

September 22, 2015

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: EB-2015-0116 – Union Gas Limited – 2016 Rates Evidence**

Union Gas (“Union”) filed an Application on September 11, 2015 with the Ontario Energy Board (the “Board”) for an order of the Board approving or fixing rates for the distribution, transmission and storage of natural gas, effective January 1, 2016.

In its cover letter, Union stated that supporting evidence would be filed at a later date. Please find Union’s evidence attached.

If the proposed rate changes are approved by the Board, the total bill increase for a typical Union South residential customer consuming 2,200 m<sup>3</sup> per year would amount to \$8 - \$9 per year. For a typical Union North residential customer consuming 2,200 m<sup>3</sup> per year, the total bill increase would amount to \$3 - \$4 per year.

Union seeks the Board’s issuance of the final Rate Order by November 30, 2015 to ensure the implementation of 2016 rates by January 1, 2016. In the event that the Board does not issue a rate order by November 30, 2015 for implementation by Union on January 1, 2016, Union seeks an Order of the Board declaring Union’s rates as filed interim as of January 1, 2016. Union proposes to deal with any retrospective impact of the Board’s Decision through a rate rider for general service rate classes and a one-time adjustment for all other rate classes, which will recover any changes in rates ultimately approved by the Board’s order with effect from January 1, 2016.

Yours truly,

*[original signed by]*

Chris Ripley  
Manager, Regulatory Applications

c.c.: EB-2014-0271 Intervenors  
Crawford Smith, Torys



**PREFILED EVIDENCE**

The purpose of this evidence is to describe proposed changes to Union’s regulated transportation, storage and distribution rates effective January 1, 2016 determined in accordance with the Board-approved 2014-2018 Incentive Regulation (“IR”) Application (EB-2013-0202), Settlement Agreement and supporting evidence (collectively “the Agreement”). The Board approved the Agreement on October 7, 2013.

The Board-approved Agreement sets out a multi-year incentive ratemaking mechanism (“IRM”) for calendar years 2014 to 2018. The framework includes a price cap index (“PCI”), where rates are a function of: an inflation factor (“I”), a productivity factor (“X”), certain non-routine adjustments (Z factors), certain predetermined pass-throughs (Y factors), and an adjustment for Normalized Average Consumption (“NAC”) to reflect changes in consumption in the general service rate classes. The 2016 rate setting process described below follows the same approach used to set 2015 rates in EB-2014-0271.

This evidence is organized under the following headings:

**Tab 1**

1. 2016 Inflation Factor and Productivity Factor
2. Z Factor Adjustments
3. Y Factor Adjustments
4. Normalized Average Consumption Adjustment

1        5. General Service Delivery Rate Adjustment

2        6. Customer Bill Impacts

3        7. Rate Schedule Changes

4        8. New Deferral Accounts

5        9. Deferral Account Closure Requests

6        10. Implementation

7        Tab 2

8           Parkway Delivery Obligation Reporting

9        Tab 3

10           Gas Supply Memorandum

11        Tab 4

12           Volume Break Point

13

14        A description of the supporting schedules referred to below is provided in the Overview of

15        Working Papers document following Tab 1. A summary of Union's 2016 proposed revenue

16        changes is provided in Table 1 below.

Table 1  
Proposed Changes in Revenue  
Effective January 1, 2016

Line No.	Particulars	(\$000's)
	<u>Summary Change in Revenue:</u>	
1	2016 Proposed in EB-2015-0116	1,174,655
2	2015 Approved in EB-2014-0271	<u>1,114,236</u>
3	Net Change (line 1 - line 2)	<u><u>60,419</u></u>
	<u>Detail Change in Revenue:</u>	
4	2016 Price Cap Index (0.80%)	7,231
5	2016 DSM Budget Change	24,666
6	2016 DSM Utility Incentive	4,180
7	2016 Capital Pass-throughs	23,925
8	2016 Parkway Delivery Obligation	<u>417</u>
9	Total (lines 4 through 8)	<u><u>60,419</u></u>

1

2 **1. 2016 INFLATION FACTOR AND PRODUCTIVITY FACTOR**

3 The inflation factor used in Union's PCI mechanism is the actual year-over-year percentage  
4 change in the annualized average of four quarters (using Q2 to Q2) of Statistics Canada's  
5 Gross Domestic Product Implicit Price Index Final Domestic Demand ("GDP IPI FDD").  
6 The inflation factor is adjusted annually on this basis with no restatement for adjustments by  
7 Statistics Canada. For 2016 rates, the inflation factor is 1.99%. It is based on the actual  
8 change in the GDP IPI FDD from 2014 Q2 to 2015 Q2. The calculation is provided at  
9 Working Papers, Schedule 1.

1 The approved annual productivity (“X”) factor for the IR term is expressed as a percentage of  
2 inflation. Specifically, for each year of the IR term productivity is 60% of GDP IPI FDD,  
3 inclusive of a stretch factor. This results in an annual rate escalation factor, before the impact  
4 of Y and Z factors and earnings sharing, of 40% of GDP IPI FDD. For 2016 rates, the X  
5 factor is 1.19% and the PCI is 0.80%.

## 6 7 **2. Z FACTOR ADJUSTMENTS**

### 8 **Treatment of Tax Savings**

9 Consistent with the Board-approved Agreement, Union will maintain an equal and  
10 symmetrical sharing of tax changes over the IR term, sharing the impact of tax changes 50:50  
11 as applied to the tax level reflected in rates. For 2016, there are no rate impacts related to tax.

## 12 13 **3. Y FACTOR ADJUSTMENTS**

14 The Board-approved Agreement provided for a number of Y factors which are not adjusted as  
15 part of the price cap formula and are passed through to customers in rates. The Y factors are:

- 16 • Cost of gas and upstream transportation costs as defined in EB-2011-0210;
- 17 • DSM budget changes as determined in EB-2011-0327 and any subsequent Board  
18 proceeding;
- 19 • Lost Revenue Adjustment Mechanism (“LRAM”) for the contract rate classes;
- 20 • Unaccounted for gas volume variances; and,
- 21 • Major capital additions.

1    3.1    Cost of Gas and Upstream Transportation Costs

2    Union's current upstream gas costs are as filed in Union's October 1, 2015 QRAM (EB-2015-  
3    0255). Changes in upstream gas costs will continue to be determined using the Board-  
4    approved QRAM methodology. Working Papers, Schedule 15 provides the allocation of  
5    upstream transportation costs by rate class.

6  
7    3.2    DSM Budget Changes

8    Union's 2015-2020 DSM Plan (EB-2015-0029) is currently under review by the Board, and  
9    therefore there is currently no approved DSM budget for 2016. Accordingly, Union proposes  
10   to include in rates the EB-2015-0029 proposed 2016 DSM budget of \$57.2 million. Further,  
11   consistent with Union's proposal in EB-2015-0029 to include in rates the DSM Utility  
12   Incentive at the 100% target level, Union proposes to recover an additional \$4.2 million in  
13   2016. The total cost associated with DSM in 2016 rates is \$61.4 million. The difference  
14   between the 2016 DSM budget and actual 2016 DSM budget will be captured in the Demand  
15   Side Management Variance Account ("DSMVA"). The difference between the 2016 DSM  
16   Utility Incentive and the actual 2016 DSM Utility Incentive will be captured in the Demand  
17   Side Management Incentive Deferral Account ("DSMIDA"). The allocation to rate classes  
18   can be found at Working Papers, Schedule 11.

1 3.3 LRAM for the Contract Rate Classes

2 For contract rate classes, Union will continue to adjust volumes and calculate rates to capture  
3 the LRAM volume impacts. As the 2014 DSM audit process is not yet complete, Union  
4 proposes to adjust 2016 volumes by 2014 pre-audit results. The variance related to the  
5 difference between the 2014 pre-audit and post-audit results will be captured in the LRAM  
6 deferral account.

7  
8 *Rate M7 and Rate 20 Attribution*

9 Union's current approved forecast volume by rate class is based on its 2013 Cost of Service  
10 Application (EB-2011-0210) plus subsequent Board-approved adjustments. Effective January 1,  
11 2014, Union changed the eligibility criteria for customers in Rate M4, Rate M5A and Rate M7 in  
12 Union South causing customers to transfer to M7 from M4 and M5A. The 2014 pre-audit  
13 LRAM results by rate class are determined based on the rate class of a customer at December 31,  
14 2014. In order to align the 2014 pre-audit LRAM results with the rate class of the customer in  
15 the Board-approved forecast volume, Union transferred the LRAM pre-audit results of the  
16 identified customers in Rate M7 of  $7,984 \times 10^3 \text{ m}^3$  to rate classes M4 and M5A based on the rate  
17 class of the customer in 2013 Board-approved volumes.

18  
19 Union made a similar adjustment from Rate 20 to Rate 100 in Union North of  $2,413 \times 10^3 \text{ m}^3$  to  
20 align the 2014 pre-audit LRAM results with the rate class of the customer in the 2013 Board-  
21 approved volumes. Working Papers, Schedule 17 provides the LRAM volume adjustments by  
22 rate class.

1    3.4    2011 LRAM Volume Adjustments

2    Union proposes to reflect the 2011 LRAM volumes in delivery rates for Union's contract rate  
3    classes beginning January 1, 2016. As per the EB-2013-0202 Decision, Union adjusts volumes  
4    and calculates rates to capture the LRAM volume impacts for the contract rate classes as a Y  
5    factor.

6  
7    In Union's 2013 DSM Deferral and Variance Account Disposition proceeding (EB-2014-0273),  
8    Union identified that its contract rate class volumes did not include the audited 2011 contract rate  
9    class LRAM volume savings of 113,813  $10^3\text{m}^3$  and would be updated in 2016 rates. When  
10    Union prepared the contract rate class volume forecast included in 2013 rates, no 2011 LRAM  
11    volumes were reflected. This volume forecast was completed in early 2011. The unaudited  
12    LRAM volume savings were not available until April 2, 2012 and the audited LRAM volume  
13    savings were not available June 29, 2012. Accordingly, it could not be included in Union's 2013  
14    forecast as part of Union's EB-2011-0210 proceeding. The 2011 contract rate class volume  
15    savings of 113,813  $10^3\text{m}^3$  are also not reflected in the volumes included in delivery rates for 2014  
16    or 2015.

17  
18    No adjustments are required for 2012 and 2013 LRAM volumes because the volumes were  
19    included in delivery rates beginning January 1, 2014, as per Union's 2014 Rates proceeding (EB-  
20    2013-0365) and January 1, 2015, as per Union's 2015 Rates proceeding (EB-2014-0271),  
21    respectively.

1 The 2016 LRAM volume adjustment of 234,127  $10^3\text{m}^3$  includes 2014 LRAM volumes of  
2 120,313  $10^3\text{m}^3$  and 2011 LRAM volumes of 113,813  $10^3\text{m}^3$ , as provided at Working Papers,  
3 Schedule 17.

### 4 5 3.5 Major Capital Additions

6 Consistent with the Board-approved Agreement, parties agreed that Union's 2014-2018 IR  
7 term would include Y factor treatment for major capital projects, subject to the projects  
8 meeting certain eligibility criteria. Union includes a capital pass-through mechanism to adjust  
9 rates during the IR term to reflect the associated impacts of significant capital investments  
10 made throughout the IR term deemed "not-business-as-usual".

### 11 12 Parkway West Project

13 The Parkway West project was approved by the Board in the Leave-to-Construct Application  
14 (EB-2012-0433). In EB-2013-0365 and EB-2014-0271, respectively, the Board approved the  
15 capital pass-through treatment of Parkway West and the costs for 2014 and 2015 rates. Union  
16 has included the 2016 costs associated with the Parkway West Project in 2016 rates. Please see  
17 Working Papers, Schedule 10 for the 2016 rate adjustments by rate class.

### 18 19 Brantford-Kirkwall / Parkway D Project

20 The Brantford-Kirkwall / Parkway D Project was approved by the Board in the Leave-to-  
21 Construct Application (EB-2013-0074) with the Brantford-Kirkwall pipeline construction

conditional on the NEB approval of TransCanada King's North Project. The NEB approved the King's North Project on June 2, 2015. Union has included the 2016 costs associated with the Brantford-Kirkwall / Parkway D Project in 2016 rates. Please see Working Papers, Schedule 10 for the 2016 rate adjustments by rate class.

Dawn Parkway 2016 System Expansion Project

The Dawn Parkway 2016 System Expansion project was approved by the Board in the Leave-to-Construct Application (EB-2014-0261) on April 30, 2015. Union has included the 2016 costs associated with the Dawn Parkway 2016 System Expansion Project in 2016 rates. Please see Working Papers, Schedule 10 for the 2016 rate adjustments by rate class.

Burlington Oakville Pipeline Project

In the Burlington Oakville Pipeline Project Leave-to-Construct proceeding (EB-2014-0182), Union is seeking cost recovery on approximately 12 km of NPS 20 pipeline extending from Union's Board-approved Parkway West Compressor Station to Union's existing Bronte Gate Station with an in-service date of November 1, 2016. The Burlington Oakville Pipeline Project meets the Board-approved capital pass-through criteria as a major facility expansion project:

- i. The net delivery revenue requirement impact for the Burlington Oakville Pipeline Project is greater than \$5 million. The net revenue requirement calculation is provided at Appendix G;
- ii. The capital cost of the Burlington Oakville Pipeline Project exceeds \$50 million (\$119.5 million as filed in EB-2014-0182);

- 1           iii.     The Project is outside the base rates on which the 2014-2018 IRM framework was  
2                 set;
- 3           iv.     The Burlington Oakville Pipeline Project is essential to ensure continued reliable  
4                 and secure delivery of natural gas in Ontario. The Project addresses increasing  
5                 demand in the fast growing Town of Oakville and City of Burlington as well as  
6                 the southern portion of the Town of Milton;
- 7           v.      The Burlington Oakville Pipeline Project was identified during the course of the  
8                 IRM negotiations, through the Settlement Agreement reached with TransCanada  
9                 and during Union's April 2013 Stakeholder meeting;
- 10          vi.     The Burlington Oakville Pipeline Project is subject to leave-to-construct approval,  
11                 and there will be a full review within the EB-2014-0182 case;
- 12          vii.    Union will allocate the Burlington Oakville Pipeline Project net revenue  
13                 requirement using the 2013 Board-approved cost allocation methodology. Please  
14                 see Working Papers, Schedule 10, for the 2016 rate adjustments by rate class  
15                 associated with the Burlington Oakville Pipeline Project; and,
- 16          viii.   In the Burlington Oakville Pipeline Project proceeding, Union is proposing to  
17                 track any variance between what is approved in rates for the Project and actual  
18                 revenue requirement in a new deferral account and will dispose of any balances as  
19                 part of Union's annual non-commodity deferral account disposition proceeding.

2017 Dawn Parkway Project

In the 2017 Dawn Parkway Project Leave-to-Construct proceeding (EB-2015-0200), Union is seeking cost recovery of all facilities associated with the development of the proposed 2017 Dawn Parkway Project. Construction will be staged over a two-year period with in-service dates of November 1, 2016 and November 1, 2017. The 2017 Dawn Parkway Project meets the Board-approved capital pass-through criteria as a major facility expansion project:

- i. The net delivery revenue requirement impact for the 2017 Dawn Parkway Project is greater than \$5 million. The net revenue requirement calculation is provided at Appendix G;
- ii. The capital cost of the 2017 Dawn Parkway Project exceeds \$50 million (\$622.5 million as filed in EB-2015-0200);
- iii. The Project is outside the base rates on which the 2014-2018 IRM framework was set;
- iv. The 2017 Dawn Parkway Project is essential to meet changing conditions in supply and transportation dynamics for Ontario, Quebec and U.S. Northeast customers. The Project addresses the dramatic change from mature natural gas basin supply in North America to shale gas formation supply;
- v. The 2017 Dawn Parkway Project was identified during Union's July 2014 and April 2015 Stakeholder meetings;
- vi. The 2017 Dawn Parkway Project will have a full regulatory review as part of the EB-2015-0200 proceeding;

- 1           vii.     Union will allocate the 2017 Dawn Parkway Project net revenue requirement  
2                   using the 2013 Board-approved cost methodology. Please see Working Papers,  
3                   Schedule 10, for the 2016 rate adjustments by rate class associated with the 2017  
4                   Dawn Parkway Project; and,
- 5           viii.    In the 2017 Dawn Parkway Project proceeding, Union is proposing to track any  
6                   variance between what is approved in rates for the Project and actual revenue  
7                   requirement in a new deferral account and will dispose of any balances as part of  
8                   Union's annual non-commodity deferral account disposition proceeding.
- 9

10   **4. NORMALIZED AVERAGE CONSUMPTION ADJUSTMENT**

11   Consistent with the Board-approved Agreement, Union adjusted general service rates  
12   annually during the 2014-2018 IR term for the changes in NAC. NAC incorporates all  
13   volume changes, including changes due to average use and DSM activities (LRAM) for  
14   general service rate classes.

15

16   Consistent with the 2015 methodology, Union adjusted the general service storage and  
17   delivery rates for the 2014 actual NAC, using the Board-approved weather normal  
18   methodology blend of 50:50 (30-year average and 20-year declining trend). For 2016, the  
19   NAC adjustment is the variance between 2013 Actual NAC and 2014 Actual NAC, as seen in  
20   Working Papers, Schedule 12.

1 **5. General Service Delivery Rate Adjustment**

2 Union proposes to revise the approach used to adjust small volume general service Rate M1 and  
3 Rate 01 distribution customer-related costs during the 2014-2018 IR term on a revenue neutral  
4 basis by adjusting the 2016 customer-related cost variance over all of the delivery volumes  
5 within each of the Rate M1 and Rate 01 rate classes.

6  
7 Union recovers distribution customer-related costs in the monthly customer charge. In order to  
8 maintain the current charge of \$21, changes in customer-related costs are currently adjusted to  
9 the first general service delivery block rate as necessary. This approach to setting the small  
10 volume general service delivery rates during the IR term was agreed to by parties in Union's EB-  
11 2013-0202 Settlement Agreement, Appendix I, page 2 and page 10.

12  
13 When setting 2014 and 2015 general service rates, the outcome of this approach produced small  
14 adjustments to the first delivery block rate and maintained the declining rate structure in the  
15 subsequent delivery blocks of the rate.

16  
17 As a result of the Board-approved capital pass-through adjustments, the customer-related costs  
18 are resulting in a larger decrease in 2016, which results in a lower Rate M1 and Rate 01 first  
19 delivery block rate as compared to the subsequent blocks. Applying the current approach to the  
20 2016 decrease does not maintain the current declining block rate structure and does not provide  
21 benefits to customers in proportion to their consumption.

To maintain the current customer charge of \$21 per month and the current declining block structure, Union proposes to adjust the 2016 customer-related cost variance over all the delivery volumes within each of the Rate M1 and Rate 01 rate class. Please see Appendix I, for a comparison of the current and proposed customer-related cost adjustments for Rate M1 and Rate 01.

## **6. CUSTOMER BILL IMPACTS**

For most residential customers in the Union South area the annual rate increase is between \$8 and \$9 per year for a customer consuming 2,200 m<sup>3</sup> annually. For most residential customers in the Union North area the annual rate increase is between \$3 and \$4 per year for a customer consuming 2,200 m<sup>3</sup> annually. Working Papers, Schedule 6 provides average 2016 unit price changes for all in-franchise rate classes. Working Papers, Schedule 8 provides customer bill impacts for general service rate classes M1, M2, Rate 01 and Rate 10. Working Papers, Schedule 9 provides the bill impact for sales service and direct purchase customers combined.

## **7. RATE SCHEDULE CHANGES**

### **Unauthorized Overrun Non-Compliance Rate**

The purpose of this evidence is to propose a new Unauthorized Overrun Non-Compliance rate. Union is proposing this rate to ensure customers comply with their contractual obligations when a distribution interruption is called.

Union's distribution system is designed to meet firm peak demands. Distribution service interruptions are called when Union determines that the demands on Union's system are too great to meet both firm and interruptible services. Union calls an interruption in order to ensure it is able to satisfy its firm contractual obligations.

During the previous two winters, Union notified interruptible distribution customers of interruptions to their service. Customers with contracted interruptible distribution service were provided notice to reduce their natural gas consumption to levels within their firm contract parameters; those without firm contract parameters were to cease all consumption of natural gas. There were customers with interruptible distribution services in both Union North and Union South that did not comply with the interruption. Instead, these customers elected to pay the Unauthorized Overrun Rate, which was cheaper than the cost of using an alternate fuel. The customers that did not comply with the distribution interruption had a financial advantage compared to customers who did comply, which is inequitable. In addition, these customers put Union's system operations at risk. The proposed Unauthorized Overrun Non-Compliance penalty rate is meant to financially incent customers to comply with the contractual commitment during an interruption period.

#### *Unauthorized Overrun Non-Compliance Rate*

Union proposes an Unauthorized Overrun Non-Compliance rate of \$3.855/m<sup>3</sup> (or \$100/GJ) which is set at a level sufficient to ensure that customers comply with contractual parameters during an interruption.

1 Currently, when a customer fails to comply with an interruption, in whole or in part, the  
2 unauthorized overrun charge is applied. The rate is set to be equivalent to the Rate M1 first  
3 block delivery commodity charge plus the Rate M1 storage commodity charge. Based on the  
4 October 2015 QRAM (as per EB-2015-0255), the unauthorized overrun charge is 4.6404  
5 cents/m<sup>3</sup> (or \$1.204/GJ) for customers taking service under Rate 25, M4, Rate M5A, Rate M7,  
6 Rate T1 and Rate T2. When an interruption is called, all volumes consumed in excess of firm  
7 contract parameters are unauthorized. At the current rate of \$1.204/GJ, customers may make an  
8 economic decision to not comply, since the \$1.204/GJ charge may be less than the next  
9 economic alternative. In addition, the current level of this charge may not provide a sufficient  
10 penalty to the non-complying customer.

11  
12 Union proposes to set the rate at \$100/GJ which takes into consideration the costs of alternate  
13 fuels during the previous two winters. For example, the price of diesel, a common alternate fuel  
14 used by customers during periods of natural gas distribution interruptions, was approximately  
15 \$40/GJ<sup>1</sup>. The Unauthorized Overrun Non-Compliance rate of \$100/GJ exceeds these recent  
16 historic alternate fuel prices in order to provide customers with the appropriate price signal to  
17 comply with Union's distribution service interruption.

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<sup>1</sup> Natural Resources Canada, Energy Prices, London, Ontario  
([http://www2.nrcan.gc.ca/eneene/sources/pripri/prices\\_bycity\\_e.cfm?PriceYear=0&ProductID=5&LocationID=66,8,39,17](http://www2.nrcan.gc.ca/eneene/sources/pripri/prices_bycity_e.cfm?PriceYear=0&ProductID=5&LocationID=66,8,39,17))

1 For example, if a customer with an interruptible distribution contract consumes 1,000 GJ of gas  
2 during a period of interruption, the customer will be charged 1,000 GJ x \$100/GJ for a total  
3 charge of \$100,000.

4  
5 The proposed charge for non-compliance during an interruption does not alleviate the  
6 interruptible customer from any consequential damages arising from a customer's failure to  
7 comply with Union's interruption notice.

8  
9 The Board supported penalty charges designed to incent customer behaviour to protect Union's  
10 system in Union's Customer Review (RP-2001-0029) Decision with Reasons, page 31 and  
11 recently reiterated by the Board in Union's Checkpoint Balancing 2014 (EB-2014-0154)  
12 Decision, page 6:

13 *"In the Board's view, the penalty must be sufficiently costly to defaulters to strongly*  
14 *discourage strategic non-compliance with balance obligations, and the careless or*  
15 *incompetent acceptance of contractual obligations which are not reasonably achievable.*  
16 *The Board is concerned that parties wishing to engage in the market, either directly or*  
17 *through agents, must be appropriately encouraged to manage their obligations*  
18 *responsibly. The system as a whole requires that."*

19  
20 Union proposes to add the Unauthorized Overrun Non-Compliance rate of \$3.855/m<sup>3</sup> (or  
21 \$100/GJ) to the in-franchise rate schedules that offer an interruptible service (Rate 25, M4, M5A,  
22 M7, T1, and T2). The Blackline rate schedules are provided at Appendix H.

1 Hagar Liquefaction Service - Gas Supply Service Option

2 In Union's Hagar Liquefaction Service (EB-2014-0012) Decision, the Board decided to forebear  
3 from regulating the provision of Liquid Natural Gas ("LNG"). In order to provide LNG customers  
4 with a gas supply service option, Union requires modifications to the Union North Schedule "A" to  
5 accommodate minimum and maximum gas supply charges expressed in \$/GJ. The liquefaction  
6 service can only be described in energy units. This modification will enable Union to invoice the  
7 gas supply service option in energy, consistent with the invoicing of the unregulated liquefaction  
8 service. The LNG minimum and maximum gas supply charges are based on Board-approved  
9 Rate 25 gas supply charges. A Blackline copy of the Union North Schedule "A" is provided at  
10 Working Papers, Schedule H.

11  
12 Aggregate Excess

13 As part of the storage service available at rate schedule Section (C) of Rate T1, Rate T2 and Rate  
14 T3, at Note 3.1, Union currently describes the Aggregate Excess option for the calculation of the  
15 storage space allocation as:

16 *"Aggregate excess is the difference between a customer's gas consumption in the 151-*  
17 *day winter period and consumption during the balance of the year."*

18  
19 The current description of Aggregate Excess does not accurately describe the calculation. Union  
20 proposes to revise this description of the Aggregate Excess calculation in the rate schedules to:

1       *“Aggregate excess is the difference between the customer’s total 151-day winter*  
2       *consumption (November 1 through March 31) and the customer’s average daily*  
3       *consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of*  
4       *winter.”*

5  
6       Union is not proposing any changes to the Aggregate Excess calculation. A Blackline copy of the  
7       rate schedule changes is provided at Appendix H.

8  
9       General Terms and Conditions Schedule Updates

10      The purpose of this evidence is to describe Union’s proposals related to the General Terms and  
11      Conditions (“GT&C”) within its M12, M13, M16, and C1 transportation rate schedules and to  
12      the Nominations schedules within the M12 and C1 rate schedules. Union is proposing that all  
13      changes be implemented effective January 1, 2016.

14  
15      These changes are explained further in the following sections:

- 16           1. GT&C Changes  
17           2. Nominations Changes  
18           3. Parkway Delivery Commitment Incentive

19  
20      *GT&C Changes*

21      Union proposes to include additional wording in the Taxes section of Article IX of the C1 GT&C  
22      (Schedule “A 2010”) regarding United States (“US”) withholding tax. US withholding tax can

1 arise under agreements with US sourced income such as transportation, services, and sales  
2 provided/concluded in the US. The potential for such arrangements could only occur with  
3 services sold under the C1 rate schedule. This additional wording is intended to ensure and  
4 facilitate the appropriate treatment of US withholding tax and the information reporting on the  
5 payments received by Union related to US sourced income.

6  
7 In Union's 2013 Cost of Service (EB-2011-0210), the Board approved the creation of a new M13  
8 GT&C (Schedule "A 2013") that reflected a structure consistent with Union's Storage and  
9 Transportation Access Rule ("STAR") versions of Union's M12 and C1 GT&C. The pre-  
10 existing M13 GT&C (Schedule "A") continued to apply to contracts entered into before January  
11 1, 2013 and the new version applied to contracts entered into on or after January 1, 2013. Since  
12 all of Union's M13 customers have transitioned to contracts using the Schedule "A 2013", Union  
13 proposes to eliminate the Schedule "A".

14  
15 In addition to the above, minor changes have been made to the GT&C in each of the M12, M13,  
16 M16, and C1 transportation rate schedules to add clarity and improve grammar.

17  
18 The updated GT&C for M12, M13, M16, and C1 are attached at Appendix B. Blackline  
19 comparisons of the updated GT&C to those last approved by the Board for M12, M13, M16 and  
20 C1 are attached at Appendix H.

1    *Nomination Changes*

2    Union's daily nomination cycle timelines are established by Union and reflect the North  
3    American Energy Standards Board ("NAESB") standard nomination cycles. NAESB had  
4    identified changes to timelines for implementation during 2016.

5  
6    Currently, Union's nomination cycle timelines are outlined in the Nominations schedules to the  
7    M12 and C1 rate schedules. Union also posts the nomination cycle timelines on its website and  
8    discloses the nomination cycle deadlines in Unionline which is the electronic interface between  
9    Union and its customers for many functions including the nomination process.

10  
11    Instead of updating the nomination cycle timelines within the Nominations schedules, Union  
12    proposes to remove the timeline details and include a reference to Union's website and deadlines  
13    within Unionline for that information for the following reasons:

- 14            i.    Including the details in the rate schedule predates having a website for posting  
15                    such information and Unionline for daily nomination activities;
- 16            ii.   This information is operational in nature and changes in conjunction with NAESB  
17                    standards; and,
- 18            iii.   It allows for future updates to cycle timelines to be made more easily.

19  
20    Union has also updated the first and last sections of Schedule "B 2010" to recognize that  
21    customers use structured Unionline screens to provide nomination details, the designation of

third parties for nomination activities is provided via Unionline access request forms, and that the designation can take effect at times other than the start of the following month.

The updated M12 Nominations schedules for M12 and C1 are attached at Appendix B. Blackline comparisons of the updated Nominations schedules to those last approved by the Board are attached at Appendix H.

Parkway Delivery Commitment Incentive ("PDCI")

In Union's 2014 Rates (EB-2013-0365) Decision and Order on the Parkway Delivery Obligation, the Board accepted the Settlement Framework for Reduction of Parkway Delivery Obligation. In the Decision, Appendix B, page 4, parties agreed that:

- "4. From and after November 1, 2016, all PDO volumes (DP and sales service gas) will attract a PDCI. The PDCI will be set at the Board approved M12 Dawn to Parkway toll at 100% load factor including fuel based on the fuel cost included in Union's October 1 QRAM each year.*
- 5. The PDCI will be paid on the Parkway deliveries Union requires from DP customers, for which they commit to deliver their DCQ volumes at Parkway, and requires from its sales service customers. For greater clarity, volumes voluntarily delivered to Parkway, rather than delivered pursuant to a PDO required by Union, will not attract the PDCI.*
- 6. The payment of the PDCI to sales service customers will be made by way of a credit to the Union South gas supply transportation rate. The payment of the*

1                   *PDCI to DP customers will be by way of a credit on the bill to the Bundled*  
2                   *Transportation contract holder.”*  
3

4   To reflect the credit to direct purchase customers beginning November 1, 2016, Union proposes  
5   to add the PDCI to the Rate R1, Rate T1, Rate T2, Rate T3, and Rate U2 rate schedules.

6   Blackline copy of the applicable Union South rate schedules are provided at Appendix H.  
7

8   **8. NEW DEFERRAL ACCOUNTS**

9   There are no new deferral account requests.  
10

11   **9. DEFERRAL ACCOUNT CLOSURE REQUESTS**

12   Average Use per Customer (No. 179-118)

13   The Average Use per Customer account was established as part of Union’s 2008-2012  
14   Incentive Regulation proceeding (EB-2007-0606). In the 2014-2018 IR term, Union began  
15   adjusting rates annually for changes in normalized average consumption, rather than average  
16   use, for volumetric changes in general service rate classes. The Board agreed in the EB-2013-  
17   0202 Decision for Union to establish a Normalized Average Consumption deferral account  
18   replacing the Average Use per Customer deferral account. Union requests approval to close  
19   the Average Use per Customer deferral account (No.179-118) effective January 1, 2016.

1 Preparation of Audited Utility Financial Statements (No. 179-129)

2 In Union's 2013 Cost of Service proceeding (EB-2011-0210), the Board directed Union to  
3 prepare and file separate audited financial statements for the portion of the business that is  
4 subject to rate regulation, and capture the costs of preparing these statements in the  
5 Preparation of Audited Utility Financial Statements deferral account. In the EB-2013-0109  
6 hearing, the Board, on its own motion, determined that it would initiate a review of the  
7 directive. As a result Union suspended all work on the preparation of audited utility financial  
8 statements. In the EB-2013-0109 Decision, the Board found the potential value received from  
9 the separate audited financial statements did not justify the expected costs, and therefore the  
10 Board relieved Union of the requirement to prepare the statements. The associated deferral  
11 account is no longer necessary as all amounts spent retaining Ernst & Young for planning and  
12 cost estimates have been disposed of and the balance in the account is zero. Union requests  
13 approval to close the Preparation of Audited Utility Financial Statements deferral account  
14 (No. 179-129) effective January 1, 2016.

15  
16 **10. IMPLEMENTATION**

17 Union proposes to implement new rates effective January 1, 2016 as described in the Rate  
18 Setting Process of the EB-2013-0202 Settlement Agreement at Section 13.1. Union therefore  
19 requests a decision by November 30, 2015. This timing allows 2016 rates to be implemented  
20 prospectively and aligns with the January 1, 2016 QRAM process.

1 In the event that the Board does not issue a rate order by November 30, 2015 for implementation  
2 by Union on January 1, 2016, Union seeks an Order of the Board declaring Union's rates as filed  
3 interim as of January 1, 2016. Union proposes to deal with any retrospective impact of the  
4 Board's Decision through a rate rider for general service rate classes and a one-time adjustment  
5 for all other rate classes, which will recover any changes in rates ultimately approved by the  
6 Board's order with effect from January 1, 2016.

