

Existing Configuration

From Union's application, Project Summary, page 1:

"Physically, the distribution systems serving the Town of Oakville and the City of Burlington are supplied by deliveries from Union's pipelines connected to Union's Dawn Parkway System and with contracted transportation services on the TransCanada Mainline. The transportation services on the TransCanada Mainline are contracted either directly with TransCanada or in the secondary market. Approximately 25% of the design day demand is supplied by deliveries from Union's pipelines. The remaining 75% of the design day demand is supplied with contracted transportation services, of which approximately 40% is contracted transportation services acquired through the secondary market. The Burlington Oakville System, which provides supply to the Town of Oakville and City of Burlington, therefore relies heavily on natural gas delivered through contracted transportation services."

The existing arrangements are as follows:

- From TransCanada:
 - 68 TJ/d from Dawn to CDA
 - 16 TJ/d from Parkway to CDA
 - 84 TJ/d total
- From Union's Dawn to Parkway system:
 - 30 TJ/d from 12" line
 - 24 TJ/d from 8" line
 - 54 TJ/d total
- From a third party:
 - 60 TJ/d exchange for the winter period November 1 to March 31
- Total = 198 TJ/d to serve the Burlington Oakville load.

Proposed Configuration

From Union's application, Project Summary, pages 2 and 3:

"Union proposes to meet the growth and address the security of supply needs of the Burlington Oakville System by constructing new pipeline facilities from the Dawn Parkway System to the existing NPS 20 Burlington to Oakville Pipeline at the Bronte Gate Station for November 1, 2016 in-service. The Proposed Pipeline provides reliable, secure supply over the long term at a lower cost than contracting for transportation services (if they were even available). The Proposed Pipeline and ancillary facilities ("the Project") will cost ratepayers less than the cost of transportation services to supply the Burlington Oakville System today. The Proposed Pipeline will provide a high pressure pipeline system from which future development in the rapidly expanding Oakville, Burlington and Milton region can be served."

The proposed arrangements are as follows.

- From TransCanada:
 - 11 TJ/d from Dawn to CDA
 - 135 TJ/d from Kirkwall to CDA (this is part of the Settlement Agreement with TransCanada, the volume is not used to serve the Burlington Oakville demand)

- From Union:
 - 30 TJ/d from 12" line
 - 24 TJ/d from 8" line
 - 211 TJ/d from proposed 20" line
 - 265 TJ/d
- Total = 276 TJ/d to serve the Burlington Oakville load + 135 TJ/d from Kirkwall to CDA to keep TransCanada revenue neutral.

Alternative

Historically, gas is sourced from Dawn and would flow from Dawn to Parkway and then from Parkway to Oakville and Burlington. TransCanada's Greater Golden Horseshoe Facilities Project demonstrates that significantly more gas can be sourced from Niagara/Douglstown ("Niagara") at minimal incremental capital cost to serve the Ontario market such as the Burlington Oakville demand (designated as Union ECDA on the TransCanada system) and the demands in Hamilton Gate 3 and Kirkwall Dominion (designated as the Amended Union CDA on the TransCanada system).

According to Union's application, approximately 75% of the demands in Burlington and Oakville are served through contracts on the TransCanada system to Union CDA. If the applied for Burlington Oakville Pipeline Project is approved, the existing Union CDA would be split into two delivery areas, Union ECDA which include Oakville and Burlington and Amended Union CDA which includes Kirkwall Dominion and Hamilton Gate 3 (see EB-2014-0182, Exhibit B.BOMA.4, Attachment 1).

Union's proposal reflects the historic supply and flow of gas. It does not reflect the new reality of gas supply from Niagara facilitated through the approval of TransCanada's Greater Golden Horseshoe Facilities Project in May 2015. Union currently purchases 21 TJ/d of gas supply at Niagara. It could purchase more Marcellus gas at Niagara and use that gas to serve the demands in both Union ECDA and Amended Union CDA. Instead of contracting for only 75% of the ECDA demand on the TransCanada system, Union could serve 100% of the demand through the TransCanada system. The advantages of the Alternative include:

- (1) eliminate the need for the proposed Burlington Oakville Pipeline Project;
- (2) reduce the need for new facilities on Union's Dawn to Parkway system;
- (3) reduce the existing in-franchise demand on Union's Dawn to Parkway system;
- (4) increase security of supply through an additional supply point, namely Niagara;
- (5) increase flexibility to serve future growth in Milton, Oakville, Burlington and Hamilton;
- (6) reduce cost exposure should growth not materialize as forecast;
- (7) enhance longevity of the existing 8" and 12" pipelines serving the Burlington Oakville area; and
- (8) increase the utilization of existing facilities on the TransCanada system.

Whether Union serves the incremental Burlington Oakville load through its own system or through a commercial arrangement on the TransCanada system, it has to transport the gas from Dawn to Parkway if the supply comes from Dawn. The cost of the incremental capacity on the Dawn to Parkway system is twice as much as the current M12 rate (see Preliminary Cost Comparison). If Union purchases the incremental gas supply at Niagara instead of Dawn and transports it through the TransCanada system to the Burlington Oakville area, Union's Dawn to Parkway system does not need to be expanded. The expansion of the Dawn to Parkway system

can be further reduced if Union purchases gas supply to serve both the incremental demand and the existing demand. Stated another way, if the existing Burlington Oakville demand does not need to be transported from Dawn, Union can use the vacated capacity to serve new M12 or C1 customers without adding new facilities.

To meet the aggregate winter 2014/15 design day demand totalling 2868 TJ/d for Union South, Union has 21 TJ/d supply from Niagara (see 2014-2015 gas supply memorandum section 5.1.1 from Exhibit A, Tab 5 in EB-2015-0010). In the future, Union could increase the supply from Niagara to meet its aggregate demand for Union South. Purchasing additional supply at Niagara is consistent with Union's gas supply planning objectives and principles including:

- ensure secure and reliable gas supply to Union's service territory at a reasonable cost;
- minimize risk by diversifying contract terms, supply basins and upstream pipelines;
- encourage new sources of supply as well as new infrastructure to Union's service territory; and
- deliver gas to various receipt points on Union's system to maintain system integrity.

During the technical conference on May 21, 2015, Union noted it is difficult to know exactly where the demand growth would be (transcript page 97). Contracting on TransCanada would allow Union to be indifferent to where the demand growth occurs. If future demand materializes west of Burlington instead of east of Burlington, Union can simply nominate more deliveries at Burlington. Union can increase or decrease its contract demand on the TransCanada system to match actual growth whereas once a pipeline is built, the cost of service must be paid.

