed these facilities or options with Union?
- (c) Has TransCanada asked Union about using existing Union facilities?
- (d) Please provide a copy of all internal presentations or analysis to senior management and presentations or analysis to customers, potential customers or other external parties that address the possibility of upgrading the TransCanada Domestic Line.
- (e) What is TransCanada's capacity between Niagara/Chippawa to Kirkwall on the TransCanada Mainline after the 2013 expansion?
- (f) Without any capacity expansion, what is TransCanada's capacity on the low pressure system between Niagara/Chippawa and Kirkwall?
- (g) What is the total volume contracted for firm receipts at Niagara and Chippawa on the TransCanada system to Kirkwall and other downstream points as of November 1, 2013?
- (h) To the best of TransCanada's knowledge, what is the total volume contracted for delivery on U.S. pipeline systems to Niagara and Chippawa as of November 1, 2013?
- (i) Where would TransCanada locate one or two compressors in the vicinity of Parkway? What associated yard piping changes would be required?
- (j) What year would the proposed TransCanada facilities be in-service?

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**Union -TCPL 12**

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- (k) Please provide contract quantity, receipt point and delivery point for all transportation contracts with Union involving service from the TransCanada Domestic Line that have expired within the previous 18 months. Please comment on whether Union requested renewal of any of those contracts?

**Response:**

- (a) TransCanada has reviewed with customers the use of this line to transport gas supply from the Niagara and Chippawa interconnection points to the Greater Toronto Area. However TransCanada certainly would have reviewed transportation from Kirkwall to Parkway via the TransCanada system as an alternative to LCU protection at Parkway if TransCanada knew Union had these needs. Please refer to the response to (d) below.
- (b) No. Please refer to the response to (a).
- (c) TransCanada assumes Union is referring to the use of Union C1 service between Kirkwall and Parkway. TransCanada has discussed with customers the use of the domestic line as a means of providing a direct and new path to access Marcellus supply at Parkway from either Chippawa or Niagara. In the context of providing LCU protection at Parkway, the use of Union capacity between Kirkwall and Parkway has not been discussed with Union. However as stated above if TransCanada had been aware that Union had this need for LCU protection at Parkway it most certainly would have discussed this option with Union. TransCanada currently has a total of 263,249 GJ/d contracted with Union between Kirkwall and Dawn. These contracts commence service in 2012 and 2013.
- (d) Please refer to Attachments 1 and 2, Union 12(d). Please also refer to Attachment 1, Union 3(c).
- (e) Facilities for the 2013/14 gas year have not yet been finalized. With the installation of the proposed facilities for November 1, 2012 TransCanada will be capable of metering and receiving 439 TJ/d of supply from Niagara Falls. TransCanada notes that the capacity of the line between Kirkwall and Niagara/Chippawa is approximately 1 Bcf/d.

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**Union -TCPL 12**

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- (f) TransCanada has no ability to transfer gas from the low pressure Niagara Domestic Line to the higher pressure Niagara Export Line for service to Kirkwall.
- (g) Currently TransCanada does not have any Firm Transportation contracts executed for November 1, 2013 with a receipt of Niagara or Chippawa, however it does have approximately 359,000 GJ/d of commitments for capacity under executed Precedent Agreements. Please see “2012 Eastern Mainline Expansion, s.58 Application, Section 3.0: Economics: Supply, Market and Alternatives s3.1.8” for a breakdown of requests for Firm Transportation.
- (h) It is the understanding of TransCanada that a total of 820,000 Dth/d is contracted for delivery on US pipelines at Niagara and Chippawa as of November 1, 2013.
- (i) TransCanada has not evaluated potential sites for the new compression. Due to the congestion in the existing Parkway site, TransCanada expects that a new site will be required with all new yard piping. The determination of a suitable site will be part of a collaborative alternative evaluation process between Union and TransCanada.
- (j) The in-service date is to be determined through a collaborative process between Union and TransCanada.
- (k) All customers holding Firm Transportation (FT) and Storage Transportation Service (STS) agreements on the TransCanada Mainline have the unilateral right to renew or non-renew those agreements on six months’ notice to TransCanada. The table below shows contracts to the Union CDA for which Union has exercised its right of full or partial non-renewal between October 31, 2010 and October 31, 2012. The contracts shown are served using the TransCanada Domestic Line. Note that the Non-Renewable Firm Transportation (FT-NR) agreement in the table does not have renewal rights, as per the FT-NR Toll Schedule in TransCanada’s Canadian Mainline tariff.

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**Union -TCPL 12**


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Union Gas Limited Contract Expiry Report						
Classes of Service: FT, FT-SN, FT-NR, STS						
						
* Partial Contract Quantity Expiring						
CONT. NO	CONTRACT START DATE	CONTRACT END DATE	AGR. TYPE CODE	PRIMARY RECEIPT	PRIMARY DELIVERY	CONTRACT DEMAND (GJ/D)
<b>Contracts that will expire October, 2012</b>						
12430	1999-Nov-01	2012-Oct-31	FT	Empress	Union CDA	12,145 *
42582	2011-Nov-01	2012-Oct-31	FT-NR	Union Parkway Belt	Union CDA	64,000
<b>Contracts that expired October, 2010</b>						
22755	2003-Nov-01	2010-Oct-31	FT	Empress	Union CDA	4,303
12430	1999-Nov-01	2010-Oct-31	FT	Empress	Union CDA	8,197 *