**EB-2015-0116**  
**Rate Order for 2016 Rates**  
**Index of Appendices – Tab 1**

Appendix A	Summary of Changes to Sales Rates
Appendix B	Rate Schedules
Appendix C	Summary of Average Rate and Price Adjustment Changes for Rates 25, M4, M5A, M7 and T1 Interruptible Contract Services
Appendix D	Customer Notices
Appendix E	Miscellaneous Non-Energy Charges
Appendix F	Accounting Orders
Appendix G	Revenue Requirement Calculations
Appendix H	Rate Schedule Changes - Blackline
Appendix I	General Service Delivery Rate Adjustment

## APPENDIX A

UNION GAS LIMITED  
Union North  
Summary of Changes to Sales Rates  
Rate 01A - Small Volume General Firm Service

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
1	Monthly Charge - All Zones	\$21.00		\$21.00
	Monthly Delivery Charge - All Zones			
2	First 100 m <sup>3</sup>	9.0309	0.0694	9.1003
3	Next 200 m <sup>3</sup>	8.8028	0.0676	8.8704
4	Next 200 m <sup>3</sup>	8.4451	0.0649	8.5100
5	Next 500 m <sup>3</sup>	8.1168	0.0624	8.1792
6	Over 1,000 m <sup>3</sup>	7.8457	0.0603	7.9060
7	Delivery - Price Adjustment (All Volumes)	(0.2792) (1)	0.0488	(0.2304) (2)
	Gas Transportation Service			
8	Fort Frances	5.7686	0.0036	5.7722
9	Western Zone	4.9541	0.0031	4.9572
10	Northern Zone	6.4503	0.0040	6.4543
11	Eastern Zone	7.7149	0.0048	7.7197
12	Transportation - Price Adjustment (All Zones)	0.7006 (3)		0.7006 (4)
	Storage Service			
13	Fort Frances	3.6175	0.0468	3.6643
14	Western Zone	3.2920	0.0426	3.3346
15	Northern Zone	3.8899	0.0503	3.9402
16	Eastern Zone	4.3952	0.0569	4.4521
17	Storage - Price Adjustment (All Zones)	-		-
	Commodity Cost of Gas and Fuel			
18	Fort Frances	12.2089	(0.0007)	12.2082
19	Western Zone	12.2975	(0.0007)	12.2968
20	Northern Zone	12.4346	(0.0007)	12.4339
21	Eastern Zone	12.5437	(0.0007)	12.5430
22	Commodity and Fuel - Price Adjustment (All Zones)	(2.0989) (5)		(2.0989) (6)

Notes:

- (1) Includes a temporary credit of (0.0488) cents/m<sup>3</sup> expiring December 31, 2015 and a temporary credit of (0.2304) cents/m<sup>3</sup> expiring March 31, 2016.
- (2) Includes a temporary credit of (0.2304) cents/m<sup>3</sup> expiring March 31, 2016.
- (3) Includes Prospective Recovery of 0.3088, 0.4886, (0.0284), and (0.0985) cents/m<sup>3</sup> and a temporary charge of 0.0301 cents/m<sup>3</sup> expiring March 31, 2016.
- (4) Includes Prospective Recovery of 0.3088, 0.4886, (0.0284), and (0.0985) cents/m<sup>3</sup> and a temporary charge of 0.0301 cents/m<sup>3</sup> expiring March 31, 2016.
- (5) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m<sup>3</sup>.
- (6) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m<sup>3</sup>.

UNION GAS LIMITED  
Union North  
Summary of Changes to Sales Rates  
Rate 10 - Large Volume General Firm Service

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
1	Monthly Charge - All Zones	\$70.00		\$70.00
	Monthly Delivery Charge - All Zones			
2	First 1,000 m <sup>3</sup>	7.1390	0.0729	7.2119
3	Next 9,000 m <sup>3</sup>	5.8241	0.0595	5.8836
4	Next 20,000 m <sup>3</sup>	5.1033	0.1002	5.2035
5	Next 70,000 m <sup>3</sup>	4.6205	0.0907	4.7112
6	Over 100,000 m <sup>3</sup>	2.7914	0.0548	2.8462
7	Delivery - Price Adjustment (All Volumes)	(0.0162) (1)	(0.3189)	(0.3351) (2)
	Gas Transportation Service			
8	Fort Frances	5.0913	(0.0001)	5.0912
9	Western Zone	4.2768	(0.0001)	4.2767
10	Northern Zone	5.7729	(0.0001)	5.7728
11	Eastern Zone	7.0376	(0.0002)	7.0374
12	Transportation - Price Adjustment (All Zones)	0.6688 (3)		0.6688 (4)
	Storage Service			
13	Fort Frances	2.3829	0.0088	2.3917
14	Western Zone	2.0574	0.0076	2.0650
15	Northern Zone	2.6553	0.0098	2.6651
16	Eastern Zone	3.1606	0.0116	3.1722
17	Storage - Price Adjustment (All Zones)	-		-
	Commodity Cost of Gas and Fuel			
18	Fort Frances	12.2089	(0.0007)	12.2082
19	Western Zone	12.2975	(0.0007)	12.2968
20	Northern Zone	12.4346	(0.0007)	12.4339
21	Eastern Zone	12.5437	(0.0007)	12.5430
22	Commodity and Fuel - Price Adjustment (All Zones)	(2.0989) (5)		(2.0989) (6)

Notes:

- (1) Includes a temporary charge of 0.3189 cents/m<sup>3</sup> expiring December 31, 2015, and a temporary credit of (0.3351) cents/m<sup>3</sup> expiring March 31, 2016.
- (2) Includes a temporary credit of (0.3351) cents/m<sup>3</sup> expiring March 31, 2016.
- (3) Includes Prospective Recovery of 0.3017, 0.4820, (0.0129), and (0.0926) cents/m<sup>3</sup> and a temporary credit of (0.0094) cents/m<sup>3</sup> expiring March 31, 2016.
- (4) Includes Prospective Recovery of 0.3017, 0.4820, (0.0129), and (0.0926) cents/m<sup>3</sup> and a temporary credit of (0.0094) cents/m<sup>3</sup> expiring March 31, 2016.
- (5) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m<sup>3</sup>.
- (6) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m<sup>3</sup>.

UNION GAS LIMITED  
Union North  
Summary of Changes to Sales Rates  
Rate 20 - Medium Volume Firm Service

Line No.	Particulars (cents/m³)	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
1	Monthly Charge	\$972.44	(\$39.65)	\$932.79
	Delivery Demand Charge			
2	First 70,000 m³	27.8909	1.8533	29.7442
3	All over 70,000 m³	16.4012	1.0899	17.4911
	Delivery Commodity Charge			
4	First 852,000 m³	0.5383	0.0706	0.6089
5	All over 852,000 m³	0.3922	0.0514	0.4436
	Monthly Gas Supply Demand Charge			
6	Fort Frances	54.0801		54.0801
7	Western Zone	33.2652	0.8102	34.0754
8	Northern Zone	71.4880	1.7413	73.2293
9	Eastern Zone	103.7960	2.5282	106.3242
10	Gas Supply Demand - Price Adjustment (All Zones)	-		-
	Commodity Transportation 1			
11	Fort Frances	4.3859		4.3859
12	Western Zone	3.9299	(0.0006)	3.9293
13	Northern Zone	4.7675	(0.0007)	4.7668
14	Eastern Zone	5.4755	(0.0008)	5.4747
15	Transportation 1 - Price Adjustment (All Zones)	0.9480 (1)		0.9480 (2)
	Commodity Transportation 2			
16	Fort Frances	-		-
17	Western Zone	-		-
18	Northern Zone	-		-
19	Eastern Zone	-		-
	Commodity Cost of Gas and Fuel			
20	Fort Frances	12.0032	(0.0007)	12.0025
21	Western Zone	12.0903	(0.0007)	12.0896
22	Northern Zone	12.2251	(0.0007)	12.2244
23	Eastern Zone	12.3322	(0.0007)	12.3315
24	Commodity and Fuel - Price Adjustment (All Zones)	(2.0989) (3)		(2.0989) (4)
	Bundled Storage Service (\$/GJ)			
25	Monthly Demand Charge	12.366	0.098	12.464
26	Commodity Charge	0.158	0.001	0.159
27	Storage Demand - Price Adjustment	-		-

Notes:

- (1) Includes Prospective Recovery of 0.3504, 0.5794, 0.1258, and (0.1076) cents/m³.
- (2) Includes Prospective Recovery of 0.3504, 0.5794, 0.1258, and (0.1076) cents/m³.
- (3) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m³.
- (4) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m³.

UNION GAS LIMITED  
Union North  
Summary of Changes to Sales Rates  
Rate 100 - Large Volume High Load Factor Firm Service

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
1	Monthly Charge	\$1,464.29	(\$40.58)	\$1,423.71
2	Delivery Demand Charge All Zones	15.3958	(1.4378)	13.9580
3	Delivery Commodity Charge All Zones	0.2190	(0.0138)	0.2052
4	Monthly Gas Supply Demand Charge Fort Frances	102.9596		102.9596
5	Western Zone	78.6756		78.6756
6	Northern Zone	123.2688		123.2688
7	Eastern Zone	160.9615		160.9615
8	Gas Supply Demand - Price Adjustment (All Zones)	-		-
9	Commodity Transportation 1 Fort Frances	7.0810		7.0810
10	Western Zone	6.7390		6.7390
11	Northern Zone	7.3672		7.3672
12	Eastern Zone	7.8982		7.8982
13	Transportation 1 - Price Adjustment (All Zones)	-		-
14	Commodity Transportation 2 Fort Frances	-		-
15	Western Zone	-		-
16	Northern Zone	-		-
17	Eastern Zone	-		-
18	Commodity Cost of Gas and Fuel Fort Frances	12.0032	(0.0007)	12.0025
19	Western Zone	12.0903	(0.0007)	12.0896
20	Northern Zone	12.2251	(0.0007)	12.2244
21	Eastern Zone	12.3322	(0.0007)	12.3315
22	Commodity and Fuel - Price Adjustment (All Zones)	(2.0989) (1)		(2.0989) (2)
23	Bundled Storage Service (\$/GJ) Monthly Demand Charge	12.366	0.098	12.464
24	Commodity Charge	0.158	0.001	0.159
25	Storage Demand - Price Adjustment	-		-

Notes:

- (1) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m<sup>3</sup>.  
(2) Includes Prospective Recovery of (0.2247), (1.0528), (0.6098), and (0.2116) cents/m<sup>3</sup>.

UNION GAS LIMITED  
Union North  
Summary of Changes to Sales Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
1	<u>Rate 25 - Large Volume Interruptible Service</u> Monthly Charge	\$352.32	(\$20.62)	\$331.70
2	Delivery Charge - All Zones * Maximum	4.7185	0.0686	4.7871
3	Gas Supply Charges - All Zones Minimum	1.4848		1.4848
4	Maximum	675.9484		675.9484

\* see Appendix C.

UNION GAS LIMITED  
Union South  
Summary of Changes to Sales Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>Utility Sales</u>			
1	Commodity and Fuel	12.5325	(0.0007)	12.5318
2	Commodity and Fuel - Price Adjustment	(1.4583) (1)		(1.4583) (2)
3	Transportation	3.5158		3.5158
4	Total Gas Supply Commodity Charge	<u>14.5900</u>	<u>(0.0007)</u>	<u>14.5893</u>
	<u>M4 Firm Commercial/Industrial</u>			
5	Minimum annual gas supply commodity charge	4.2289	(0.0007)	4.2282
	<u>M4 / M5A Interruptible Commercial/Industrial</u>			
6	Minimum annual gas supply commodity charge	4.2289	(0.0007)	4.2282
	<u>Storage and Transportation Supplemental Services - Rate T1, Rate T2 &amp; Rate T3</u>	<u>\$/GJ</u>		<u>\$/GJ</u>
	Monthly demand charges: (\$/GJ)			
7	Firm gas supply service	58.972		58.972
8	Firm backstop gas	1.722	(0.000)	1.722
	Commodity charges:			
9	Gas supply	3.201		3.201
10	Backstop gas	4.582	0.015	4.597
11	Reasonable Efforts Backstop Gas	5.367	0.098	5.465
12	Supplemental Inventory	Note (3)		Note (3)
13	Supplemental Gas Sales Service (cents/m <sup>3</sup> )	19.0578	0.0565	19.1142
14	Failure to Deliver	2.545	0.098	2.643
15	Discretionary Gas Supply Service (DGSS)	Note (4)		Note (4)

Notes:

- (1) Includes Prospective Recovery of (0.2596), (1.0860), (0.4607), and 0.2545 cents/m<sup>3</sup> and a temporary charge of 0.0935 cents/m<sup>3</sup> expiring March 31, 2016.
- (2) Includes Prospective Recovery of (0.2596), (1.0860), (0.4607), and 0.2545 cents/m<sup>3</sup> and a temporary charge of 0.0935 cents/m<sup>3</sup> expiring March 31, 2016.
- (3) The charge for banked gas purchases shall be the higher of the daily spot gas cost at Dawn in the month of or the month following the month in which gas is sold under this rate and shall not be less than Union's approved weighted average cost of gas.
- (4) Reflects the "back to back" price plus gas supply administration charge.

UNION GAS LIMITED  
Union South  
Summary of Changes to Sales Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
1	<u>Rate M1 - Small Volume General Service Rate</u> Monthly Charge	\$21.00		\$21.00
2	First 100 m <sup>3</sup>	3.8988	0.4169	4.3157
3	Next 150 m <sup>3</sup>	3.7017	0.3958	4.0975
4	All over 250 m <sup>3</sup>	3.1926	0.3414	3.5340
5	Delivery - Price Adjustment (All Volumes)	0.3597 (1)	(0.2968)	0.0629 (2)
6	Storage Service	0.7416	(0.0389)	0.7027
7	Storage - Price Adjustment	-		-
8	<u>Rate M2 - Large Volume General Service Rate</u> Monthly Charge	\$70.00		\$70.00
9	First 1,000 m <sup>3</sup>	3.6124	0.4849	4.0973
10	Next 6,000 m <sup>3</sup>	3.5455	0.4759	4.0214
11	Next 13,000 m <sup>3</sup>	3.3563	0.4747	3.8310
12	All over 20,000 m <sup>3</sup>	3.1163	0.4407	3.5570
13	Delivery - Price Adjustment (All Volumes)	0.2913 (3)	(0.3859)	(0.0946) (4)
14	Storage Service	0.6428	(0.0267)	0.6161
15	Storage - Price Adjustment	-		-

Notes:

- (1) Includes a temporary charge of 0.2968 cents/m<sup>3</sup> expiring December 31, 2015, and a temporary charge of 0.0629 cents/m<sup>3</sup> expiring March 31, 2016.
- (2) Includes a temporary charge of 0.0629 cents/m<sup>3</sup> expiring March 31, 2016.
- (3) Includes a temporary charge of 0.3859 cents/m<sup>3</sup> expiring December 31, 2015, and a temporary credit of (0.0946) cents/m<sup>3</sup> expiring March 31, 2016.
- (4) Includes a temporary credit of (0.0946) cents/m<sup>3</sup> expiring March 31, 2016.

UNION GAS LIMITED  
Union South  
Summary of Changes to Sales Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>Rate M4 - Firm comm/ind contract rate</u>			
	Monthly demand charge:			
1	First 8,450 m <sup>3</sup>	47.8404	6.3394	54.1798
2	Next 19,700 m <sup>3</sup>	21.4504	2.8424	24.2928
3	All over 28,150 m <sup>3</sup>	18.0214	2.3880	20.4094
	Monthly delivery commodity charge:			
4	First block	1.0353	0.2687	1.3040
5	All remaining use	0.4466	0.1159	0.5625
6	Delivery - Price Adjustment (All Volumes)	-		-
7	Minimum annual firm delivery commodity charge	1.2270	0.2680	1.4950
	<u>Interruptible contracts *</u>			
8	Monthly Charge	\$681.21	(\$11.66)	\$669.55
	Daily delivery commodity charge:			
9	2,400 m <sup>3</sup> to 17,000 m <sup>3</sup>	2.6539	0.4832	3.1371
10	17,000 m <sup>3</sup> to 30,000 m <sup>3</sup>	2.5240	0.4832	3.0072
11	30,000 m <sup>3</sup> to 50,000 m <sup>3</sup>	2.4557	0.4832	2.9389
12	50,000 m <sup>3</sup> to 60,000 m <sup>3</sup>	2.4078	0.4832	2.8910
13	Delivery - Price Adjustment (All Volumes)	-		-
14	Minimum annual interruptible delivery commodity charge	2.8456	0.4825	3.3281
	<u>Rate M5A - interruptible comm/ind contract</u>			
	<u>Firm contracts *</u>			
15	Monthly demand charge	28.5955	3.0821	31.6776
16	Monthly delivery commodity charge	2.0180	0.3681	2.3861
17	Delivery - Price Adjustment (All Volumes)	-		-
	<u>Interruptible contracts *</u>			
18	Monthly Charge	\$681.21	(\$11.66)	\$669.55
	Daily delivery commodity charge:			
19	2,400 m <sup>3</sup> to 17,000 m <sup>3</sup>	2.6539	0.4832	3.1371
20	17,000 m <sup>3</sup> to 30,000 m <sup>3</sup>	2.5240	0.4832	3.0072
21	30,000 m <sup>3</sup> to 50,000 m <sup>3</sup>	2.4557	0.4832	2.9389
22	50,000 m <sup>3</sup> to 60,000 m <sup>3</sup>	2.4078	0.4832	2.8910
23	Delivery - Price Adjustment (All Volumes)	-		-
24	Minimum annual interruptible delivery commodity charge	2.8456	0.4825	3.3281

Notes:

\* Price changes to individual interruptible and seasonal contract rates are provided in Appendix C.

UNION GAS LIMITED  
Union South  
Summary of Changes to Sales Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>Rate M7 - Special large volume contract</u>			
	<u>Firm</u>			
1	Monthly demand charge	26.3233	2.5073	28.8306
2	Monthly delivery commodity charge	0.3410	0.0623	0.4033
3	Delivery - Price Adjustment	-		-
	<u>Interruptible *</u>			
4	Monthly delivery commodity charge: Maximum	4.2954	0.8963	5.1917
5	Delivery - Price Adjustment	-		-
	<u>Seasonal *</u>			
6	Monthly delivery commodity charge: Maximum	4.0513	0.8963	4.9476
7	Delivery - Price Adjustment	-		-
	<u>Rate M9 - Large wholesale service</u>			
8	Monthly demand charge	16.2405	1.1934	17.4339
9	Monthly delivery commodity charge	0.2019	0.0003	0.2022
10	Delivery - Price Adjustment	-		-
	<u>Rate M10 - Small wholesale service</u>			
11	Monthly delivery commodity charge	5.4186	0.5312	5.9498

Notes:

\* Price changes to individual interruptible and seasonal contract rates are provided in Appendix C.

UNION GAS LIMITED  
Union South  
Summary of Changes to Contract Carriage Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>Contract Carriage Service</u>			
	<u>Rate T1 - Storage and Transportation</u>			
	<u>Storage (\$ / GJ)</u>			
	Monthly demand charges:			
1	Firm space	0.011		0.011
	Firm Injection/Withdrawal Right			
2	Union provides deliverability inventory	1.603	(0.017)	1.586
3	Customer provides deliverability inventory	1.208	(0.013)	1.195
4	Firm incremental injection	1.208	(0.013)	1.195
5	Interruptible withdrawal	1.208	(0.013)	1.195
	Commodity charges:			
6	Withdrawal	0.029		0.029
7	Customer provides compressor fuel	0.008		0.008
8	Injection	0.029		0.029
9	Customer provides compressor fuel	0.008		0.008
10	Storage fuel ratio - customer provides fuel	0.400%	0.003%	0.403%
	<u>Transportation (cents / m<sup>3</sup>)</u>			
11	Monthly demand charge first 28,150 m <sup>3</sup>	32.7527	1.7646	34.5173
12	Monthly demand charge next 112,720 m <sup>3</sup>	22.6284	1.2191	23.8475
	Firm commodity charges:			
13	Union provides compressor fuel - All volumes	0.1335	0.0028	0.1363
14	Customer provides compressor fuel - All volumes	0.0739	0.0023	0.0762
	Interruptible commodity charges: *			
15	Maximum - Union provides compressor fuel	4.2954	0.8963	5.1917
16	Maximum - customer provides compressor fuel	4.2358	0.8958	5.1316
17	Transportation fuel ratio - customer provides fuel	0.301%	0.003%	0.303%
	<u>Authorized overrun services</u>			
	<u>Storage (\$ / GJ)</u>			
	Commodity charges			
18	Injection / Withdrawals	0.105	(0.001)	0.104
19	Customer provides compressor fuel	0.061	(0.001)	0.060
20	Transportation commodity charge (cents/m <sup>3</sup> )	1.2103	0.0608	1.2711
21	Customer provides compressor fuel	1.1507	0.0603	1.2110
22	<u>Monthly Charge</u>	\$1,935.18	(\$11.14)	\$1,924.04

\* Price changes to individual interruptible contract rates are provided in Appendix C.

UNION GAS LIMITED  
Union South  
Summary of Changes to Contract Carriage Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>Contract Carriage Service</u>			
	<u>Rate T2 - Storage and Transportation</u>			
	<u>Storage (\$ / GJ)</u>			
	Monthly demand charges:			
1	Firm space	0.011		0.011
	Firm Injection/Withdrawal Right			
2	Union provides deliverability inventory	1.603	(0.017)	1.586
3	Customer provides deliverability inventory	1.208	(0.013)	1.195
4	Firm incremental injection	1.208	(0.013)	1.195
5	Interruptible withdrawal	1.208	(0.013)	1.195
	Commodity charges:			
6	Withdrawal	0.029		0.029
7	Customer provides compressor fuel	0.008		0.008
8	Injection	0.029		0.029
9	Customer provides compressor fuel	0.008		0.008
10	Storage fuel ratio - customer provides fuel	0.400%	0.003%	0.403%
	<u>Transportation (cents / m<sup>3</sup>)</u>			
11	Monthly demand charge first 140,870 m <sup>3</sup>	20.9163	(0.0101)	20.9062
12	Monthly demand charge all over 140,870 m <sup>3</sup>	11.0637	(0.0053)	11.0584
	Firm commodity charges:			
13	Union provides compressor fuel - All volumes	0.0634	0.0007	0.0641
14	Customer provides compressor fuel - All volumes	0.0080	0.0003	0.0083
	Interruptible commodity charges: *			
15	Maximum - Union provides compressor fuel	4.2954	0.8963	5.1917
16	Maximum - customer provides compressor fuel	4.2400	0.8958	5.1358
17	Transportation fuel ratio - customer provides fuel	0.279%	0.002%	0.282%
	<u>Authorized overrun services</u>			
	<u>Storage (\$ / GJ)</u>			
	Commodity charges			
18	Injection / Withdrawals	0.105	(0.001)	0.104
19	Customer provides compressor fuel	0.061	(0.001)	0.060
20	Transportation commodity charge (cents/m <sup>3</sup> )	0.7510	0.0005	0.7515
21	Customer provides compressor fuel	0.6957	(0.0001)	0.6956
22	<u>Monthly Charge</u>	\$5,943.28	(\$192.16)	\$5,751.12

\* Price changes to individual interruptible contract rates are provided in Appendix C.

UNION GAS LIMITED  
Union South  
Summary of Changes to Contract Carriage Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>Rate T3 - Storage and Transportation</u>			
	<u>Storage (\$ / GJ)</u>			
	Monthly demand charges:			
1	Firm space	0.011		0.011
	Firm Injection/Withdrawal Right			
2	Union provides deliverability inventory	1.603	(0.017)	1.586
3	Customer provides deliverability inventory	1.208	(0.013)	1.195
4	Firm incremental injection	1.208	(0.013)	1.195
5	Interruptible withdrawal	1.208	(0.013)	1.195
	Commodity charges:			
6	Withdrawal	0.029		0.029
7	Customer provides compressor fuel	0.008		0.008
8	Injection	0.029		0.029
9	Customer provides compressor fuel	0.008		0.008
10	Storage fuel ratio - customer provides fuel	0.400%	0.003%	0.403%
	<u>Transportation (cents / m<sup>3</sup>)</u>			
11	Monthly demand charge	10.4499	1.1841	11.6340
12	Union provides compressor fuel - All volumes	0.0851	0.0007	0.0858
13	Customer provides compressor fuel - All volumes	0.0108		0.0108
14	Transportation fuel ratio- Cust. provides fuel	0.375%	0.004%	0.378%
	<u>Authorized overrun services</u>			
	<u>Storage (\$ / GJ)</u>			
	Commodity charges			
15	Injection / Withdrawals	0.105	(0.001)	0.104
16	Customer provides compressor fuel	0.061	(0.001)	0.060
17	Transportation commodity charge (cents/m <sup>3</sup> )			
18	Customer provides compressor fuel	0.4286 0.3544	0.0396 0.0389	0.4682 0.3933
	<u>Monthly Charge</u>			
19	City of Kitchener	\$20,369.55	(\$161.38)	\$20,208.17
20	Natural Resource Gas	\$3,126.93	(\$24.77)	\$3,102.16
21	Six Nations	\$1,042.31	(\$8.26)	\$1,034.05

UNION GAS LIMITED  
Union South  
Summary of Changes to Unbundled Rates

Line No.	Particulars (cents/m <sup>3</sup> )	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>U2 Unbundled Service</u>			
	<u>Storage (\$ / GJ)</u>			
	Monthly demand charges:			
	Standard Storage Service (SSS)			
1	Combined Firm Space & Deliverability	0.024	(0.001)	0.023
	Standard Peaking Service (SPS)			
2	Combined Firm Space & Deliverability	0.116	(0.001)	0.115
3	Incremental firm injection right	1.052	(0.013)	1.039
4	Incremental firm withdrawal right	1.052	(0.013)	1.039
	Commodity charges:			
5	Injection customer provides compressor fuel	0.026		0.026
6	Withdrawal customer provides compressor fuel	0.026		0.026
7	Storage fuel ratio - Customer provides fuel	0.400%	0.003%	0.403%
	<u>Authorized overrun services</u>			
	<u>Storage (\$ / GJ)</u>			
	Commodity charges:			
8	Injection customer provides compressor fuel	0.061	(0.001)	0.060
9	Withdrawal customer provides compressor fuel	0.061	(0.001)	0.060

UNION GAS LIMITED  
Summary of Changes to Storage and Transportation Rates

Line No.	Particulars (\$/GJ)	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>M12 Transportation Service</u>			
	<u>Firm transportation</u>			
	Monthly demand charges:			
1	Dawn to Kirkwall	2.193	0.228	2.421
2	Dawn to Oakville/Parkway	2.604	0.279	2.883
3	Kirkwall to Parkway	0.411	0.051	0.462
4	F24-T	0.069		0.069
	<u>M12-X Firm Transportation</u>			
5	Between Dawn, Kirkwall and Parkway	3.244	0.358	3.602
	Commodity charges:			
6	Easterly	Note (1)		Note (1)
7	Westerly	Note (1)		Note (1)
8	Parkway (TCPL) to Parkway (Cons)	Note (1)		Note (1)
	<u>Limited Firm/Interruptible</u>			
	Monthly demand charges:			
9	Maximum	6.250	0.669	6.919
	Commodity charges :			
10	Others	Note (1)		Note (1)
	<u>Authorized Overrun</u>			
	Transportation commodity charges:			
	Easterly:			
11	Dawn to Kirkwall - Union supplied fuel	Note (1)		Note (1)
12	Dawn to Oakville/Parkway - Union supplied fuel	Note (1)		Note (1)
13	Dawn to Kirkwall - Shipper supplied fuel	0.072 (1)	0.008	0.080 (1)
14	Dawn to Oakville/Parkway - Shipper supplied fuel	0.086 (1)	0.009	0.095 (1)
15	Kirkwall to Parkway - Union supplied fuel	Note (1)		Note (1)
16	Kirkwall to Parkway - Shipper supplied fuel	0.014	0.001	0.015
17	Westerly - Union supplied fuel	Note (1)		Note (1)
18	Westerly - Shipper supplied fuel	0.086 (1)	0.009	0.095 (1)
	<u>M12-X Firm Transportation</u>			
19	Between Dawn, Kirkwall and Parkway - Union supplied fuel	Note (1)		Note (1)
20	Between Dawn, Kirkwall and Parkway - Shipper supplied fuel	0.107 (1)	0.011	0.118 (1)
	<u>M13 Transportation of Locally Produced Gas</u>			
21	Monthly fixed charge per customer station	\$938.96	7.510	\$946.47
22	Transmission commodity charge to Dawn	0.034	0.001	0.035
23	Commodity charge - Union supplies fuel	0.008		0.008
24	Commodity charge - Shipper supplies fuel	Note (2)		Note (2)
25	Authorized Overrun - Union supplies fuel	0.077		0.077
26	Authorized Overrun - Shipper supplies fuel	0.069 (2)		0.069 (2)

Notes:

- (1) Monthly fuel rates and ratios per Schedule "C".  
(2) Plus customer supplied fuel per rate schedule.

UNION GAS LIMITED  
Summary of Changes to Storage and Transportation Rates

Line No.	Particulars (\$/GJ)	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>M16 Storage Transportation Service</u>			
1	Monthly fixed charge per customer station	\$1,493.78	11.950	\$1,505.73
	Monthly demand charges:			
2	East of Dawn	0.759	0.006	0.765
3	West of Dawn	1.064	(0.009)	1.055
4	Transmission commodity charge to Dawn	0.034	0.001	0.035
	Transportation Fuel Charges to Dawn:			
5	East of Dawn - Union supplied fuel	0.008		0.008
6	West of Dawn - Union supplied fuel	0.008		0.008
7	East of Dawn - Shipper supplied fuel	Note (1)		Note (1)
8	West of Dawn - Shipper supplied fuel	Note (1)		Note (1)
	Transportation Fuel Charges to Pools:			
9	East of Dawn - Union supplied fuel	0.010		0.010
10	West of Dawn - Union supplied fuel	0.023		0.023
11	East of Dawn - Shipper supplied fuel	Note (1)		Note (1)
12	West of Dawn - Shipper supplied fuel	Note (1)		Note (1)
	<u>Authorized Overrun</u>			
	Transportation Fuel Charges to Dawn:			
13	East of Dawn - Union supplied fuel	0.067	0.001	0.068
14	West of Dawn - Union supplied fuel	0.077		0.077
15	East of Dawn - Shipper supplied fuel	0.059 (1)	0.001	0.060 (1)
16	West of Dawn - Shipper supplied fuel	0.069 (1)		0.069 (1)
	Transportation Fuel Charges to Pools:			
17	East of Dawn - Union supplied fuel	0.035		0.035
18	West of Dawn - Union supplied fuel	0.058		0.058
19	East of Dawn - Shipper supplied fuel	0.025 (1)		0.025 (1)
20	West of Dawn - Shipper supplied fuel	0.035 (1)		0.035 (1)
	<u>C1 - Cross Franchise Transportation Service</u>			
	<u>Transportation service</u>			
	Monthly demand charges:			
21	St. Clair / Bluewater & Dawn	1.064	(0.009)	1.055
22	Ojibway & Dawn	1.064	(0.009)	1.055
23	Parkway to Dawn	0.640	0.079	0.719
24	Parkway to Kirkwall	0.640	0.079	0.719
25	Kirkwall to Dawn	1.128	0.140	1.268
26	Dawn to Kirkwall	2.193	0.228	2.421
27	Dawn to Parkway	2.604	0.279	2.883
28	Kirkwall to Parkway	0.411	0.051	0.462
29	Dawn to Dawn-Vector	0.029		0.029
30	Dawn to Dawn-TCPL	0.136	0.001	0.137
	Short-term:			
31	Maximum	75.00		75.00
	Commodity charges:			
32	St. Clair / Bluewater & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.013	0.001	0.014
33	St. Clair / Bluewater & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.010	0.001	0.011
34	Ojibway & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.015		0.015
35	Ojibway & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.023		0.023
36	Parkway to Kirkwall / Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.008		0.008
37	Parkway to Kirkwall / Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.015		0.015
38	Kirkwall to Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.008		0.008
39	Kirkwall to Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.008		0.008
40	Dawn to Kirkwall - Union supplied fuel (Nov. 1 - Mar. 31)	0.038	0.001	0.039
41	Dawn to Kirkwall - Union supplied fuel (Apr. 1 - Oct. 31)	0.016		0.016
42	Dawn to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.052		0.052
43	Dawn to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.029		0.029
44	Kirkwall to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.022		0.022
45	Kirkwall to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.021		0.021

Notes:

(1) Plus customer supplied fuel per rate schedule.

UNION GAS LIMITED  
Summary of Changes to Storage and Transportation Rates

Line No.	Particulars (\$/GJ)	EB-2015-0255 Approved October 1, 2015 Rate (a)	Rate Change (b)	EB-2015-0116 Approved January 1, 2016 Rate (c)
	<u>C1 - Cross Franchise Transportation Service</u>			
	<u>Transportation service cont'd</u>			
1	St. Clair / Bluewater & Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
2	St. Clair / Bluewater & Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	Note (1)		Note (1)
3	Ojibway & Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
4	Ojibway & Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	Note (1)		Note (1)
5	Parkway to Kirkwall / Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
6	Parkway to Kirkwall / Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	Note (1)		Note (1)
7	Kirkwall to Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
8	Kirkwall to Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	Note (1)		Note (1)
9	Dawn to Kirkwall - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
10	Dawn to Kirkwall - Shipper supplied fuel (Apr. 1 - Oct. 31)	Note (1)		Note (1)
11	Dawn to Parkway - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
12	Dawn to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)	Note (1)		Note (1)
13	Kirkwall to Parkway - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
14	Kirkwall to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)	Note (1)		Note (1)
15	Dawn to Dawn-Vector - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
16	Dawn to Dawn-Vector - Shipper supplied fuel (Apr. 1 - Oct . 31)	Note (1)		Note (1)
17	Dawn to Dawn-TCPL - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
18	Dawn to Dawn-TCPL - Shipper supplied fuel (Apr. 1 - Oct . 31)	Note (1)		Note (1)
	Interruptible commodity charges:			
19	Maximum	75.00		75.00
20	Dawn(Tecumseh), Dawn(Facilities or TCPL), Dawn (Vector) and Dawn (TSLE	Note (1)		Note (1)
	<u>Authorized Overrun</u>			
	Firm transportation commodity charges:			
21	St. Clair / Bluewater & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.048		0.048
22	St. Clair / Bluewater & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.045		0.045
23	Ojibway & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.050		0.050
24	Ojibway & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.058		0.058
25	Parkway to Kirkwall / Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.125	0.009	0.134
26	Parkway to Kirkwall / Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.132	0.009	0.141
27	Kirkwall to Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.045	0.005	0.050
28	Kirkwall to Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.045	0.005	0.050
29	Dawn to Kirkwall - Union supplied fuel (Nov. 1 - Mar. 31)	0.142	0.008	0.150
30	Dawn to Kirkwall - Union supplied fuel (Apr. 1 - Oct. 31)	0.120	0.007	0.127
31	Dawn to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.169	0.010	0.179
32	Dawn to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.146	0.009	0.155
33	Kirkwall to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.066	0.003	0.069
34	Kirkwall to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.066	0.002	0.068
35	St. Clair / Bluewater & Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.035 (1)		0.035 (1)
36	St. Clair / Bluewater & Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.035 (1)		0.035 (1)
37	Ojibway & Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.035 (1)		0.035 (1)
38	Ojibway & Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.035 (1)		0.035 (1)
39	Parkway to Kirkwall / Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.086 (1)	0.009	0.095 (1)
40	Parkway to Kirkwall / Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.086 (1)	0.009	0.095 (1)
41	Kirkwall to Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.037 (1)	0.005	0.042 (1)
42	Kirkwall to Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.037 (1)	0.005	0.042 (1)
43	Dawn to Kirkwall - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.072 (1)	0.008	0.080 (1)
44	Dawn to Kirkwall - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.072 (1)	0.008	0.080 (1)
45	Dawn to Parkway - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.086 (1)	0.009	0.095 (1)
46	Dawn to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)	0.086 (1)	0.009	0.095 (1)
47	Kirkwall to Parkway - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.014 (1)	0.001	0.015 (1)
48	Kirkwall to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)	0.014 (1)	0.001	0.015 (1)
49	Dawn to Dawn-Vector - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.001 (1)		0.001 (1)
50	Dawn to Dawn-Vector - Shipper supplied fuel (Apr. 1 - Oct . 31)	0.001 (1)		0.001 (1)
51	Dawn to Dawn-TCPL - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.004 (1)	0.001	0.005 (1)
52	Dawn to Dawn-TCPL - Shipper supplied fuel (Apr. 1 - Oct . 31)	0.004 (1)	0.001	0.005 (1)
	Short Term Firm transportation commodity charges:			
53	Maximum	75.00		75.00

Notes:

(1) Plus customer supplied fuel per rate schedule.