By reducing the volume of gas flowing from the Dawn to Parkway system to the Burlington Oakville system through the existing 8" and 12" lines, there is less wear on these pipelines. Because the design day assumes the demand in Burlington Oakville area is served by TransCanada from Niagara, the existing 8" and 12" lines can provide additional security of supply and can be used to supplement higher than design day demands.

Is the Alternative technically feasible?

Exhibit B.OGVG.1 shows where the existing TransCanada and Union facilities are located and how the pipelines are connected. Currently, gas flows from Parkway to Oakville (Bronte) and Burlington on both the TransCanada and Union systems. In its Greater Golden Horseshoe Facilities Project application, TransCanada applied to the National Energy Board (NEB) under Section 58 of the *NEB Act* to install facilities that would, amongst other things, allow it to reverse the flow between MLV 207 (Burlington) and Parkway (see S58, flow schematics with current facilities and with proposed facilities). The NEB approved this application in May 2015 and the ability for reverse flow is expected to be implemented by November 1, 2015.

It is noted that while TransCanada is modifying its existing system so that it can transport gas from Bronte to Parkway, Union is proposing to construct a new pipeline along the same pipeline corridor so that it can transport a similar volume of gas in the opposite direction from Parkway to Bronte at the same time. One would observe that if both systems were owned by one company and all the facilities were under the jurisdiction of one regulator, it would be difficult for that company to justify both projects at the same time.

According to the flow schematic with proposed facilities, TransCanada will have firm capacity to transport 287 TJ/d from Niagara to Burlington, 200 TJ/d from Burlington to Parkway and 489 TJ/d from Niagara to Kirkwall. The incremental firm capacities from Niagara to Parkway and

Kirkwall are required to provide incremental FT services, totalling 348 TJ/d, to Enbridge. The total capital cost to provide the incremental FTs is only \$27 million.

Under the Alternative described above, Union would source a total of 276 TJ/d from Niagara to the Burlington Oakville area. To accommodate this volume, TransCanada would have to increase the receipt capacity at Niagara by 255 TJ/d¹ and increase the delivery capacity from MLV 209 to 207 by 189 TJ/d². In the undertaking provided during the technical conference, Union stated that the maximum operating pressure of TransCanada's Domestic Line to Burlington is 6450 kPa (see Exhibit JT1.4). If this is true, TransCanada can easily provide the increase in receipt and delivery capacities using its existing facilities without the addition of new pipeline or compression facilities.

If the maximum pressure information provided by Union is incorrect and the maximum operating pressure between MLV 209 to 207 is only 4480 kPa (see Figure 3 in S58 Appendix 9, Figure 3), TransCanada will not be able to expand the Domestic Line. Instead, TransCanada will have to transport the gas to Kirkwall and then through the Union system to Parkway. If this is the case, no new pipeline or compression facilities are required on the TransCanada system while Union may need to add some facilities between Kirkwall and Parkway. It should be noted that physically, gas will not be transported from Parkway south to Bronte, instead, more gas would be dropped off in Burlington and Bronte and less gas would be transported to Parkway from Bronte on the Domestic Line. Any incremental facilities required on the TransCanada and Union systems are expected to be a fraction of the proposed Burlington Oakville Pipeline Project.

Is the Alternative economically feasible?

While it is clear the Alternative is technically feasible, to test the economics of the Alternative, a high level preliminary cost comparison for 2018 is performed. The preliminary cost comparison (attached) shows a savings of \$4 to \$12.8 million depending on whether the comparison is based on current rates or the cost of incremental capacity on Union's Dawn to Parkway system. This preliminary analysis is not purported to be a wholesome economic evaluation. It is provided to demonstrate further investigation is merited. Even if the high level cost comparison shows marginal savings, the Alternative should still be investigated because of the many advantages associated with it described in an earlier section.

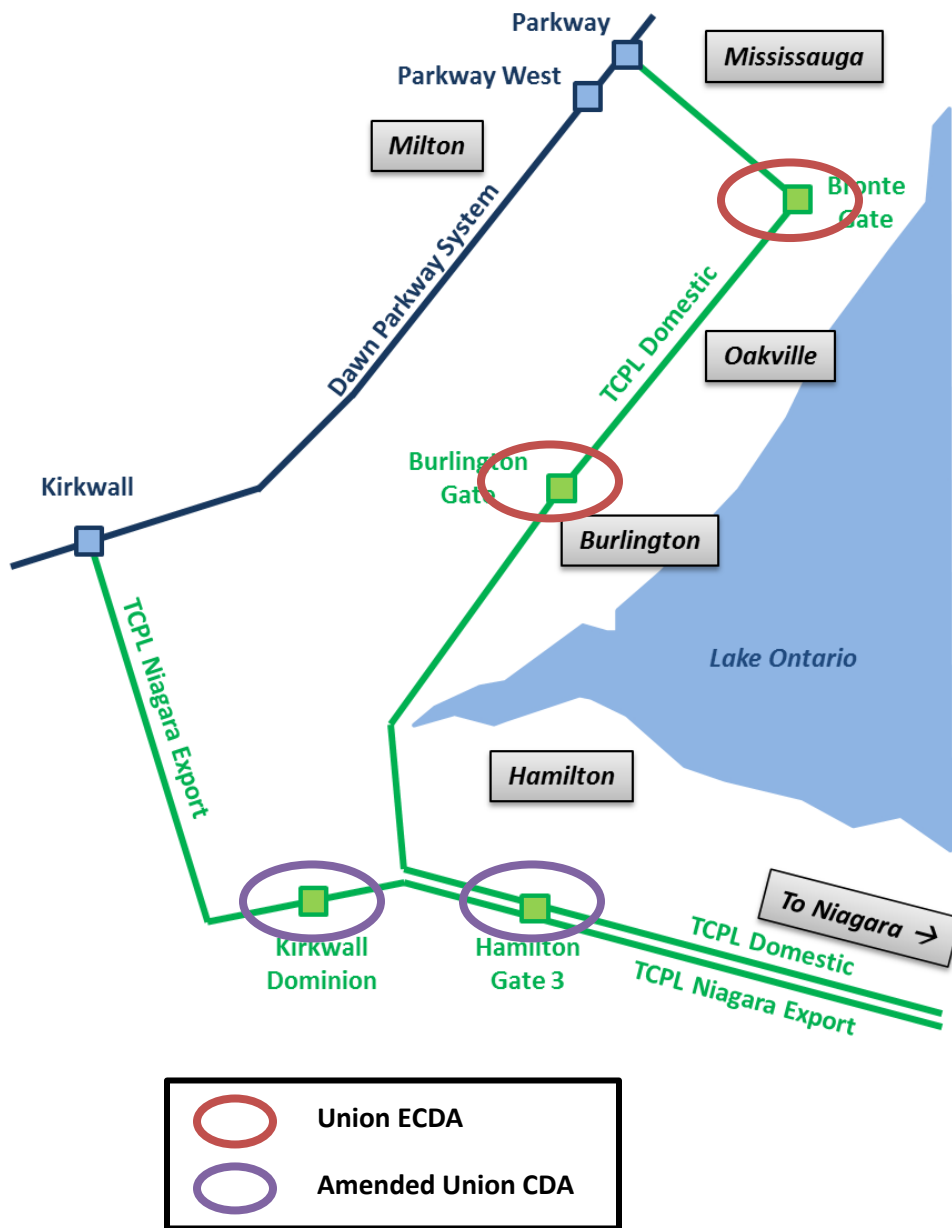
It is recognized that there are outstanding issues associated with the Alternative including but not limited to:

- What facilities are required on the TransCanada and Union system;
- Full NPV analysis including impact on TCPL rates is required, not just one year;
- Ways to minimize unabsorbed demand charges;
- Include gas supply cost in the cost comparison (EB-2015-0010, Exhibit A, Tab 4, Appendix A shows gas price at Niagara is lower than that at Dawn);
- Operational integration of increased supply from Niagara;
- Impact of and potential modification to the proposed segregation of Union CDA to Parkway, ECDA and Amended CDA;
- Potential to supply Hamilton demand from Niagara; and
- Effect on liquidity at Niagara.

¹ 276 TJ/d less 21 TJ/d existing supply from Niagara.

² 276 TJ/d less 87 TJ/d existing delivery to Union at MLV 207.

Location of Union's Gate Stations in the Union CDA



5.1.1 Union South Design Day

Union South design day demand is the total firm requirement of the in-franchise sales service, bundled, unbundled and transportation service customers in the South delivery area.

The design day weather condition for the Union South area is based on the coldest observed degree day experienced in the Union South delivery area. The design degree day for Union South is 43.1 measured at the London airport.

For Union South, the Gas Supply Plan is focused on purchasing upstream supply and transportation to meet Union's annual demand requirements. The annual volume requirement is divided by 365 days such that the upstream pipe flows at 100% utilization each day of the year. During times when usage is less than the upstream supply, the excess supply is injected into storage at Dawn. When demands are greater than the upstream supply, gas is withdrawn from storage and transported to Union South in-franchise customers.

The role of meeting the entire design day needs for Union South resides within the gas storage and transmission system plans. The Gas Supply Plan is only a component of this broader exercise and only manages the average day supply needs for Union South sales customers. To meet the design day requirements of Union's South in-franchise customers, Union must have sufficient volume of gas in storage for the seasonal and firm design day demand requirements (storage plan) and sufficient transportation assets to move the upstream supply and gas out of storage into the transmission pipeline systems and to markets. The transmission system plan requires Union to have enough transmission assets to move the firm design day demand from the systems supply points to its customers on design day. Union's distribution systems are designed to meet peak day requirements. If the transmission or storage assets are not sufficient to meet design day and seasonal requirements, Union will build additional assets or purchase services to meet this shortfall.

Design days do not occur every year, however, the assets must be available should the design day occur. The resources available to meet Union's design day in Union South are shown below in Figure 7.

Although the design degree day of 43.1 has not changed in Union South, the customers' demands on a peak day have increased. The design day requirements in Union South have increased from 2,743 TJ/d to 2,868 TJ/d.

Figure 7

Winter 2014/2015 Design Day	
<u>Union South Design Day Demand and Resources (TJ/day)</u>	
Demand	
Union South*	2,868
Supply	
Storage at Dawn	1,381
Non-obligated (e.g. Power Plants)	188
TCPL Empress to Union CDA	67
Trunkline	21
Panhandle	39
TCPL Niagara	21
Ontario Parkway	359
Alliance/Vector	84
Vector	112
MichCon	11
Ontario Dawn	539
Customer Supplied Fuel	45
Total Supply	2,868
* includes Sales Service, Bundled Direct Purchase, T-service, Unbundled	