## TransCanada Pipelines – Enbridge Gas Distribution:

February 16, 2012

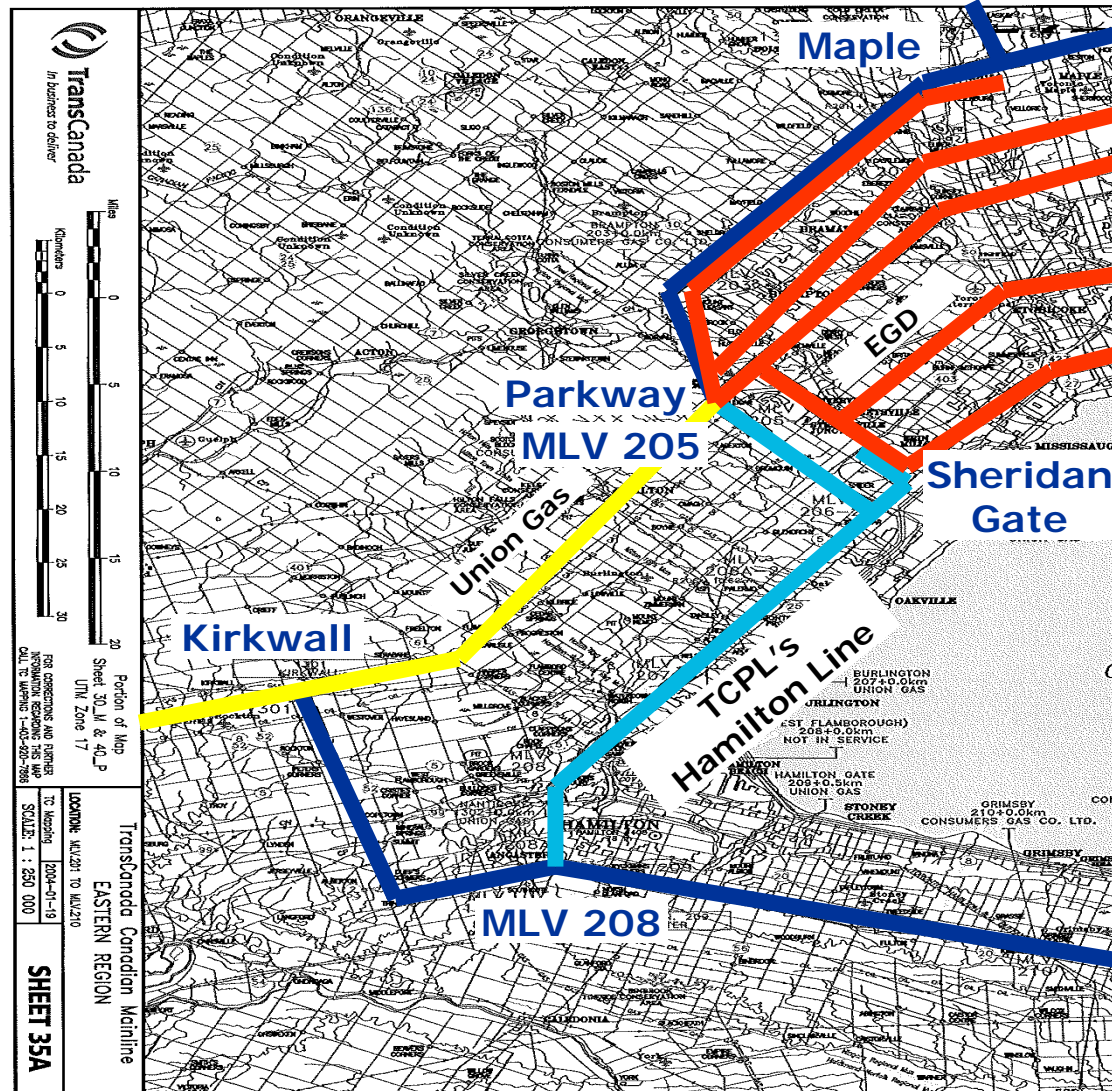
# EGD Meeting Topics



- **Overview**
- **Pipeline Integrity Overview**
- **Current line operational requirements**
- **Available Capacity**
- **Service Opportunity**