## APPENDIX B



RATE 01A - SMALL VOLUME GENERAL FIRM SERVICE

**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones who is an end user whose total gas requirements at that location are equal to or less than 50,000 m<sup>3</sup> per year.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

(a) **Sales Service**

For continuous supply of natural gas by Union and associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service, the Monthly, Delivery and Gas Supply Charges shall apply.

(b) **Transportation Service**

For continuous delivery on Union's distribution system from the Point of Receipt on TCPL's system to the Point of Consumption on the customer's premises of natural gas owned by the customer and transported by TCPL under a firm transportation service tariff or equivalent National Energy Board Order. For this service, the Monthly and Delivery Charges shall apply. Unless otherwise authorized by Union, customers who initiate a movement to Transportation Service from a Sales Service or Bundled Transportation Service must accept an assignment from Union of transportation capacity on upstream pipeline systems.

(c) **Bundled Transportation Service**

For continuous delivery by Union of gas owned by the customer and for the associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service the Monthly, and Delivery Charges, as well as the Storage and Transportation Charges of the Gas Supply Charge shall apply.

**MONTHLY RATES AND CHARGES**

Zone Rate Schedule No.	<u>Fort Frances</u> 201	<u>Western</u> 101	<u>Northern</u> 301	<u>Eastern</u> 601
<u>APPLICABLE TO ALL SERVICES</u>				
<u>MONTHLY CHARGE</u>	\$21.00	\$21.00	\$21.00	\$21.00
<u>DELIVERY CHARGE</u>	<u>¢ per m<sup>3</sup></u>	<u>¢ per m<sup>3</sup></u>	<u>¢ per m<sup>3</sup></u>	<u>¢ per m<sup>3</sup></u>
First 100 m <sup>3</sup> per month @	9.1003	9.1003	9.1003	9.1003
Next 200 m <sup>3</sup> per month @	8.8704	8.8704	8.8704	8.8704
Next 200 m <sup>3</sup> per month @	8.5100	8.5100	8.5100	8.5100
Next 500 m <sup>3</sup> per month @	8.1792	8.1792	8.1792	8.1792
Over 1,000 m <sup>3</sup> per month @	7.9060	7.9060	7.9060	7.9060
Delivery-Price Adjustment (All Volumes)	(0.2304) (1)	(0.2304) (1)	(0.2304) (1)	(0.2304) (1)

Notes:

(1) Includes a temporary credit of (0.2304) cents/m<sup>3</sup> expiring March 31, 2016.



**uniongas**

Effective  
2016-01-01  
**Rate 01A**  
Page 2 of 2

ADDITIONAL CHARGES FOR SALES SERVICE

**GAS SUPPLY CHARGES**

Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel.  
The applicable rates are provided in Schedule "A".

**MONTHLY BILL**

The monthly bill will equal the sum of the monthly charges plus the rates multiplied by the applicable gas quantities delivered plus all applicable taxes.  
If the customer transports its own gas, the Gas Supply Charge under Sales Service will not apply.

**MINIMUM MONTHLY BILL**

The Minimum Monthly Bill shall be the Monthly Charge.

**DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**SERVICE AGREEMENT**

Customers providing their own gas supply in whole or in part, for transportation by Union, must enter into a Service Agreement with Union.

**TERMS AND CONDITIONS OF SERVICE**

1. If multiple end-users are receiving service from a customer under this rate, for billing purposes, the Monthly Charge, the Delivery Charge and any other charge that is specific to the location of each end-user shall be used to develop a monthly bill for each end-user at each location. Upon request, possibly for a fee, Union will combine the individual bills on a single invoice or statement for administrative convenience. However, Union will not combine the quantities or demands of several end-use locations so that eligibility to a different rate class will result. Further, Union will not combine the monthly billing data of individual end-users to generate a single bill which is less than the sum of the monthly bills of the individual end-users involved at each location.
2. Customers must enter into a Service Agreement with Union prior to the commencement of service.
3. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



RATE 10 - LARGE VOLUME GENERAL FIRM SERVICE

**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones who is an end-user whose total firm gas requirements at one or more Company-owned meters at one location exceed 50,000 m<sup>3</sup> per year.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

(a) **Sales Service**

For continuous supply of natural gas by Union and associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service, the Monthly, Delivery and Gas Supply Charges shall apply.

(b) **Transportation Service**

For continuous delivery on Union's distribution system from the Point of Receipt on TCPL's system to the Point of Consumption on the customer's premises of natural gas owned by the customer and transported by TCPL under a firm transportation service tariff or equivalent National Energy Board Order. For this service, the Monthly, and Delivery Charges shall apply. Unless otherwise authorized by Union, customers who initiate a movement to Transportation Service from a Sales Service or Bundled Transportation Service must accept an assignment from Union of transportation capacity on upstream pipeline systems. Customers may reduce their assignment of transportation capacity in compliance with Union's Turnback Policy.

(c) **Bundled Transportation Service**

For continuous delivery by Union of gas owned by the customer and for the associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service the Monthly, and Delivery Charges, as well as the Storage and Transportation Charges of the Gas Supply Charge shall apply.

**MONTHLY RATES AND CHARGES**

Zone	<u>Fort Frances</u>	<u>Western</u>	<u>Northern</u>	<u>Eastern</u>
Rate Schedule No.	210	110	310	610
<u>APPLICABLE TO ALL SERVICES</u>				
<u>MONTHLY CHARGE</u>	\$70.00	\$70.00	\$70.00	\$70.00
<u>DELIVERY CHARGE</u>	<u>¢ per m<sup>3</sup></u>	<u>¢ per m<sup>3</sup></u>	<u>¢ per m<sup>3</sup></u>	<u>¢ per m<sup>3</sup></u>
First 1,000 m <sup>3</sup> per month @	7.2119	7.2119	7.2119	7.2119
Next 9,000 m <sup>3</sup> per month @	5.8836	5.8836	5.8836	5.8836
Next 20,000 m <sup>3</sup> per month @	5.2035	5.2035	5.2035	5.2035
Next 70,000 m <sup>3</sup> per month @	4.7112	4.7112	4.7112	4.7112
Over 100,000 m <sup>3</sup> per month @	2.8462	2.8462	2.8462	2.8462
Delivery-Price Adjustment (All Volumes)	(0.3351) (1)	(0.3351) (1)	(0.3351) (1)	(0.3351) (1)

Notes:

(1) Includes a temporary credit of (0.3351) cents/m<sup>3</sup> expiring March 31, 2016.

ADDITIONAL CHARGES FOR SALES SERVICE**GAS SUPPLY CHARGES****Gas Supply Charge (if applicable)**

The gas supply charge is comprised of charges for transportation and for commodity and fuel.  
The applicable rates are provided in Schedule "A".

**MONTHLY BILL**

The monthly bill will equal the sum of the monthly charges plus the rates multiplied by the applicable gas quantities delivered plus all applicable taxes.  
If the customer transports its own gas, the Gas Supply Charge under Sales Service will not apply.

**MINIMUM MONTHLY BILL**

The Minimum Monthly Bill shall be the Monthly Charge.

**DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**SERVICE AGREEMENT**

Customers providing their own gas supply in whole or in part, for transportation by Union and customers purchasing gas from Union with maximum daily requirements in excess of 3,000 m<sup>3</sup> per day must enter into a Service Agreement with Union.

**TERMS AND CONDITIONS OF SERVICE**

1. Service shall be for a minimum term of one year.
2. If multiple end-users are receiving service from a customer under this rate, for billing purposes, the Monthly Charge, the Delivery Charge and any other charge that is specific to the location of each end-user shall be used to develop a monthly bill for each end-user at each location. Upon request, possibly for a fee, Union will combine the individual bills on a single invoice or statement for administrative convenience. However, Union will not combine the quantities or demands of several end-use locations so that eligibility to a different rate class will result. Further, Union will not combine the monthly billing data of individual end-users to generate a single bill which is less than the sum of the monthly bills of the individual end-users involved at each location.
3. Customers must enter into a Service Agreement with Union prior to the commencement of service.
4. For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.
5. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

RATE 20 - MEDIUM VOLUME FIRM SERVICE**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones who is an end-user or who is authorized to serve an end-user of gas through one or more Company-owned meters at one location, and whose total maximum daily requirements for firm or combined firm and interruptible service is 14,000 m<sup>3</sup> or more.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

**(a) Sales Service**

For continuous supply of natural gas by Union and associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service, the Monthly, Delivery and Gas Supply Charges shall apply.

**(b) Transportation Service**

For continuous delivery on Union's distribution system from the Point of Receipt on TCPL's system to the Point of Consumption on the customer's premises of natural gas owned by the customer. The customer is responsible for obtaining the requisite regulatory approvals for the supply and transmission of such gas to Union's distribution system. For this service, the Monthly, Delivery, Transportation Account and Diversion Transaction Charges shall apply. Unless otherwise authorized by Union, customers who initiate a movement to Transportation Service from a Sales Service or Bundled Transportation Service must accept an assignment from Union of transportation capacity on upstream pipeline systems. Customers may reduce their assignment of transportation capacity in compliance with Union's Turnback Policy.

**(c) Bundled Transportation Service**

For continuous delivery by Union of gas owned by the customer and for the associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service the Monthly, Delivery, Gas Supply Demand and Commodity Transportation Charges shall apply.

**(d) Storage Service**

For load balancing purposes for customers using Transportation Service on this rate schedule. If at the sole discretion of Union, adequate supplies exist, bundled and unbundled storage and delivery/redelivery services will be provided.

The charge for Bundled Storage Service will consist of the charges for Transportation Service plus the charges for Bundled Storage Service.

NOTE: Union has a short-term intermittent gas supply service under Rate 30 of which customers may avail themselves, if they qualify for use of the service.



**uniongas**

Effective  
2016-01-01  
**Rate 20**  
Page 2 of 4

## MONTHLY RATES AND CHARGES

### APPLICABLE TO ALL SERVICES - ALL ZONES (1)

<u>MONTHLY CHARGE</u>	\$932.79
<u>DELIVERY CHARGES</u> (cents per month per m <sup>3</sup> )	
Monthly Demand Charge for first 70,000 m <sup>3</sup> of Contracted Daily Demand	29.7442
Monthly Demand Charge for all units over 70,000 m <sup>3</sup> of Contracted Daily Demand	17.4911
Commodity Charge for first 852,000 m <sup>3</sup> of gas volumes delivered	0.6089
Commodity Charge for all units over 852,000 m <sup>3</sup> of gas volumes delivered	0.4436

### NOTE

(1) Either the utility or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates, charges and terms and conditions applicable thereto, different from the rates, charges and terms and conditions specified herein if changed rates, charges and terms and conditions are considered by either party to be necessary, desirable and in the public interest.

### ADDITIONAL CHARGES FOR SALES SERVICE

#### Gas Supply Charge

The gas supply charge is comprised of charges for transportation and for commodity and fuel.  
The applicable rates are provided in Schedule "A".

#### Commodity Transportation

Charge 1 applies for all gas volumes delivered in the billing month up to the volume represented by the Contract Demand multiplied by the number of days in the billing month multiplied by 0.4.

Charge 2 applies for all additional gas volumes delivered in the billing month.

## HEAT CONTENT ADJUSTMENT

The gas supply commodity charges hereunder will be adjusted upwards or downwards as described below if the average total heating value of the gas per cubic metre (m<sup>3</sup>) determined in accordance with Union's Terms and Conditions in any month falls above or below 37.89 MJ per m<sup>3</sup>, respectively.

The adjustment shall be determined by multiplying the amount otherwise payable by a fraction, where the numerator is the monthly weighted average total heating value per cubic meter and the denominator 37.89.

**COMMISSIONING AND DECOMMISSIONING RATE**

The contract may provide that the Monthly Demand Charges specified above shall not apply on all or part of the daily contracted demand used by the customer either during the testing, commissioning and phasing in of gas using equipment or, alternatively, in the decommissioning and phasing out of gas using equipment being displaced by other gas using equipment, for a period not to exceed one year ("the transition period"). To be eligible the new or displaced gas using equipment must be separately meterable. In such event, the contract will provide the following rates that such volume during the transitional period will be charged.

Zone Rate Schedule No.	<u>Fort Frances</u> 220	<u>Western</u> 120	<u>Northern</u> 320	<u>Eastern</u> 620
<u>MONTHLY CHARGE</u>	\$932.79	\$932.79	\$932.79	\$932.79
<u>DELIVERY CHARGES</u>	<u>cents per m<sup>3</sup></u>	<u>cents per m<sup>3</sup></u>	<u>cents per m<sup>3</sup></u>	<u>cents per m<sup>3</sup></u>
Commodity Charge for each unit of gas volumes delivered	2.5647	2.5647	2.5647	2.5647

**GAS SUPPLY CHARGES**

The gas supply charge is comprised of charges for transportation and for commodity and fuel.  
The applicable rates are provided in Schedule "A".

**ADDITIONAL CHARGES FOR TRANSPORTATION AND STORAGE SERVICES – ALL ZONES****MONTHLY TRANSPORTATION ACCOUNT CHARGE**

For customers that currently have installed or will require installing telemetering equipment \$220.55

**BUNDLED (T-SERVICE) STORAGE SERVICE CHARGES**

Monthly Demand Charge for each unit of Contracted Daily Storage Withdrawal Entitlement (\$/GJ/Month) \$12.464

Monthly Storage Demand- Price Adjustment for each unit of Contracted Daily Storage Withdrawal Entitlement: (\$/GJ/Month) -

Commodity Charge for each unit of gas withdrawn from storage (\$/GJ) \$0.159

Authorized Overrun Commodity Charge on each additional unit of gas Union authorizes for withdrawal from storage (\$/GJ) \$0.569

The Authorized Overrun Commodity Charge is payable on all quantities on any Day in excess of the customer's contractual rights, for which authorization has been received. Overrun will be authorized by Union at its sole discretion.

**DIVERSION TRANSACTION CHARGE**

Charge to a customer Receiving Delivery of diverted gas each time such customer requests a diversion and Union provides the service: \$10.00

**THE BILL**

The bill will equal the sum of the charges for all services selected plus the rates multiplied by the applicable gas quantities delivered or withdrawn for each service chosen plus all applicable taxes. If the customer transports its own gas, the Gas Supply Charge under Sales Service will not apply. If the customer selects Union's Sales Service which includes the Gas Supply Charge, no additional charges for Transportation and Storage Services will apply.

**MINIMUM BILL**

The minimum bill shall be the Monthly Charge, the Transportation Account Charge and the Demand Charges, as applicable.



**uniongas**

Effective  
2016-01-01  
**Rate 20**  
Page 4 of 4

#### **DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

#### **SERVICE AGREEMENT**

All customers must enter into a Service Agreement with Union before receiving service under this rate schedule.

#### **TERMS AND CONDITIONS OF SERVICE**

1. Service shall be for a minimum term of one year.
2. If multiple end-users are receiving service from a customer under this rate, for billing purposes, the Monthly Charge, the Delivery Charge, the Transportation Account Charge and any other charge that is specific to the location of each end-user shall be used to develop a monthly bill for each end-user at each location. Upon request, possibly for a fee, Union will combine the individual bills on a single invoice or statement for administrative convenience. However, Union will not combine the quantities or demands of several end-use locations so that eligibility to a different rate class will result. Further, Union will not combine the billing data of individual end-users to generate a single bill which is less than the sum of the bills of the individual end-users involved at each location.
3. Customers must enter into a Service Agreement with Union prior to the commencement of service.
4. For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.
5. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

RATE 25 - LARGE VOLUME INTERRUPTIBLE SERVICE**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones who is an end-user or who is authorized to serve an end-user of gas through one or more Company-owned meters at one location, and whose total maximum daily interruptible requirement is 3,000 m<sup>3</sup> or more or the interruptible portion of a maximum daily requirement for combined firm and interruptible service is 14,000 m<sup>3</sup> or more and whose operations, in the judgement of Union, can readily accept interruption and restoration of gas service.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

**(a) Sales Service**

For interruptible supply of natural gas by Union and associated transportation services necessary to ensure its delivery in accordance with customer's needs. For this service, the Monthly, Delivery and Gas Supply Charges shall apply.

**(b) Transportation Service**

For delivery of natural gas owned by the customer on Union's distribution system from the Point of Receipt from TCPL's system to the Point of Consumption on the customer's or end-user's premises, providing that, in the judgement of Union, acting reasonably, the customer-owned gas does not displace service from Union under a Rate 20 or Rate 100 contract specific to that location. The customer is responsible for obtaining the requisite regulatory approvals for the supply and transmission of such gas to Union's distribution system. For this service, the Monthly, Delivery, Transportation Account and Diversion Transaction Charges shall apply.

NOTE: Union has a short-term intermittent gas supply service under Rate 30 which customers may avail themselves of, if they qualify for use of the service.

**MONTHLY RATES AND CHARGES**APPLICABLE TO ALL SERVICES – ALL ZONES (1)

<u>MONTHLY CHARGE</u>	\$331.70
<u>DELIVERY CHARGES</u>	<u>cents per m<sup>3</sup></u>
A Delivery Price for all volumes delivered to the customer to be negotiated between Union and the customer and the average price during the period in which these rates remain in effect shall not exceed:	4.7871
<u>UNAUTHORIZED OVERRUN NON - COMPLIANCE RATE</u>	<u>cents per m<sup>3</sup></u>
Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect.	385.5000

Notes:

(1) Either the utility or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates, charges and terms and conditions applicable thereto, different from the rates, charges and terms and conditions specified herein if changed rates, charges and terms and conditions are considered by either party to be necessary, desirable and in the public interest.



**uniongas**

Effective  
2016-01-01  
**Rate 25**  
Page 2 of 3

#### ADDITIONAL CHARGES FOR SALES SERVICE

##### Gas Supply Charge

As per applicable rate provided in Schedule "A".

##### Interruptible Service

Applicable all year at a price agreed upon between Union and the customer and the average price during the period in which these rates remain in effect.

#### **HEAT CONTENT ADJUSTMENT**

The gas supply commodity charges hereunder will be adjusted upwards or downwards as described below if the average total heating value of the gas per cubic metre ( $\text{m}^3$ ) determined in accordance with Union's Terms and Conditions in any month falls above or below 37.89 MJ per  $\text{m}^3$ , respectively.

The adjustment shall be determined by multiplying the amount otherwise payable by a fraction, where the numerator is the monthly weighted average total heating value per cubic meter and the denominator 37.89.

#### ADDITIONAL CHARGES FOR TRANSPORTATION – ALL ZONES

##### MONTHLY TRANSPORTATION ACCOUNT CHARGE:

For customers that currently have installed or will require installing telemetering equipment.

\$220.55

#### **THE BILL**

The bill will equal the sum of the monthly charges for all services selected plus the rates multiplied by the applicable gas volumes delivered or withdrawn for each service chosen plus all applicable taxes. If the customer transports its own gas, the Gas Supply Charge under Sales Service will not apply. If the customer selects Union's Sales Service which includes the Gas Supply Charge, no additional charges for Transportation will apply.

#### **MINIMUM BILL**

The minimum bill shall be the Monthly Charge and the Transportation Account Charge, if applicable.

#### **DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

#### **SERVICE AGREEMENT**

All customers must enter into a Service Agreement with Union before receiving service under this rate schedule.



**uniongas**

Effective  
2016-01-01  
**Rate 25**  
Page 3 of 3

#### **TERMS AND CONDITIONS OF SERVICE**

1. Service shall be for a minimum term of one year.
2. If multiple end-users are receiving service from a customer under this rate, for billing purposes, the Monthly Charge, the Delivery Charge, the Transportation Account Charge and any other charge that is specific to the location of each end-user shall be used to develop a monthly bill for each end-user at each location. Upon request, Union will combine the individual bills on a single invoice or statement for administrative convenience. However, Union will not combine the volumes or demands of several end-use locations so that eligibility to a different rate class will result. Further, Union will not combine the monthly billing data of individual end-users to generate a single bill which is less than the sum of the monthly bills of the individual end-users involved at each location.
3. Customers must enter into a Service Agreement with Union prior to the commencement of service.
4. For the purposes of qualifying for a rate class, the total volumes of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.
5. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



RATE 30 - INTERMITTENT GAS SUPPLY SERVICE  
AND SHORT TERM STORAGE / BALANCING SERVICE

**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones already connected to Union's gas distribution system who is an end-user or is authorized to serve an end-user.

**SERVICE AVAILABLE**

For intermittent, short-term gas supply which will be a substitute for energy forms other than Company owned gas sold under other rate schedules. This may include situations where customer-owned gas supplies are inadequate and short-term backstopping service is requested or during a situation of curtailment on the basis of price when the purchase price of Spot gas is outside the interruptible service price range. The gas supply service available hereunder is offered only in conjunction with service to the customer under an applicable firm or interruptible service rate schedule of Union. The service is for intermittent gas supply and short term storage / balancing service and will be billed in combination with Monthly, Delivery, and other applicable charges for such services under the applicable rate schedule. Gas supply under this rate will be provided when, at the sole discretion of Union, adequate supplies are available.

**GAS SUPPLY CHARGE**

The gas supply charge shall be \$5.00 per  $10^3 \text{ m}^3$  plus the greater of the incremental cost of gas for Union and the customer's gas supply charge.

**SHORT TERM STORAGE / BALANCING SERVICE**

Short Term Storage / Balancing Service is:

- i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
- ii) short-term firm deliverability, OR
- iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

- i) the minimum amount of storage service to which a customer is willing to commit,
- ii) whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) utilization of facilities, and
- iv) competition.

A commodity charge to be negotiated between Union and the customer not to exceed \$6.000/GJ.

**THE BILL**

The bill for gas supply and/or short term supplemental services under this rate shall be rendered in conjunction with the billing for delivery and other services under the customer's applicable rate for such services.

**SERVICE AGREEMENT**

All customers must enter into a Service Agreement with Union for this service and must agree therein to curtail or interrupt use of gas under this rate schedule whenever requested to do so by Union.



**uniongas**

Effective  
2016-01-01  
**Rate 30**  
Page 2 of 2

**TERMS AND CONDITIONS OF SERVICE**

1. Failure of the customer to interrupt or curtail use of gas on this rate as requested by Union shall be subject to the Unauthorized Overrun Gas Penalty as provided in Union's Terms and Conditions. Anytime the customer has such failure, Union reserves the right to cancel service under this rate.
2. The Terms and Conditions of the applicable rate schedule for delivery of the gas sold hereunder shall also apply.
3. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



RATE 100 – LARGE VOLUME HIGH LOAD FACTOR FIRM SERVICE

**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones who is an end-user or who is authorized to serve an end-user of gas through one or more Company-owned meters at one location, and whose maximum daily requirement for firm service is 100,000 m<sup>3</sup> or more, and whose annual requirement for firm service is equal to or greater than its maximum daily requirement multiplied by 256.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

(a) **Sales Service**

For continuous supply of natural gas by Union and associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service, the Monthly, Delivery and Gas Supply Charges shall apply.

(b) **Transportation Service**

For continuous delivery on Union's distribution system from the Point of Receipt on TCPL's system to the Point of Consumption on the customer's premises of natural gas owned by the customer. The customer is responsible for obtaining the requisite regulatory approvals for the supply and transmission of such gas to Union's distribution system. For this service, the Monthly, Delivery, Transportation Account and Diversion Transaction Charges shall apply. Unless otherwise authorized by Union, customers who initiate a movement to Transportation Service from a Sales Service or Bundled Transportation Service must accept an assignment from Union of transportation capacity on upstream pipeline systems. Customers may reduce their assignment of transportation capacity in compliance with Union's Turnback Policy.

(c) **Bundled Transportation Service**

For continuous delivery by Union of gas owned by the customer and for the associated transportation and storage services necessary to ensure deliverability in accordance with the customer's needs. For this service the Monthly, Delivery, Gas Supply Demand and Commodity Transportation Charges shall apply.

(d) **Storage Service**

For load balancing purposes for customers using Transportation Service on this rate schedule. If at the sole discretion of Union, adequate supplies exist, bundled and unbundled storage and delivery/redelivery services will be provided.

The charge for Bundled Storage Service will consist of the charges for Transportation Service plus the charges for Bundled Storage Service.

NOTE: Union has a short-term intermittent gas supply service under Rate 30 which customers may avail themselves of, if they qualify for use of the service.

**MONTHLY RATES AND CHARGES**APPLICABLE TO ALL SERVICES - ALL ZONES (1)

<u>MONTHLY CHARGE</u>	\$1,423.71
<u>DELIVERY CHARGES</u> (cents per Month per m <sup>3</sup> of Daily Contract Demand)	
Monthly Demand Charge for each unit of Contracted Daily Demand	13.9580
Commodity Charge for each unit of gas volumes delivered (cents/m <sup>3</sup> )	0.2052

NOTE:

(1) Either the utility or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates, charges and terms and conditions applicable thereto, different from the rates, charges and terms and conditions specified herein if changed rates, charges and terms and conditions are considered by either party to be necessary, desirable and in the public interest.

ADDITIONAL CHARGES FOR SALES SERVICEGas Supply Charges

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A".

Commodity Transportation

Charge 1 applies for all gas volumes delivered in the billing month up to the volume represented by the Contract Demand multiplied by the number of days in the billing month multiplied by 0.3.

Charge 2 applies for all additional gas volumes delivered in the billing month.

**HEAT CONTENT ADJUSTMENT**

The gas supply commodity charges hereunder will be adjusted upwards or downwards as described below if the average total heating value of the gas per cubic metre (m<sup>3</sup>) determined in accordance with Union's Terms and Conditions in any month falls above or below 37.89 MJ per m<sup>3</sup>, respectively.

The adjustment shall be determined by multiplying the amount otherwise payable by a fraction, where the numerator is the monthly weighted average total heating value per cubic meter and the denominator 37.89.



**uniongas**

Effective  
2016-01-01  
**Rate 100**  
Page 3 of 4

#### COMMISSIONING AND DECOMMISSIONING RATE

The contract may provide that the Monthly Demand Charges specified above shall not apply on all or part of the daily contracted demand used by the customer either during the testing, commissioning and phasing in of gas using equipment or, alternatively, in the decommissioning and phasing out of gas using equipment being displaced by other gas using equipment, for a period not to exceed one year ("the transitional period"). To be eligible the new or displaced gas using equipment must be separately meterable. In such event, the contract will provide the following rates that such volume during the transitional period will be charged.

Zone Rate Schedule No.	<u>Fort Frances</u> 2100	<u>Western</u> 1100	<u>Northern</u> 3100	<u>Eastern</u> 6100
<u>MONTHLY CHARGE</u>	\$1,423.71	\$1,423.71	\$1,423.71	\$1,423.71
<u>DELIVERY CHARGES</u>	<u>cents per m<sup>3</sup></u>	<u>cents per m<sup>3</sup></u>	<u>cents per m<sup>3</sup></u>	<u>cents per m<sup>3</sup></u>
Commodity Charge for each unit of gas volumes delivered	0.8608	0.8608	0.8608	0.8608

#### GAS SUPPLY CHARGES

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A".

#### ADDITIONAL CHARGES FOR TRANSPORTATION AND STORAGE SERVICES – ALL ZONES

##### MONTHLY TRANSPORTATION ACCOUNT CHARGE

For customers that currently have installed or will require installing telemetering equipment \$220.55

##### BUNDLED (T-SERVICE) STORAGE SERVICE CHARGES

Monthly Demand Charge for each unit of Contracted Daily Storage Withdrawal Entitlement (\$/GJ/Month) \$12.464

Monthly Storage Demand- Price Adjustment for each unit of Contracted Daily Storage Withdrawal Entitlement: (\$/GJ/Month) -

Commodity Charge for each unit of gas withdrawn from storage (\$/GJ) \$0.159

Authorized Overrun Commodity Charge on each additional unit of gas Union authorizes for withdrawal from storage (\$/GJ) \$0.569

The Authorized Overrun Commodity Charge is payable on all quantities on any Day in excess of the customer's contractual rights, for which authorization has been received. Overrun will be authorized by Union at its sole discretion.

##### DIVERSION TRANSACTION CHARGE

Charge to a customer Receiving Delivery of diverted gas each time such customer requests a diversion and Union provides the service: \$10.00

#### THE BILL

The bill will equal the sum of the charges for all services selected plus the rates multiplied by the applicable gas quantities delivered or withdrawn for each service chosen plus all applicable taxes. If the customer transports its own gas, the Gas Supply Charge under Sales Service will not apply. If the customer selects Union's Sales Service which includes the Gas Supply Charge, no additional charges for Transportation and Storage Services will apply.

#### MINIMUM BILL

The minimum bill shall be the Monthly Charge, the Transportation Account Charge and the Demand Charges, as applicable.



**uniongas**

Effective  
2016-01-01  
**Rate 100**  
Page 4 of 4

#### **DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

#### **SERVICE AGREEMENT**

All customers must enter into a Service Agreement with Union before receiving service under this rate schedule.

#### **TERMS AND CONDITIONS OF SERVICE**

1. Service shall be for a minimum term of one year.
2. If multiple end-users are receiving service from a customer under this rate, for billing purposes, the Monthly Charge, the Delivery Charge, the Transportation Account Charge and any other charge that is specific to the location of each end-user shall be used to develop a monthly bill for each end-user at each location. Upon request, possibly for a fee, Union will combine the individual bills on a single invoice or statement for administrative convenience. However, Union will not combine the quantities or demands of several end-use locations so that eligibility to a different rate class will result. Further, Union will not combine the billing data of individual end-users to generate a single bill which is less than the sum of the bills of the individual end-users involved at each location.
3. Customers must enter into a Service Agreement with Union prior to the commencement of service.
4. For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.
5. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

RATE S1 - GENERAL FIRM SERVICE STORAGE RATES**ELIGIBILITY**

Any customer or agent in Union's Fort Frances, Western, Northern or Eastern Zones who is authorized to serve an end-user of gas, paying for delivery services under Rate 01A or Rate 10.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

**(a) Transportation Service**

The customer is responsible for obtaining all Gas Supply services to the end-user including the requisite regulatory approvals for the supply and transmission of such gas to Union's distribution system. For this service, the Diversion Transaction Charge shall apply. Unless otherwise authorized by Union, customers who initiate a movement to Transportation Service from a Sales Service or Bundled Transportation Service must accept an assignment from Union of transportation capacity on upstream pipeline systems.

**(b) Storage Service**

For load balancing purposes for customers using Transportation Service on this rate schedule. If at the sole discretion of Union, adequate supplies exist, unbundled storage and delivery/redelivery services will be provided.

The charge for Unbundled Storage Service will consist of the charges for Transportation Service plus the charges for Unbundled Storage Service which must include charges for delivery/redelivery service to/from storage.

**MONTHLY RATES AND CHARGES**UNBUNDLED STORAGE SERVICE CHARGES

Storage Space Charge	
Applied to Contracted Maximum Storage Space (\$ per GJ per Month)	\$0.086
Fuel Ratio	
Applied to all gas injected and withdrawn from storage (%)	0.403%
Commodity Charge	
Applied to all gas injected and withdrawn from storage (\$ per GJ)	\$0.027

UNBUNDLED STORAGE SERVICE AUTHORIZED OVERRUN CHARGES

Fuel Ratio	
Applied to all gas injected and withdrawn from storage (%)	0.860%
Commodity Charge	
Applied to all gas injected and withdrawn from storage (\$ per GJ)	\$0.054

The Authorized Overrun Commodity Charge is payable on all quantities on any Day in excess of the customer's contractual rights, for which authorization has been received. Overrun will be authorized by Union at its sole discretion.

**UNBUNDLED STORAGE SERVICE UNAUTHORIZED OVERRUN CHARGES**

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space or the gas storage balance for the account of the customer is less than zero or the customer has injected or withdrawn volumes from storage which exceeds their contractual rights, and which has not been authorized by Union or provided for under a short term storage/balancing service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate during the November 1 to April 15 period will be \$60.00 per GJ. The Unauthorized Overrun rate during the April 16 to October 31 period will be \$6.000 per GJ.

Zone	<u>Fort Frances</u>	<u>Western</u>	<u>Northern</u>	<u>Eastern</u>
<u>Delivery Service to Storage Facilities (1)</u>				
Demand Charge (\$/GJ/month)	N/A	\$23.187	\$9.083	\$0.908
Commodity (\$/GJ)	N/A	\$0.049	\$0.023	\$0.008
<u>Redelivery Service from Storage Facilities</u>				
Demand Charge (\$/GJ/month)	\$1.822	\$1.822	\$1.822	\$7.939
Commodity (\$/GJ)	N/A	\$0.036	\$0.036	\$0.049

**Notes:**

1. Delivery Service to Storage Facilities is not available to Northern Zone customers in the Sault Ste. Marie Delivery Area (SSMDA).
2. Daily Firm Injection and Withdrawal Rights shall be pursuant to the storage contract.
3. Storage Space, Withdrawal Rights, and Injection Rights are not assignable to any other party without the prior written consent of Union and where necessary, approval from the Ontario Energy Board.