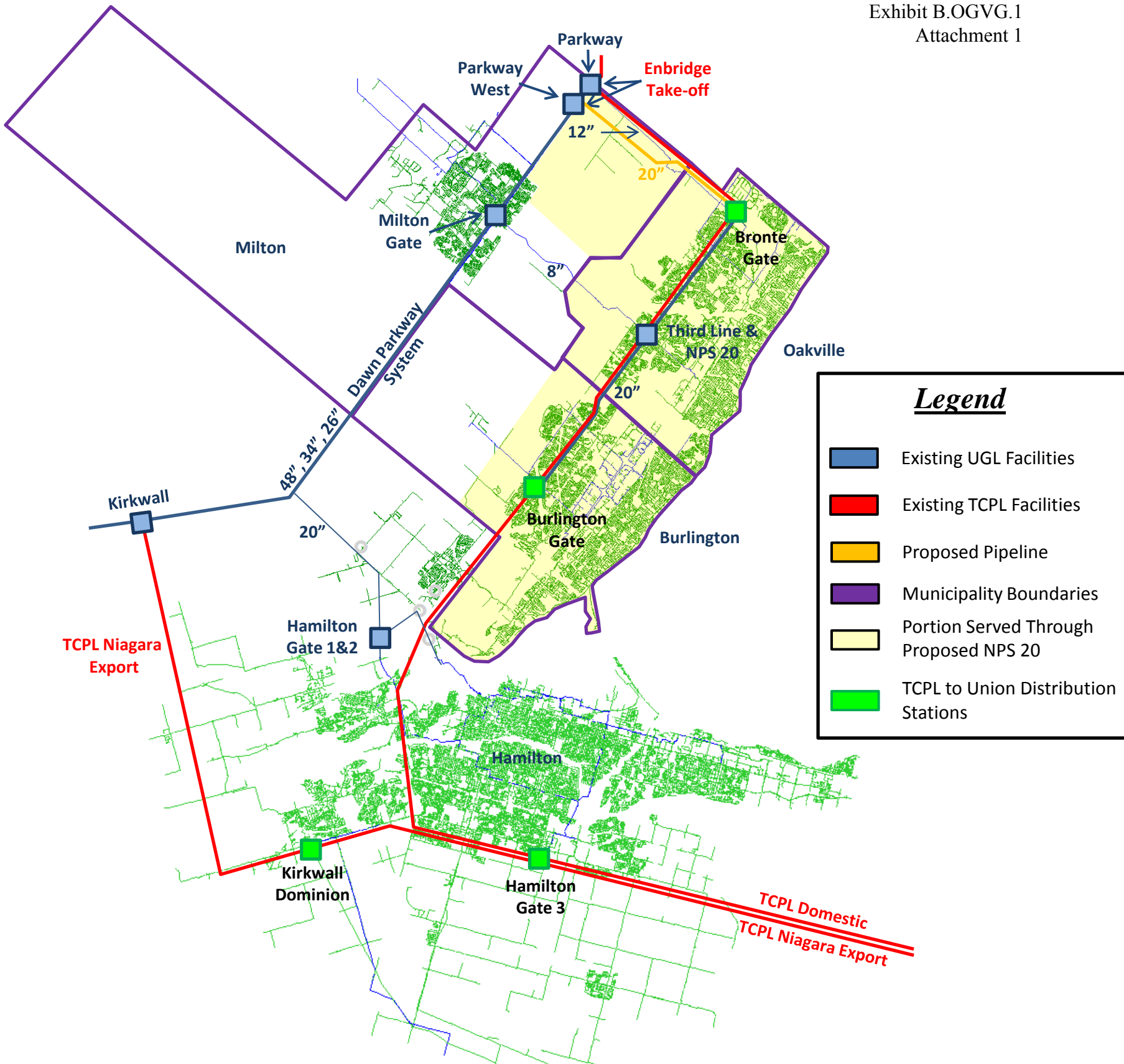
5.1.2 Union North Design Day

Union North design day demand is the total firm requirement of the in-franchise sales service and bundled DP customers in each of Union's six Northern delivery areas. Union does not include demand for customers with transportation service contracts as these customers are required to provide their own transportation services on TransCanada to Union to provide Union sufficient supply to meet their design day requirements.

The design day weather condition is based on the coldest observed degree day experienced in each of the six delivery areas. The design degree day for the Northern Delivery areas is as follows:

WDA	56.1	Thunder Bay
MDA	54.7	Fort Frances
SSMDA	48.2	Sault Ste Marie
NCDA	49.0	Muskoka / Gravenhurst
NDA	51.9	Sudbury
EDA	47.1	Kingston

Even though the winter of 2013/2014 was extremely cold, there were no new heating degree records set to adjust the ones used from the previous plan.