# Niagara to GTA via the Hamilton Line

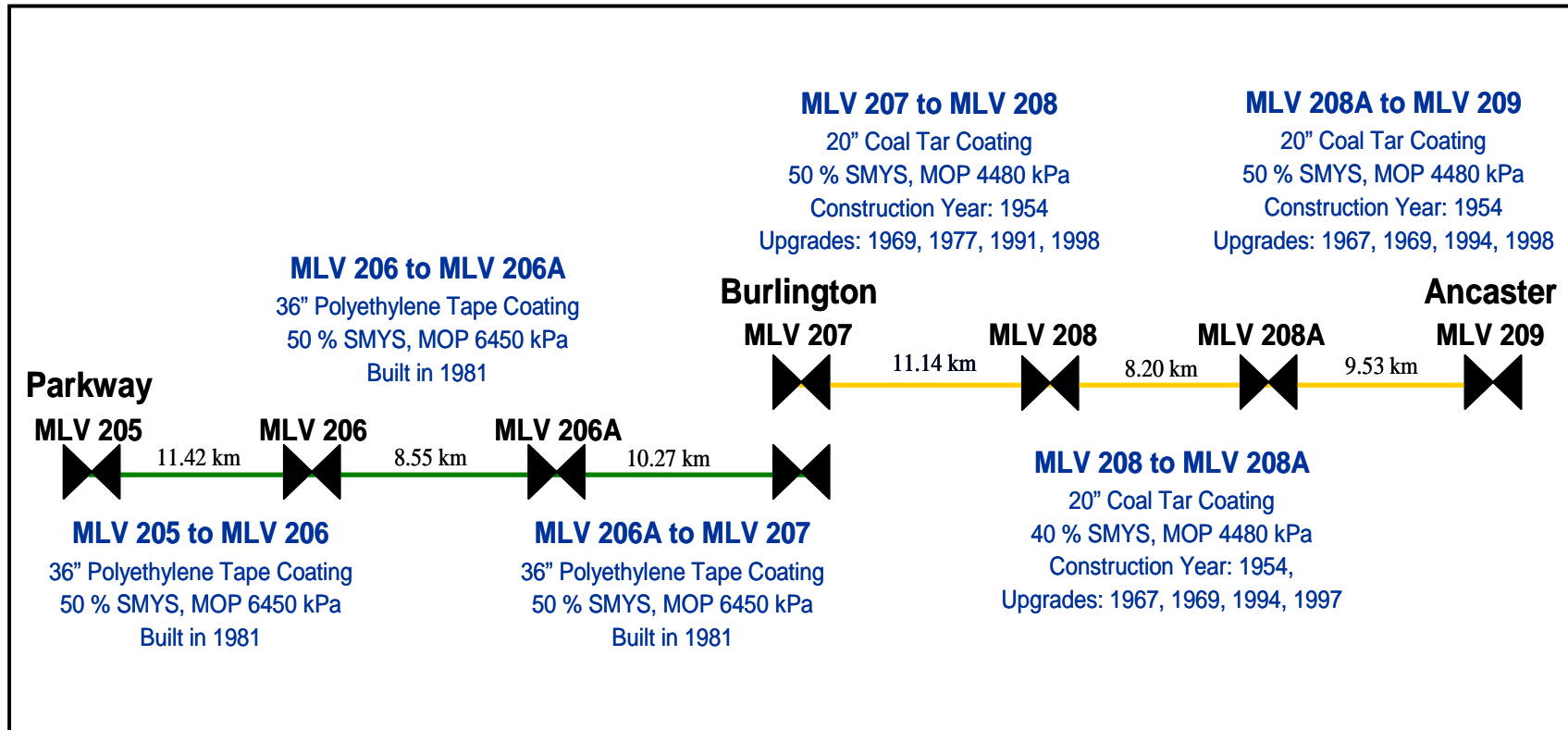


## Benefits to EGD:

- Supply diversification
  - Direct access to Marcellus gas
- Delivery Security
  - New delivery path to GTA; distinct from Union and TCPL (NOL)
- Efficient
  - Low capital vs. versus capacity
- Flexible
  - Capacity ramp-up



# Pipeline Integrity Overview



**MAOP = 6450 kPa**

**MAOP = 4480 kPa**

# Pipeline Integrity Class designations



Pipeline Design Class				
MLV	Class 1 (km)	Class 2 (km)	Class 3 (km)	Class 4 (km)
205	0	0	11.41	0
206	0	0	7.52	1.01
206A	0	0	10.26	0
207	0	0	3.38	7.75
208	0	0	0	8.2
208A	0	0	3.35	6.09

Population Class				
MLV	Class 1 (km)	Class 2 (km)	Class 3 (km)	Class 4 (km)
205	9.73	1.7	0	0
206	0.02	1.2	5.7	0
206A	1.13	0.4	8.74	0
207	4.4	2.73	3.98	0
208	1.02	2.71	4.3	0
208A	1.45	2.01	5.91	0

# Pipeline Integrity – Cathodic Protection and Mechanical Damage Overview



- **Cathodic Protection Survey complete in 2011**
  - Test resulted in adequate CP for both sections
    - Negative polarized potential of 850 mV (minimum)
- **Mechanical Damage inspections in 2007 and 2011**
  - MLV 205-207 - Line 2 (2011)
    - 3 dents identified, none require repair
  - MLV 207-209 - Line 1 (2007)
    - 4 dents identified, none require repair

# Pipeline Integrity – Magnetic Flux Leakage Program



- **Magnetic Flux Leakage (MFL) for External Corrosion**
  - Multiple MFL and Caliper runs over past 5 years on all sections
    - MLV 200 - 207 Line 2 most recently inspected in 2011
    - MLV 207 – 209 Line 1 planned inspection to occur in 2012
- **External Corrosion Results**
  - MLV 205-207 -2
    - No critical external corrosion features identified
  - MLV 207-209 - Line 1
    - No critical external corrosion features identified

# Pipeline Integrity – SCC Program



- **Based upon TC experience MLV 205 to 209 is not susceptible to the development of SCC colonies**
  - Investigative digs have been performed to validate
  - No significant SCC has been found
- **SCC ILI (EMAT Tool) under continued development**
  - Plan to inspect between MLV 201 and 207 (tape coated section) in 2012 - 2013 after tool testing complete