**Diversion Transaction Charge**

Charge to a customer receiving delivery of diverted gas each time such customer requests a diversion and Union provides the service:

\$10.00

**MONTHLY BILL**

The monthly bill will equal the sum of the monthly charges for all services selected plus the rates multiplied by the applicable gas quantities delivered or withdrawn for each service chosen plus all applicable taxes.

**DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**TERMS AND CONDITIONS OF SERVICE**

1. Customers must enter into a Service Agreement with Union prior to the commencement of service.
2. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

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O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



# uniongas

Effective  
2016-01-01  
Schedule "A"  
Page 1 of 2

Union Gas Limited  
Union North  
Gas Supply Charges

(A) Availability

Available to customers in Union's Fort Frances, Western, Northern and Eastern Delivery Zones.

(B) Applicability:

To all sales customers served under Rate 01A, Rate 10, Rate 20, Rate 100, Rate 25, and Natural Gas Liquefaction Service.

(C) Rates

Utility Sales

Rate 01A (cents / m<sup>3</sup>)

	<u>Fort Frances</u>	<u>Western</u>	<u>Northern</u>	<u>Eastern</u>
Storage	3.6643	3.3346	3.9402	4.4521
Storage - Price Adjustment	-	-	-	-
Commodity and Fuel (1)	12.2082	12.2968	12.4339	12.5430
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Transportation	5.7722	4.9572	6.4543	7.7197
Transportation - Price Adjustment	0.7006	0.7006	0.7006	0.7006
Total Gas Supply Charge	<u>20.2464</u>	<u>19.1903</u>	<u>21.4301</u>	<u>23.3165</u>

Rate 10 (cents / m<sup>3</sup>)

Storage	2.3917	2.0650	2.6651	3.1722
Storage - Price Adjustment	-	-	-	-
Commodity and Fuel (1)	12.2082	12.2968	12.4339	12.5430
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Transportation	5.0912	4.2767	5.7728	7.0374
Transportation - Price Adjustment	0.6688	0.6688	0.6688	0.6688
Total Gas Supply Charge	<u>18.2610</u>	<u>17.2084</u>	<u>19.4417</u>	<u>21.3225</u>

Notes:

(1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/m<sup>3</sup>.



# uniongas

Effective  
2016-01-01  
Schedule "A"  
Page 2 of 2

Union Gas Limited  
Union North  
Gas Supply Charges

Utility Sales

	<u>Fort Frances</u>	<u>Western</u>	<u>Northern</u>	<u>Eastern</u>
<u>Rate 20 (cents / m<sup>3</sup>)</u>				
Commodity and Fuel (1)	12.0025	12.0896	12.2244	12.3315
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Commodity Transportation - Charge 1	4.3859	3.9293	4.7668	5.4747
Transportation 1 - Price Adjustment	0.9480	0.9480	0.9480	0.9480
Commodity Transportation - Charge 2	-	-	-	-
Monthly Gas Supply Demand	54.0801	34.0754	73.2293	106.3242
Gas Supply Demand - Price Adjustment	-	-	-	-
Commissioning and Decommissioning Rate	7.0646	5.3840	8.6285	11.3709

Rate 100 (cents / m<sup>3</sup>)

Commodity and Fuel (1)	12.0025	12.0896	12.2244	12.3315
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Commodity Transportation - Charge 1	7.0810	6.7390	7.3672	7.8982
Commodity Transportation - Charge 2	-	-	-	-
Monthly Gas Supply Demand	102.9596	78.6756	123.2688	160.9615
Commissioning and Decommissioning Rate	7.8704	6.5833	8.9469	10.9448

Rate 25 (cents / m<sup>3</sup>)

Gas Supply Charge:	Interruptible Service			
	Minimum	1.4848	1.4848	1.4848
	Maximum	675.9484	675.9484	675.9484

Natural Gas Liquefaction Service (\$ / GJ) (2)

Gas Supply Charge:	Interruptible Service	
	Minimum	0.3919
	Maximum	178.3976

Notes:

- (1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/m<sup>3</sup>.  
(2) Billing in energy (\$/GJ) will only apply to the Natural Gas Liquefaction Service.

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Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

SMALL VOLUME GENERAL SERVICE RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To general service customers whose total consumption is equal to or less than 50,000 m<sup>3</sup> per year.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

a)	Monthly Charge		\$21.00
b)	Delivery Charge		
	First	100 m <sup>3</sup>	4.3157 ¢ per m <sup>3</sup>
	Next	150 m <sup>3</sup>	4.0975 ¢ per m <sup>3</sup>
	All Over	250 m <sup>3</sup>	3.5340 ¢ per m <sup>3</sup>
	Delivery – Price Adjustment (All Volumes)		0.0629 ¢ per m <sup>3</sup> (1)
c)	Storage Charge (if applicable)		0.7027 ¢ per m <sup>3</sup>
	Storage - Price Adjustment (All Volumes)		0.0000 ¢ per m <sup>3</sup>
	Applicable to all bundled customers (sales and bundled transportation service).		
d)	Gas Supply Charge (if applicable)		
	The gas supply charge is comprised of charges for transportation and for commodity and fuel.		
	The applicable rates are provided in Schedule "A".		

During any month in which a customer terminates service or begins service, the fixed charge for the month will be prorated to such customer.

Notes:

- (1) Includes a temporary charge of 0.0629 cents/m<sup>3</sup> expiring March 31, 2016.

**(D) Supplemental Service to Commercial and Industrial Customers Under Group Meters**

Combination of readings from several meters may be authorized by the Company and the Company will not reasonably withhold authorization in cases where meters are located on contiguous pieces of property of the same owner not divided by a public right-of-way

**(E) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(F) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(G) Overrun Charge**

In the event that a direct purchase customer fails to deliver its contracted volumes to Union, and Union has the capability to continue to supply the customer, Union will do so. The customer may pay 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup>, plus 7¢ per m<sup>3</sup>.

**(H) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule, the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union. Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

**(I) Company Policy Relating to Terms of Service**

- a. Customers who temporarily discontinue service during any twelve consecutive months without payment of the monthly fixed charge for the months in which the gas is temporarily disconnected shall pay for disconnection and reconnection.
- b. When gas is delivered at an absolute pressure in excess of 101.325 kilopascals, then for purposes of measurement, hereunder, such volume of gas shall be corrected to an absolute pressure of 101.325 kilopascals. Atmospheric pressure is assumed to be the levels shown below in kilopascals (absolute) regardless of the actual atmospheric pressure at which the gas is measured and delivered.

<u>Zone</u>	<u>Assumed Atmospheric Pressure kPa</u>
1	100.148
2	99.494
3	98.874
4	98.564
5	98.185
6	97.754
7	97.582
8	97.065
9	96.721
10	100.561
11	99.321
12	98.883

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

LARGE VOLUME GENERAL SERVICE RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To general service customers whose total consumption is greater than 50,000 m<sup>3</sup> per year.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

a)	Monthly Charge		\$70.00	
b)	Delivery Charge			
	First	1 000 m <sup>3</sup>	4.0973 ¢ per m <sup>3</sup>	
	Next	6 000 m <sup>3</sup>	4.0214 ¢ per m <sup>3</sup>	
	Next	13 000 m <sup>3</sup>	3.8310 ¢ per m <sup>3</sup>	
	All Over	20 000 m <sup>3</sup>	3.5570 ¢ per m <sup>3</sup>	
	Delivery – Price Adjustment (All Volumes)		(0.0946) ¢ per m <sup>3</sup>	(1)
c)	Storage Charge (if applicable)		0.6161 ¢ per m <sup>3</sup>	
	Storage - Price Adjustment (All Volumes)		0.0000 ¢ per m <sup>3</sup>	
	Applicable to all bundled customers (sales and bundled transportation service).			
d)	Gas Supply Charge (if applicable)			
	The gas supply charge is comprised of charges for transportation and for commodity and fuel.			
	The applicable rates are provided in Schedule "A".			

During any month in which a customer terminates service or begins service, the fixed charge for the month will be prorated to such customer.

Notes:

(1) Includes a temporary credit of (0.0946) cents/m<sup>3</sup> expiring March 31, 2016.

**(D) Supplemental Service to Commercial and Industrial Customers Under Group Meters**

Combination of readings from several meters may be authorized by the Company and the Company will not reasonably withhold authorization in cases where meters are located on contiguous pieces of property of the same owner not divided by a public right-of-way.

**(E) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(F) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(G) Overrun Charge**

In the event that a direct purchase customer fails to deliver its contracted volumes to Union, and Union has the capability to continue to supply the customer, Union will do so. The customer may pay 4.7134 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup>, plus 7¢ per m<sup>3</sup>.

**(H) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule, the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union. Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

**(I) Company Policy Relating to Terms of Service**

- a. Customers who temporarily discontinue service during any twelve consecutive months without payment of the monthly fixed charge for the months in which the gas is temporarily disconnected shall pay for disconnection and reconnection.
- b. When gas is delivered at an absolute pressure in excess of 101.325 kilopascals, then for purposes of measurement, hereunder, such volume of gas shall be corrected to an absolute pressure of 101.325 kilopascals. Atmospheric pressure is assumed to be the levels shown below in kilopascals (absolute) regardless of the actual atmospheric pressure at which the gas is measured and delivered.

<u>Zone</u>	Assumed Atmospheric Pressure <u>kPa</u>
1	100.148
2	99.494
3	98.874
4	98.564
5	98.185
6	97.754
7	97.582
8	97.065
9	96.721
10	100.561
11	99.321
12	98.883

Effective

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Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



FIRM INDUSTRIAL AND COMMERCIAL CONTRACT RATE

**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer who enters into a contract for the purchase or transportation of gas for a minimum term of one year that specifies a daily contracted demand between 2 400 m<sup>3</sup> and 60 000 m<sup>3</sup>.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

1. Bills will be rendered monthly and shall be the total of:

(i) A Monthly Demand Charge			
First	8 450 m <sup>3</sup> of daily contracted demand		54.1798 ¢ per m <sup>3</sup>
Next	19 700 m <sup>3</sup> of daily contracted demand		24.2928 ¢ per m <sup>3</sup>
All Over	28 150 m <sup>3</sup> of daily contracted demand		20.4094 ¢ per m <sup>3</sup>
(ii) A Monthly Delivery Commodity Charge			
First 422 250 m <sup>3</sup> delivered per month			1.3040 ¢ per m <sup>3</sup>
Next volume equal to 15 days use of daily contracted demand			1.3040 ¢ per m <sup>3</sup>
For remainder of volumes delivered in the month			0.5625 ¢ per m <sup>3</sup>
Delivery- Price Adjustment (All Volumes)			0.0000 ¢ per m <sup>3</sup>

(iii) Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A"

2. Overrun Charge

Authorized overrun gas is available provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization. Overrun means gas taken on any day in excess of 103% of contracted daily demand. Authorized overrun will be available April 1 through October 31 and will be paid for at a Delivery Rate of 3.0853 ¢ per m<sup>3</sup> and, if applicable, the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all volumes purchased.

Unauthorized overrun gas taken in any month shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all gas supply volumes purchased.

3. Firm Minimum Annual Charge

In each contract year, the customer shall purchase from Union or pay for a minimum volume of gas or transportation services equivalent to 146 days use of firm contracted demand. Overrun gas volumes will not contribute to the minimum volume. In the event that the customer shall not take such minimum volume the customer shall pay an amount equal to the deficiency from the minimum volume times a Delivery Charge of 1.4950 ¢ per m<sup>3</sup> and, if applicable a gas supply commodity charge provided in Schedule "A".

In the event that the contract period exceeds one year the annual minimum volume will be prorated for any part year.

**4. Interruptible Service**

Union may agree, in its sole discretion, to combine a firm service with an interruptible service provided that the amount of interruptible volume to be delivered and agreed upon by Union and the customer shall be no less than 350,000 m<sup>3</sup> per year.

The price of all gas delivered by Union pursuant to any contract, contract amendment, or contract renewal shall be determined on the basis of the following schedules:

**a) (i) Monthly Delivery Commodity Charge**

<u>Daily Contracted Demand Level (CD)</u>	<u>Price per m<sup>3</sup></u>
2 400 m <sup>3</sup> ≤ CD < 17 000 m <sup>3</sup>	3.1371 ¢ per m <sup>3</sup>
17 000 m <sup>3</sup> ≤ CD < 30 000 m <sup>3</sup>	3.0072 ¢ per m <sup>3</sup>
30 000 m <sup>3</sup> ≤ CD < 50 000 m <sup>3</sup>	2.9389 ¢ per m <sup>3</sup>
50 000 m <sup>3</sup> ≤ CD ≤ 60 000 m <sup>3</sup>	2.8910 ¢ per m <sup>3</sup>

Delivery- Price Adjustment (All Volumes) - ¢ per m<sup>3</sup>

**(ii) Days Use of Interruptible Contract Demand**

The price determined under Paragraph 4(a) of "Rates" will be reduced by the amount based on the number of Days Use of Contracted Demand as scheduled below:

For 75 days use of contracted demand	0.0530 ¢ per m <sup>3</sup>
For each additional days use of contracted demand up to a maximum of 275 days, an additional discount of	0.00212 ¢ per m <sup>3</sup>

**(iii) Gas Supply Charge (if applicable)**

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A"

(iv) Monthly Charge \$669.55 per month

- b) In each contract year, the customer shall take delivery from Union, or in any event pay for, if available and not accepted by the customer, a minimum volume of gas or transportation services as specified in the contract between the parties and which will not be less than 350 000 m<sup>3</sup> per annum. Overrun volumes will not contribute to the minimum volume. In the event that the customer shall not take such minimum volume, the customer shall pay an amount equal to the deficiency from the minimum volume times a Delivery Charge of 3.3281 ¢ per m<sup>3</sup>, and if applicable, a gas supply charge provided in Schedule "A".

In the event that the contract period exceeds one year, the annual minimum volume will be prorated for any part year.

- c) Overrun gas is available without penalty provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization. Overrun means gas taken on any day in excess of 105% of contracted daily demand.

Unauthorized overrun gas taken in any month shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all gas supply volumes purchased.

**Unauthorized Overrun Non-Compliance Rate:**

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the delivery.



**uniongas**

Effective  
2016-01-01  
**Rate M4**  
Page 3 of 3

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems for all volumes. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union.

Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

Effective

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Chatham, Ontario

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INTERRUPTIBLE INDUSTRIAL AND COMMERCIAL CONTRACT RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer who enters into a contract for the purchase or transportation of gas for a minimum term of one year that specifies a daily contracted demand between 2 400 m<sup>3</sup> and 60 000 m<sup>3</sup> inclusive.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

**1. Interruptible Service**

The price of all gas delivered by Union pursuant to any contract, contract amendment, or contract renewal shall be determined on the basis of the following schedules:

**a) (i) Monthly Delivery Commodity Charge**

<u>Daily Contracted Demand Level (CD)</u>	<u>Price per m<sup>3</sup></u>
2 400 m <sup>3</sup> ≤ CD < 17 000 m <sup>3</sup>	3.1371 ¢ per m <sup>3</sup>
17 000 m <sup>3</sup> ≤ CD < 30 000 m <sup>3</sup>	3.0072 ¢ per m <sup>3</sup>
30 000 m <sup>3</sup> ≤ CD < 50 000 m <sup>3</sup>	2.9389 ¢ per m <sup>3</sup>
50 000 m <sup>3</sup> ≤ CD ≤ 60 000 m <sup>3</sup>	2.8910 ¢ per m <sup>3</sup>

Delivery- Price Adjustment (All Volumes)	0.0000 ¢ per m <sup>3</sup>
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**(ii) Days Use of Interruptible Contract Demand**

The price determined under Paragraph 1(a) of "Rates" will be reduced by the amount based on the number of Days

For 75 days use of contracted demand	0.0530 ¢ per m <sup>3</sup>
For each additional days use of contracted demand up to a maximum of 275 days, an additional discount of	0.00212 ¢ per m <sup>3</sup>

**(iii) Gas Supply Charge (if applicable)**

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A"

(iv) Monthly Charge	\$669.55 per month
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2. In each contract year, the customer shall take delivery from Union, or in any event pay for, if available and not accepted by the customer, a minimum volume of gas or transportation services as specified in the contract between the parties and which will not be less than 350 000 m<sup>3</sup> per annum. Overrun volumes will not contribute to the minimum volume. In the event that the customer shall not take such minimum volume, the customer shall pay an amount equal to the deficiency from the minimum volume times a Delivery Charge of 3.3281 ¢ per m<sup>3</sup>, and if applicable, a gas supply charge provided in Schedule "A".

In the event that the contract period exceeds one year, the annual minimum volume will be prorated for any part year.

3. Overrun gas is available without penalty provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization. Overrun means gas taken on any day in excess of 105% of contracted daily demand.

Unauthorized overrun gas taken in any month shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all gas supply volumes purchased.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the delivery.

4. Non-Interruptible Service

Union may agree, in its sole discretion, to combine an interruptible service with a firm service in which case the amount of firm daily demand to be delivered shall be agreed upon by Union and the customer.

- a) The monthly demand charge for firm daily deliveries will be 31.6776 ¢ per m<sup>3</sup>.
- b) The commodity charge for firm service shall be the rate for firm service at Union's firm rates net of a monthly demand charge of 31.6776 ¢ per m<sup>3</sup> of daily contracted demand and a delivery commodity price adjustment of 0.0000 ¢ per m<sup>3</sup>.
- c) The interruptible commodity charge will be established under Clause 1 of this schedule.

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union.

Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



SPECIAL LARGE VOLUME  
INDUSTRIAL AND COMMERCIAL CONTRACT RATE

**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a Customer

- a) who enters into a contract for the purchase or transportation of gas for a minimum term of one year that specifies a combined maximum daily requirement for firm, interruptible and seasonal service of at least 60 000 m<sup>3</sup>; and
- b) who has site specific energy measuring equipment that will be used in determining energy balances.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

**1. Bills will be rendered monthly and shall be the total of:**

(i) A Monthly Demand Charge

A negotiated Monthly Demand Charge of up to 28.8306 ¢ per m<sup>3</sup> for each m<sup>3</sup> of daily contracted firm demand.

(ii) A Monthly Delivery Commodity Charge

(1) A Monthly Firm Delivery Commodity Charge for all firm volumes of 0.4033 ¢ per m<sup>3</sup> for each m<sup>3</sup>, and a Delivery - Price Adjustment of 0.0000 ¢ per m<sup>3</sup>.

(2) A Monthly Interruptible Delivery Commodity Charge for all interruptible volumes to be negotiated between Union and the customer not to exceed an annual average of 5.1917 ¢ per m<sup>3</sup>, and a Delivery - Price Adjustment of 0.0000 ¢ per m<sup>3</sup>.

(3) A Monthly Seasonal Delivery Commodity Charge for all seasonal volumes to be negotiated between Union and the customer not to exceed an annual average of 4.9476 ¢ per m<sup>3</sup>, and a Delivery - Price Adjustment of 0.0000 ¢ per m<sup>3</sup>.

(iii) Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A".

(iv) Overrun Gas

Overrun gas is available without penalty provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization.



Unauthorized overrun gas taken in any month shall be paid for at the M1 rate in effect at the time the overrun occurs, plus, if applicable, the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all the gas supply volumes purchased.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the delivery.

2. In negotiating the Monthly Interruptible and Seasonal Commodity Charges, the matters to be considered include:
  - (a) The volume of gas for which the customer is willing to contract,
  - (b) The load factor of the customer's anticipated gas consumption, the pattern of annual use, and the minimum annual quantity of gas which the customer is willing to contract to take or in any event pay for,
  - (c) Interruptible or curtailment provisions, and
  - (d) Competition.
3. In each contract year, the customer shall take delivery from Union, or in any event, pay for if available and not accepted by the customer, a minimum volume of gas as specified in the contract between the parties. Overrun gas volumes will not contribute to the minimum volume.
4. The contract may provide that the Monthly Demand Charge specified in Rate Section 1 above shall not apply on all or part of the daily contracted firm demand used by the customer during the testing, commissioning, phasing in, decommissioning and phasing out of gas-using equipment for a period not to exceed one year (the "transition period"). In such event, the contract will provide for a Monthly Delivery Commodity Charge to be applied on such volume during the transition of 3.7552 ¢ per m<sup>3</sup> and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup>, if applicable.
5. Either the utility or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates and other charges different from the rates and other charges specified herein if the changed rates and other charges are considered by either party to be necessary, desirable and in the public interest.

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Bundled Direct Purchase Delivery and Short Term Supplemental Services**

Where a customer elects transportation service and/or a short term supplemental service under this rate schedule, the customer must enter into a Contract under rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



LARGE WHOLESALE SERVICE RATE

**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a distributor who enters into a contract to purchase and/or receive delivery of a firm supply of gas for distribution to its customers and who agrees to take or pay for an annual quantity of at least two million cubic metres.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

1. (i) A Monthly Demand Charge of 17.4339 ¢ per m<sup>3</sup> of established daily demand determined in accordance with the service contract, such demand charge to be computed on a calendar month basis and a pro-rata charge to be made for the fraction of a calendar month which will occur if the day of first regular delivery does not fall on the first day of a month,
- (ii) A Delivery Commodity Charge of 0.2022 ¢ per m<sup>3</sup>, a Delivery Price Adjustment of 0.0000 ¢ per m<sup>3</sup> for gas delivered and,
- (iii) Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel.  
The applicable rates are provided in Schedule "A".

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Overrun Charge**

Authorized:

For all quantities on any day in excess of 103% of the customer's contractual rights, for which authorization has been received, the customer will be charged 0.7754 ¢ per m<sup>3</sup>. Overrun will be authorized by Union at its sole discretion.

Unauthorized:

For all quantities on any day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 36.0 ¢ per m<sup>3</sup>.



**uniongas**

Effective  
2016-01-01  
**Rate M9**  
Page 2 of 2

**(G) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union.

Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

SMALL WHOLESALE SERVICE RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a non-contract distributor who purchases and/or receives delivery of a firm supply of gas for distribution only to its own customers.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

1. A Delivery Commodity Charge of 5.9498 ¢ per m<sup>3</sup> for gas delivered.
2. Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel.  
The applicable rates are provided in Schedule "A".

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Overrun Charge**

In the event that a direct purchase customer fails to deliver its contracted volumes to Union, and Union has the capability to continue to supply the customer, Union will do so. This gas shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and, if applicable, the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup>, plus 7 ¢ per m<sup>3</sup> for all gas supply volumes purchased.

**(G) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule, the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union.

Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

BUNDLED DIRECT PURCHASE CONTRACT RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer who enters into a Receipt Contract or Gas Purchase Contract for delivery and/or sale of gas to Union.

**(C) Rates**

	<u>Demand Charge Rate/GJ/month</u>	<u>Commodity Charges/Credits Rate/GJ</u>
a) Transportation by Union For gas delivered to Union at any point other than the Ontario Point(s) of Receipt, Union will charge a customer all approved tolls and charges, incurred by Union to transport the gas to the Ontario Point(s) of Receipt		
b) Firm Backstop Gas Applied to the contracted Firm Backstop Gas Supply Service	\$1.722	
Backstop Gas Commodity Charge On all quantities supplied by Union to the Ontario Point(s) of Receipt		\$4.597
c) Reasonable Efforts Backstop Gas Paid on all quantities of gas supplied by Union to the customer's Point(s) of Consumption		\$5.465
d) Banked Gas Purchase  T-service		Note (1)
e) Failure to Deliver Applied to all quantities not delivered to Union in the event the customer's supply fails		\$2.643
f) Short Term Storage / Balancing Service (2)  Maximum		\$6.000
g) Discretionary Gas Supply Service ("DGSS")		Note (3)
h) Parkway Delivery Commitment Incentive ("PDCI") (4)		\$(0.134)



**Notes:**

- (1) The charge for banked gas purchases shall be the higher of the daily spot cost at Dawn in the month of or the month following the month in which gas is sold under this rate and shall not be less than Union's approved weighted average cost of gas.
- (2) Short Term Storage / Balancing Service is:
  - i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
  - ii) short-term firm deliverability, OR
  - iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for short term storage services, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
  - ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
  - iii) Utilization of facilities, and
  - iv) Competition
- (3) Discretionary Gas Supply Service price reflects the "back-to-back" price plus gas supply administration charge.
- (4) Parkway Delivery Commitment Incentive ("PDCI") effective November 1, 2016.

STORAGE AND TRANSPORTATION RATES  
FOR CONTRACT CARRIAGE CUSTOMERS**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer:

- a) whose qualifying annual transportation volume for combined firm and interruptible service is at least 2 500 000 m<sup>3</sup> or greater and has a daily firm contracted demand up to 140,870 m<sup>3</sup>; and
- b) who enters into a Carriage Service Contract with Union for the transportation or the storage and transportation of Gas for use at facilities located within Union's gas franchise area; and
- c) who has meters with electronic recording at each Point of Consumption; and
- d) who has site specific energy measuring equipment that will be used in determining energy balances; and
- e) for whom Union has determined transportation and/or storage capacity is available.

For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.

**(C) Rates**

The following rates shall be charged for all quantities contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

**STORAGE SERVICE:**

	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	For Customers Providing <u>Their Own Compressor Fuel</u>	
			Fuel Ratio <u>Ratio</u>	Commodity Charge <u>Rate/GJ</u>
a) Annual Firm Storage Space Applied to contracted Maximum Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right: Applied to the contracted Maximum Annual Firm Injection/Withdrawal Right Union provides deliverability Inventory	\$1.586			
Customer provides deliverability Inventory (4)	\$1.195			
c) Incremental Firm Injection Right: Applied to the contracted Maximum Incremental Firm Injection Right	\$1.195			
d) Annual Interruptible Withdrawal Right: Applied to the contracted Maximum Annual Interruptible Withdrawal Right	\$1.195			



	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
e) Withdrawal Commodity Paid on all quantities withdrawn from storage up to the Maximum Daily Storage Withdrawal Quantity		\$0.029	0.403%	\$0.008
f) Injection Commodity Paid on all quantities injected into storage up to the Maximum Daily Storage Injection Quantity		\$0.029	0.403%	\$0.008
g) Short Term Storage / Balancing Service Maximum		\$6.000		

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Annual Firm Injection Rights are equal to 100% of their respective Annual Firm Withdrawal Rights. Injection Rights in excess of the Annual Firm Injection Rights will be charged at the Incremental Firm Injection Right.
3. Annual Firm Storage Space

The maximum storage space available to a customer at the rates specified herein is determined by one of the following storage allocation methodologies:

### 3.1 Aggregate Excess

Aggregate excess is the difference between the customer's total 151-day winter consumption (November 1 through March 31) and the customer's average daily consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of winter. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

### 3.2 Obligated daily contract quantity multiple of 15

Obligated daily contract quantity is the firm daily quantity of gas which the customer must deliver to Union. The 15 x obligated daily contract quantity calculation will be done using the daily contract quantity for the upcoming contract year. At each contract renewal, the 15 x obligated daily contract quantity calculation will be performed to set the new space allocation.

Customers may contract for less than their maximum entitlement of firm storage space.



4. Annual Injection/Withdrawal Right

The maximum level of deliverability available to a customer at the rates specified herein is determined by one of the following methodologies:

4.1 The greater of obligated daily contract quantity or firm daily contract demand less obligated daily contract quantity.

Customers may contract for less than their maximum entitlement of deliverability. A customer may contract up to this maximum entitlement with a combination of firm and interruptible deliverability as specified in Section (C) Storage Service.

5. Additional storage space or deliverability, in excess of the allocated entitlements per Notes 3 and 4, may be available at market prices.

6. Storage Space and Withdrawal Rights are not assignable to any other party without the prior written consent of Union.

7. Deliverability Inventory being defined as 20% of annual storage space.

8. Short Term Storage / Balancing Service is:

- i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, or
- ii) short-term firm deliverability, or
- iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
- ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) Utilization of facilities, and
- iv) Competition



**TRANSPORTATION CHARGES:**

	Demand Charge <u>Rate/m<sup>3</sup>/mo</u>	Commodity Charge <u>Rate/m<sup>3</sup></u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio (5)	Commodity Charge <u>Rate/m<sup>3</sup></u>
a) Annual Firm Transportation Demand				
Applied to the Firm Daily Contract Demand				
First 28,150 m <sup>3</sup> per month	34.5173 ¢			
Next 112,720 m <sup>3</sup> per month	23.8475 ¢			
b) Firm Transportation Commodity				
Paid on all firm quantities redelivered to the customer's Point(s) of Consumption				
Commodity Charge (All volumes)		0.1363 ¢	0.303%	0.0762 ¢
c) Interruptible Transportation Commodity				
Paid on all interruptible quantities redelivered to the customer's Point(s) of Consumption				
Maximum		5.1917 ¢	0.303%	5.1316 ¢

Notes:

- All demand charges are paid monthly during the term of the contract for not less than one year unless Union, at its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
- In negotiating the rate to be charged for the transportation of gas under Interruptible Transportation, the matters that are to be considered include:
  - The amount of the interruptible transportation for which customer is willing to contract,
  - The anticipated load factor for the interruptible transportation quantities,
  - Interruptible or curtailment provisions, and
  - Competition.
- In each contract year, the customer shall pay for a Minimum Interruptible Transportation Activity level as specified in the Contract. Overrun activity will not contribute to the minimum activity level.
- Transportation fuel ratios do not apply to customers served from dedicated facilities directly connected to third party transmission systems with custody transfer metering at the interconnect.
- Either Union or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates and other charges different from the rates and other charges specified herein if the changed rates and other charges are considered by either party to be necessary, desirable and in the public interest.



**SUPPLEMENTAL CHARGES:**

Rates for supplemental services are provided in Schedule "A".

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year.

**OVERRUN SERVICE:**

**1. Annual Storage Space**

Authorized

Authorized Overrun is provided as Storage/Balancing Service. It is payable on all quantities on any Day in excess of the customer's contracted Maximum Storage Space. Overrun will be authorized by Union at its sole discretion. Storage Space Overrun equal to the customer's firm deliveries from TCPL: less the customer's Firm Daily Contract Demand, all multiplied by the Days of Interruption called during the period of November 1 to March 31, will be automatically authorized until the following July 1.

Unauthorized

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space, and which has not been authorized by Union or provided for under a short term supplemental storage service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate will be \$6.000 per GJ applied to the greatest excess for each occurrence.

If on any Day the gas storage balance for the account of the customer is less than zero, the Unauthorized Overrun charge will apply for each GJ of gas below a zero inventory level and this amount of gas shall be deemed not to have been withdrawn from storage. The gas shall be deemed to have been sold to the customer at the highest spot price at Dawn in the month of occurrence and the month following occurrence as identified in the Canadian Gas Price Reporter and shall not be less than Union's approved weighted average cost of gas. If the customer has contracted to provide its own deliverability inventory, the zero inventory level shall be deemed to mean twenty percent (20%) of the Annual Firm Storage Space.

**2. Injection, Withdrawals and Transportation**

## Authorized

The following Overrun rates are applied to any quantities transported, injected or withdrawn in excess of 103% of the Contract parameters. Overrun will be authorized by Union at its sole discretion.

Automatic authorization of Injection Overrun will be given during all Days a customer has been interrupted.

	Union Providing <u>Fuel</u>	For Customers Providing Their Own Compressor Fuel <u>Firm or Interruptible Service</u>	
	Firm or Interruptible <u>Service</u>	<u>Fuel Ratio</u>	<u>Commodity Charge</u>
Storage Injections	\$0.104/GJ	0.860%	\$0.060/GJ
Storage Withdrawals	\$0.104/GJ	0.860%	\$0.060/GJ
Transportation	1.2711 ¢/m <sup>3</sup>	0.303%	1.2110 ¢/m <sup>3</sup>

## Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 5.0184 ¢ per m<sup>3</sup> or \$1.302 per GJ, as appropriate.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the transportation service.

**3. Storage / Balancing Service**

## Authorized

The following Overrun rates are applied to any quantities stored in excess of the Contract parameters. Overrun will be authorized by Union Gas at its sole discretion.

	Firm Service <u>Rate/GJ</u>
Space	\$6.000
Injection / Withdrawal Maximum	\$6.000

**OTHER SERVICES & CHARGES:****1. Monthly Charge**

In addition to the rates and charges described previously for each Point of Consumption, a Monthly Charge shall be applied as follows:

Monthly Charge	\$1,924.04
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**2. Diversion of Gas**

The availability of the right to divert gas will be based on Union's ability to accommodate the diversion. The price to be charged for the right to divert shall be determined through negotiation.

**3. Delivery Obligations**

Unless otherwise authorized by Union, all other customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**4. Additional Service Information**

Additional information on Union's T1 service offering can be found at:

The additional information consists of, but is not limited to, the following:

[www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features](http://www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features)

- i. Storage space and deliverability entitlement;
- ii. The determination of gas supply receipt points and delivery obligations;
- iii. The nomination schedule;
- iv. The management of multiple redelivery points by a common fuel manager; and
- v. The availability of supplemental transactional services including title transfers.

**5. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.

Rate/GJ

PDCI Effective November 1, 2016

\$(0.134)

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

STORAGE AND TRANSPORTATION RATES  
FOR CONTRACT CARRIAGE CUSTOMERS**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer:

- a) who has a daily firm contracted demand of at least 140 870 m<sup>3</sup>. Firm and/or interruptible daily contracted demand of less than 140,870 m<sup>3</sup> cannot be combined for the purposes of qualifying for this rate class; and
- b) who enters into a Carriage Service Contract with Union for the transportation or the storage and transportation of Gas for use at facilities located within Union's gas franchise area; and
- c) who has meters with electronic recording at each Point of Consumption; and
- d) who has site specific energy measuring equipment that will be used in determining energy balances; and
- e) for whom Union has determined transportation and/or storage capacity is available.

For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.