System Schematics

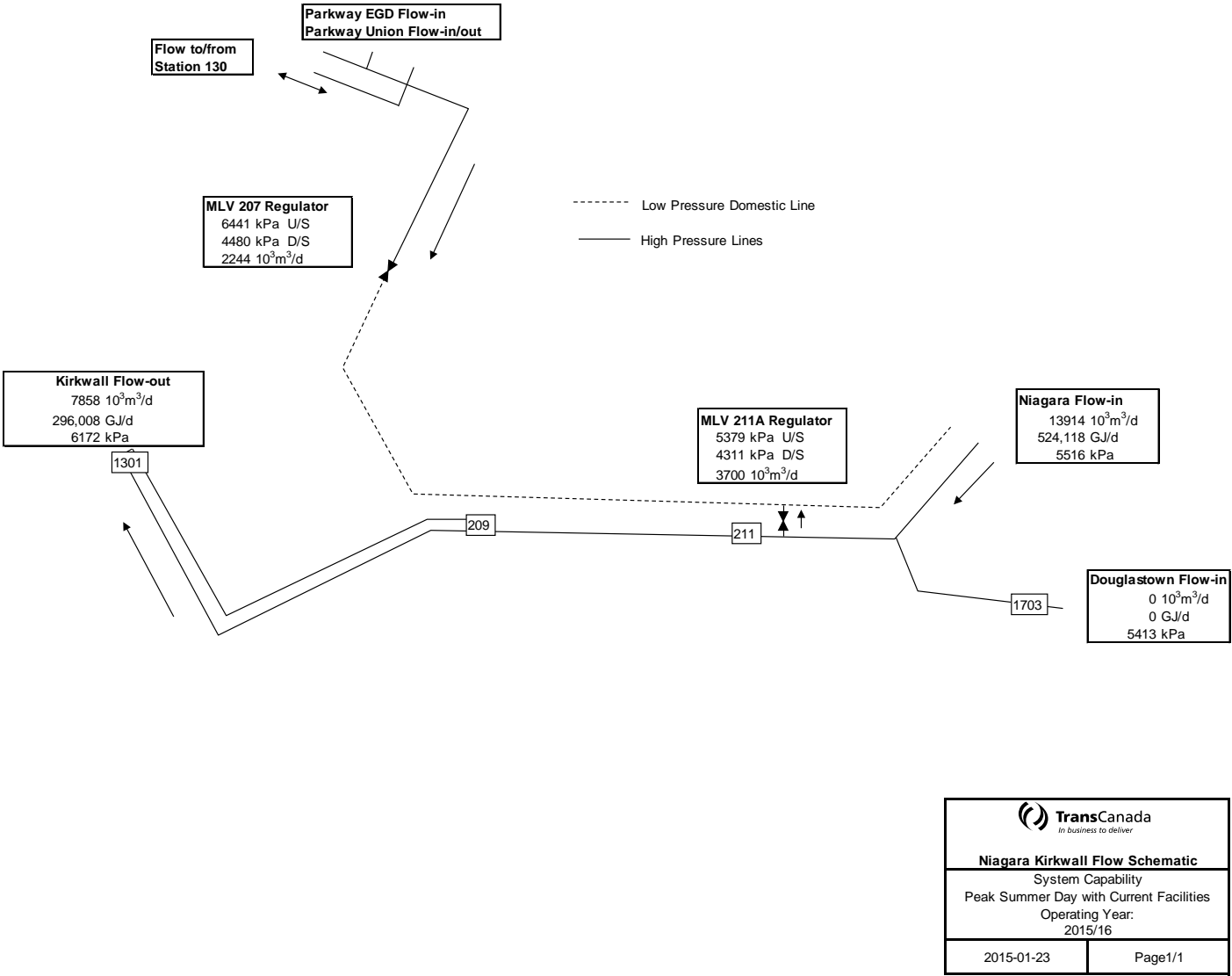


Figure 3-1: Flow Schematic with Current Facilities

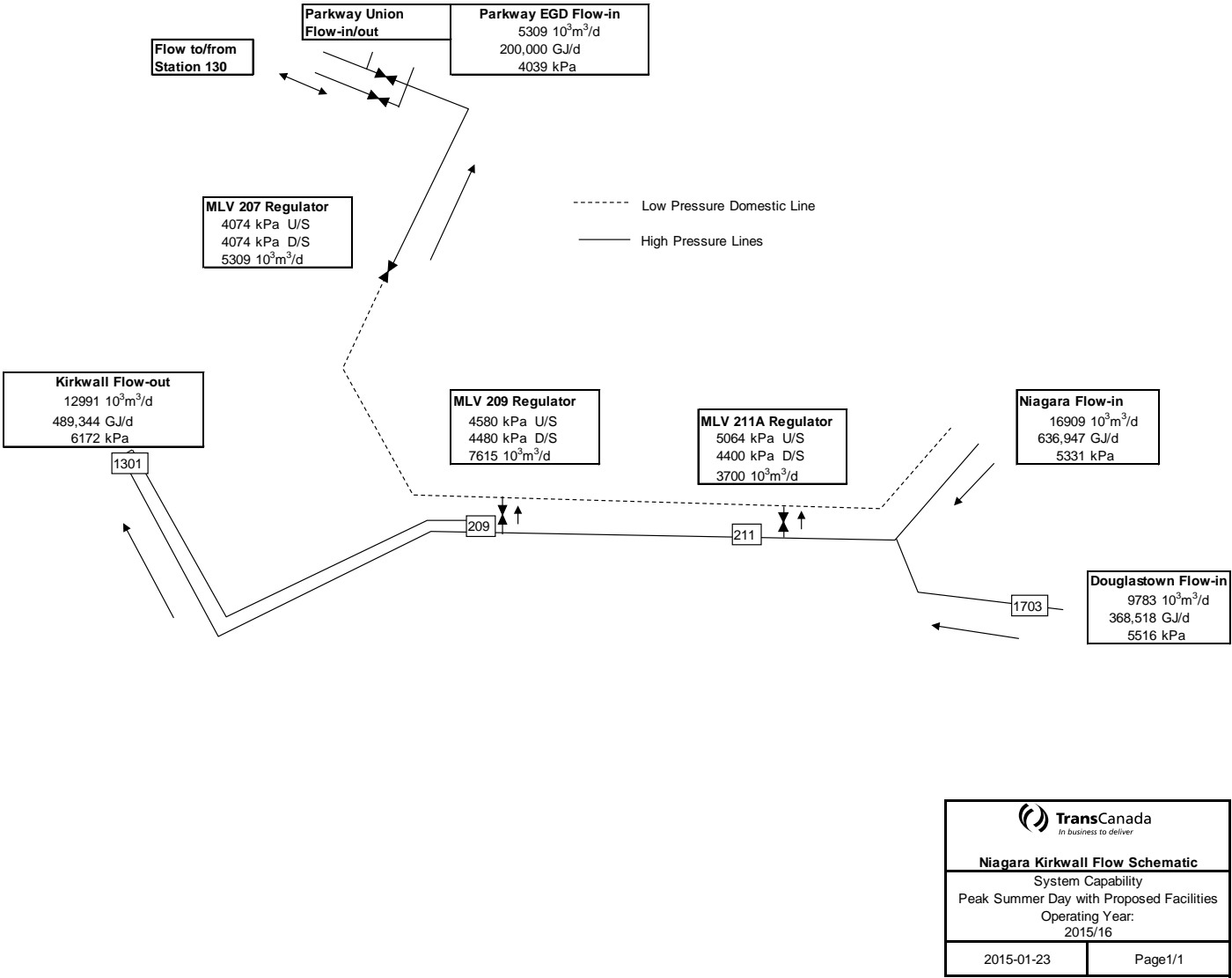


Figure 3-2: Flow Schematic with Proposed Facilities

Maximum Operating Pressures (“MOP”)

From	To	Location	From (MOP)	To (MOP)
Union Dawn Parkway System	TransCanada Mainline	Parkway/Parkway West	6160	6450
Union Dawn Parkway System	Enbridge	Parkway Consumers/Lisgar	6160	3450
Union Dawn Parkway System	TransCanada Mainline (Niagara Export Line)	Kirkwall	6160	6895
Union Dawn Parkway System	Union High Pressure Distribution System	Hamilton 1 & 2	6160	5033
Union Dawn Parkway System	Union High Pressure Distribution System	Milton Gate	6160	2760
Union Dawn Parkway System	Union High Pressure Distribution System	Halton Hills	6160	6160
Union Dawn Parkway System	Union High Pressure Distribution System	Parkway Transmission	6160	1900
TransCanada (Niagara Domestic Line)	Union Burlington Oakville System	Bronte Gate	6450	1900
TransCanada (Domestic Line)	Union Burlington Oakville System	Burlington Gate	6450	1900
TransCanada Mainline (Niagara Export Line)	Union High Pressure Distribution System	Kirkwall/Dominion	6895	4960
TransCanada Mainline (Niagara Export Line or Domestic Line)	Union High Pressure Distribution System	Hamilton #3	6895 or 4480	1900

Pipe Integrity Engineering Assessment of Greater Golden Horseshoe Facilities Project