# Pipeline Integrity – Summary



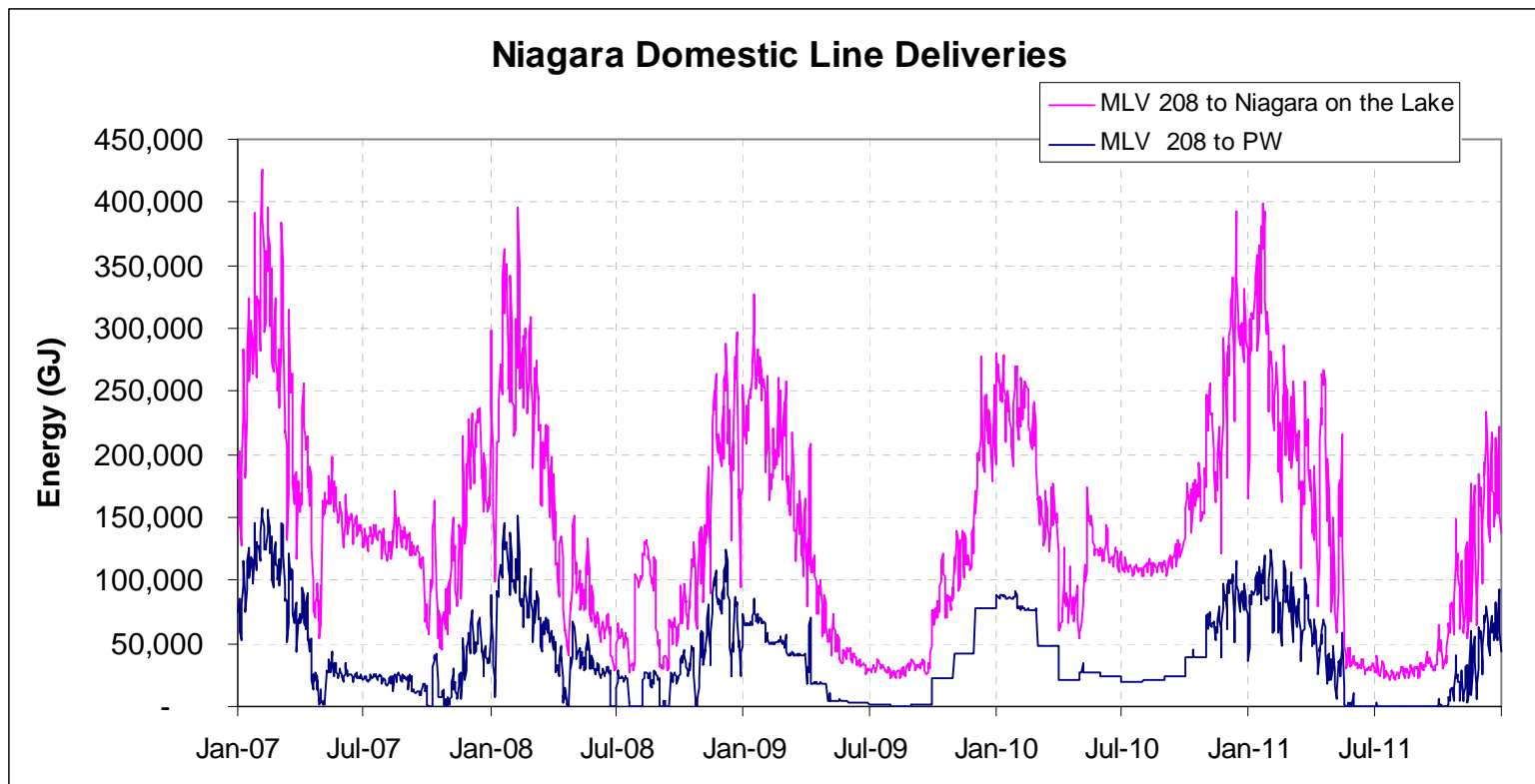
- **TransCanada's Pipe Integrity assessment of MLV 205- 209 have shown there are no immediate concerns for:**
  - External Corrosion
  - SCC
  - Mechanical Damage
- **No In-service ruptures, leaks or hydro-test failures have been identified**

Heavy Wall Pipe in all areas in excellent condition resulting in  
Safe and Reliable Operation

# Current Line Operational Requirements



- **Historical flows to domestic line markets**
  - From MLV 208 North to PW (Bronte and Burlington)
  - From MLV 208 East to Niagara on the Lake





# Hamilton Line Upgrade options

Options	Minimum Delivery Pressure	Capital Cost	Capacity (average day) TJ/d
1) Existing Facilities plus a new MS at PW	3450 kPa	\$10 Million	~ 100
2) Option 1 + New CV and piping from the export line	3450 kPa	\$15 Million	~ 200
3) Option 1 + Compression at Burlington	3450 kPa	\$85 Million	~ 400
4a) 22km NPS 36	3800 kPa	~\$125 Million	~ 900
4b) 22km NPS 36 w/ compression at Parkway (2X12MW)	6450 kPa	TBD	~ 900
5a) Option 4(a) + Stn 209 and 211 reversals	3800 kPa	~\$150 Million	~ 1400
5b) Option 5A with compression at Parkway (2X20MW)	6450 kPa	TBD	~ 1400



# Hamilton Line Capacity Options



- **TransCanada can design the integrated system to meet Enbridge's requirements**
  - Capacity additions designed to accommodate EGD's pressure and volume needs
  - Cost effective capacity additions

# Hamilton Line Service Opportunity



## Three options:

1. **Separate Parkway meter out of the existing EGD CDA (EGD Parkway DDA)**
    - Estimated Niagara to EGD Parkway DDA : approx. 10.5 cents/GJ
  2. **Create a New DDA with a new Parkway meter (EGD Parkway 2)**
    - Original EGD Parkway meter remains in EGD CDA
    - Estimated toll from Niagara Falls to EGD Toronto: approx. 10.5 cents/GJ
  3. **Divide EGD CDA into two distinct DDA's, EGD CDA North and South**
    - EGD CDA South would contain Parkway and meters in Niagara region
    - Estimated toll from Niagara Falls to EGD CDA South = approx. 7.5 cents/GJ
    - EGD North would contain all other meters in current CDA
- Current toll Niagara Falls to EGD CDA = \$0.175/GJ
  - 2013 Restructuring Proposal toll Niagara Falls to EGD CDA = \$0.1236/GJ
  - Estimated tolls based on the 2013 Restructuring Proposal filed with the NEB 31Oct2011