**(C) Rates**

The following rates shall be charged for all quantities contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

**STORAGE SERVICE:**

	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
a) Annual Firm Storage Space Applied to contracted Maximum Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right: Applied to the contracted Maximum Annual Firm Injection/Withdrawal Right Union provides deliverability Inventory Customer provides deliverability Inventory (4)	\$1.586 \$1.195			
c) Incremental Firm Injection Right: Applied to the contracted Maximum Incremental Firm Injection Right	\$1.195			
d) Annual Interruptible Withdrawal Right: Applied to the contracted Maximum Annual Interruptible Withdrawal Right	\$1.195			



	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
e) Withdrawal Commodity Paid on all quantities withdrawn from storage up to the Maximum Daily Storage Withdrawal Quantity		\$0.029	0.403%	\$0.008
f) Injection Commodity Paid on all quantities injected into storage up to the Maximum Daily Storage Injection Quantity		\$0.029	0.403%	\$0.008
g) Short Term Storage / Balancing Service Maximum		\$6.000		

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Annual Firm Injection Rights are equal to 100% of their respective Annual Firm Withdrawal Rights. Injection Rights in excess of the Annual Firm Injection Rights will be charged at the Incremental Firm Injection Right.
3. Annual Firm Storage Space

The maximum storage space available to a customer at the rates specified herein is determined by one of the following storage allocation methodologies:

3.1 Aggregate Excess

Aggregate excess is the difference between the customer's total 151-day winter consumption (November 1 through March 31) and the customer's average daily consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of winter. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

3.2 Obligated daily contract quantity multiple of 15

Obligated daily contract quantity is the firm daily quantity of gas which the customer must deliver to Union. The 15 x obligated daily contract quantity calculation will be done using the daily contract quantity for the upcoming contract year. At each contract renewal, the 15 x obligated daily contract quantity calculation will be performed to set the new space allocation.

3.3 For new, large (daily firm transportation demand requirements in excess of 1,200,000 m<sup>3</sup>/day) gas fired power generation customers, storage space is determined by peak hourly consumption x 24 x 4 days. Should the customer elect firm deliverability less than their maximum entitlement (see Note 4.2), the maximum storage space available at the rates specified herein is 10 x firm storage deliverability contracted, not to exceed peak hourly consumption x 24 x 4 days.

Customers may contract for less than their maximum entitlement of firm storage space.



4. Annual Injection/Withdrawal Right

The maximum level of deliverability available to a customer at the rates specified herein is determined by one of the following methodologies:

4.1 The greater of obligated daily contract quantity or firm daily contract demand less obligated daily contract quantity.

4.2 For new, large (daily firm transportation demand requirements in excess of 1,200,000 m<sup>3</sup>/day) gas fired power generation customers, the maximum entitlement of firm storage deliverability is 24 times the customer's peak hourly consumption, with 1.2% firm deliverability available at the rates specified herein.

Customers may contract for less than their maximum entitlement of deliverability. A customer may contract up to this maximum entitlement with a combination of firm and interruptible deliverability as specified in Section (C) Storage Service.

5. Additional storage space or deliverability, in excess of the allocated entitlements per Notes 3 and 4, may be available at market prices.

6. Storage Space and Withdrawal Rights are not assignable to any other party without the prior written consent of Union.

7. Deliverability Inventory being defined as 20% of annual storage space.

8. Short Term Storage / Balancing Service is:

- i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, or
- ii) short-term firm deliverability, or
- iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
- ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) Utilization of facilities, and
- iv) Competition

**TRANSPORTATION CHARGES:**

	Demand Charge <u>Rate/m<sup>3</sup>/mo</u>	Commodity Charge <u>Rate/m<sup>3</sup></u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio (5) (6)	Commodity Charge <u>Rate/m<sup>3</sup></u>
a) Annual Firm Transportation Demand Applied to the Firm Daily Contract Demand				
First 140,870 m <sup>3</sup> per month	20.9062 ¢			
All over 140,870 m <sup>3</sup> per month	11.0584 ¢			
b) Firm Transportation Commodity Paid on all firm quantities redelivered to the customer's Point(s) of Consumption				
Commodity Charge (All volumes)		0.0641 ¢	0.282%	0.0083 ¢
c) Interruptible Transportation Commodity Paid on all interruptible quantities redelivered to the customer's Point(s) of Consumption				
Maximum		5.1917 ¢	0.282%	5.1358 ¢

**Notes:**

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, at its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Effective January 1, 2007, new customers and existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day and who are directly connected to i) the Dawn-Trafalgar transmission system in close proximity to Parkway or ii) a third party pipeline, have the option to pay for service using a Billing Contract Demand. The Billing Contract Demand shall be determined by Union such that the annual revenues over the term of the contract will recover the invested capital, return on capital and operating and maintenance costs associated with the dedicated service in accordance with Union's system expansion policy. The firm transportation demand charge will be applied to the Billing Contract Demand. For customers choosing the Billing Contract Demand option, the authorized transportation overrun rate will apply to all volumes in excess of the Billing Contract Demand but less than the daily firm demand requirement.
3. In negotiating the rate to be charged for the transportation of gas under Interruptible Transportation, the matters that are to be considered include:
  - a) The amount of the interruptible transportation for which customer is willing to contract,
  - b) The anticipated load factor for the interruptible transportation quantities,
  - c) Interruptible or curtailment provisions, and
  - d) Competition.
4. In each contract year, the customer shall pay for a Minimum Interruptible Transportation Activity level as specified in the Contract. Overrun activity will not contribute to the minimum activity level.
5. Transportation fuel ratios do not apply to customers served from dedicated facilities directly connected to third party transmission systems with custody transfer metering at the interconnect.



6. Firm transportation fuel ratio does not apply to new customers or existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day that contract for M12 Dawn to Parkway transportation service equivalent to 100% of their daily firm demand requirement. If a customer with a daily firm demand requirement in excess of 1,200,000 m<sup>3</sup>/day contracts for M12 Dawn to Parkway transportation service at less than 100% of their firm daily demand requirement, the firm transportation fuel ratio will be applicable to daily volumes not transported under the M12 transportation contract.
7. Either Union or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates and other charges different from the rates and other charges specified herein if the changed rates and other charges are considered by either party to be necessary, desirable and in the public interest.

**SUPPLEMENTAL CHARGES:**

Rates for supplemental services are provided in Schedule "A".

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year.

**OVERRUN SERVICE:**

**1. Annual Storage Space**

Authorized

Authorized Overrun is provided as Storage/Balancing Service. It is payable on all quantities on any Day in excess of the customer's contracted Maximum Storage Space. Overrun will be authorized by Union at its sole discretion. Storage Space Overrun equal to the customer's firm deliveries from TCPL: less the customer's Firm Daily Contract Demand, all multiplied by the Days of Interruption called during the period of November 1 to March 31, will be automatically authorized until the following July 1.

Unauthorized

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space, and which has not been authorized by Union or provided for under a short term supplemental storage service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate will be \$6.000 per GJ applied to the greatest excess for each occurrence.

If on any Day the gas storage balance for the account of the customer is less than zero, the Unauthorized Overrun charge will apply for each GJ of gas below a zero inventory level and this amount of gas shall be deemed not to have been withdrawn from storage. The gas shall be deemed to have been sold to the customer at the highest spot price at Dawn in the month of occurrence and the month following occurrence as identified in the Canadian Gas Price Reporter and shall not be less than Union's approved weighted average cost of gas. If the customer has contracted to provide its own deliverability inventory, the zero inventory level shall be deemed to mean twenty percent (20%) of the Annual Firm Storage Space.

**2. Injection, Withdrawals and Transportation**

## Authorized

The following Overrun rates are applied to any quantities transported, injected or withdrawn in excess of 103% of the Contract parameters. Overrun will be authorized by Union at its sole discretion.

Automatic authorization of Injection Overrun will be given during all Days a customer has been interrupted.

	Union Providing Fuel	For Customers Providing Their Own Compressor Fuel Firm or Interruptible Service	
	Firm or Interruptible Service	Fuel Ratio	Commodity Charge
Storage Injections	\$0.104/GJ	0.860%	\$0.060/GJ
Storage Withdrawals	\$0.104/GJ	0.860%	\$0.060/GJ
Transportation	0.7515 ¢/m <sup>3</sup>	0.282%	0.6956 ¢/m <sup>3</sup>

## Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 5.0184 ¢ per m<sup>3</sup> or \$1.302 per GJ, as appropriate.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the transportation service.

**3. Storage / Balancing Service**

## Authorized

The following Overrun rates are applied to any quantities stored in excess of the Contract parameters. Overrun will be authorized by Union Gas at its sole discretion.

	Firm Service Rate/GJ
Space	\$6.000
Injection / Withdrawal Maximum	\$6.000



**OTHER SERVICES & CHARGES:**

**1. Monthly Charge**

In addition to the rates and charges described previously for each Point of Consumption, a Monthly Charge shall be applied as follows:

Monthly Charge	\$5,751.12
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**2. Diversion of Gas**

The availability of the right to divert gas will be based on Union's ability to accommodate the diversion. The price to be charged for the right to divert shall be determined through negotiation.

**3. Delivery Obligations**

Effective January 1, 2007, new customers and existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day who are delivering gas to Union under direct purchase arrangements may be entitled to non-obligated deliveries. The delivery options available to customers are detailed at [www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features](http://www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features)

Unless otherwise authorized by Union, all other customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**4. Nominations**

Effective January 1, 2007, new customers and existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day who have non obligated deliveries may contract to use Union's 5 additional nomination windows (13 in total) for the purposes of delivering gas to Union. These windows are in addition to the standard NAESB and TCPL STS nomination windows. Customers taking the additional nomination window service will pay an additional monthly demand charge of \$0.068/GJ/day/month multiplied by the non-obligated daily contract quantity.

**5. Additional Service Information**

Additional information on Union's T2 service offering can be found at:

The additional information consists of, but is not limited to, the following:

[www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features](http://www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features)

- i. Storage space and deliverability entitlement;
- ii. The determination of gas supply receipt points and delivery obligations;
- iii. The nomination schedule;
- iv. The management of multiple redelivery points by a common fuel manager; and
- v. The availability of supplemental transactional services including title transfers.

**6. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.

Rate/GJ

PDCI Effective November 1, 2016

\$(0.134)



**uniongas**

Effective  
2016-01-01  
**Rate T2**  
Page 8 of 8

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

STORAGE AND TRANSPORTATION RATES  
FOR CONTRACT CARRIAGE CUSTOMERS**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a Distributor:

- a) whose minimum annual transportation of natural gas is 700 000 m<sup>3</sup> or greater; and
- b) who enters into a Carriage Service Contract with Union for the transportation or the storage and transportation of Gas for distribution to its customers; and
- c) who has meters with electronic recording at each Point of Redelivery; and
- d) for whom Union has determined transportation and/or storage capacity is available.

**(C) Rates**

The following rates shall be charged for all quantities contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

**STORAGE SERVICE:**

	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
a) Annual Firm Storage Space Applied to contracted Maximum Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right: Applied to the contracted Maximum Annual Firm Injection/Withdrawal Right				
Union provides deliverability Inventory	\$1.586			
Customer provides deliverability Inventory (4)	\$1.195			
c) Incremental Firm Injection Right: Applied to the contracted Maximum Incremental Firm Injection Right	\$1.195			
d) Annual Interruptible Withdrawal Right: Applied to the contracted Maximum Annual Interruptible Withdrawal Right	\$1.195			



	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio	Commodity Charge <u>Rate/GJ</u>
e) Withdrawal Commodity Paid on all quantities withdrawn from storage up to the Maximum Daily Storage Withdrawal Quantity		\$0.029	0.403%	\$0.008
f) Injection Commodity Paid on all quantities injected into storage up to the Maximum Daily Storage Injection Quantity		\$0.029	0.403%	\$0.008
g) Short Term Storage / Balancing Service Maximum		\$6.000		

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Annual Firm Injection Rights are equal to 100% of their respective Annual Firm Withdrawal Rights. Injection Rights in excess of the Annual Firm Injection Rights will be charged at the Incremental Firm Injection Right.
3. Annual Firm Storage Space

The maximum storage space available to a customer at the rates specified herein is determined by one of the following storage allocation methodologies:

#### 3.1 Aggregate Excess

Aggregate excess is the difference between the customer's total 151-day winter consumption (November 1 through March 31) and the customer's average daily consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of winter. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

#### 3.2 Obligated daily contract quantity multiple of 15

Obligated daily contract quantity is the firm daily quantity of gas which the customer must deliver to Union. The 15 x obligated daily contract quantity calculation will be done using the daily contract quantity for the upcoming contract year. At each contract renewal, the 15 x obligated daily contract quantity calculation will be performed to set the new space allocation.

Customers may contract for less than their maximum entitlement of firm storage space.

4. Annual Injection/Withdrawal Right

The maximum level of deliverability available to a customer at the rates specified herein is determined to be the greater of obligated daily contract quantity or firm daily contract demand less obligated daily contract quantity.

Customers may contract for less than their maximum entitlement of deliverability. A customer may contract up to this maximum entitlement with a combination of firm and interruptible deliverability as specified in Section (C) Storage Service.



5. Additional storage space or deliverability, in excess of the allocated entitlements per Notes 3 and 4, may be available at market prices.
6. Storage Space and Withdrawal Rights are not assignable to any other party without the prior written consent of Union.
7. Deliverability Inventory being defined as 20% of annual storage space.
8. Short Term Storage / Balancing Service is:
  - i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
  - ii) short-term firm deliverability, OR
  - iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for this service, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
- ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) Utilization of facilities, and
- iv) Competition

**TRANSPORTATION CHARGES:**

	Demand Charge <u>Rate/m<sup>3</sup>/mo</u>	Commodity Charge <u>Rate/m<sup>3</sup></u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio	Commodity Charge <u>Rate/m<sup>3</sup></u>
a) Annual Firm Transportation Demand (1) Applied to the Firm Daily Contract Demand	11.6340 ¢			
b) Firm Transportation Commodity Paid on all firm quantities redelivered to the Customer's Point(s) of Redelivery		0.0858 ¢	0.378%	0.0108 ¢

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.

**SUPPLEMENTAL CHARGES**

Rates for supplemental services are provided in Schedule "A".

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year.

**OVERRUN SERVICE****1. Annual Storage Space****Authorized**

Authorized Overrun is provided as Storage/Balancing Service. It is payable on all quantities on any Day in excess of the customer's contracted Maximum Storage Space. Overrun will be authorized by Union at its sole discretion.

**Unauthorized**

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space, and which has not been authorized by Union or provided for under a short term supplemental storage service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate will be \$6.000 per GJ applied to the greatest excess for each occurrence.

If on any Day, the gas storage balance for the account of the customer is less than zero, the Unauthorized Overrun charge will apply for each GJ of gas below a zero inventory level and this amount of gas shall be deemed not to have been withdrawn from storage. The gas shall be deemed to have been sold to the customer at the highest spot price at Dawn in the month of occurrence and the month following occurrence as identified in the Canadian Gas Price Reporter and shall not be less than Union's approved weighted average cost of gas. If the customer has contracted to provide its own deliverability inventory, the zero inventory level shall be deemed to mean twenty percent (20%) of the Annual Firm Storage Space.

**2. Injection, Withdrawals and Transportation**

## Authorized

The following Overrun rates are applied to any quantities transported, injected or withdrawn in excess of 103% of the Contract parameters. Overrun will be authorized by Union at its sole discretion.

	Union Providing <u>Fuel</u>	For Customers Providing Their Own Compressor Fuel <u>Firm or Interruptible Service</u>	
	Firm or Interruptible <u>Service</u>	<u>Fuel Ratio</u>	<u>Commodity Charge</u>
Storage Injections	\$0.104/GJ	0.860%	\$0.060/GJ
Storage Withdrawals	\$0.104/GJ	0.860%	\$0.060/GJ
Transportation	0.4682 ¢/m <sup>3</sup>	0.378%	0.3933 ¢/m <sup>3</sup>

## Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 36.0¢ per m<sup>3</sup> or \$9.339 per GJ, as appropriate.

**3. Short Term Storage Services**

## Authorized

The following Overrun rates are applied to any quantities stored in excess of the Contract parameters. Overrun will be authorized by Union Gas at its sole discretion.

	Firm Service <u>Rate/GJ</u>
Space	\$6.000
Injection Maximum	\$6.000

**OTHER SERVICES & CHARGES****1. Monthly Charge**

In addition to the rates and charges described previously for each Point of redelivery a Monthly Charge shall be applied to each specific customer as follows:

	<u>Monthly Charge</u>
City of Kitchener	\$ 20,208.17
NRG	\$ 3,102.16
Six Nations	\$ 1,034.05

If a customer combines Sales Service with Contract Carriage Service, the monthly charge will be prorated such that the customer will under both services pay no more than the above monthly charge.

**2. Diversion of Gas**

The availability of the right to divert gas will be based on Union's ability to accommodate the diversion. The price to be charged for the right to divert shall be determined through negotiation.

3. Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**4. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.	<u>Rate/GJ</u>
PDCI Effective November 1, 2016	\$(0.134)

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

**uniongas**Effective  
2016-01-01  
Schedule "A"**Gas Supply Charges****(A) Availability:**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability:**

To all sales customers served under Rate M1, Rate M2, Rate M4, Rate M5A, Rate M7, Rate M9, Rate M10 and storage and transportation customers taking supplemental services under Rate T1, Rate T2 and Rate T3.

**(C) Rates:**cents / m<sup>3</sup>Utility Sales

Commodity and Fuel	12.5318 (1)
Commodity and Fuel - Price Adjustment	(1.4583)
Transportation	3.5158
<b>Total Gas Supply Commodity Charge</b>	<b>14.5893</b>

Minimum Annual Gas Supply Commodity Charge

Rate M4 Firm and Rate M5A Interruptible Contract	4.2282
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Storage and Transportation Supplemental Services - Rate T1, Rate T2 & Rate T3\$/GJ

Monthly demand charges:	
Firm gas supply service	58.972
Firm backstop gas	1.722
Commodity charges:	
Gas supply	3.201
Backstop gas	4.597
Reasonable Efforts Backstop Gas	5.465
Supplemental Inventory	Note (2)
Supplemental Gas Sales Service (cents / m <sup>3</sup> )	19.1142
Failure to Deliver: Applied to quantities not delivered to Union in the event the customer's supply fails	2.643
Discretionary Gas Supply Service (DGSS)	Note (3)

Notes:

- (1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/ m<sup>3</sup>.
- (2) The charge for banked gas purchases shall be the higher of the daily spot gas cost at Dawn in the month of or the month following the month in which gas is sold under this rate and shall not be less than Union's approved weighted average cost of gas.
- (3) Reflects the "back to back" price plus gas supply administration charge.

Effective: January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

**STORAGE RATES FOR  
UNBUNDLED CUSTOMERS****(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer, or an agent, who is authorized to service residential and non-contract commercial and industrial end-users paying for the Monthly Fixed Charge and Delivery charge under Rate M1 or Rate M2:

- a) who enters into an Unbundled Service Contract with Union for the storage of Gas for use at facilities located within Union's gas franchise area;
- b) who contracts for Standard Peaking Service (SPS) with Union unless the customer can demonstrate that it has a replacement to the deliverability available in the SPS physically tied into Union's system and an OEB approved rate to provide the SPS replacement service;
- c) who accepts daily estimates of consumption at Points of Consumption as prepared by Union so that they may nominate an equivalent amount from storage, upstream transportation, or Ontario Producers authorized to sell to third parties;
- d) who nominates injections and withdrawals from storage and deliveries on upstream pipeline systems daily or Ontario Producers authorized to sell to third parties;
- e) for whom Union has determined storage capacity is available; and
- f) who accepts a monthly bill as prepared by Union.

**(C) Rates**

The following rates shall be charged for all volumes contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

<b>STORAGE SERVICE</b>	<b>Demand Charge <u>Rate/GJ/mo</u></b>	<b>Fuel <u>Ratio</u></b>	<b>Commodity Charge <u>Rate/GJ</u></b>
i) Standard Storage Service (SSS)			
a) Combined Storage Space & Deliverability Applied to contracted Maximum Storage Space	\$0.023		
b) Injection Commodity		0.403%	\$0.026
c) Withdrawal Commodity		0.403%	\$0.026
ii) Standard Peaking Service (SPS)			
a) Combined Storage Space & Deliverability Applied to contracted Maximum Storage Space	\$0.115		
b) Injection Commodity		0.403%	\$0.026
c) Withdrawal Commodity		0.860%	\$0.026



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2016-01-01  
**Rate U2**  
Page 2 of 3

	Demand Charge <u>Rate/GJ/mo</u>	Fuel <u>Ratio</u>	Commodity Charge <u>Rate/GJ</u>
iii) Supplemental Service			
a) Incremental Firm Injection Right: (5) Applied to the contracted Maximum Incremental Firm Injection Right	\$1.039		
b) Incremental Firm Withdrawal Right: (5) Applied to the contracted Maximum Incremental Firm Withdrawal Right	\$1.039		
c) Short Term Storage / Balancing Service - Maximum			\$6.000

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the Contract, which shall not be less than one year, unless Union, in its sole discretion, accepts a term of less than one year.
2. Daily Firm Injection and Withdrawal Rights shall be pursuant to the Storage Contract.
3. Storage Space, Withdrawal Rights, and Injection Rights are not assignable to any other party without the prior written consent of Union and where necessary, approval from the Ontario Energy Board.
4. Short Term Storage / Balancing service (less than 2 years) is:
  - i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
  - ii) short-term incremental firm deliverability, OR
  - iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

  - i) The minimum amount of storage service to which a customer is willing to commit,
  - ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
  - iii) Utilization of facilities,
  - iv) Competition, and
  - v) Term.
5. Union's ability to offer incremental injection and withdrawal rights is subject to annual asset availability.



uniongas

Effective  
2016-01-01  
**Rate U2**  
Page 3 of 3

## OVERRUN SERVICE

### 1. Injection and Withdrawal

#### Authorized

	<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
Injection	0.860%	\$0.060
Withdrawal	0.860%	\$0.060

The Authorized Overrun rate is payable on all quantities on any Day in excess of the customer's contractual rights, for which authorization has been received. Overrun will be authorized by Union at its sole discretion.

#### Unauthorized

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space or the gas storage balance for the account of the customer is less than zero or the customer has injected or withdrawn volumes from storage which exceeds their contractual rights, and which has not been authorized by Union or provided for under a short term storage/balancing service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate during the November 1 to April 15 period will be \$60.00 per GJ. The Unauthorized Overrun rate during the April 16 to October 31 period will be \$6.000 per GJ.

## OTHER SERVICES & CHARGES

1. Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must commit to provide a call at Parkway, throughout the winter period, for a specified number of days. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.
2. **Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.	<u>Rate/GJ</u>
PDCI Effective November 1, 2016	\$(0.134)

### (D) Delayed Payment

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



## TRANSPORTATION RATES

### (A) Applicability

The charges under this schedule shall be applicable to a Shipper who enters into a Transportation Service Contract with Union.

#### Applicable Points

Dawn as a receipt point: Dawn (TCPL), Dawn (Facilities), Dawn (Tecumseh), Dawn (Vector) and Dawn (TSLE).

Dawn as a delivery point: Dawn (Facilities).

### (B) Services

Transportation Service under this rate schedule shall be for transportation on Union's Dawn - Trafalgar facilities.

### (C) Rates

The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

	Monthly Demand Charge (applied to daily contract demand) <u>Rate/GJ</u>	Commodity and Fuel Charges  Fuel Ratio <u>%</u>	<u>AND</u>  Commodity Charge <u>Rate/GJ</u>
<b><u>Firm Transportation (1)</u></b>			
Dawn to Parkway	\$2.883	Monthly fuel rates and ratios shall be in accordance with schedule "C".	
Dawn to Kirkwall	\$2.421		
Kirkwall to Parkway	\$0.462		
Parkway to Dawn	n/a		
<b><u>M12-X Firm Transportation</u></b>			
Between Dawn, Kirkwall and Parkway	\$3.602	Monthly fuel rates and ratios shall be in accordance with schedule "C".	
<b><u>Limited Firm/Interruptible Transportation (1)</u></b>			
Dawn to Parkway – Maximum	\$6.919	Monthly fuel rates and ratios shall be in accordance with schedule "C".	
Dawn to Kirkwall – Maximum	\$6.919		
Parkway (TCPL) to Parkway (Cons) (2)		0.156%	

#### **Authorized Overrun (3)**

Authorized overrun rates will be payable on all quantities in excess of Union's obligation on any day. The overrun charges payable will be calculated at the following rates. Overrun will be authorized at Union's sole discretion.

	If Union supplies fuel Commodity Charge <u>Rate/GJ</u>	Commodity and Fuel Charges  Fuel Ratio <u>%</u>	<u>AND</u>  Commodity Charge <u>Rate/GJ</u>
Transportation Overrun			
Dawn to Parkway		Monthly fuel rates and ratios shall be in accordance with schedule "C".	\$0.095
Dawn to Kirkwall			\$0.080
Kirkwall to Parkway			\$0.015
Parkway to Dawn			\$0.095
Parkway (TCPL) Overrun (4)	n/a	0.699%	n/a
M12-X Firm Transportation		Monthly fuel rates and ratios shall be in accordance with schedule "C".	
Between Dawn, Kirkwall and Parkway			\$0.118



**(C) Rates (Cont'd)**

Unauthorized Overrun

Authorized Overrun rates will be payable on all quantities up to 2% in excess of Union's contractual obligation.

The Unauthorized Overrun shall be the higher of the reported daily spot price of gas at either Dawn, Parkway, Niagara or Iroquois in the month of or the month following the month in which the overrun occurred plus 25% for all usage on any day in excess of 102% of Union's contractual obligation.

Nomination Variances

Where Union and the shipper have entered into a Limited Balancing Agreement ("LBA"), the rate for unauthorized parking or drafting which results from nomination variances shall equal the "Balancing Fee" rate as described under Article XXII of TransCanada PipeLines Transportation Tariff.

Notes for Section (C) Rates:

- (1) The annual transportation commodity charge is calculated by application of the YCRR Formula, as per Section (D). The annual transportation fuel required is calculated by application of the YCR Formula, as per Section (D).
- (2) This rate is for westerly transportation within the Parkway yard, from Parkway (TCPL) to Parkway (Cons) or Lisgar.
- (3) For purposes of applying the YCRR Formula or YCR Formula (Section (D)) to transportation overrun quantities, the transportation commodity revenue will be deemed to be equal to the commodity charge of the applicable service as detailed in Section (B).
- (4) This ratio will be applied to all gas quantities for which Union is obligated to deliver to Parkway (Cons) or Lisgar and has agreed to deliver to Parkway (TCPL) on an interruptible basis. This will be in addition to any rate or ratio paid for transportation easterly to Parkway (Cons) or Lisgar.
- (5) A demand charge of \$0.069/GJ/day/month will be applicable for customers contracting for firm all day transportation service in addition to the demand charges appearing on this schedule for firm transportation service to either Kirkwall or Parkway

**(D) Transportation Commodity**

The annual fuel charge in kind or in dollars for transportation service in any contract year shall be equal to the sum of the application of the following equation applied monthly for the 12 months April through March (The "YCRR" or "YCR" Formula). An appropriate adjustment in the fuel charges will be made in May for the previous 12 months ending March 31<sup>st</sup> to obtain the annual fuel charges as calculated using the applicable "YCRR" or "YCR" Formula. At Union's sole discretion Union may make more frequent adjustments than once per year. The YCRR and YCR adjustments must be paid/remitted to/from Shippers at Dawn within one billing cycle after invoicing.



(D) Transportation Commodity (Cont'd)

$$\text{YCR} = \sum_{1}^{4} [(0.001560 \times (\text{QT1} + \text{QT3})) + (\text{DSF} \times (\text{QT1} + \text{QT3})) + \text{F}_{\text{ST}}] \text{ For June 1 to Sept. 30}$$

plus

$$\sum_{5}^{12} [0.001560 \times (\text{QT1} + \text{Q3}) + (\text{DWF} \times \text{QT1}) + \text{F}_{\text{WT}}] \text{ For Oct. 1 to May 31}$$

$$\text{YCRR} = \sum_{1}^{4} [(0.001560 \times (\text{QT1} + \text{QT3})) + (\text{DSF} \times (\text{QT1} + \text{QT3})) + \text{F}_{\text{ST}}] \times \text{R} \text{ For June 1 to Sept. 30}$$

plus

$$\sum_{5}^{12} [(0.001560 \times (\text{QT1} + \text{QT3})) + (\text{DWF} \times \text{QT1}) + \text{F}_{\text{WT}}] \times \text{R} \text{ For Oct. 1 to May 31}$$

where: DSF = 0.00000 for Dawn summer fuel requirements  
DWF = 0.0020 for Dawn winter fuel requirements

in which:

YCR Yearly Commodity Required

The sum of 12 separate monthly calculations of Commodity Quantities required for the period from April through March.

YCRR Yearly Commodity Revenue Required

The sum of 12 separate monthly calculations of Commodity Revenue required for the period April through March.

QT1 Monthly quantities in GJ transported easterly hereunder received at Dawn at not less than 4 850 kPa but less than 5 860 kPa (compression required at Dawn).

QT3 Monthly quantities in GJ transported westerly hereunder received at the Parkway Delivery Point.

F<sub>WT</sub> The individual Shipper's monthly share of compressor fuel used in GJ which was required at Union's Lobo, Bright, Trafalgar and Parkway Compressor Stations ("Lobo", "Bright", "Trafalgar" and "Parkway") to transport the same Shipper's QT1 monthly quantities easterly.

Lobo, Bright, Trafalgar and Parkway compressor fuel required by each Shipper will be calculated each month.

The monthly Lobo and Bright compressor fuel will be allocated to each Shipper in the same proportion as the Shipper's monthly quantities transported is to the monthly transported quantity for all users including Union.

The monthly Parkway and Trafalgar compressor fuel used will be allocated to each Shipper in the same proportion as the monthly quantity transported to Parkway (TCPL) for each user is to the total monthly quantity transported for all users including Union.



**(D) Transportation Commodity (Cont'd)**

$F_{ST}$  The individual Shipper's monthly share of compressor fuel used in GJ which was required at Union's Lobo, Bright, Trafalgar and Parkway compressor stations to transport the same Shipper's quantity on the Trafalgar system.

Lobo, Bright, Trafalgar and Parkway compressor fuel required by each Shipper will be calculated each month.

R Union's weighted average cost of gas in \$/GJ.

**Notes**

- (i) In the case of Easterly flow, direct deliveries by TCPL at Parkway to Union or on behalf of Union to Union's Transportation Shippers will be allocated to supply Union's markets on the Dawn-Parkway facilities starting at Parkway and proceeding westerly to successive laterals until exhausted.

**(E) Provision for Compressor Fuel**

For a Shipper that has elected to provide its own compressor fuel.

**Transportation Fuel**

On a daily basis, the Shipper will provide Union at the delivery point and delivery pressure as specified in the contract, a quantity (the "Transportation Fuel Quantity") representing the Shipper's share of compressor fuel and unaccounted for gas for transportation service on Union's system.

The Transportation Fuel Quantity will be determined on a daily basis, as follows:

Transportation Fuel Quantity = Transportation Quantity x Transportation Fuel Ratio.

In the event that the actual quantity of fuel supplied by the Shipper was different from the actual fuel quantity as calculated using the YCR formula, an adjustment will be made in May for the previous 12 months ending March 31<sup>st</sup>.

**Nominations**

The Shipper will be required to nominate its Transportation Fuel Quantity in addition to its normal nominations for transportation services.

**(F) Terms of Service**

The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A" for contracts in effect before October 1, 2010. The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A 2010" for contracts in effect on or after October 1, 2010.

**(G) Nominations**

Nominations under this rate schedule shall be in accordance with the attached Schedule "B" for contracts in effect before October 1, 2010.

Nominations under this rate schedule shall be in accordance with the attached Schedule "B 2010" for contracts in effect on or after October 1, 2010.



**uniongas**

Effective  
2016-01-01  
**Rate M12**  
Page 5 of 5

**(H) Monthly Fuel Rates and Ratios**

Monthly fuel rates and ratios under this rate schedule shall be in accordance with Schedule "C".

**(I) Receipt and Delivery Points and Pressures**

Receipt and Delivery Points and Pressures under this rate schedule shall be in accordance with Schedule "D 2010" for contracts in effect on or after October 1, 2010.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

**RATE M12  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

1. "Contract" shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;
2. "cubic metre" shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
3. "day" shall mean a period of twenty-four (24) consecutive hours beginning at 9:00 a.m. Central Standard time. The reference date for any day shall be the calendar date upon which the twenty-four (24) hour period shall commence;
4. "delivery" shall mean any gas that is delivered by Union into Shipper's possession, or to the possession of Shipper's agent;
5. "firm" shall mean service not subject to curtailment or interruption except under Articles XI and XII of this Schedule "A";
6. "gas" shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;
7. "gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;
8. "interruptible service" shall mean service subject to curtailment or interruption, after notice, at any time;
9. "Interconnecting Pipeline" shall mean a pipeline that directly connects to the Union pipeline system;
10. "joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;
11. "limited interruptible service" shall mean gas service subject to interruption or curtailment on a limited number of days as specified in the Contract;
12. "m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;
13. "month" shall mean the period beginning at 9:00 a.m. Central Standard time on the first day of a calendar month and ending at 9:00 a.m. Central Standard time on the first day of the following calendar month;
14. "OEB" means the Ontario Energy Board;
15. "pascal" (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" (kPa) shall mean 1,000 pascals;
16. "receipt" shall mean any gas that is delivered into Union's possession, or the possession of Union's agent;
17. "Shipper" shall have the meaning as defined in the Contract and shall also include Shipper's agent(s);

## **SCHEDULE "A"**

18. "TCPL" means TransCanada PipeLines Limited;
19. "cricondenth therm hydrocarbon dewpoint" shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;
20. "hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;
21. "specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
22. "Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

### **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to/by Union hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to or interference with the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas nor more than four hundred and sixty (460) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenth therm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas.

## **SCHEDULE "A"**

3. Non-conforming Gas: In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
4. Quality of Gas Received: The quality of the gas to be received by Union hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will also accept gas of a quality as set out in any other Interconnecting Pipeline's general terms and conditions, provided that all Interconnecting Pipelines accept such quality of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in Union's M12 Rate Schedule.

### **III. MEASUREMENTS**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
  - d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

### **IV. RECEIPT POINT AND DELIVERY POINT**

1. Unless otherwise specified in the Contract, the point or points of receipt for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where Union takes possession of the gas.
2. Unless otherwise specified in the Contract, the point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection as specified in the Contract where Shipper takes possession of the gas.