Item ID: 009063088

Rev.: 00

Status: Final

Effective Date: 2015-FEB-23

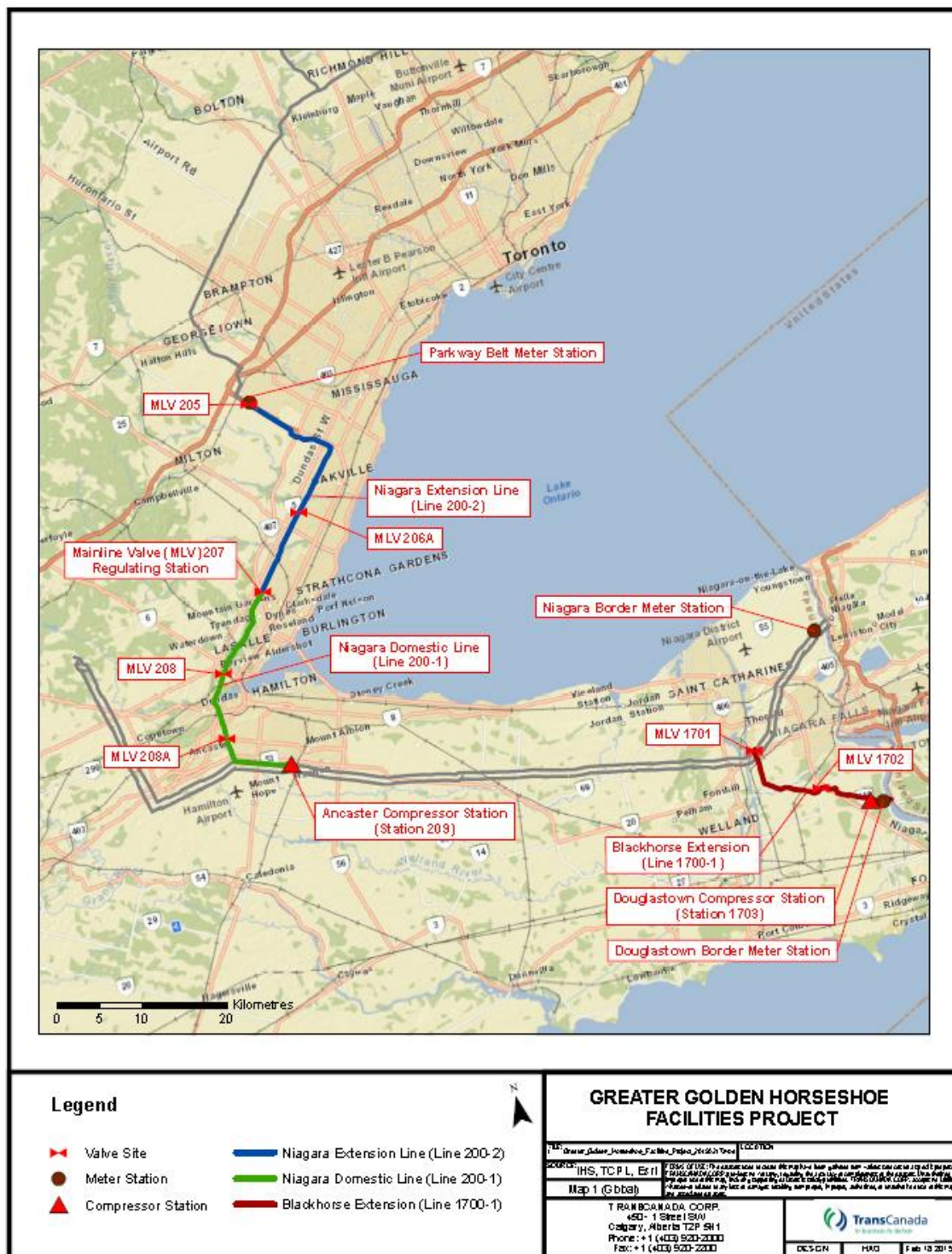


Figure 1: Location of Pipeline Segments and Facilities – Greater Golden Horseshoe Facilities Project

Pipe Integrity Engineering Assessment of Greater Golden Horseshoe Facilities Project



Item ID: 009063088

Rev.: 00

Status: Final

Effective Date: 2015-FEB-23

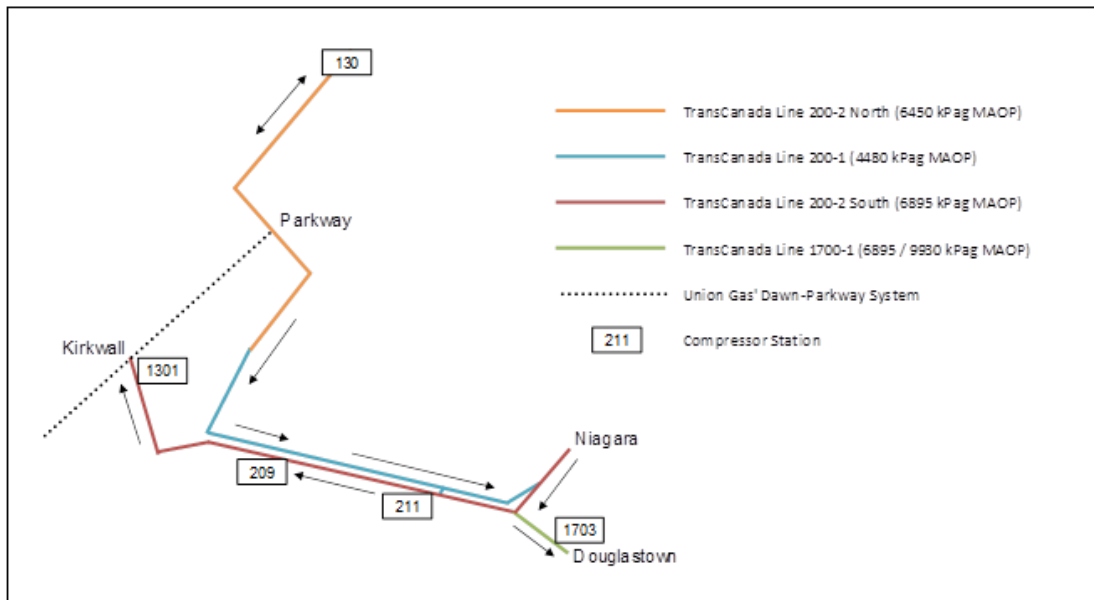


Figure 2: Current Flow Direction in the Affected Segments of Lines 200-1, 200-2 and 1700-1