# Benefits/Issues common to all options



## All options:

- Provides an independent path into Toronto at Parkway with access to Marcellus supply off of the Hamilton line
- Provides a lower toll than would otherwise be available to EGD CDA

# Specific Benefits/Issues to each Option



## Option #1: (Parkway DDA)

- No impact to other shippers or EGD's existing contracts

## Option #2: (Toronto DDA)

- Parkway Consumers meter remains in EGD CDA
- No impact to other shippers or EGD's existing contracts

## Option #3: (EGD South, EGD North)

- Lowest Toll of all three options and provides direct access to Marcellus supply to Niagara Falls market in addition to GTA market
- Contracts could be restructured for North CDA and South CDA

# Timing and Process



- **A new capacity open season for Niagara to EGD Parkway could be held as early as the end of Q2 2012.**
  - PA's required by end of 2012 in order to provide service by 2014
  - Term 10 years
- **Construction Timelines**
- **Approvals for DDA / meter changes**

# Service Questions



## Firm Service from Niagara to Parkway Consumers DDA, Toronto DDA or EGD South DDA

- **Access to diversions (upon Niagara becoming a Receipt Point)**
  - Dawn storage could be accessed via diversion to Union CDA, Kirkwall or Dawn
- **Access to alternate receipt points**
  - Alternate receipt point of Chippawa available subject to bi-directional metering being installed and space being available on the day
- **Curtailment per the tariff**
  - Firm is the highest level of service with the highest priority in the event of curtailment

# Considerations for Successful Implementation of Hamilton Line



- Revenue generation opportunity/ Mainline toll benefit
- Keep regulatory process simple
- Minimize opposition from stakeholders
  - Existing Load Retention
  - Incremental Load

# Hamilton Line Service Opportunity



- Questions ??