### **V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

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### **VI. FACILITIES ON SHIPPER'S PROPERTY**

## **SCHEDULE "A"**

Except under those conditions where Union is delivering to TCPL for TCPL or Shipper at Union's Parkway Point of Delivery, or to an Interconnecting Pipeline, or where otherwise specified in the Contract, the following will apply:

1. Construction and Maintenance: Union, at its own expense may construct, maintain and operate on Shipper's property at the delivery point a measuring station properly equipped with a meter or meters and any other necessary measuring equipment for properly measuring the gas redelivered under the Contract. Shipper will grant to Union a lease and/or rights-of-way over property of Shipper as required by Union to install such facilities and to connect same to Union's pipeline.
2. Entry: Union, its servants, agents and each of them may at any reasonable time on notice (except in cases of emergency) to Shipper or his duly authorized representative enter Shipper's property for the purpose of constructing, maintaining, removing, operating and/or repairing station equipment.
3. Property: The said station and equipment will be and remain the property of Union notwithstanding it is constructed on and attached to the realty of Shipper, and Union may at its own expense remove it upon termination of the Contract and will do so if so requested by Shipper.

## **VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by their regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the redelivery point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the delivery point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing redeliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.

## **SCHEDULE "A"**

6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

### **VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the 10th day of each month for all services furnished during the preceding month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the 10th day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.

### **IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a business day, then payment must be received in Union's account on the first business day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment.
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend service(s) until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend service(s) because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing paragraph(s), Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such

## **SCHEDULE "A"**

overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "bill" next following shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within six (6) years from the date of the incorrect billing. In the event any refund is issued with Shipper's gas bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.

### **X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act of the Province of Ontario, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

### **XI. FORCE MAJEURE**

1. The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.

## **SCHEDULE "A"**

5. An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm Contract Demand for that Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the M12 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
9. If, due to the occurrence of an event of force majeure as outlined above, the capacity for gas deliveries by Union is impaired, it will be necessary for Union to curtail Shipper's gas receipts to Union hereunder, via proration based on utilization of such facilities for the Day. This prorating shall be determined by multiplying the capability of such facilities as available downstream of the impairment on the Day, by a fraction where the numerator is Shipper's nominated firm quantity and the denominator is the total of all such nominated firm quantities for nominated services and planned consumption for in-franchise customers on the Day. For the purposes of this Article XI, firm services shall mean all firm services provided by Union to in-franchise customers and ex-franchise shippers.

## **XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI hereof) which has not been waived by the other party, then and in every such case and as often as the same may happen, the Non-defaulting party may give written notice to the Defaulting party requiring it to remedy such default and in the event of the Defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the Non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

## **XIII. MODIFICATION**

Subject to Union's M12 Rate Schedule, Schedule A, Article XV and the ability of Union to amend the M12 Rate Schedule with the approval of the OEB, no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

## **XIV. NON-WAIVER AND FUTURE DEFAULT**

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**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**RATE M12  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Authorized Overrun"** shall mean the amount by which Shipper's Authorized Quantity exceeds the Contract Demand;

**"Available Capacity"** shall mean at any time, Union's remaining available capacity to provide Transportation Services;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days; provided however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days, commencing on November 1 of each year; except for the first Contract Year which shall commence on the Commencement Date and end on the first October 31 that follows such date;

**"cricondenthem hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"delivery"** shall mean any gas that is delivered by Union into Shipper's possession, or to the possession of Shipper's agent;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"Expansion Facilities"** shall mean any new facilities to be constructed by Union in order to provide Transportation Services;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"gas"** shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;

**"gross heating value"** shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

**"hydrocarbon dewpoint"** shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

**"Interruptible Service HUB Contract"** shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

**"interruptible service"** or **"Interruptible"** shall mean service subject to curtailment or interruption, after notice, at any time;

**"Interconnecting Pipeline"** shall mean a pipeline that directly connects to the Union pipeline system;

**"joule"** (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term **"megajoule"** (MJ) shall mean 1,000,000 joules. The term **"gigajoule"** (GJ) shall mean 1,000,000,000 joules;

**"Loaned Quantities"** shall mean those quantities of gas loaned to Shipper under the Facilitating Agreement;

**"m<sup>3</sup>"** shall mean cubic metre of gas and **"10<sup>3</sup>m<sup>3</sup>"** shall mean 1,000 cubic metres of gas;

**"Month"** shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

**"NAESB"** shall mean North American Energy Standards Board;

**"OEB"** means the Ontario Energy Board;

**"Open Season"** or **"open season"** shall mean an open access auction or bidding process held by Union as a method of allocating capacity;

**"pascal"** (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term **"kilopascal"** (kPa) shall mean 1,000 pascals;

**"receipt"** shall mean any gas that is delivered into Union's possession, or the possession of Union's agent;

**"Shipper"** shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

**"specific gravity"** shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Taxes"** shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

**"TCPL"** means TransCanada PipeLines Limited;

**"Wobbe Number"** shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. **Natural Gas:** The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. **Freedom from objectionable matter:** The gas to be delivered to/by Union hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,

- b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than four hundred and sixty (460) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenthem hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas.
3. Non-conforming Gas: In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
4. Quality of Gas Received: The quality of the gas to be received by Union hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will also accept gas of a quality as set out in any other Interconnecting Pipeline's general terms and conditions, provided that all Interconnecting Pipelines accept such quality of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in Union's M12 Rate Schedule.

### **III. MEASUREMENTS**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
- a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
  - d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

**IV. RECEIPT POINT AND DELIVERY POINT**

1. Unless otherwise specified in the Contract, the point or points of receipt and point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where possession of the gas changes from one party to the other, and as per Schedule "D 2010".

**V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

**VI. FACILITIES ON SHIPPER'S PROPERTY**

Except under those conditions where Union is delivering to TCPL for TCPL or Shipper at Parkway (TCPL), or to an Interconnecting Pipeline, or where otherwise specified in the Contract, the following will apply:

1. Construction and Maintenance: Union, at its own expense may construct, maintain and operate on Shipper's property at the delivery point a measuring station properly equipped with a meter or meters and any other necessary measuring equipment for properly measuring the gas redelivered under the Contract. Shipper will grant to Union a lease and/or rights-of-way over property of Shipper as required by Union to install such facilities and to connect same to Union's pipeline.
2. Entry: Union, its servants, agents and each of them may at any reasonable time on notice (except in cases of emergency) to Shipper or his duly authorized representative enter Shipper's property for the purpose of constructing, maintaining, removing, operating and/or repairing station equipment.
3. Property: The said station and equipment will be and remain the property of Union notwithstanding it is constructed on and attached to the realty of Shipper, and Union may at its own expense remove it upon termination of the Contract and will do so if so requested by Shipper.

**VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the redelivery point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the delivery point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.

## **SCHEDULE "A 2010"**

4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

## **VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Transportation Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled in any of the Transportation Services to Shipper, the parties shall have the right to amend their statement for a period equal to the time during which the Interconnecting Pipeline retains the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

## **IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,

- a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
- b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.
4. Taxes: In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.
5. Set Off: If either party shall, at any time, be in arrears under any of its payment obligations to the other party under the Contract, then the party not in arrears shall be entitled to reduce the amount payable by it to the other party in arrears under the Contract, or any other contract, by an amount equal to the amount of such arrears or other indebtedness to the other party. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract or any enhancement to the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.

**X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**XI. FORCE MAJEURE**

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm Contract Demand for that Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the M12 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
9. Proration of Firm Transportation Service: If, due to the occurrence of an event of force majeure as outlined above, the capacity for gas deliveries by Union is impaired, it will be necessary for Union to curtail Shipper's gas receipts to Union hereunder, via proration based on utilization of such facilities for the Day. This prorating shall be determined by

multiplying the capability of such facilities as available downstream of the impairment on the Day, by a fraction where the numerator is Shipper's nominated firm quantity and the denominator is the total of all such nominated firm quantities for nominated services and planned consumption for in-franchise customers on the Day. For the purposes of this Article XI, firm services shall mean all firm services provided by Union to in-franchise customers and ex-franchise shippers.

**XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

**XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

**XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. ALLOCATION OF CAPACITY**

1. Requests for Transportation Service: A potential shipper may request firm transportation service on Union's system at any time. Any request for firm M12 transportation service must include: potential shipper's legal name, Receipt Point(s), Delivery Point(s), Commencement Date, Initial Term, Contract Demand and proposed payment. This is applicable for M12 service requests for firm transportation service with minimum terms of ten (10) years where Expansion Facilities are required or a minimum term of five (5) years for use of existing capacity.
2. Expansion Facilities: If requests for firm transportation services cannot be met through existing capacity such that the only way to satisfy the requests for transportation service would require the construction of Expansion Facilities which create new capacity, Union shall allocate any such new capacity by open season, subject to the terms of the open season, and these General Terms and Conditions.

3. Open Seasons: If requests for long-term firm transportation service can be met through existing facilities upon which long-term capacity is becoming available, Union shall allocate such long-term capacity by open season, subject to the terms of the open season, and these General Terms and Conditions. "**Long-term**", for the purposes of this Article XVI, means, in the case of a transportation service, a service that has a term of one year or greater.
4. Awarding Open Season Capacity: Capacity requests received during an open season shall be awarded starting with those bids with the highest economic value. If the economic values of two or more independent bids are equal, then service shall be allocated on a pro-rata basis. The economic value shall be based on the net present value which shall be calculated based on the proposed per-unit rate and the proposed term of the contract and without regard to the proposed Contract Demand ("**NPV**").
5. Available Capacity Previously Offered in Open Season: Union may at any time allocate capacity to respond to any M12 transportation service request through an open season. If a potential shipper requests M12 transportation service that can be provided through Available Capacity that was previously offered by Union in an open season but was not awarded, then:
  - a. Any such request must conform to the requirements of Section 1 of this Article XVI;
  - b. Union shall allocate capacity to serve such request pursuant to this Section 5, and subject to these General Terms and Conditions and Union's standard form M12 transportation contract;
  - c. Union may reject a request for M12 transportation service for any of the following reasons:
    - i) if there is insufficient Available Capacity to fully meet the request, but if that is the only reason for rejecting the request for service, Union must offer to supply the Available Capacity to the potential shipper;
    - ii) if the proposed monthly payment is less than Union's Monthly demand charge plus fuel requirements for the applicable service;
    - iii) if prior to Union accepting the request for transportation service Union receives a request for transportation service from one or more other potential shippers and there is, as a result, insufficient Available Capacity to service all the requests for service, in which case Union shall follow the procedure in Section 5 d hereof; -
    - iv) if Union does not provide the type of transportation service requested; or
    - v) if all of the conditions precedent specified in Article XXI Sections 1 and 2 herein have not been satisfied or waived.
  - d. Union will advise the potential shipper in writing whether Union accepts or rejects the request for service, subject to Article XVI 5 c, within 5 calendar days of receiving a request for M12 transportation service. If Union rejects a request for service, Union shall inform the potential shipper of the reasons why its request is being rejected; and
  - e. If Union has insufficient Available Capacity to service all pending requests for transportation service Union may:
    - i) Reject all the pending requests for transportation service and conduct an open season; or
    - ii) Union shall inform all the potential shippers who have submitted a pending request for transportation service that it does not have sufficient capacity to service all pending requests for service, and Union shall provide all such potential shippers with an equal opportunity to submit a revised request for service. Union shall then allocate the Available Capacity to the request for transportation service with the highest economic value to Union. If the economic values of two or more requests are equal, then service shall be allocated on a pro-rata basis. The economic value of any request shall be based on the NPV.

**XVII. RENEWALS**

Contracts with an Initial Term of five (5) years or greater will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter. Shipper may reduce the Contract Demand or terminate the Contract with notice in writing by Shipper at least two (2) years prior to the expiration thereof.

**XVIII. SERVICE CURTAILMENT**

1. Right to Curtail: Union shall have the right to curtail or not to schedule part or all of Transportation Services, in whole or in part, on all or a portion of its pipeline system at any time for reasons of Force Majeure or when, in Union sole discretion, acting reasonably, capacity or operating conditions so require or it is desirable or necessary to make modifications, repairs or operating changes to its pipeline system. Union shall provide Shipper such notice of such curtailment as is reasonable under the circumstances. If due to any cause whatsoever Union is unable to receive or deliver the quantities of Gas which Shipper has requested, then Union shall order curtailment by all Shippers affected and to the extent necessary to remove the effect of the disability. Union has a priority of service policy to determine the order of service curtailment. In order to place services on the priority of service list, Union considers the following business principles: appropriate level of access to core services, customer commitment, encouraging appropriate contracting, materiality, price and term, and promoting and enabling in-franchise consumption.

The Priority ranking for all services utilizing Union Gas' storage, transmission and distribution system as applied to both in-franchise and ex-franchise services are as follows; with number 1 having the highest priority and the last interrupted.

1. Firm In-franchise Transportation and Distribution services and firm Ex-franchise services (Note 1)
2. In-franchise Interruptible Distribution services
3. C1/M12 IT Transport and IT Exchanges with Take or Pay rates
4. Balancing (Hub Activity) < = 100 GJ/d; Balancing (Direct Purchase) < = 500 GJ/d; In-franchise distribution authorized overrun (Note 3)
5. C1/M12 IT Transport and IT Exchanges at premium rates
6. C1/M12 Overrun < = 20% of CD (Note 4)
7. Balancing (Direct Purchase) > 500 GJ/d
8. Balancing (Hub Activity) > 100 GJ/d; C1/M12 IT Transport and IT Exchanges
9. C1/M12 Overrun > 20% of CD
10. C1/M12 IT Transport and IT Exchanges at a discount
11. Late Nominations

Notes:

1. Nominated services must be nominated on the NAESB Timely Nomination Cycle otherwise they are considered to be late nomination and are therefore interruptible.
  2. Higher value or more reliable IT is contemplated in the service and contract, when purchase at market competitive prices.
  3. Captures the majority of customers that use Direct Purchase balancing transactions.
  4. Captures the majority of customers that use overrun.
2. Capacity Procedures: Union reserves the right to change its procedures for sharing interruptible capacity and will provide Shipper with two (2) months prior notice of any such change.
  3. Maintenance: Union's facilities from time to time may require maintenance or construction. If such maintenance or construction is required, and in Union's sole opinion, acting reasonably, such maintenance or construction may impact Union's ability to meet Shipper's requirements, Union shall provide at least ten (10) days notice to Shipper, except in the case of an emergency. In the event the maintenance impacts Union's ability to meet Shipper's requirements, Union shall not be liable for any damages and shall not be deemed in breach of the Contract. To the extent that Union's ability to accept and/or deliver Shipper's gas is impaired, the Monthly demand charge shall be reduced in accordance with Article XI Section 8 and available capacity allocated in accordance with Article XI Section 9 herein.

Union shall use reasonable efforts to determine a mutually acceptable period during which such maintenance or construction will occur and also to limit the extent and duration of any impairments. Union will endeavour to schedule and complete the maintenance and construction, which would normally be expected to impact on Union's ability to meet Shipper's requirements, during the period from April 1 through to November 1.

**XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security) (if any) shall remain in place throughout the term hereof, unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract as a result of one of the following events ("**Material Event**");
  - a. Shipper is in default, which default has not been remedied, of the Contract or is in default of any other material contract with Union or another party; or,
  - b. Shipper's corporate or debt rating falls below investment grade according to at least one nationally recognized rating agency; or,
  - c. Shipper ceases to be rated by a nationally recognized agency; or,
  - d. Shipper has exceeded credit available as determined by Union from time to time,

then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). The Security plus the Initial Financial Assurances shall not exceed twelve (12) months of Monthly demand charges (in accordance with Article IX herein) multiplied by Contract Demand. In the event that Shipper does not provide to Union such Security within such fourteen (14) day period, Union may deem a default under the Default and Termination provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

**XX. MISCELLANEOUS PROVISIONS**

1. Permanent Assignment: Shipper may assign the Contract to a third party ("Assignee"), up to the Contract Demand, (the "Capacity Assigned"). Such assignment shall require the prior written consent of Union and release of obligations by Union for the Capacity Assigned from the date of assignment. Such consent and release shall not be unreasonably withheld and shall be conditional upon the Assignee providing, amongst other things, financial assurances as per Article XXI herein. Any such assignment will be for the full rights, obligations and remaining term of the Contract as relates to the Capacity Assigned.
2. Temporary Assignment: Shipper may, upon notice to Union, assign all or a part of its service entitlement under the Contract (the "Assigned Quantity") and the corresponding rights and obligations to an Assignee on a temporary basis for not less than one calendar month. Such assignment shall not be unreasonably withheld and shall be conditional upon the Assignee executing the Facilitating Agreement as per Article XXI herein. Notwithstanding such assignment, Shipper shall remain obligated to Union to perform and observe the covenants and obligations contained herein in regard to the Assigned Quantity to the extent that Assignee fails to do so.
3. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

**XXI. PRECONDITIONS TO TRANSPORTATION SERVICES**

1. Union Conditions: The obligations of Union to provide Transportation Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Transportation Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the transportation Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union.
2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of Shipper and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Transportation Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and shall, as required, have entered into the necessary contracts to purchase the gas quantities handled under the Contract; and,
  - b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,
  - c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract.
3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, and d and Section 2 a and b. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.
4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.

**RATE M12  
NOMINATIONS**

- a) For Services provided either under this rate schedule or referenced to this rate schedule:
- i) For Services required on any day Shipper shall provide Union with details regarding the quantity it desires to be handled at the applicable Receipt Point(s) and/or Delivery Point(s), and such additional information as Union determines to be necessary (a "**Nomination**").
  - ii) All Nominations shall be submitted by electronic means via *Unionline*. Union, in its sole discretion, may amend or modify the nominating procedures or *Unionline* at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all Nominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in *Unionline*.
  - iii) For customers electing firm all day transportation service, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.
- b) Union shall determine whether or not all or any portion of the Nomination will be accepted. In the event Union determines that it will not accept such Nomination, Union shall advise Shipper of the reduced quantity (the "**Quantity Available**") for Services at the applicable points as outlined in each nomination cycle. After receiving such advice from Union but no later than one half hour after the Quantities Available deadline as outlined in each nomination cycle, Shipper shall provide a "**Revised Nomination**" to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantity Available, then the Revised Nomination shall be deemed to be the Quantity Available. If the Revised Nomination (delivered within the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
- c) That portion of a Shipper's Nomination or Revised Nomination, as set out in (a) and (b), above, which Union shall accept for Services hereunder, shall be known as Shipper's "**Authorized Quantity**".
- d) If on any day the actual quantities handled by Union, for each of the Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Services exceed Shipper's Authorized Quantity, such excess shall be deemed "**Unauthorized Overrun**".
- e) The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20) of the quantity received for that day. Union shall have the right to limit Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20) of the quantity handled for that day, for each applicable Service.
- f) A nomination for a daily quantity of gas on any day shall remain in effect and apply to subsequent days unless and until Union receives a new nomination from Shipper or unless Union gives Shipper written notice that it is not acceptable in accordance with either (a) or (b) of this schedule.
- g) Except for periods of gas or quantity balancing as provided in the Contract, nominations by Shipper for deliveries to Union and redeliveries by Union shall be the same delivery of gas by Union either to Shipper or a Shipper's Account with Union.

**RATE M12  
NOMINATIONS**

1. For Transportation Services required on any Day under the Contract, Shipper shall provide Union with details regarding the quantity of Gas it desires to be handled at the applicable Receipt Point(s) and/or Delivery Point(s), and such additional information as Union determines to be necessary (a "**Nomination**").
2. All Nominations shall be submitted by electronic means via *Unionline*. Union, in its sole discretion, may amend or modify the nominating procedures or *Unionline* at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all Nominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in *Unionline*.
3. Union shall determine whether or not all or any portion of the Nomination will be scheduled at each nomination cycle. With respect to each nomination cycle, in the event Union determines that it will not schedule such Nomination, Union shall advise Shipper of the reduced quantity (the "**Quantities Available**") for Transportation Services at the applicable points as outlined in each nomination cycle. After receiving such advice from Union, but no later than one half hour after the Quantities Available deadline as outlined in each nomination cycle, Shipper shall provide a revised nomination ("**Revised Nomination**") to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantities Available, then the Revised Nomination shall be deemed to be the Quantities Available. If the Revised Nomination (delivered with the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
4. For Shippers electing firm all day transportation service, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.
5. For Transportation Services requiring Shipper to provide compressor fuel in kind, the nominated fuel requirements will be calculated by rounding to the nearest whole GJ.
6. All Timely Nominations shall have rollover options. Specifically, Shippers shall have the ability to nominate for several days, months or years, provided the Nomination start date and end date are both within the term of the Transportation Agreement.
7. Nominations received after the nomination deadline shall, if accepted by Union, be scheduled after Nominations received before the nomination deadline.
8. All Services are required to be nominated in whole Gigajoules (GJ).
9. To the extent Union is unable to complete a Nomination confirmation due to inaccurate, untimely or incomplete data involving an Interconnecting Pipeline entity, Union shall undertake reasonable efforts to confirm the transaction on a non-discriminatory basis until such time that the transaction is adequately verified by the parties, or until such time that Union determines that the Nomination is invalid at which time the Union shall reject the Nomination.
10. That portion of a Shipper's Nomination or Revised Nomination, as set out in paragraphs 1 and 3 above, which Union shall schedule for Transportation Services hereunder, shall be known as Shipper's "**Authorized Quantity**".
11. If on any day the actual quantities handled by Union, for each of the Transportation Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Transportation

## **SCHEDULE "B 2010"**

Services exceed Shipper's Authorized Quantity shall be deemed "**Unauthorized Overrun**".

12. The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20<sup>th</sup>) of the quantity received for that day. Union shall have the right to limit Transportation Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20<sup>th</sup>) of the quantity handled for that day, for each applicable Transportation Service.
13. The parties hereto recognize that with respect to Transportation Services, on any day, receipts of gas by Union and deliveries of gas by Union may not always be exactly equal, but each party shall cooperate with the other in order to balance as nearly as possible the quantities transacted on a daily basis, and any imbalances arising shall be allocated to the Facilitating Agreement and shall be subject to the respective terms and charges contained therein, and shall be resolved in a timely manner.
14. Shipper may designate via *Unionline* access request form, a third party as agent for purposes of providing a Nomination, and for giving and receiving notices related to Nominations, and Union shall only accept nominations from the agent. Any such designation, if acceptable to Union, shall be effective following the receipt and processing of the written notice and will remain in effect until revoked in writing by Shipper.

**UNION GAS LIMITED**  
**M12 Monthly Transportation Fuel Ratios and Rates**  
 Firm or Interruptible Transportation Commodity  
Effective January 1, 2016

Month	VT1 Easterly Dawn to Parkway (TCPL) With Dawn Compression		VT1 Easterly Dawn to Kirkwall, Lisgar, Parkway (Consumers) With Dawn Compression		VT3 Westerly Parkway to Kirkwall, Dawn	
	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate
	(%)	(\$/GJ)	(%)	(\$/GJ)	(%)	(\$/GJ)
April	0.856	0.044	0.541	0.028	0.156	0.008
May	0.608	0.031	0.368	0.019	0.156	0.008
June	0.505	0.026	0.270	0.014	0.395	0.020
July	0.491	0.025	0.257	0.013	0.394	0.020
August	0.390	0.020	0.157	0.008	0.393	0.020
September	0.386	0.020	0.157	0.008	0.389	0.020
October	0.734	0.038	0.461	0.024	0.156	0.008
November	0.877	0.045	0.618	0.032	0.156	0.008
December	0.989	0.051	0.728	0.037	0.156	0.008
January	1.139	0.059	0.864	0.044	0.156	0.008
February	1.082	0.056	0.815	0.042	0.156	0.008
March	1.011	0.052	0.731	0.038	0.156	0.008

Month	M12-X Easterly Kirkwall to Parkway (TCPL)		M12-X Easterly Kirkwall to Lisgar, Parkway (Consumers)		M12-X Westerly Parkway to Kirkwall, Dawn	
	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate
	(%)	(\$/GJ)	(%)	(\$/GJ)	(%)	(\$/GJ)
April	0.471	0.024	0.156	0.008	0.291	0.015
May	0.396	0.020	0.156	0.008	0.291	0.015
June	0.391	0.020	0.156	0.008	0.291	0.015
July	0.390	0.020	0.156	0.008	0.291	0.015
August	0.389	0.020	0.156	0.008	0.291	0.015
September	0.385	0.020	0.156	0.008	0.291	0.015
October	0.430	0.022	0.156	0.008	0.291	0.015
November	0.415	0.021	0.156	0.008	0.156	0.008
December	0.417	0.021	0.156	0.008	0.156	0.008
January	0.432	0.022	0.156	0.008	0.156	0.008
February	0.424	0.022	0.156	0.008	0.156	0.008
March	0.436	0.022	0.156	0.008	0.156	0.008

**UNION GAS LIMITED****M12 Monthly Transportation Authorized Overrun Fuel Ratios and Rates**

Firm or Interruptible Transportation Commodity

Effective January 1, 2016

Month	VT1 Easterly Dawn to Parkway (TCPL) With Dawn Compression		VT1 Easterly Dawn to Kirkwall, Lisgar, Parkway (Consumers) With Dawn Compression		VT3 Westerly Parkway to Kirkwall, Dawn	
	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate
	(%)	(\$/GJ)	(%)	(\$/GJ)	(%)	(\$/GJ)
April	1.469	0.170	1.154	0.139	0.769	0.134
May	1.221	0.158	0.980	0.130	0.769	0.134
June	1.118	0.152	0.883	0.125	1.008	0.147
July	1.104	0.152	0.870	0.124	1.006	0.147
August	1.003	0.146	0.770	0.119	1.006	0.147
September	0.999	0.146	0.770	0.119	1.002	0.146
October	1.347	0.164	1.074	0.135	0.769	0.134
November	1.490	0.171	1.231	0.143	0.769	0.134
December	1.602	0.177	1.341	0.149	0.769	0.134
January	1.752	0.185	1.477	0.156	0.769	0.134
February	1.695	0.182	1.428	0.153	0.769	0.134
March	1.624	0.178	1.344	0.149	0.769	0.134

Month	M12-X Easterly Kirkwall to Parkway (TCPL)		M12-X Easterly Kirkwall to Lisgar, Parkway (Consumers)		M12-X Westerly Parkway to Kirkwall, Dawn	
	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Rate
	(%)	(\$/GJ)	(%)	(\$/GJ)	(%)	(\$/GJ)
April	1.084	0.071	0.769	0.055	0.904	0.141
May	1.009	0.067	0.769	0.055	0.904	0.141
June	1.004	0.067	0.769	0.055	0.904	0.141
July	1.003	0.067	0.769	0.055	0.904	0.141
August	1.002	0.067	0.769	0.055	0.904	0.141
September	0.998	0.066	0.769	0.055	0.904	0.141
October	1.043	0.069	0.769	0.055	0.904	0.141
November	1.028	0.068	0.769	0.055	0.769	0.134
December	1.030	0.068	0.769	0.055	0.769	0.134
January	1.044	0.069	0.769	0.055	0.769	0.134
February	1.037	0.068	0.769	0.055	0.769	0.134
March	1.049	0.069	0.769	0.055	0.769	0.134

**RATE M12  
RECEIPT AND DELIVERY POINTS AND PRESSURES**

1. Receipt and Delivery Points:

The following defines each Receipt Point and/or Delivery Point, as indicated (R= Receipt Point; D= Delivery Point)

R,D	<b><u>DAWN (FACILITIES):</u></b>	Union's Compressor Station site situated in the northwest corner of Lot Twenty-Five (25), Concession II, in the Township of Dawn-Euphemia, in the County of Lambton. This point is applicable for quantities of gas that have been previously transported or stored under other contracts that Shipper may have in place with Union.
R	<b><u>DAWN (TCPL):</u></b>	At the junction of Union's and TCPL's facilities, at or adjacent to Dawn (Facilities).
R	<b><u>DAWN (TECUMSEH):</u></b>	At the junction of Union's and Enbridge Gas Distribution Inc.'s (Enbridge) Tecumseh Gas Storage's facilities, at or adjacent to Dawn (Facilities).
R	<b><u>DAWN (TSLE):</u></b>	At the junction of Union's and Enbridge Gas Distribution Inc.'s (" <b>Enbridge</b> ") NPS 16 Tecumseh Sombra Line Extension facilities; at or adjacent to Dawn (Facilities)
R	<b><u>DAWN (VECTOR):</u></b>	At the junction of Union's and Vector Pipeline Limited Partnership (" <b>Vector</b> ") facilities, at or adjacent to Dawn (Facilities).
R,D	<b><u>PARKWAY (TCPL):</u></b>	At the junction of Union's and TCPL's facilities, at or adjacent to Union's facilities situated in the Part Lot 9 and Part Lot 10, Concession IX, New Survey, Town of Milton, Regional Municipality of Halton (now part of City of Mississauga)
R,D	<b><u>KIRKWALL:</u></b>	At the junction of Union's and TCPL's facilities at or adjacent to Union's facilities situated in Part Lot Twenty-Five (25), Concession 7, Town of Flamborough.
D	<b><u>PARKWAY (CONSUMERS):</u></b>	At the junction of Union's and Enbridge's facilities, at or adjacent to Union's facilities situated in Part Lot 9 and Part Lot 10, Concession IX, New Survey, Town of Milton, Regional Municipality of Halton (now part of City of Mississauga)
D	<b><u>LISGAR:</u></b>	At the junction of the facilities of Union and Enbridge situated at 6620 Winston Churchill Boulevard, City of Mississauga.

2. Receipt and Delivery Pressures:

(a) All Gas tendered by or on behalf of Shipper to Union shall be tendered at the Receipt Point(s) at Union's prevailing pressure at that Receipt Point, or at such pressure as per operating agreements between Union and the applicable Interconnecting Pipeline as amended or restated from time to time.

(b) All Gas tendered by or on behalf of Union to Shipper shall be tendered at the Delivery Point(s) at Union's prevailing pressure at that Delivery Point or at such pressure as per agreements between Union and the applicable Interconnecting Pipeline as amended or restated from time to time.

(c) Under no circumstances shall Union be obligated to receive or deliver gas hereunder at pressures exceeding the maximum allowable operating pressures prescribed under any applicable governmental regulations; nor shall Union be required to make any physical deliveries or to accept any physical receipts which its existing facilities cannot accommodate.



TRANSPORTATION OF LOCALLY PRODUCED GAS

**(A) Applicability**

The charges under this rate schedule shall be applicable to a customer who enters into a contract with Union for gas received at a local production point to be transported to Dawn.

Applicable Points

Dawn as a delivery point: Dawn (Facilities).

**(B) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Demand Commodity

	<b>Demand Charge Rate/Month</b>	<b>Commodity Charge Union Provides Fuel Rate/GJ</b>	<b>Customer Provides Own Fuel Fuel Ratio</b>
1. Monthly fixed charge per Customer Station	\$946.47		
2. Transmission Commodity Charge		\$0.035	
3. Delivery Commodity Charge		\$0.008	0.156%

These charges are in addition to the transportation, storage and/or balancing charges which shall be paid for under Rate M12 or Rate C1, or other services that may be negotiated.

4. Overrun Services

Authorized Overrun

Authorized overrun will be payable on all quantities transported in excess of Union's obligation on any day. The overrun charges payable will be calculated at \$0.077 /GJ. Overrun will be authorized at Union's sole discretion.

	<b>Commodity Charge Union Provides Fuel Rate/GJ</b>	<b>Customers Provides Own Fuel Commodity Charge Rate/GJ</b>	<b>Fuel Ratio</b>
Authorized Overrun Charge	\$0.077	\$0.069	0.156%

Unauthorized Overrun

Authorized Overrun rates payable on all volumes up to 2% in excess of Union's contractual obligation.

The Unauthorized Overrun rate during the November 1 to April 15 period will be \$50 per GJ for all usage on any day in excess of 102% of Union's contractual obligation. The Unauthorized Overrun rate during the April 16 to October 31 period will be \$9.373 per GJ for all usage on any day in excess of 102% of Union's contractual obligation.

**(C) Terms of Service**

General Terms & Conditions applicable to this rate shall be in accordance with the attached Schedule "A" in effect before January 1, 2013. The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A 2013" for contracts in effect on or after January 1, 2013.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

**GENERAL TERMS & CONDITIONS  
M13 TRANSPORTATION AGREEMENT**

**SCHEDULE "A"**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

1. "Banking Day" shall mean a day on which the general offices of the Canadian Imperial Bank of Commerce, 99 King St. W., Chatham, Ontario are open for business;
2. "business day" shall mean a day on which the general offices of Union in Chatham, Ontario are open for business;
3. "Contract" shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;
4. "contract year" shall mean a period of three hundred and sixty-five (365) consecutive days, beginning on the day agreed upon by Union and Shipper as set forth in the Contract, or on any anniversary of such date; provided, however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days;
5. "day" shall mean a period of twenty-four (24) consecutive hours beginning at 9:00 a.m. Central Standard time. The reference date for any day shall be the calendar date upon which the twenty-four (24) hour period shall commence;
6. "month" shall mean the period beginning at 9:00 a.m. Central Standard time on the first day of a calendar month and ending at 9:00 a.m. Central Standard time on the first day of the following calendar month;
7. "firm" shall mean service not subject to curtailment or interruption except under Articles XI and XII of this Schedule "B";
8. "interruptible service" shall mean service subject to curtailment or interruption, after notice, at any time;
9. "gas" shall mean gas as defined in the Ontario Energy Board Act, R.S.O. 1980, c. 332, as amended, supplemented or reenacted from time to time;
10. "cubic metre" shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
11. "m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;
12. "pascal" (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" (kPa) shall mean 1,000 pascals;
13. "joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;
14. "gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;
15. "Shipper" shall have the meaning as defined in the Contract and shall also include Shipper's agent(s);
16. "subsidiary" shall mean a company in which more than fifty (50) per cent of the issued share capital (having full voting rights under all circumstances) is owned or controlled directly or indirectly by another company, by one or more subsidiaries of such other company, or by such other company and one or more of its subsidiaries;

17. "TCPL" means TransCanada PipeLines Limited;
18. "NOVA" means NOVA Gas Transmission Ltd;
19. "Panhandle" means CMS Panhandle Eastern Pipeline Company;
20. "MichCon" means Michigan Consolidated Gas Company;
21. "SCPL" means St. Clair Pipelines (1996) Ltd.;
22. "OEB" means the Ontario Energy Board;
23. "NEB" means the National Energy Board (Canada);
  - i. "GLGT" means Great Lakes Gas Transmission Company;
  - ii. "CMS" means CMS Gas Transmission and Storage Company; and,
  - iii. "Consumers" means The Consumers' Gas Company, Limited.
24. "cricondenth therm hydrocarbon dewpoint" shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;
25. "hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;
26. "specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute; and,
27. "Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,

- f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondentherm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,
  - k. shall not exceed forty-three degrees Celsius (43°C), and,
  - l. shall not be odourized by Shipper.
3. Non-conforming Gas:
- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
  - b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.
4. Quality of Gas Received: The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will use reasonable efforts to accept gas of a quality that may deviate from the quality standards set out therein.
5. Quality of Gas at Dawn: The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.