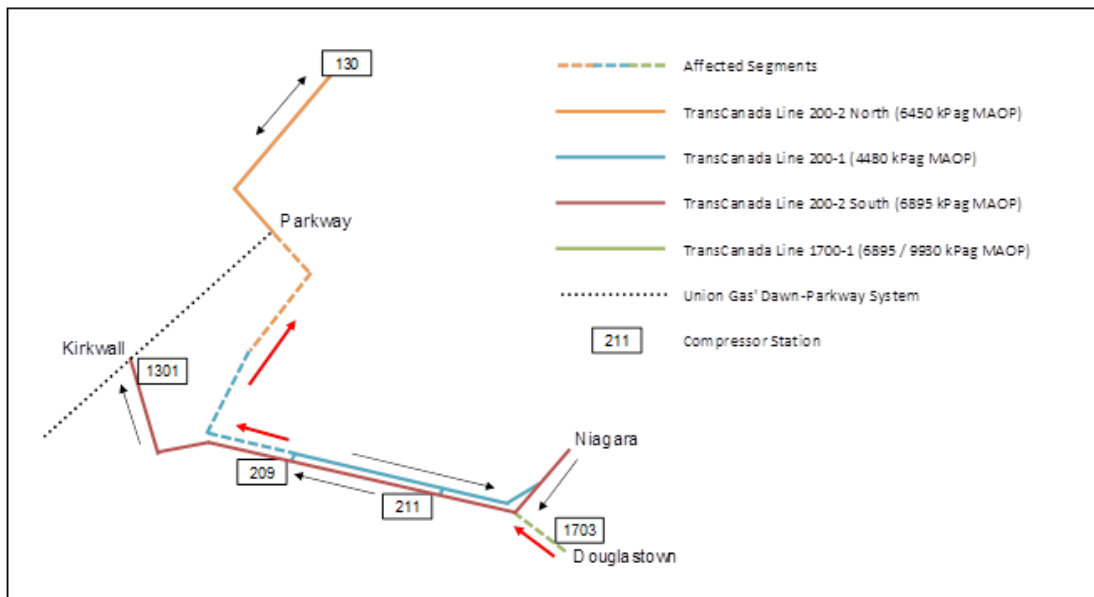


Figure 3: Expected Flow Direction in the Affected Segments of Lines 200-1, 200-2 and 1700-1

Preliminary Cost Comparison for the year 2018 (excluding fuel)

	Current Rates	Incremental Capacity Rate	Existing		Proposed using Current Union Rates		Proposed using Incremental Capacity Rate		Alternative		Cost Savings using Current Union Rates	Cost Savings using Incremental Capacity Rate
	\$/GJ	\$/GJ	Volume, TJ	Cost, \$MM	Volume, TJ	Cost, \$MM	Volume, TJ	Cost, \$MM	Volume, TJ	Cost, \$MM	\$ MM	\$ MM
TransCanada:												
Dawn to CDA	0.3239		68	8.04	0	0.00	0	0.00				
Parkway to CDA	0.1563		16	0.91	11	0.63	11	0.63				
Kirkwall to CDA	0.1674				135	8.25	135	8.25				
Niagara to CDA	0.2188								276	22.04		
Total TransCanada			84	8.95	11	8.88	11	8.88		22.04		
Union Gas:												
Dawn to Parkway (TC)	0.086		16	0.50	11	0.35	11	0.35				
Dawn to Parkway	0.086	0.177	54	1.70	265	8.32	265	17.10				
Total Union			54	2.20	265	8.66	265	17.45		0.00		
Exchange:												
Third party (Nov. 1 to Mar. 31)	0.96		60	8.70								
Burlington Oakville Project						8.5		8.5				
Total			198	19.85	276	26.04	276	34.83		22.04	4.00	12.78

Sources:

1. Current TransCanada rates are interim tolls effective Jan. 1, 2015, includes final abandonment surcharge.
2. Current Union rates are as updated April 1, 2015.
3. Incremental capacity rate for Dawn to Parkway is based on Union response to OGVG.4: \$14.2 million for 220 TJ from Dawn to Parkway.
4. Third party exchange toll is from Union 2014/2015 Gas Supply Memorandum, Appendix C.
5. Kirkwall to CDA elimination for the Alternative is based on EB 2014-0182 Tech. Conf. transcript p. 72

2014/15 Gas Supply Plan Memorandum

Appendix C

UNION GAS LIMITED

Summary of Upstream Transportation Contracts - as at November 1, 2014

Northern and Eastern Operations Areas

Line No.	Upstream Pipeline	Primary Receipt Point	Primary Delivery Point	Contract Quantity	Contract Units	Contract Termination Date	Unitized Demand Charge (\$Cdn/GJ)	Commodity Charge (\$Cdn/GJ)	100% LF Toll (\$Cdn/GJ)
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h=f+g)
TransCanada Pipeline									
1	Empress to Union NCDA FT	Empress	Union NCDA	10,756	GJ	31-Oct-2017	1.495		1.495
2	Empress to Union EDA FT	Empress	Union EDA	59,101	GJ	31-Oct-2017	1.650		1.650
3	Empress to Union NDA FT	Empress	Union NDA	76,015	GJ	31-Oct-2017	1.317		1.317
4	Empress to Union WDA FT	Empress	Union WDA	39,880	GJ	31-Oct-2017	0.856		0.856
5	Empress to Union SSMDA FT	Empress	Union SSMDA	8,843	GJ	31-Oct-2017	1.194		1.194
6	Empress to Union MDA FT	Empress	Union MDA	4,522	GJ	31-Oct-2017	0.598		0.598
7	Parkway to Union EDA FT	Parkway	Union EDA	35,000	GJ	31-Oct-2017	0.250		0.250
8	Parkway to Union CDA FT	Parkway	Union CDA	16,000	GJ	31-Oct-2017	0.101		0.101
9	Dawn to Union CDA FT	Dawn	Union CDA	8,000	GJ	31-Oct-2017	0.204		0.204
10	TCPL FT - Total			258,117	GJ				
Other									
11	Parkway to CDA - Exchange	Parkway	Union CDA	60,000	GJ	31-Mar-2015	0.960		0.960
12	Total - Other			60,000	GJ				
TransCanada Storage Transportation Service Firm Withdrawal									
13	NCDA	Parkway	Union NCDA	13,704	GJ	31-Oct-2017			
14	WDA	Parkway	Union WDA	31,420	GJ	31-Oct-2017			
15	SSMDA	Dawn	Union SSMDA	35,022	GJ	31-Oct-2017			
16	NDA	Parkway	Union NDA	48,375	GJ	31-Oct-2017			
17	EDA	Parkway	Union EDA	68,520	GJ	31-Oct-2017	0.250		0.250
18	TCPL Firm STS Withdrawal - Total			197,041	GJ				
TransCanada Storage Transportation Service Firm Injection									
19	NCDA	Union NCDA	Parkway	0	GJ	31-Oct-2017			0.000
20	WDA	Union WDA	Parkway	3,150	GJ	31-Oct-2017	0.840		0.840
21	SSMDA	Union SSMDA	Parkway	0	GJ	31-Oct-2017			
22	EDA	Union EDA	Parkway	47,571	GJ	31-Oct-2017			
23	NDA	Union NDA	Parkway	49,100	GJ	31-Oct-2017	0.358		0.358
24	TCPL Firm STS Injection - Total			99,821	GJ				
Centra Transmission Holdings Inc.									
25	Centra Transmission Holdings Inc.	Spruce	Union MDA	149.6	10 ³ m ³	31-Oct-2015	0.221		0.221
26	Centra Pipelines Minnesota Inc.	Sprague	Baudette	5,281	MCF	31-Oct-2015	0.061		0.061
27	CTHI FT - Total			5,695	GJ		0.283		0.283