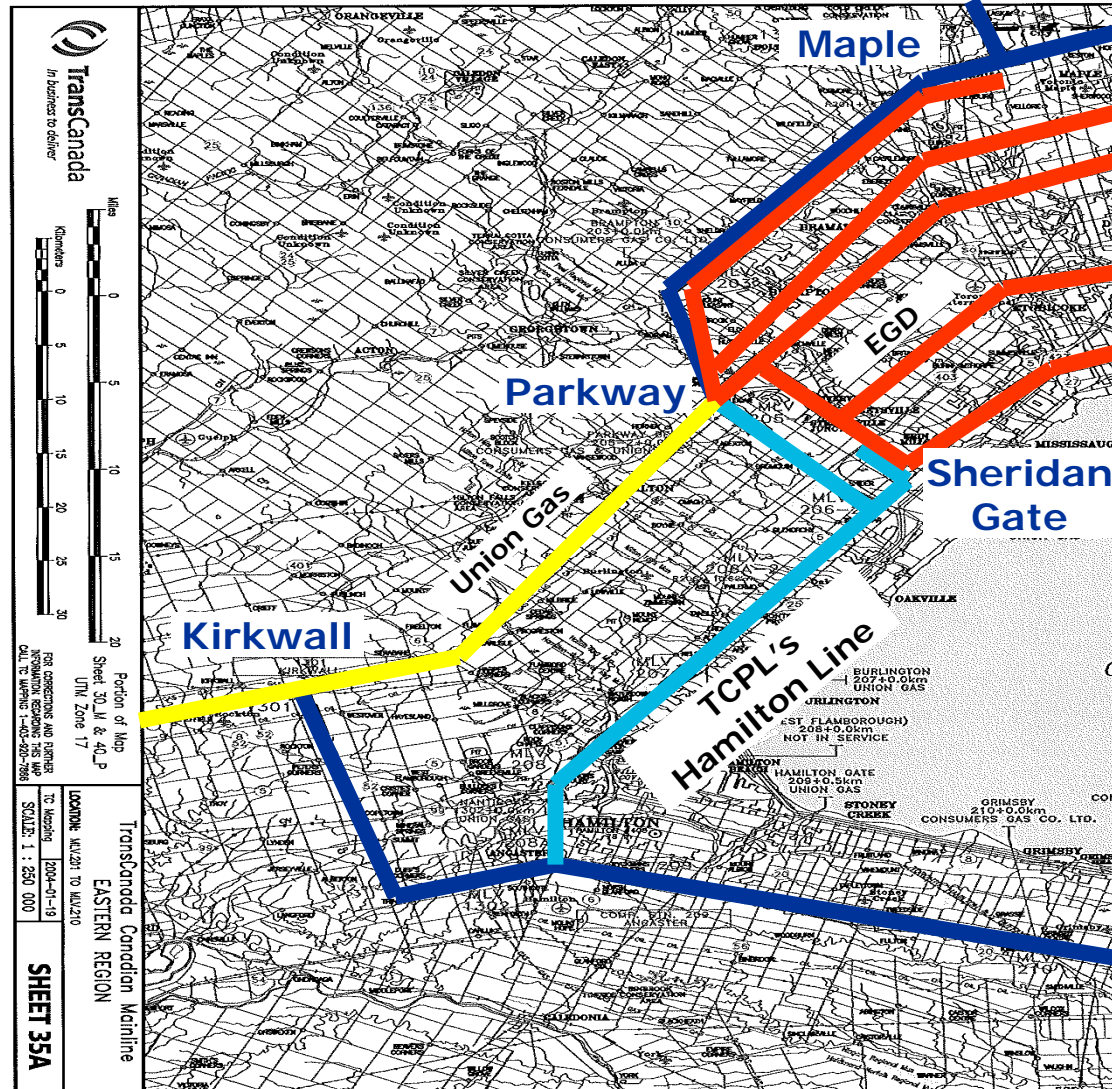




## TransCanada Pipelines – Enbridge Gas Distribution:

January 10, 2012

# Niagara to GTA via the Hamilton Line



## Benefits to EGD:

- Supply diversification
  - Direct access to Marcellus gas
- Delivery Security
  - New delivery path to GTA; distinct from Union and TCPL (NOL)
- Efficient
  - Low capital vs. versus capacity
- Flexible
  - Capacity ramp-up

# Range of Hamilton Line Upgrade options



Options	Minimum Delivery Pressure	Capital Cost	Capacity TJ/d
1. Existing Facilities plus a new MS at PW	3450 kPa	\$10 Million	~100
2. Option 1 + New CV and piping from the export line	3450 kPa	\$15 Million	~200
3. Option 1 + Compression at Burlington	3450 kPa	\$85 Million	~400
4. 22km NPS 36	6450 kPa	TBD	~900
5. Option 4 + Stn 209 and 211 reversals	6450 kPa	TBD	~1400



# 2012 Eastern Expansion Update



- **On-going consultation program**

- Working with landowners, developers, municipalities & government agencies

- **Recent Activities**

- Pipe order placed in Q4 2011
- Received valves and majority of long lead items Q4 2011

- **Currently Planned Activities**

- Finalize land appraisals Q1 2012
- Begin land acquisition negotiations Q1 2012
- Begin Fabrication May 2012 and Construction Q3 2012

- **Regulatory**

- Filed Section 58 NEB application in November 2011
- NEB IR's received on December 23 and due January 12, 2012
- Anticipate NEB approval Q2 2012

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**Union -TCPL 13**

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**Reference:** TransCanada Written Evidence, Section 3.4, page 10, lines 9-13

**Preamble:** TransCanada proposes an alternative that would flow gas from Dawn to Parkway on a path with significant distance using GLGT and TransCanada infrastructure.

**Request:**

- (a) Please confirm that this alternative would have gas flow approximately 3,800 km from Ontario to Manitoba and back again.
- (b) Does TransCanada use this path for its own system deliveries to Parkway or other points?
- (c) Does TransCanada use this path for its own system LCU protection at Maple or other points?
- (d) What is TransCanada's total cost of flowing Dawn to Parkway via the TransCanada and GLGT systems? Please include all assumptions including tolls, fuel, O&M and embedded cost of service.
- (e) Does TransCanada operate and maintain more equipment on its Emerson to Eastern Zone pipelines than it otherwise would if the gas flowed on a more direct path from Dawn to Parkway and from Parkway to market?

**Response:**

- (a) Not confirmed. TransCanada has contracted for 500 TJ/d of C1 (Dawn to Dawn TCPL) and a corresponding amount of St. Clair to Emerson service on GLGT since 2010. Since then, physical reversal of flow at Dawn has only occurred on three days. Other than in exceptional cases, the gas continues to physically flow in the Emerson to St. Clair direction and this capacity is used to effect a displacement, which results in lower capital costs, lower operating costs, and lower fuel consumption and costs. This is a displacement process similar to Union's Parkway Obligation.

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**Union -TCPL 13**

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- (b) TransCanada has contracted for 500 TJ/d of C1 (Dawn to Dawn TCPL) and a corresponding amount of firm service from St. Clair to Emerson on the GLGT system that TransCanada can use to effect displacements that result in receipts at Dawn being delivered to points downstream of Parkway on a firm basis.
- (c) LCU is an element of the system design of the Canadian Mainline and therefore all assets on the integrated system, including TBO assets, are influenced by the LCU criteria.
- (d) TransCanada began contracting for firm St. Clair to Emerson service on the GLGT System in 2010. TransCanada's assessment was that contracting for St. Clair to Emerson service on the GLGT System was the lowest cost means of meeting its contractual obligations. The components for assessing the "backhaul" versus "build" options were as follows:

Existing Infrastructure Economics (via Backhaul):

- Union Gas Dawn to Dawn TBO cost (demand and fuel), limited to (500 TJ/d) available
- GLGT St. Clair to Emerson TBO cost (demand, fuel (if applicable) and commodity charges);
- Metering changes at Dawn and Emerson; and
- Incremental NOL fuel and O&M costs.

The Base Annual Cost of Service in this option is \$33.4M.

The Base Annual Cost of Service for the alternative of construction of new infrastructure on the Dawn to Maple route is \$51.9M.

TransCanada evaluated the economics under a variety of scenarios including low and high capital costs, as well as sensitivities to various reduced gas prices. Overall the analysis showed that contracting for St. Clair to Emerson service resulted in an overall lower annual cost of service, ranging from a high of \$26 million to a low of \$16 million based upon a GLGT TBO St. Clair to Emerson cost of 0.08 \$US/Dth.