### III. MEASUREMENTS

- 1. Service Unit: The unit of the gas delivered to Union shall be a quantity of 10<sup>3</sup>m<sup>3</sup>. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
- 2. Determination of Volume and Energy:
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all

as amended from time to time.

- c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VI herein.

#### **IV. POINT OF RECEIPT AND POINT OF DELIVERY**

1. Unless otherwise specified in the Contract, the point or points of receipt for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where Union takes possession of the gas. Whenever the phrase "receipt point" appears herein, it shall mean Point of Receipt as defined in this Article IV.
2. Unless otherwise specified in the Contract, the point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection as specified in the Contract, where Shipper takes possession of the gas. Whenever the phrase "delivery point" shall appear herein, it shall mean Point of Delivery as defined in this Article IV.

#### **V. FACILITIES ON CUSTOMER'S PROPERTY**

N/A.

#### **VI. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas received or delivered hereunder is measured by a meter that is owned and operated by an upstream or downstream transporter (the "Transporter") whose facilities may or may not interconnect with Union's, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas received or delivered on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union pursuant to this Article VII, Section 2 shall be in accordance with the general terms and conditions as incorporated in that Transporter's gas tariff as approved by Transporter's regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Receipt Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Receipt Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
5. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.

**VII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the 10th day of each month for all services furnished during the preceding month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding month's billing, an adjustment based on any difference between actual quantities and estimated quantities. If presentation of a bill to Shipper is delayed after the 10th day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.

**VIII. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a business day, then payment must be received in Union's account on the first business day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due, Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract may suspend service(s) until such amount is paid, provided however, that if Shipper, in good faith shall dispute the amount of any such bill or part thereof and shall pay to Union such amounts as it concedes to be correct and at any time thereafter within twenty (20) days of a demand made by Union shall furnish good and sufficient surety bond satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination which may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case, then Union shall not be entitled to suspend service(s) because of such non-payment unless and until default be made in the conditions of such bond or in payment for any further service(s) to Shipper hereunder.
3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "bill" next following shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within six (6) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of invoice.

**IX. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act of the Province of Ontario, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under this Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**X. FORCE MAJEURE**

N/A

**XI. DEFAULT AND TERMINATION**

N/A

**XII. MODIFICATION**

N/A

**XIII. NONWAIVER AND FUTURE DEFAULT**

N/A

**XIV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**RATE M13  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Aid to Construction"** shall include any and all costs, expenses, amounts, damages, obligations, or other liabilities (whether of a capital or operating nature, and whether incurred before or after the date of the Contract) actually paid by Union (including amounts paid to affiliates for services rendered in accordance with the Affiliate Relationships Code as established by the OEB) in connection with or in respect of satisfying the conditions precedent set out in Article XXI herein (including without limitation the cost of construction, installation and connection of any required meter station as described in Article IX, Section 6, the obtaining of all governmental, regulatory and other third party approvals, and the obtaining of rights of way) whether resulting from Union's negligence or not, except for any costs that have arisen from the gross negligence, fraud, or wilful misconduct of Union;

**"Average Local Producer Heat" ("ALPH")** shall mean the heat content value as set by Union, and shall be determined by volumetrically averaging the gross heat content of all produced gas delivered to the Union system by Ontario Local Producers. The ALPH shall be expressed in GJ/10<sup>3</sup>m<sup>3</sup> and may be adjusted from time to time by Union;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days; provided however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days, commencing on November 1 of each year; except for the first Contract Year which shall commence on the Commencement Date and end on the first October 31 that follows such date;

**"cricondenthem hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Dawn Quantity"** shall mean the total daily quantity of gas in GJ delivered at Dawn (Facilities), which is equal to the total energy of all gas supplied daily to Union at the Receipt Point(s). The Dawn Quantity shall be calculated utilizing the following factor equation: Dawn Quantity = Produced Volume x ALPH;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"Delivery Point"** shall mean the point where Union shall deliver the Dawn Quantity and/or Market Quantity to Shipper and as further defined in Schedule 1 of the Contract;

**"Distribution Demand"** shall mean the varying demand for the supply of gas, as determined by Union, on Union's pipeline and distribution system for users of gas who are supplied or delivered gas by Union's pipeline and distribution system;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"Firm Daily Variability Demand"** shall mean the established quantity set forth in Schedule 2 of the Contract, which is the

permitted difference between the Dawn Quantity and the Market Quantity;

"**gas**" shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;

"**gross heating value**" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

"**hydrocarbon dewpoint**" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

"**Interruptible Service HUB Contract**" shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

"**Interconnecting Pipeline**" shall mean a pipeline that directly connects to the Union pipeline and distribution system;

"**joule**" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "**megajoule**" (MJ) shall mean 1,000,000 joules. The term "**gigajoule**" (GJ) shall mean 1,000,000,000 joules;

"**m<sup>3</sup>**" shall mean cubic metre of gas and "**10<sup>3</sup>m<sup>3</sup>**" shall mean 1,000 cubic metres of gas;

"**MAOP**" shall mean the maximum allowable operating pressure of Union's pipeline and distribution system and as further defined in Schedule 1 of the Contract;

"**Market Quantity**" shall mean the daily quantity in GJ nominated for Name Change Service that Day by Shipper at Dawn (Facilities);

"**Maximum Daily Quantity**" shall mean the maximum quantity of gas Shipper may deliver to Union at a Receipt Point on any Day, as further defined in Schedule 1;

"**Month**" shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

"**Name Change Service**" shall mean an interruptible administrative service whereby Union acknowledges for Shipper a change in title of a gas quantity from Shipper to a third party at the Delivery Point;

"**OEB**" means the Ontario Energy Board;

"**pascal**" ("**Pa**") shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "**kilopascal**" ("**kPa**") shall mean 1,000 pascals;

"**Produced Volume**" shall mean the aggregate of all actual volumes of gas in 10<sup>3</sup>m<sup>3</sup>, delivered by Shipper to Union at all Receipt Points on any Day;

"**Producer Balancing Account**" shall mean the gas balance held by Union for Shipper, or owed by Shipper to Union, at the Delivery Point. Where the Producer Balancing Account is zero or a positive number, the account is in a credit position, and where the Producer Balancing Account is less than zero, the account is in a debit position;

"**Producer Balancing Service**" shall mean a Service whereby Union either calculates a credit or debit to the Producer Balancing Account by subtracting the Market Quantity from the Dawn Quantity. Where such amount is greater than zero, Union will credit the Producer Balancing Account, or where such amount is less than zero, Union will debit the Producer Balancing Account. This Service shall be performed on a retroactive basis on the terms and conditions contained in Schedule 2 of the Contract, as may be revised from time to time by Union;

"**Receipt Point**" shall mean the point(s) where Union shall receive gas from Shipper;

**"Sales Agreement"** shall mean the Ontario Gas Purchase Agreement(s) entered into between Shipper and Union;

**"Shipper"** shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

**"specific gravity"** shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"System Capacity"** shall mean the volumetric capacity that exists from time to time within Union's pipeline and distribution system which determines Union's ability to accept volumes of gas into Union's pipeline and distribution system hereunder. System Capacity shall be determined by Union and such determination, in addition to the physical characteristics of Union's pipeline and distribution system Distribution Demand, shall also include consideration of Union's local Distribution Demand, Union's total system Distribution Demand, availability of Union's gas storage capacity, and other gas being purchased and/or delivered into Union's pipeline and distribution system;

**"Taxes"** shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

**"Wobbe Number"** shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. **Natural Gas:** The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. **Freedom from objectionable matter:** The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenthem hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point

forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,

- k. shall not exceed forty-three degrees Celsius (43°C), and,
  - l. shall not be odourized by Shipper.
3. Non-conforming Gas:
- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
  - b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.
4. Quality of Gas Received: The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will use reasonable efforts to accept gas of a quality that may deviate from the quality standards set out therein.
5. Quality of Gas at Dawn: The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.

### **III. MEASUREMENTS**

- 1. Service Unit: The unit of the gas delivered to Union shall be a quantity of 10<sup>3</sup>m<sup>3</sup>. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
- 2. Determination of Volume and Energy:
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "**Manual for Determination of Supercompressibility Factors for Natural Gas**" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.

**IV. RECEIPT POINT AND DELIVERY POINT**

The point(s) of receipt and point of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in Schedule 1 of the Contract, where possession of the gas changes from one party to the other.

**V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

**VI. FACILITIES ON SHIPPER'S PROPERTY**

1. Meter Station: Union shall provide, at the Receipt Point(s), according to the terms hereunder, the meter station required to receive and measure the Produced Volume of gas received by Union from Shipper. Shipper agrees, if requested by Union, to provide Union with sufficient detailed information regarding Shipper's current and expected operations in order to aid Union in Union's design of the meter station.
2. Union Obligations: Pursuant to Article VI. Section 1 herein, Union shall purchase, install and maintain, at the Receipt Point(s):
  - a. a meter and any associated recording gauges as are necessary; and,
  - b. a suitable gas odourizing injection facility where Union deems such facility to be necessary.
3. Union Equipment: All equipment installed by Union at the Receipt Point(s) shall remain the property of Union at all times, notwithstanding the fact that it may be affixed to Shipper's property. Union shall be entitled to remove said equipment at any time within a period of sixty (60) days from any termination or expiry of the Contract. Shipper shall take all necessary steps to ensure Union may enter onto the Receipt Point(s) to remove such equipment for a period of sixty (60) days after termination or expiry of the Contract or the Sales Agreement.
4. Shipper Obligations: Upon Union's request Shipper shall, at Shipper's own cost and expense:
  - a. obtain a registered lease or freehold ownership at the Receipt Point(s) sufficient to provide Union with free uninterrupted access to, from, under and above the Receipt Point(s), for a term (and extended terms) identical to the Contract, plus sixty (60) days, and shall provide Union with a bona fide copy of such lease agreement prior to Union commencing the construction of the meter station;
  - b. furnish, install, set, and maintain suitable pressure and volume control equipment and such additional equipment as required on Shipper's delivery system, to protect against the overpressuring of Union's facilities, and to limit the daily flow of gas to the corresponding Maximum Daily Quantity applicable to the Receipt Point(s);
  - c. supply, install and maintain a gravel or cut stone covering on each Receipt Point and shall maintain such Receipt Point(s) in a safe and workmanlike manner; and,
  - d. install and maintain a fence satisfactory to Union around the perimeter of each Receipt Point which will adequately secure and protect Union's equipment therein.
5. Maintenance Costs: Shipper shall within thirty (30) days of the delivery of an invoice by Union, reimburse Union for any actual costs reasonably incurred by Union for any repair, replacement, relocation, or upgrading of any meter station

requested by Shipper, or as required by law, or by duly constituted regulatory body, or through good engineering practice. Union shall be responsible for any costs incurred by Union to correct an error made by Union.

**VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas received or delivered hereunder is measured by a meter that is owned and operated by an upstream or downstream transporter (the "**Transporter**") whose facilities may or may not interconnect with Union's, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas received or delivered on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union pursuant to this Article VII, Section 2 shall be in accordance with the general terms and conditions as incorporated in that Transporter's gas tariff as approved by Transporter's regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Receipt Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Receipt Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
5. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.

**VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled in any of the Services to Shipper, the parties shall have the right to amend their statement for a period equal to the time during which the companies, that transport the gas contemplated herein for Union and Shipper, retain the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.
4. Taxes: In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.
5. Set Off: If either party shall, at any time, be in arrears under any of its payment obligations to the other party under the Contract, then the party not in arrears shall be entitled to reduce the amount payable by it to the other party in arrears under the Contract, or any other contract, by an amount equal to the amount of such arrears or other indebtedness to the other party. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.
6. Station and Connection Costs: In the event that a meter station must be constructed and/or installed in order to give effect to the Contract, Shipper agrees to pay Union for a portion, as determined by Union, of Union's actual cost, as hereinafter defined, for constructing and installing such station. Shipper also agrees to pay the actual costs to connect such station to Union's pipeline and distribution system. Union shall advise Shipper as to the need for a meter station and shall provide Shipper with an estimate of the Aid to Construction. Such Aid to Construction shall include the costs of all pipe, fittings and materials, third party labour costs and Union's direct labour, labour saving devices, vehicles and

mobile equipment, but shall exclude the purchase costs of gas pressure control equipment and gas meters installed by Union.

**X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**XI. FORCE MAJEURE**

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to

by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.

8. **Firm Daily Variability Demand Charge Relief:** Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the Firm Daily Variability Demand for that Contract, then for that Day the Monthly charge shall be reduced by an amount equal to the applicable Firm Daily Variability Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Firm Daily Variability Demand Rate**" shall mean the monthly Firm Daily Variability Demand charge as provided in Schedule 2 of the Contract, divided by the number of days in the month for which such rate is being calculated.

**XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

In the event that the Contract is terminated pursuant to this Article XII, the parties hereto agree that they shall continue to be bound only by the terms and conditions set forth in the Contract but only for the purpose of determining the actual quantities in Shipper's Producer Balancing Account with such determination being subject to Article X. Such extended period of time shall not exceed one (1) year from the date of termination of the Contract.

**XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

**XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. RESERVED FOR FUTURE USE**

N/A

**XVII. RENEWALS**

The Contract will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter, subject to notice in writing by either party of termination at least three (3) months prior to the expiration thereof.

**XVIII. SERVICE CURTAILMENT**

1. Verbal Notice: Excepting instances of emergency, Shipper and Union agree to give at least twenty-four (24) hours verbal notice before a planned curtailment of receipt or delivery, shut-down or start-up.
2. Emergency: Shipper shall complete and maintain a plan which depicts all of the Shipper's gas production facilities including all emergency shut off valves and emergency equipment and provide a copy to Union upon Union's request. Shipper shall provide to Union the names and telephone numbers of those persons whom Union may contact in the event of an emergency situation arising within the Shipper's facilities.
3. Emergency Notice: In the event that Union is notified by a third party or if Union becomes aware of an emergency situation in which Shipper's gas production site, pipeline or associated equipment is involved, Union shall immediately notify Shipper or Shipper's representative of such emergency condition.
4. Right to Modify: Union shall have the right, at all times, to reconstruct or modify Union's pipeline and distribution system and the pressure carried therein, notwithstanding that such reconstruction or modification may reduce the System Capacity available to receive Shipper's gas, or Shipper's ability to deliver gas to Union. Should Union expect any such reconstruction or modification to reduce the delivery or receipt of gas by either party, Union will, where able, provide Shipper with six (6) months' notice or as much notice as is reasonably practical in the circumstances. Union shall use reasonable efforts to assist the Shipper in meeting its Market Quantity in these circumstances.

**XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security), if any, shall remain in place throughout the term hereof unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances (including the Initial Financial Assurances and Security), if any, throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract for any reason (a "**Material Event**"), then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). In the event that Shipper does not provide to Union such Security, Union may deem a default in accordance with the provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

3. Licence: Shipper represents and warrants to Union that Shipper possesses a licence to produce gas in the Province of Ontario.

**XX. MISCELLANEOUS PROVISIONS**

1. Assignment: Shipper may assign the Contract to a third party ("**Assignee**"), up to the Maximum Daily Quantity, (the "**Capacity Assigned**"). Such assignment shall require the prior written consent of Union and release of obligations by Union for the Capacity Assigned from the date of assignment. Such consent and release shall not be unreasonably withheld and shall be conditional upon the Assignee providing, amongst other things, financial assurances as per Article XXI herein. Any such assignment will be for the full rights, obligations and remaining term of the Contract as relates to the Capacity Assigned.
2. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

**XXI. PRECONDITIONS TO SERVICES**

1. Union Conditions: The obligations of Union to provide Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union; and,
  - e. Union shall, where applicable, have obtained all internal and external approvals including the governmental, regulatory and other approvals or authorizations required to construct any facilities necessary to provide the Services hereunder, which approvals and authorizations, if granted upon conditions, shall be conditions satisfactory to Union; and,
  - f. Union shall, where applicable, have completed and placed into service those facilities necessary to provide the Services hereunder; and,
  - g. Further to Article IX Section 6 herein, Shipper shall pay to Union a payment ("**First Prepayment**") towards the Aid to Construction at the time of the execution of this Agreement. Shipper shall pay a payment prior to installation of the meter station ("**Second Prepayment**"). The foregoing payments are specified in the attached Schedule 1 for the first meter station ("**Receipt Point #1**") to be installed under the Contract. Payments for additional meter stations will be handled by written mutual agreement between the parties. Shipper shall pay Union the difference if the actual Aid to Construction is more than the Prepayments, within thirty (30) days of the delivery of an invoice from Union on which the actual costs for construction and installation of facilities are stated. Union shall pay Shipper the difference if the actual Aid to Construction is less than the Prepayments. In the event Shipper terminates this Agreement prior to Union incurring any costs related to the construction, installation or connection of the meter station, Shipper's Prepayments shall be returned to Seller, without interest, within fifteen (15) days notice to Union of such termination by Shipper. In the event Union has incurred costs, as set out herein, relative to the construction, installation or connection of the meter station prior to being notified by Shipper of Shipper's intention to terminate the Agreement, Union shall deduct such actual costs from Union's return of Shipper's Prepayments. "**Prepayments**" shall mean the sum of the First Prepayment and the Second

Prepayment.

2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of Shipper and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and,
  - b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,
  - c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract; and,
  - d. Shipper shall have cancelled or renegotiated its Sales Agreement, on terms satisfactory to Union, as applicable.
3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, d, e, f, g, and Section 2 a, b, and d. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.
4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, or if any of the Shipper payments required under the condition precedent in this Article XXI Section 1 g have not been paid as required in such section, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.



STORAGE AND TRANSPORTATION SERVICES TRANSPORTATION CHARGES

**(A) Availability**

The charges under this rate schedule shall be applicable for transportation service rendered by Union for all quantities transported to and from embedded storage pools located within Union's franchise area and served using Union's distribution and transmission assets.

Applicable Points

Dawn as a receipt point: Dawn (Facilities).

Dawn as a delivery point: Dawn (Facilities).

**(B) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

a) Charges Applicable to both Firm and/or Interruptible Transportation Services:

Monthly Fixed Charge per customer station (\$ per month) (1) \$1,505.73

Transmission Commodity Charge to Dawn (\$ per GJ) \$0.035

Transportation Fuel	<b>Customers located East of Dawn</b>	<b>Customers located West of Dawn</b>
<b>Fuel Charges to Dawn:</b>		
Commodity Rate - Union provides fuel (\$ per GJ)	\$0.008	\$0.008
Fuel Ratio - customer provides fuel (%)	0.156%	0.156%
<b>Fuel Charge to the Pool</b>		
Commodity Rate - Union provides fuel (\$ per GJ)	\$0.010	\$0.023
Fuel Ratio - customer provides fuel (%)	0.192%	0.444%

b) Firm Transportation Demand Charges: (2)

	<b>Customers located East of Dawn</b>	<b>Customers located West of Dawn</b>
Monthly Demand Charge applied to contract demand (\$ per GJ)	\$0.765	\$1.055

Authorized Overrun:

The authorized overrun rate payable on all quantities transported in excess of Union's obligation any day shall be:

	<b>Customers located East of Dawn</b>	<b>Customers located West of Dawn</b>
Firm Transportation:		
<b>Charges to Dawn</b>		
Commodity Rate - Union provides fuel (\$ per GJ)	\$0.068	\$0.077
Commodity Rate - customer provides fuel (\$ per GJ)	\$0.060	\$0.069
Fuel Ratio - customer provides fuel (%)	0.156%	0.156%
<b>Charges to the Pool</b>		
Commodity Rate - Union provides fuel (\$ per GJ)	\$0.035	\$0.058
Commodity Rate - customer provides fuel (\$ per GJ)	\$0.025	\$0.035
Fuel Ratio - customer provides fuel (%)	0.192%	0.444%

Overrun will be authorized at Union's sole discretion.



**uniongas**

Effective  
2016-01-01  
**Rate M16**  
Page 2 of 2

Unauthorized Overrun

Authorized Overrun rates payable on all transported quantities up to 2% in excess of Union's contractual obligation.

The Unauthorized Overrun rate during the November 1 to April 15 period will be \$50 per GJ for all usage on any day in excess of 102% of Union's contractual obligation. The Unauthorized Overrun rate during the April 16 to October 31 period will be \$9.373 per GJ for all usage on any day in excess of 102% of Union's contractual obligation.

Charges aforesaid in respect of any given month in accordance with General Terms & Conditions shall be payable no later than the twenty-fifth day of the succeeding month.

Notes for Section (B) Rates:

- (1) The monthly fixed charge will be applied once per month per customer station regardless of service being firm, interruptible or a combination thereof.
- (2) Demand charges will be applicable to customers firm daily contracted demand or the firm portion of a combined firm and interruptible service.

**(C) Terms of Service**

The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A" for contracts in effect before October 1, 2010. The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A 2013" for contracts in effect on or after January 1, 2013.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

## **SCHEDULE "A"**

### **GENERAL TERMS & CONDITIONS M16 TRANSPORTATION AGREEMENT**

#### **I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

1. "Banking Day" shall mean a day on which the general offices of the Canadian Imperial Bank of Commerce, 99 King St. W., Chatham, Ontario are open for business;
2. "business day" shall mean a day on which the general offices of Union in Chatham, Ontario are open for business;
3. "Contract" shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;
4. "contract year" shall mean a period of three hundred and sixty-five (365) consecutive days, beginning on the day agreed upon by Union and Shipper as set forth in the Contract, or on any anniversary of such date; provided, however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days;
5. "day" shall mean a period of twenty-four (24) consecutive hours beginning at 9:00 a.m. Central Standard time. The reference date for any day shall be the calendar date upon which the twenty-four (24) hour period shall commence;
6. "month" shall mean the period beginning at 9:00 a.m. Central Standard time on the first day of a calendar month and ending at 9:00 a.m. Central Standard time on the first day of the following calendar month;
7. "firm" shall mean service not subject to curtailment or interruption except under Articles XI and XII of this Schedule "B";
8. "interruptible service" shall mean service subject to curtailment or interruption, after notice, at any time;
9. "gas" shall mean gas as defined in the Ontario Energy Board Act, R.S.O. 1980, c. 332, as amended, supplemented or reenacted from time to time;
10. "cubic metre" shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
11. "m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;
12. "pascal" (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" (kPa) shall mean 1,000 pascals;
13. "joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;
14. "gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;
15. "Shipper" shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);
16. "subsidiary" means a company in which more than fifty (50) per cent of the issued share capital (having full voting

## **SCHEDULE "A"**

rights under all circumstances) is owned or controlled directly or indirectly by another company, by one or more subsidiaries of such other company, or by such other company and one or more of its subsidiaries;

17. "TCPL" means TransCanada PipeLines Limited;
18. "NOVA" means Gas Transmission Ltd.;
19. "Panhandle" means CMS Panhandle Eastern Pipeline Company;
20. "MichCon" means Michigan Consolidated Gas Company;
21. "SCPL" means St. Clair Pipelines (1996) Ltd.;
22. "OEB" means the Ontario Energy Board;
23. "NEB" means the National Energy Board (Canada);
24. "GLGT" means Great Lakes Gas Transmission Company;
25. "CMS" means CMS Gas Transmission and Storage Company;
26. "Consumers" means The Consumers' Gas Company, Limited;
27. "cricondenthm hydrocarbon dewpoint" shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;
28. "hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;
29. "specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute; and,
30. "Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,

## SCHEDULE "A"

- d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenthem hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,
  - k. shall not exceed forty-three degrees Celsius (43°C), and,
  - l. shall not be odourized by Shipper.
3. Non-conforming Gas:
- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
  - b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.
  - c. With respect to Article II 2. h. herein, Union may accept the gas subject to Shipper's obligations under the Dehydration Contract, if applicable.
4. Quality of Gas Received: The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II.
5. Quality of Gas at Dawn: The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
6. Odourization of Gas:
- a. Union may odourize or deliver odourized gas under the Contract,
  - b. Shipper shall if requested by Union monitor the mercaptan sulphur content of the gas delivered to Union under the Contract and shall provide at no cost to Union a continuous signal quantifying the mercaptan sulphur content in milligrams per cubic metre.

## III. MEASUREMENTS

## **SCHEDULE "A"**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
  - d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

## **IV. POINT OF RECEIPT AND POINT OF DELIVERY**

1. Unless otherwise specified in the Contract, the point or points of receipt for all gas to be covered thereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where Union takes possession of the gas. Whenever the phrase "receipt point" appears herein, it shall mean Point of Receipt as defined in this Article IV.
2. Unless otherwise specified in the Contract, the point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection as specified in the Contract, where Shipper takes possession of the gas. Whenever the phrase "delivery point" shall appear hereon, it shall mean Point of Delivery as defined in this Article IV.

## **V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

N/A

## **VI. FACILITIES ON SHIPPER'S PROPERTY**

N/A

## **VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of

## **SCHEDULE "A"**

measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.

3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Custody Transfer Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Custody Transfer Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

## **VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the 10th day of each month for all services furnished during the preceding month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding month's billing, an adjustment based on any difference between actual quantities and estimated quantities. If presentation of a bill to Shipper is delayed after the 10th day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.

## **IX. PAYMENTS**

## **SCHEDULE "A"**

1. **Monthly Payments:** Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a business day, then payment must be received in Union's account on the first business day preceding the twentieth (20<sup>th</sup>) day of the month.
2. **Remedies for Non-payment:** Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due, Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract may suspend service(s) until such amount is paid, provided however, that if Shipper, in good faith shall dispute the amount of any such bill or part thereof and shall pay to Union such amounts as it concedes to be correct and at any time thereafter within twenty (20) days of a demand made by Union shall furnish good and sufficient surety bond satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination which may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case, then Union shall not be entitled to suspend service(s) because of such non-payment unless and until default be made in the conditions of such bond or in payment for any further service(s) to Shipper hereunder.

Notwithstanding the foregoing paragraph, this does not relieve Shipper from the obligation to continue its deliveries of gas under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. **Billing Adjustments:** If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "bill" next following shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within six (6) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of invoice.

## **X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act of the Province of Ontario, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

## **XI. FORCE MAJEURE**

N/A

## **XII. DEFAULT AND TERMINATION**

N/A

**XIII. MODIFICATION**

N/A

**XIV. NONWAIVER AND FUTURE DEFAULT**

N/A

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**RATE M16  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Aid to Construction"** shall include any and all costs, expenses, amounts, damages, obligations, or other liabilities (whether of a capital or operating nature, and whether incurred before or after the date of the Contract) actually paid by Union (including amounts paid to affiliates for services rendered in accordance with the Affiliate Relationships Code as established by the OEB) in connection with or in respect of satisfying the conditions precedent set out in Article XXI herein (including without limitation the construction and placing into service of the Union Expansion Facilities, the obtaining of all governmental, regulatory and other third party approvals, and the obtaining of rights of way) whether resulting from Union's negligence or not, except for any costs that have arisen from the gross negligence, fraud, or wilful misconduct of Union;

**"Authorized Overrun"** shall mean the amount by which Shipper's Authorized Quantity exceeds the firm and interruptible contract demands;

**"Authorized Quantity"** shall have the meaning given thereto in Schedule "B 2010" of the C1 Rate Schedule;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days, beginning on the Commencement Date or on any anniversary of such date; provided, however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days;

**"cricondentherm hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Custody Transfer Point"** That point on the piping system at the Pool Station which is at the Shipper side of the insulating flange on the Union Expansion Facilities, and which point shall serve as the point of custody transfer;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"Dehydration Contract"** shall mean the contract for Dehydration Service between Union and the Shipper as detailed in Schedule 1 of the Contract;

**"Delivery Point"** shall mean the point(s) where Union shall deliver gas to Shipper as defined in Schedule 1 of the Contract;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"gas"** shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Sch. B, as amended, supplemented or re-enacted from time to time;

**"gross heating value"** shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

**"hydrocarbon dewpoint"** shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

**"Interconnecting Pipeline"** shall mean a pipeline that directly connects to the Union pipeline system;

**"Interruptible Service HUB Contract"** shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

**"interruptible"** shall mean service subject to curtailment or interruption, after notice, at any time;

**"joule"** (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term **"megajoule"** (MJ) shall mean 1,000,000 joules. The term **"gigajoule"** (GJ) shall mean 1,000,000,000 joules;

**"m<sup>3</sup>"** shall mean cubic metre of gas and **"10<sup>3</sup>m<sup>3</sup>"** shall mean 1,000 cubic metres of gas;

**"Month"** shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

**"OEB"** means the Ontario Energy Board;

**"pascal"** **"(Pa)"** shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term **"kilopascal"** **"(kPa)"** shall mean 1,000 pascals;

**"Pool Quantity"** shall mean the actual daily quantity of gas delivered to or received from Shipper at the Custody Transfer Point;

**"Pool Station"** shall mean the physical location of Union's measurement and control facilities to the pool; the pool name as detailed in Schedule 1 of the Contract;

**"Receipt Point"** shall mean any one of the points where Union shall receive gas from Shipper as detailed in Schedule 1 of the Contract;

**"Shipper"** shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

**"Shipper Quantity"** shall, on any Day, be equal to the greater of: (i) the Authorized Quantity for that Day; and (ii) the nomination duly made by Shipper in good faith prior to the nomination deadline for the first nomination window applicable for that Day; provided that in no event shall the Shipper Quantity exceed the firm contract demand;

**"specific gravity"** shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Taxes"** shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

"TCPL" means TransCanada PipeLines Limited;

"**Union Expansion Facilities**" shall mean any facilities necessary for Union to provide the Services, including without limiting the generality of the foregoing:

- a. a meter and any associated recording gauges as are necessary;
- b. pressure and/or flow control devices, over pressure protection and telemetry equipment as are necessary;
- c. a suitable gas odourizing injection facility if Union deems such a facility to be necessary
- d. piping, fittings, material, filtration facilities, cathodic protection and insulating flanges;
- e. gas chromatograph, moisture analyzer, piping, fittings, material, filtration facilities, cathodic protection and insulating flanges;

"**Wobbe Number**" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenthem hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one

point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,

- k. shall not exceed forty-three degrees Celsius (43°C), and,
- l. shall not be odourized by Shipper.

3. **Non-conforming Gas:**

- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
- b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.
- c. With respect to Article II 2. h. herein, Union may accept the gas subject to Shipper's obligations under the Dehydration Contract, if applicable.

4. **Quality of Gas Received:** The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II.

5. **Quality of Gas at Dawn:** The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.

6. **Odourization of Gas:**

- a. Union may odourize or deliver odourized gas under the Contract,
- b. Shipper shall if requested by Union monitor the mercaptan sulphur content of the gas delivered to Union under the Contract and shall provide at no cost to Union a continuous signal quantifying the mercaptan sulphur content in milligrams per cubic metre.

**III. MEASUREMENTS**

1. **Storage, Transportation, and/or Sales Unit:** The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.

2. **Determination of Volume and Energy:**

- a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.

- b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
- c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
- d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

**IV. RECEIPT POINT AND DELIVERY POINT**

The point or points of receipt and point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in Schedule 1 of the Contract, where possession of the gas changes from one party to the other.

**V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

- 1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
- 2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

**VI. FACILITIES ON SHIPPER'S PROPERTY**

- 1. Union Equipment: All of the Union Expansion Facilities shall remain the property of Union. Union shall be entitled to remove said equipment at any time within a period of sixty (60) days from any termination or expiry of the Contract. Shipper shall take all necessary steps to ensure Union may enter the Pool Station to remove such equipment for a period of sixty (60) days after termination or expiry of the Contract.
- 2. Shipper Obligations: Shipper shall, at Shipper's own cost and expense:
  - a. obtain the Pool Station Land Rights; and
  - b. furnish, install, set, and maintain suitable pressure and quantity control equipment and such additional equipment as required on Shipper's delivery system, to protect against the over pressuring of Union's facilities as set out in Article VI of the Contract and Schedule 1 of the Contract, protect Union from receiving gas not meeting the quality specification as set out in Article II herein, and to limit the daily flow of gas to the corresponding parameters as set out in the Article II of the Contract.
- 3. Maintenance Costs: Shipper shall within thirty (30) days of the delivery of an invoice by Union, reimburse Union for any actual costs reasonably incurred by Union for any repair, replacement, relocation, or upgrading of any meter station or any Union Expansion Facilities requested by Shipper, or as required by law or by duly constituted regulatory body, or through good engineering practice. Union shall be responsible for any costs incurred by Union to correct an error made by Union.

4. Operation and Maintenance: Subject to this Article VI Section 3, each party shall be fully responsible for the continued operation, maintenance, repair and replacement of its respective facilities. Both parties agree to maintain cathodic protection on their respective facilities.
5. Inspection: Each party shall inspect its facilities as required by industry standards or by the appropriate regulatory body.
6. Repair or Replacement: Each party shall decide, in its sole discretion, whether its facilities need to be repaired or replaced. In the event that repair or replacement is needed, the party undertaking such work will, to the extent possible, give the other party sixty (60) days' notice and will ensure that the work be done in a manner so as to minimize the amount of time the pipeline has restricted flows.

**VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Custody Transfer Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Custody Transfer Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.

7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

**VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled under the Contract, Union shall have the right to amend its statements for a period equal to the time during which the Interconnecting Pipeline retains the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such

overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.

4. Taxes: In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.
5. Set Off: If Shipper shall, at any time, be in arrears under any of its payment obligations to Union under the Contract, then Union shall be entitled to reduce the amount payable by Union to Shipper under the Contract or any other contract by an amount equal to the amount of such arrears or other indebtedness to Union. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.
6. Aid to Construction: Shipper agrees to reimburse Union for the Aid to Construction.