Exchange Rate 1 US =
Conversion Factor
Heat Content

1.1271 CAD
1.055056
38.07

Bank of Canada USD Close Oct. 31, 2014

UNION GAS LIMITED
 2014-2015 Transportation Contracting Analysis

	Route	Point of Supply	Basis Differential \$US/mmBtu	Supply Cost \$US/mmBtu	Unitized Demand Charge \$US/mmBtu	Commodity Charge \$US/mmBtu	Fuel Charge \$US/mmBtu	100% LF Transportation Inclusive of Fuel \$US/mmBtu	Landed Cost \$US/mmBtu	Landed Cost \$Cdn/G	Point of Delivery
	(A)	(B)	(C)	(D) = Nymex + C	(E)	(F)	(G)	(I) = E + F + G	(J) = D + I	(K)	(L)
(2)	PEPL (2012-2017)	Panhandle Field Zone	-0.302	3.8152	0.3200	0.0441	0.1839	0.5480	\$4.36	\$4.41	Ojibway
	Dawn	Dawn	0.256	4.3735	0.0000	0.0000	0.0000	0.0000	\$4.37	\$4.42	Dawn
(2)	Trunkline/Panhandle	Trunkline Field Zone 1A	-0.107	4.0102	0.1923	0.0275	0.1531	0.3729	\$4.38	\$4.43	Ojibway
*	Michcon to St. Clair	SE Michigan	0.171	4.2883	0.0320	0.0000	0.0699	0.1019	\$4.39	\$4.44	St. Clair
(2)	TCPL Niagara	Niagara	0.156	4.2735	0.1409	0.0000	0.0069	0.1478	\$4.42	\$4.47	Kirkwall
*	PEPL - (Mkt Quote)	Panhandle Field Zone	-0.302	3.8152	0.4200	0.0441	0.1839	0.6480	\$4.46	\$4.51	Ojibway
(2)	Panhandle Longhaul (2010-2017)	Panhandle Field Zone	-0.302	3.8152	0.4251	0.0441	0.1839	0.6531	\$4.47	\$4.52	Ojibway
	Vector 1 Year (Mkt Quote)	Chicago	0.115	4.2329	0.2100	0.0018	0.0406	0.2524	\$4.49	\$4.53	Dawn
(2)	Vector (2008-2016)	Chicago	0.115	4.2329	0.2500	0.0018	0.0406	0.2924	\$4.53	\$4.58	Dawn
	ANR-Michcon-Union (Gulf)	ANR South East	-0.102	4.0152	0.3579	0.0161	0.1622	0.5361	\$4.55	\$4.60	St. Clair
	GLGT to TCPL	Northern Michigan	0.191	4.3083	0.2851	0.0074	0.0274	0.3199	\$4.63	\$4.68	Dawn
	ANR-GLGT-TCPL	Fayetteville	-0.076	4.0419	0.5498	0.0216	0.1213	0.6926	\$4.73	\$4.79	Dawn
(2)	Alliance/Vector (2000-2015)	CREC	-0.635	3.4822	1.7201	-0.4098	0.1934	1.5037	\$4.99	\$5.04	Dawn
(1)	TCPL SWDA	Empress	-0.362	3.7550	1.4045	0.0000	0.1220	1.5265	\$5.28	\$5.34	Dawn
(2)	TCPL CDA	Empress	-0.362	3.7550	1.5237	0.0000	0.1312	1.6549	\$5.41	\$5.47	Union CDA

(1) For Reference Only
 (2) Existing Union Gas Contract
 * indicates path referenced in evidence for this analysis

Assumptions used in Developing Transportation Contracting Analysis:

Annual Gas Supply & Fuel Ratio Forecasts	Point of Supply Col (B) above	Nov 2014 - Oct 2015	Average Annual Gas Supply Cost \$US/mmBtu Col (D) above	Fuel Ratio Forecasts Col (G) above
Henry Hub (NYMEX)	Henry Hub	\$4.12	\$4.12	
PEPL (2012-2017)	Panhandle Field Zone	\$3.82	\$3.82	4.82%
Dawn	Dawn	\$4.37	\$4.37	0.00%
Trunkline/Panhandle	Trunkline Field Zone 1A	\$4.01	\$4.01	3.82%
Michcon to St. Clair	SE Michigan	\$4.29	\$4.29	1.63%
TCPL Niagara	Niagara	\$4.27	\$4.27	0.16%
PEPL - (Mkt Quote)	Panhandle Field Zone	\$3.82	\$3.82	4.82%
Panhandle Longhaul (2010-2017)	Panhandle Field Zone	\$3.82	\$3.82	4.82%
Vector 1 Year (Mkt Quote)	Chicago	\$4.23	\$4.23	0.96%
Vector (2008-2016)	Chicago	\$4.23	\$4.23	0.96%
ANR-Michcon-Union (Gulf)	ANR South East	\$4.02	\$4.02	4.04%
GLGT to TCPL	Northern Michigan	\$4.31	\$4.31	0.64%
ANR-GLGT-TCPL	Fayetteville	\$4.04	\$4.04	3.00%
Alliance/Vector (2000-2015)	CREC	\$3.48	\$3.48	5.55%
TCPL SWDA	Empress	\$3.76	\$3.76	3.25%
TCPL CDA	Empress	\$3.76	\$3.76	3.50%

Sources for Assumptions:

Gas Supply Prices (Col D): ICE July 9, 2014
 Fuel Ratios (Col G): Average ratio over the previous 12 months or Pipeline Forecast
 Transportation Tolls (Cols E & F): Tolls in effect on Alternative Routes at the time of Union's Analysis
 Foreign Exchange (Col K) \$1 US = \$1.067 CDN From Bank of Canada Closing Rate July 2, 2014
 Energy Conversions (Col K) 1 dth = 1 mmBtu = 1.055056
 Union's Analysis Completed: July 2014

Paths included in analysis are those with comparable services available for contracting, as well as relevant benchmarks and currently contracted paths.