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**Union -TCPL 13**

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It should also be noted that the use of the GLGT backhaul contract provides additional flexibility. With the backhaul contract, TransCanada has been able to contract for service on a relatively short term basis, which enables TransCanada to align its requirements based on changing shipper contracts, changing market demand and changes in cost factors. This flexibility is not available with the contracting of incremental Union TBO capacity and the construction of new facilities.

TransCanada continually reviews the use of the GLGT backhaul option to meet its contract obligations at the lowest possible cost while recognizing the timeframe required to construct incremental facilities.

- (e) Nominating GLGT St. Clair to Emerson capacity does result in incremental fuel and O&M costs along the Northern Ontario Line. However, under design conditions the incremental costs are lower than the costs of the alternative as shown in the response to part d) above. Similarly, the incremental costs from operating conditions on the day may be lower than the fuel required by Union for the M12 transportation.

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**Union -TCPL 14**

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**Reference:** TransCanada Written Evidence, Section 3.4, page 11, lines 3-6

**Preamble:** TransCanada states that “Union would not require additional compression to increase its Dawn to Dawn-TCPL capacity”.

**Request:**

- (a) Specifically on what basis does TransCanada assert that “Union would not require additional compression to increase its Dawn to Dawn-TCPL capacity”?

**Response:**

- (a) In Exhibit G3, Tab 1, Schedule 1, Page 4 of 18, Lines 27 to 28, Union states that the compressor horsepower required to bring the pressure from 4926 to 6270 kPa on design day is transmission-related. TransCanada interprets that statement to mean there is sufficient compression at Dawn to compress the design day volumes to 6270 kPa. The 0.9 PJ/d design day shortfall due to a LCU event at Parkway means that the requirement for flow into the Dawn-Trafalgar system from Dawn has been reduced by 0.9 PJ/d plus a probable further reduction in fuel requirements along the system as a result of the lower flow. That essentially frees up sufficient compressor capacity to compress 0.9 PJ/d to a pressure of 6270 kPa for delivery to Dawn-TCPL subject to the necessary yard piping, regulating and metering facilities being in place.



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**Union -TCPL 15**

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**Reference:** TransCanada Written Evidence, Section 3.4, page 11, lines 10-12

**Preamble:** TransCanada states that “the most significant cost for this alternative would be the GLGT transportation”.

**Request:**

- (a) What is TransCanada’s estimate of the GLGT firm transportation cost to provide protection for an LCU event at Parkway? Please state all assumptions.
- (b) Please confirm if firm service between Dawn and Emerson on the GLGT system is provided with LCU protection?
- (c) What facilities are required to provide each of the services in a) above? Do the transportation costs in a) above include the impact of any incremental capital to provide the firm service on GLGT or TransCanada system? If there was a capital requirement, what was the capital cost to be able to backhaul on GLGT and in which year.

**Response:**

- (a) Please refer to the response to Board Staff – TCPL 1(a).
- (b) It is TransCanada’s understanding that GLGT designs its system to account for potential unit losses. Please note that TransCanada factors the use of third-party TBO capacity into its design philosophy for the Canadian Mainline, which incorporates LCU protection, and believes that Union and other pipelines that have the opportunity to should do so as well.
- (c) Please refer to the response to Board Staff – TCPL 1(a).

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**Union -TCPL 16**

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**Reference:** TransCanada Written Evidence, Section 4, page 11, lines 21-24

**Preamble:** TransCanada indicates that “events that would prevent deliveries from being made at Parkway and Lisgar appear to be extremely unlikely to occur”.

**Request:**

- (a) Please confirm that TransCanada is aware of an outage that occurred at the Lisgar interconnection with Enbridge on September 30, 2009 due to a fire that required the station to be shut-in for approximately seventy-five (75) days?

**Response:**

- (a) Confirmed. Deliveries to Enbridge through TransCanada interconnections such as Victoria Square increased during this timeframe, which is what would be expected in the event Union experienced difficulties. This is an excellent example of the LCU capability that already exists with TransCanada’s current infrastructure in meeting the needs of Union and its customers in the event of a major facility disruption at Parkway.

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**Union -TCPL 17**

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**Reference:** i) TransCanada Written Evidence, Section 4, page 12, lines 20-25;  
ii) “TransCanada seeks switch from Gas to Oil”, The Globe and Mail  
(<http://www.theglobeandmail.com/globe-investor/transcanada-seeks-switch-from-gas-tooil/article2415779/>), 27 April 2012

**Preamble:** TransCanada can provide more supply reliability to the Greater Toronto Area (GTA) than the proposed Parkway West facility.

**Request:**

- (a) In the event that service is interrupted to Enbridge at the Parkway (Consumers) feed or to both Parkway(Consumers) and Lisgar, describe in detail how TransCanada can provide incremental supply of up to 1.6 PJ/d on a design day through its existing facilities, including delivery points, flow at each delivery point, delivery pressures and sources of supply.
- (b) Please indicate whether the system pressure will fall below the minimum required delivery pressure at interconnections within the Enbridge CDA and Union EDA at any point in the modeling for a) above.
- (c) If one of the Mainline and NOL pipes is converted to oil service, what impact would that have on the ability of TransCanada to provide incremental supply of up to 1.6 PJ/d on a design day to Enbridge in the event of an outage of the Parkway (Consumers) feed or an outage of both the Parkway (Consumers) and Lisgar feeds.
- (d) Please indicate whether the system pressure will fall below the minimum required delivery pressures at interconnections within the Enbridge CDA and Union EDA at any point in the modeling for c) above.

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**Response:**

(a) & (b):

The Canadian Mainline is a diverse source of supply for Ontario. Gas enters the system from the WCSB in the west, at times from Emerson in Manitoba, from Union at Parkway and very soon will also be receiving gas from Tennessee Pipelines at Niagara. The supply reliability to the GTA is provided through existing interconnections between TransCanada and Union, TransCanada and Enbridge as well as between Union and Enbridge. Multiple large meter stations currently exist in the Parkway region to the south and in addition, through a major interconnection in the Victoria Square region to the north.

TransCanada's meter station reliability is extremely high. Station reliability is bolstered by the selective use of redundancy, minimizing the impact of equipment failure and enabling rapid detection. The probability of failures which force station flow to zero are extremely rare and in that unlikely event, supply would be managed by shifting loads to alternate meter stations, whether on Union or on TransCanada. The probability for multiple meter stations to fail simultaneously is unreasonably remote. However, should the unexpected occur, TransCanada would bypass its measurement equipment to ensure the markets are protected and expects that in that emergency circumstance, Union would respond similarly.

As indicated in the response to Union 6, recently TransCanada, Union and Enbridge worked together to effectively mitigate the effect of the station outage at Lisgar.

Please also refer to Attachment 9(a) with respect to Union and Enbridge CDA.

- (c) Please refer to the response to Union – TCPL 9(b).
- (d) Please refer to the response to Union – TCPL 9(b).

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**Union -TCPL 18**

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**Reference:** (i) TransCanada Written Evidence, Section 1, page 2, lines 7-9;  
(ii) TransCanada Written Evidence, Section 5, page 13, lines 4-19; and  
(iii) TransCanada Written Evidence, Section 6, page 13, lines 22-23

**Preamble:** (i) Union has proposed Parkway West for the reliability of its services into the TransCanada system.  
(ii) The Parkway West Project should be considered in the context of the market's development of expanded services to serve Maple and downstream points.  
(iii) Much is on the horizon for facilities development downstream of Parkway and in the GTA.

**Request:**

- (a) Please confirm that with TransCanada expansion downstream of Parkway, incremental throughput through Union's Parkway Compressor Station will be required.
- (b) Please confirm/demonstrate how TransCanada interprets that the proposed Parkway West Project and the proposed Parkway Extension Project are linked.
- (c) Please confirm that the Parkway West Project would provide LCU protection for Parkway deliveries to TransCanada's expansion plans.
- (d) Please confirm that TransCanada's Mainline and NOL are designed with LCU protection.
- (e) Please confirm that TransCanada depends on the reliability of Union's transportation services and supports LCU protected facilities.

**Response:**

- (a) TransCanada can confirm that TransCanada has contracted for additional firm deliveries on Union to Parkway for both November 1, 2012 and November 1, 2013. TransCanada cannot confirm whether other parties have contracted for additional incremental service on Union to Parkway and therefore whether additional throughput through Union's Parkway Compressor station will be required.

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**Union -TCPL 18**

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- (b) The following references in the Union interrogatory response filed as Exhibit J.B-1-7-8, Attachment 1, demonstrate the link between the proposed Parkway West Project and the proposed Parkway Extension Project:
- on slide 10, “Parkway West complements future growth projects east of Parkway, including the proposed Parkway Extension Project and Enbridge System Upgrade;”
  - on slide 4, “look for synergistic solutions to re-enforce Parkway, create a new independent feed for Enbridge and to expand capacity on the constrained Parkway to Maple Path;”
  - on slide 4, “A new feed into the GTA from the Parkway West station to a new city gate for Enbridge at Albion is built. This section of pipe will be a Joint Venture between Union and Enbridge Union owns and builds the remaining pipe from Albion to Maple. Union would then be able to provide service between Dawn and Maple;”
  - on slide 4, “Sum of all projects defined as ‘Parkway Projects’;”
  - on slide 8, “Parkway West Facilities; ... Future metering and interconnect with new pipeline to Albion/Maple;”
  - on slide 17, “Complements Parkway Extension Project (Parkway-Maple) which facilitates Ontario consumers supply diversity back to Dawn;” and
  - on slide 23, “Facilities include: ... Parkway (‘D’ Plant ) Compression” which implies that the fourth compressor at Parkway will be for the Parkway Extension and not for incremental capacity to TransCanada.
- (c) Confirmed for TransCanada’s 2012 expansion as described in the Union interrogatory response filed as Exhibit J.B-1-7-12 b). As noted in TransCanada’s response to Board Staff 1, TransCanada suggests that if there is a requirement for LCU, it should be met at the lowest overall cost to Union and its ratepayers. TransCanada further suggests that it would be prudent for Union, Enbridge and TransCanada to work collaboratively to investigate and evaluate alternatives that may be able to provide any necessary LCU protection at lower cost.
- (d) Confirmed.

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- (e) In general TransCanada supports the concept of LCU design but TransCanada also believes it is appropriate to choose the lowest cost solution that meets the design requirements. In the case of LCU at Parkway it is TransCanada's opinion that Union has not considered several options that will provide LCU protection at Parkway at a lower cost than the proposed Parkway West Project. TransCanada also confirms that it routinely consults with customers and interconnecting operators to identify facility alternatives and the lowest overall cost design as described in the response to Board Staff-TCPL 2.

As part of such consultations, should TransCanada identify that another pipeline operator already has infrastructure in place to provide incremental STFT as LCU protection on a cost effective basis with a very high degree of reliability, TransCanada would thoroughly investigate and pursue that option in preference to expending significant capital on redundant facilities.