In the event Union has incurred costs, as set out herein, relative to the construction, installation or connection of the gas metering station prior to being notified by Shipper of Shipper's intention to terminate the Contract, Shipper shall promptly remit to Union such actual costs on presentation to Shipper of an invoice for same from Union.

All applicable Taxes will be applied to all amounts to be paid under this Section. Shipper warrants and represents that no payment to be made by Shipper under the Contract is subject to any withholding tax.

## **X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

## **XI. FORCE MAJEURE**

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and

## SCHEDULE "A 2013"

any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm contract demand for the Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the C1 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
9. Unforeseen Reduction: In addition to the definition of force majeure in Article XI, Section 1 herein, for the purposes of the Contract, it shall also include the unforeseen reduction in natural gas usage and/or capacity of the local transmission system as described in Schedule 1 of the Contract, regardless of the duration of such unforeseen reduction, or any other cause, whether of the kind herein enumerated or otherwise, not within the reasonable control of the party claiming relief hereunder and which, by the exercise of due diligence, such party is unable to prevent or overcome.

## **XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make

delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

**XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

**XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. RESERVED FOR FUTURE USE**

N/A

**XVII. RENEWALS**

The Contract will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter. Shipper or Union may reduce the contract demands or terminate the Contract, with notice in writing to the other party, at least two (2) years prior to the expiration thereof.

**XVIII. SERVICE CURTAILMENT**

1. Capacity Sharing: Where requests for interruptible service hereunder exceed the capacity available for such Service, Union will authorize nominations from shippers and allocate capacity as per Union's procedures and policies and shippers shall be so advised. Any interruptible service provided herein are subordinate to any and all firm service supplied by Union, and subordinate to Union's own operational or system requirements.
2. Capacity Procedures: Union reserves the right to change its procedures and policies for sharing interruptible capacity and will provide Shipper with two (2) months' notice of any such change.

3. Maintenance: Union's facilities from time to time may require maintenance or construction. In the event that such event occurs and in Union's sole opinion, acting reasonably, may impact its ability to meet Shipper's requirements, Union shall provide at least ten (10) days' notice to the Shipper, except in the case of emergencies. In the event the maintenance impacts Union's ability to meet Shipper's requirements, Union shall not be liable for any damages and shall not be deemed to be in breach of the Contract. To the extent that Union's ability to receive or deliver gas is impaired, Demand Charge Relief shall be calculated and credited to Shipper's invoice in accordance with Article XI, Section 8 herein. Union shall use reasonable efforts to determine a mutually acceptable period during which such maintenance or construction will occur and also to limit the extent and duration of any impairments. Union will endeavour to schedule and complete the maintenance and construction, that can be scheduled and completed, and which would normally be expected to impact on Union's ability to meet its obligations of any Contract Year, during the period from April 1 through to October 31.
4. Shipper's Facilities: Shipper shall complete and maintain a plan which depicts all of Shipper's production storage facilities including all emergency shut off valves and emergency equipment and provide a copy to Union upon Union's request. Shipper shall provide to Union the names and telephone numbers of those persons whom Union may contact in the event of an emergency situation arising within the Shipper's facilities.

**XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security), if any, shall remain in place throughout the term hereof unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances (including the Initial Financial Assurances and Security), if any, throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract for any reason (a "**Material Event**"), then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). In the event that Shipper does not provide to Union such Security, Union may deem a default in accordance with the provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

3. License: Shipper represents and warrants to Union that Shipper possesses all licenses and permits needed to inject gas into, store gas in, and remove gas from the pool.

**XX. MISCELLANEOUS PROVISIONS**

1. Assignment: Shipper may not assign the Contract without the written consent of Union and, if required, the approval of the OEB. Should Union consent to the assignment, and if OEB approval is needed, Union will apply for OEB approval with all costs of the application to be paid by Shipper.
2. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

**XXI. PRECONDITIONS TO TRANSPORTATION SERVICES**

1. Union Conditions: The obligations of Union to provide Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union; and,
  - e. Shipper shall have paid any amounts owing pursuant to Schedule 1 Aid to Construction; and,
  - f. With regard to the Union Expansion Facilities:
    - i. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations required to construct the Union Expansion Facilities;
    - ii. Union shall have obtained all internal approvals that are necessary or appropriate to construct the Union Expansion Facilities;
    - iii. Union shall have completed and placed into service the Union Expansion Facilities; and,
  - g. Shipper shall, at Shipper's own cost and expense, have obtained a registered lease or freehold ownership in Union's favour for the Union Expansion Facilities located at the Pool Station satisfactory to Union and sufficient to provide Union with free uninterrupted access to, from, under and above the Pool Station for a term (and extended terms) identical to the Contract, plus sixty (60) days (such land rights being referred to as the "**Pool Station Land Rights**"), and shall provide Union with a bona fide copy of such agreements prior to Union commencing the construction of the Union Expansion Facilities.
2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of Shipper and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and shall, as required, have entered into the necessary contracts to purchase the gas quantities handled under the Contract; and,
  - b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,

- c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract.
3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, d, e, f i., f iii., and g and Section 2 a and b. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.
4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.



# uniongas

Effective  
2016-01-01  
**Rate C1**  
Page 1 of 2

## CROSS FRANCHISE TRANSPORTATION RATES

### (A) Applicability

To a Shipper who enters into a Contract with Union for delivery by Shipper of gas to Union at one of Union's points listed below for redelivery by Union to Shipper at one of Union's points.

<u>Applicable Points</u>	(1)	(2)
	Ojibway	WDA
	St. Clair	NDA
	Dawn*	SSMDA
	Parkway	SWDA
	Kirkwall	CDA
	Bluewater	EDA

\*Dawn as a receipt point: Dawn (TCPL), Dawn (Facilities), Dawn (Tecumseh), Dawn (Vector) and Dawn (TSLE).

\*Dawn as a delivery point: Dawn (Facilities).

### (B) Services

Transportation Service under this rate schedule is transportation on Union's pipeline facilities between any two Points as specified in Section (A), column 1.

### (C) Rates

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

#### Transportation Service:

	Monthly Demand Charge (applied to daily contract demand) <u>Rate/GJ</u>	Commodity Charges			
		If Union supplies fuel Commodity Charge		If Shipper supplies fuel Fuel Ratio	
		Apr.1-Oct.31 <u>Rate/GJ</u>	Nov.1-Mar.31 <u>Rate/GJ</u>	Apr.1-Oct.31 <u>%</u>	Nov.1-Mar.31 <u>%</u>
a) Firm Transportation					
Between:					
St.Clair & Dawn	\$1.055	\$0.011	\$0.014	0.205%	0.264%
Ojibway & Dawn	\$1.055	\$0.023	\$0.015	0.444%	0.301%
Bluewater & Dawn	\$1.055	\$0.011	\$0.014	0.205%	0.264%
From:					
Parkway to Kirkwall	\$0.719	\$0.015	\$0.008	0.292%	0.156%
Parkway to Dawn	\$0.719	\$0.015	\$0.008	0.292%	0.156%
Kirkwall to Dawn	\$1.268	\$0.008	\$0.008	0.156%	0.156%
Dawn to Kirkwall	\$2.421	\$0.016	\$0.039	0.316%	0.751%
Dawn to Parkway	\$2.883	\$0.029	\$0.052	0.567%	1.020%
Kirkwall to Parkway	\$0.462	\$0.021	\$0.022	0.408%	0.425%
b) Interruptible and Short Term (1 year or less) Firm Transportation:					
Maximum		\$75.00	\$75.00		
c) Firm Transportation between two points within Dawn					
Dawn to Dawn-Vector	\$0.029	n/a	n/a	0.337%	0.156%
Dawn to Dawn-TCPL	\$0.137	n/a	n/a	0.156%	0.349%
d) Interruptible Transportation between two points within Dawn*					
*includes Dawn (TCPL), Dawn Facilities, Dawn (Tecumseh), Dawn (Vector) and Dawn (TSLE)				0.156%	0.156%



**uniongas**

Effective  
2016-01-01  
**Rate C1**  
Page 2 of 2

**(C) Rates (Cont'd)**

**Authorized Overrun:**

The following Overrun rates are applied to any quantities transported in excess of the Contract parameters. Overrun will be authorized at Union's sole discretion.

	If Union supplies fuel		Commodity Charges If Shipper supplies fuel		
	Commodity Charge		Fuel Ratio	Commodity Charge	
	Apr.1-Oct.31	Nov.1-Mar.31	Apr.1-Oct.31	Nov.1-Mar.31	
	<u>Rate/GJ</u>	<u>Rate/GJ</u>	<u>%</u>	<u>%</u>	<u>Rate/GJ</u>
a) Firm Transportation					
Between:					
St.Clair & Dawn	\$0.045	\$0.048	0.205%	0.264%	\$0.035
Ojibway & Dawn	\$0.058	\$0.050	0.444%	0.301%	\$0.035
Bluewater & Dawn	\$0.045	\$0.048	0.205%	0.264%	\$0.035
From:					
Parkway to Kirkwall	\$0.141	\$0.134	0.904%	0.769%	\$0.095
Parkway to Dawn	\$0.141	\$0.134	0.904%	0.769%	\$0.095
Kirkwall to Dawn	\$0.050	\$0.050	0.156%	0.156%	\$0.042
Dawn to Kirkwall	\$0.127	\$0.150	0.929%	1.364%	\$0.080
Dawn to Parkway	\$0.155	\$0.179	1.180%	1.633%	\$0.095
Kirkwall to Parkway	\$0.068	\$0.069	1.020%	1.038%	\$0.015
b) Firm Transportation within Dawn					
Dawn to Dawn-Vector	n/a	n/a	0.337%	0.156%	\$0.001
Dawn to Dawn-TCPL	n/a	n/a	0.156%	0.349%	\$0.005

Authorized overrun for short-term firm transportation is available at negotiated rates.

**Unauthorized Overrun:**

The Unauthorized Overrun rate shall be the higher of the reported daily spot price of gas at either, Dawn, Parkway, Niagara, Iroquois or Chicago in the month of or the month following the month in which the overrun occurred plus 25% for all usage on any day in excess of 102% of Union's contractual obligation.

Notes for Section (C) Rates:

- (1) A demand charge of \$0.069/GJ/day/month will be applicable to customers contracting for firm all day transportation service in addition to the demand charges appearing on this schedule for all firm transportation service paths.

**(D) Terms of Service**

The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A" for contracts in effect before October 1, 2010. The General Terms & Conditions applicable to this rate schedule shall be in accordance with the attached Schedule "A 2010" for contracts in effect on or after October 1, 2010.

**(E) Nominations**

Nominations under this rate schedule shall be in accordance with the attached Schedule "B" for contracts in effect before October 1, 2010. Nominations under this rate schedule shall be in accordance with the attached Schedule "B 2010" for contracts in effect on or after October 1, 2010.

**(F) Receipt and Delivery Points and Pressures**

Receipt and Delivery Points and Pressures under this rate schedule shall be in accordance with Schedule "C 2010" for contracts in effect on or after October 1, 2010.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

**RATE C1  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

1. "Contract" shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;
2. "cubic metre" shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
3. "day" shall mean a period of twenty-four (24) consecutive hours beginning at 9:00 a.m. Central Standard time. The reference date for any day shall be the calendar date upon which the twenty-four (24) hour period shall commence;
4. "delivery" shall mean any gas that is delivered by Union into Shipper's possession, or to the possession of Shipper's agent;
5. "firm" shall mean service not subject to curtailment or interruption except under Articles XI and XII of this Schedule "A";
6. "gas" shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;
7. "gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;
8. "interruptible service" shall mean service subject to curtailment or interruption, after notice, at any time;
9. "Interconnecting Pipeline" shall mean a pipeline that directly connects to the Union pipeline system;
10. "joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;
11. "limited interruptible service" shall mean gas service subject to interruption or curtailment on a limited number of days as specified in the Contract;
12. "m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;
13. "month" shall mean the period beginning at 9:00 a.m. Central Standard time on the first day of a calendar month and ending at 9:00 a.m. Central Standard time on the first day of the following calendar month;
14. "OEB" means the Ontario Energy Board;
15. "pascal" (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" (kPa) shall mean 1,000 pascals;
16. "receipt" shall mean any gas that is delivered into Union's possession, or the possession of Union's agent;
17. "Shipper" shall have the meaning as defined in the Contract and shall also include Shipper's agent(s);

## **SCHEDULE "A"**

18. "TCPL" means TransCanada Pipelines Limited;
19. "cricondenth therm hydrocarbon dewpoint" shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;
20. "hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;
21. "specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
22. "Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to/by Union hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than four hundred and sixty (460) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenth therm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas.

## **SCHEDULE "A"**

3. Non-conforming Gas: In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
4. Quality of Gas Received: The quality of the gas to be received by Union hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will also accept gas of a quality as set out in any other Interconnecting Pipeline's general terms and conditions, provided that all Interconnecting Pipelines accept such quality of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in Union's C1 Rate Schedule.

### **III. MEASUREMENTS**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
  - d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

### **IV. RECEIPT POINT AND DELIVERY POINT**

1. Unless otherwise specified in the Contract, the point or points of receipt for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where Union takes possession of the gas.
2. Unless otherwise specified in the Contract, the point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection as specified in the Contract where Shipper takes possession of the gas.

### **V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

*Intentionally blank*

### **VI. FACILITIES ON SHIPPER'S PROPERTY**

## **SCHEDULE "A"**

Except under those conditions where Union is delivering to TCPL for TCPL or Shipper at Union's Parkway Point of Delivery, or to an Interconnecting Pipeline, or where otherwise specified in the Contract, the following will apply:

1. Construction and Maintenance: Union, at its own expense may construct, maintain and operate on Shipper's property at the delivery point a measuring station properly equipped with a meter or meters and any other necessary measuring equipment for properly measuring the gas redelivered under the Contract. Shipper will grant to Union a lease and/or rights-of-way over property of Shipper as required by Union to install such facilities and to connect same to Union's pipeline.
2. Entry: Union, its servants, agents and each of them may at any reasonable time on notice (except in cases of emergency) to Shipper or his duly authorized representative enter Shipper's property for the purpose of constructing, maintaining, removing, operating and/or repairing station equipment.
3. Property: The said station and equipment will be and remain the property of Union notwithstanding it is constructed on and attached to the realty of Shipper, and Union may at its own expense remove it upon termination of the Contract and will do so if so requested by Shipper.

## **VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by their regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the redelivery point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the delivery point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.

## **SCHEDULE "A"**

6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

### **VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the 10th day of each month for all services furnished during the preceding month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the 10th day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.

### **IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a business day, then payment must be received in Union's account on the first business day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment.
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend service(s) until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend service(s) because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing paragraph(s), Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such

overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "bill" next following shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within six (6) years from the date of the incorrect billing. In the event any refund is issued with Shipper's gas bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.

**X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act of the Province of Ontario, or any act passed in amendment thereof or substitution thereof, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**XI. FORCE MAJEURE**

1. The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.

## **SCHEDULE "A"**

5. An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm Contract Demand for that Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the C1 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
9. If, due to the occurrence of an event of force majeure as outlined above, the capacity for gas deliveries by Union is impaired, it will be necessary for Union to curtail Shipper's gas receipts to Union hereunder, via proration based on utilization of such facilities for the Day. This prorating shall be determined by multiplying the capability of such facilities as available downstream of the impairment on the Day, by a fraction where the numerator is Shipper's nominated firm quantity and the denominator is the total of all such nominated firm quantities for nominated services and planned consumption for in-franchise customers on the Day. For the purposes of this Article XI, firm services shall mean all firm services provided by Union to in-franchise customers and ex-franchise shippers.

## **XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI hereof) which has not been waived by the other party, then and in every such case and as often as the same may happen, the Non-defaulting party may give written notice to the Defaulting party requiring it to remedy such default and in the event of the Defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the Non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

## **XIII. MODIFICATION**

Subject to Union's C1 Rate Schedule, Schedule A, Article XV and the ability of Union to amend the C1 Rate Schedule with the approval of the OEB, no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

## **XIV. NON-WAIVER AND FUTURE DEFAULT**

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**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**RATE C1  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Authorized Overrun"** shall mean the amount by which Shipper's Authorized Quantity exceeds the Contract Demand;

**"Available Capacity"** shall mean at any time, Union's remaining available capacity to provide Transportation Services;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days; provided however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days, commencing on November 1 of each year; except for the first Contract Year which shall commence on the Commencement Date and end on the first October 31 that follows such date;

**"cricondenthm hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"delivery"** shall mean any gas that is delivered by Union into Shipper's possession, or to the possession of Shipper's agent;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"Expansion Facilities"** shall mean any new facilities to be constructed by Union in order to provide Transportation Services;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"gas"** shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;

**"gross heating value"** shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

**"hydrocarbon dewpoint"** shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

**"Interruptible Service HUB Contract"** shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

## **SCHEDULE "A 2010"**

"**interruptible service**" or "**Interruptible**" shall mean service subject to curtailment or interruption, after notice, at any time;

"**Interconnecting Pipeline**" shall mean a pipeline that directly connects to the Union pipeline system;

"**joule**" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "**megajoule**" (MJ) shall mean 1,000,000 joules. The term "**gigajoule**" (GJ) shall mean 1,000,000,000 joules;

"**Limited Firm**" shall mean gas service subject to interruption or curtailment on a limited number of Days as specified in the Contract;

"**Loaned Quantities**" shall mean those quantities of gas loaned to Shipper under the Facilitating Agreement;

"**m**<sup>3</sup>" shall mean cubic metre of gas and "**10**<sup>3</sup>**m**<sup>3</sup>" shall mean 1,000 cubic metres of gas;

"**Month**" shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

"**NAESB**" shall mean North American Energy Standards Board;

"**OEB**" means the Ontario Energy Board;

"**Open Season**" or "**open season**" shall mean an open access auction or bidding process held by Union as a method of allocating capacity;

"**pascal**" ("**Pa**") shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" ("**kPa**") shall mean 1,000 pascals;

"**receipt**" shall mean any gas that is delivered into Union's possession, or the possession of Union's agent;

"**Shipper**" shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

"**specific gravity**" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

"**Taxes**" shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

"**TCPL**" means TransCanada PipeLines Limited;

"**Wobbe Number**" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. **Natural Gas:** The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.

2. Freedom from objectionable matter: The gas to be delivered to/by Union hereunder,
- a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than four hundred and sixty (460) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondentherm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas.
3. Non-conforming Gas: In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
4. Quality of Gas Received: The quality of the gas to be received by Union hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will also accept gas of a quality as set out in any other Interconnecting Pipeline's general terms and conditions, provided that all Interconnecting Pipelines accept such quality of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in Union's C1 Rate Schedule.

### **III. MEASUREMENTS**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
- a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas

## **SCHEDULE "A 2010"**

Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.

- c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
- d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

### **IV. RECEIPT POINT AND DELIVERY POINT**

1. Unless otherwise specified in the Contract, the point or points of receipt and point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where possession of the gas changes from one party to the other, and as per Schedule "C 2010".

### **V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

### **VI. FACILITIES ON SHIPPER'S PROPERTY**

Except under those conditions where Union is delivering to TCPL for TCPL or Shipper at Parkway (TCPL), or to an Interconnecting Pipeline, or where otherwise specified in the Contract, the following will apply:

1. Construction and Maintenance: Union, at its own expense may construct, maintain and operate on Shipper's property at the delivery point a measuring station properly equipped with a meter or meters and any other necessary measuring equipment for properly measuring the gas redelivered under the Contract. Shipper will grant to Union a lease and/or rights-of-way over property of Shipper as required by Union to install such facilities and to connect same to Union's pipeline.
2. Entry: Union, its servants, agents and each of them may at any reasonable time on notice (except in cases of emergency) to Shipper or his duly authorized representative enter Shipper's property for the purpose of constructing, maintaining, removing, operating and/or repairing station equipment.
3. Property: The said station and equipment will be and remain the property of Union notwithstanding it is constructed on and attached to the realty of Shipper, and Union may at its own expense remove it upon termination of the Contract and will do so if so requested by Shipper.

### **VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.

## **SCHEDULE "A 2010"**

2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the redelivery point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the delivery point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

## **VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Transportation Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled in any of the Transportation Services to Shipper, the parties shall have the right to amend their statement for a period equal to

the time during which the Interconnecting Pipeline retains the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.
4. Taxes: In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.

Shipper shall make reasonable efforts to eliminate/minimize the withholding tax related to the fees/payments paid to Union, including but not limited to requesting from Union the relevant documentation necessary to determine the appropriate withholding, if any, for tax purposes. In the event taxes are withheld from the fees/payment paid by Shipper, Shipper shall remit such withheld taxes to the applicable taxing authority and Shipper will provide Union, after the calendar year end, Union's Federal Form 1042-S and a comparable state/international form, if applicable, within the applicable statutory time frame.

5. Set Off: If either party shall, at any time, be in arrears under any of its payment obligations to the other party under the Contract, then the party not in arrears shall be entitled to reduce the amount payable by it to the other party in arrears under the Contract, or any other contract, by an amount equal to the amount of such arrears or other indebtedness to the other party. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract or any enhancement to the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.

**X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**XI. FORCE MAJEURE**

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.

## **SCHEDULE "A 2010"**

6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm Contract Demand for that Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the C1 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
9. Proration of Firm Transportation Service: If, due to the occurrence of an event of force majeure as outlined above, the capacity for gas deliveries by Union is impaired, it will be necessary for Union to curtail Shipper's gas receipts to Union hereunder, via proration based on utilization of such facilities for the Day. This prorating shall be determined by multiplying the capability of such facilities as available downstream of the impairment on the Day, by a fraction where the numerator is Shipper's nominated firm quantity and the denominator is the total of all such nominated firm quantities for nominated services and planned consumption for in-franchise customers on the Day. For the purposes of this Article XI, firm services shall mean all firm services provided by Union to in-franchise customers and ex-franchise shippers.

## **XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

## **XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

## **XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. ALLOCATION OF CAPACITY**

1. Requests for Transportation Service: A potential shipper may request transportation service on Union's system at any time. Any request for C1 transportation service must include: potential shipper's legal name, Receipt Point(s), Delivery Point(s), Commencement Date, Initial Term, Contract Demand, proposed payment, and type of transportation service requested.
2. Expansion Facilities: If requests for firm transportation services cannot be met through existing capacity such that the only way to satisfy the requests for transportation service would require the construction of Expansion Facilities which create new capacity, Union shall allocate any such new capacity by open season, subject to the terms of the open season, and these General Terms and Conditions.
3. Open Seasons: If requests for long-term transportation service can be met through existing facilities upon which long-term capacity is becoming available, Union shall allocate such long-term capacity by open season, subject to the terms of the open season, and these General Terms and Conditions. "**Long-term**", for the purposes of this Article XVI, means, in the case of a transportation service, a service that has a term of one year or greater.
4. Awarding Open Season Capacity: Capacity requests received during an open season shall be awarded starting with those bids with the highest economic value. If the economic values of two or more independent bids are equal, then service shall be allocated on a pro-rata basis. The economic value shall be based on the net present value which shall be calculated based on the proposed per- unit rate and the proposed term of the contract and without regard to the proposed Contract Demand ("**NPV**").
5. Available Capacity Previously Offered in Open Season: Union may at any time allocate capacity to respond to any C1 transportation service request through an open season. If a potential shipper requests C1 transportation service that can be provided through Available Capacity that was previously offered by Union in an open season but was not awarded, then:
  - a. Any such request must conform to the requirements of Section 1 of this Article XVI;
  - b. Union shall allocate capacity to serve such request pursuant to this Section 5, and subject to these General Terms and Conditions and Union's standard form C1 transportation contract;
  - c. Union may reject a request for C1 transportation service for any of the following reasons:
    - i) if there is insufficient Available Capacity to fully meet the request, but if that is the only reason for rejecting the request for service, Union must offer to supply the Available Capacity to the potential shipper;
    - ii) if the proposed monthly payment is less than Union's Monthly demand charge plus fuel requirements for the applicable service;
    - iii) if prior to Union accepting the request for transportation service Union receives a request for transportation service from one or more other potential shippers and there is, as a result, insufficient Available Capacity to service all the requests for service, in which case Union shall follow the procedure in Section 5 d hereof;
    - iv) if Union does not provide the type of transportation service requested; or
    - v) if all of the conditions precedent specified in Article XXI Sections 1 and 2 herein have not been satisfied or waived.

## **SCHEDULE "A 2010"**

- d. Union will advise the potential shipper in writing whether Union accepts or rejects the request for service, subject to Article XVI 5(c) within 5 calendar days of receiving a request for C1 transportation service. If Union rejects a request for service, Union shall inform the potential shipper of the reasons why its request is being rejected; and
- e. If Union has insufficient Available Capacity to service all pending requests for transportation service Union may:
  - i) Reject all the pending requests for transportation service and conduct an open season; or
  - ii) Union shall inform all the potential shippers who have submitted a pending request for transportation service that it does not have sufficient capacity to service all pending requests for service, and Union shall provide all such potential shippers with an equal opportunity to submit a revised request for service. Union shall then allocate the Available Capacity to the request for transportation service with the highest economic value to Union. If the economic values of two or more requests are equal, then service shall be allocated on a pro-rata basis. The economic value of any request shall be based on the NPV.

## **XVII. RENEWALS**

- 1. Contracts with an Initial Term of five (5) years or greater, with Receipt Points and Delivery Points of Parkway or Kirkwall or Dawn (Facilities), will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter. Shipper may reduce the Contract Demand or terminate the Contract with notice in writing by Shipper at least two (2) years prior to the expiration thereof.

For all other contracts, the Contract will continue in full force and effect until the end of the Initial Term, but shall not renew.

## **XVIII. SERVICE CURTAILMENT**

- 1. Right to Curtail: Union shall have the right to curtail or not to schedule part or all of Transportation Services, in whole or in part, on all or a portion of its pipeline system at any time for reasons of Force Majeure or when, in Union sole discretion, acting reasonably, capacity or operating conditions so require or it is desirable or necessary to make modifications, repairs or operating changes to its pipeline system. Union shall provide Shipper such notice of such curtailment as is reasonable under the circumstances. If due to any cause whatsoever Union is unable to receive or deliver the quantities of Gas which Shipper has requested, then Union shall order curtailment by all Shippers affected and to the extent necessary to remove the effect of the disability. Union has a priority of service policy to determine the order of service curtailment. In order to place services on the priority of service list, Union considers the following business principles: appropriate level of access to core services, customer commitment, encouraging appropriate contracting, materiality, price and term, and promoting and enabling in-franchise consumption.

The Priority ranking for all services utilizing Union Gas' storage, transmission and distribution system as applied to both in-franchise and ex-franchise services are as follows; with number 1 having the highest priority and the last interrupted.

- 1. Firm In-franchise Transportation and Distribution services and firm Ex-franchise services (Note 1)
- 2. In-franchise Interruptible Distribution services
- 3. C1/M12 IT Transport and IT Exchanges with Take or Pay rates
- 4. Balancing (Hub Activity)  $\leq 100$  GJ/d; Balancing (Direct Purchase)  $\leq 500$  GJ/d; In-franchise distribution authorized overrun (Note 3)
- 5. C1/M12 IT Transport and IT Exchanges at premium rates
- 6. C1/M12 Overrun  $\leq 20\%$  of CD (Note 4)
- 7. Balancing (Direct Purchase)  $> 500$  GJ/d
- 8. Balancing (Hub Activity)  $> 100$  GJ/d; C1/M12 IT Transport and IT Exchanges
- 9. C1/M12 Overrun  $> 20\%$  of CD
- 10. C1/M12 IT Transport and IT Exchanges at a discount
- 11. Late Nominations

Notes:

## **SCHEDULE "A 2010"**

1. Nominated services must be nominated on the NAESB Timely Nomination Cycle otherwise they are considered to be late nomination and are therefore interruptible.
  2. Higher value or more reliable IT is contemplated in the service and contract, when purchase at market competitive prices.
  3. Captures the majority of customers that use Direct Purchase balancing transactions.
  4. Captures the majority of customers that use overrun.
2. Capacity Procedures: Union reserves the right to change its procedures for sharing interruptible capacity and will provide Shipper with two (2) months prior notice of any such change.
3. Maintenance: Union's facilities from time to time may require maintenance or construction. If such maintenance or construction is required, and in Union's sole opinion, acting reasonably, such maintenance or construction may impact Union's ability to meet Shipper's requirements, Union shall provide at least ten (10) days notice to Shipper, except in the case of an emergency. In the event the maintenance impacts Union's ability to meet Shipper's requirements, Union shall not be liable for any damages and shall not be deemed in breach of the Contract. To the extent that Union's ability to accept and/or deliver Shipper's gas is impaired, the Monthly demand charge shall be reduced in accordance with Article XI Section 8 and available capacity allocated in accordance with Article XI Section 9 herein.

Union shall use reasonable efforts to determine a mutually acceptable period during which such maintenance or construction will occur and also to limit the extent and duration of any impairments. Union will endeavour to schedule and complete the maintenance and construction, which would normally be expected to impact on Union's ability to meet Shipper's requirements, during the period from April 1 through to November 1.

## **XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security) (if any) shall remain in place throughout the term hereof, unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract as a result of one of the following events ("**Material Event**");
  - a. Shipper is in default, which default has not been remedied, of the Contract or is in default of any other material contract with Union or another party; or,
  - b. Shipper's corporate or debt rating falls below investment grade according to at least one nationally recognized rating agency; or,
  - c. Shipper ceases to be rated by a nationally recognized agency; or,
  - d. Shipper has exceeded credit available as determined by Union from time to time,

then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). The Security plus the Initial Financial Assurances shall not exceed twelve (12) months of Monthly demand charges (in accordance with Article IX herein) multiplied by Contract Demand. In the event that Shipper does not provide to Union such Security within such fourteen (14) day period, Union may deem a default under the Default and Termination provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after

receipt of the request.

**XX. MISCELLANEOUS PROVISIONS**

1. Permanent Assignment: Shipper may assign the Contract to a third party ("Assignee"), up to the Contract Demand, (the "Capacity Assigned"). Such assignment shall require the prior written consent of Union and release of obligations by Union for the Capacity Assigned from the date of assignment. Such consent and release shall not be unreasonably withheld and shall be conditional upon the Assignee providing, amongst other things, financial assurances as per Article XXI herein. Any such assignment will be for the full rights, obligations and remaining term of the Contract as relates to the Capacity Assigned.
2. Temporary Assignment: Shipper may, upon notice to Union, assign all or a part of its service entitlement under the Contract (the "Assigned Quantity") and the corresponding rights and obligations to an Assignee on a temporary basis for not less than one calendar month. Such assignment shall not be unreasonably withheld and shall be conditional upon the Assignee executing the Facilitating Agreement as per Article XXI herein. Notwithstanding such assignment, Shipper shall remain obligated to Union to perform and observe the covenants and obligations contained herein in regard to the Assigned Quantity to the extent that Assignee fails to do so.
3. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

**XXI. PRECONDITIONS TO TRANSPORTATION SERVICES**

1. Union Conditions: The obligations of Union to provide Transportation Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Transportation Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the Transportation Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union.
2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of Shipper and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Transportation Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and shall, as required, have entered into the necessary contracts to purchase the gas quantities handled under the Contract; and,

**SCHEDULE "A 2010"**

- b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,
  - c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract.
3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, and d and Section 2 a and b. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.
4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.

**RATE C1  
NOMINATIONS**

- a) For Services provided either under this rate schedule or referenced to this rate schedule:
- i) For Services required on any day Shipper shall provide Union with details regarding the quantity it desires to be handled at the applicable Receipt Point(s) and/or Delivery Point(s), and such additional information as Union determines to be necessary (a "**Nomination**").
  - ii) All Nominations shall be submitted by electronic means via *Unionline*. Union, in its sole discretion, may amend or modify the nominating procedures or *Unionline* at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all Nominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in *Unionline*.
  - iii) For customers electing firm all day transportation, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.
- b) Union shall determine whether or not all or any portion of the Nomination will be accepted. In the event Union determines that it will not accept such Nomination, Union shall advise Shipper of the reduced quantity (the "**Quantity Available**") for Services at the applicable points as outlined in each nomination cycle. After receiving such advice from Union but no later than one half hour after the Quantities Available deadline as outlined in each nomination cycle, Shipper shall provide a "**Revised Nomination**" to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantity Available, then the Revised Nomination shall be deemed to be the Quantity Available. If the Revised Nomination (delivered within the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
- c) That portion of a Shipper's Nomination or Revised Nomination, as set out in (a) and (b), above, which Union shall accept for Services hereunder, shall be known as Shipper's "**Authorized Quantity**".
- d) If on any day the actual quantities handled by Union, for each of the Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Services exceed Shipper's Authorized Quantity, such excess shall be deemed "**Unauthorized Overrun**".
- e) The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20) of the quantity received for that day. Union shall have the right to limit Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20) of the quantity handled for that day, for each applicable Service.
- f) A nomination for a daily quantity of gas on any day shall remain in effect and apply to subsequent days unless and until Union receives a new nomination from the Shipper or unless Union gives Shipper written notice that it is not acceptable in accordance with either (a) or (b) of this schedule.
- g) Except for periods of gas or quantity balancing as provided in the Contract, nominations by Shipper for deliveries to Union and redeliveries by Union shall be the same delivery of gas by Union either to Shipper or a Shipper's Account with Union.

**RATE C1  
NOMINATIONS**

1. For Transportation Services required on any Day under the Contract, Shipper shall provide Union with details regarding the quantity of Gas it desires to be handled at the applicable Receipt Point(s) and/or Delivery Point(s), and such additional information as Union determines to be necessary (a "**Nomination**").
2. All Nominations shall be submitted by electronic means via *Unionline*. Union, in its sole discretion, may amend or modify the nominating procedures or *Unionline* at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all Nominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in *Unionline*.
3. Union shall determine whether or not all or any portion of the Nomination will be scheduled at each nomination cycle. With respect to each nomination cycle, in the event Union determines that it will not schedule such Nomination, Union shall advise Shipper of the reduced quantity (the "**Quantities Available**") for Transportation Services at the applicable points as outlined in each nomination cycle. After receiving such advice from Union, but no later than one half hour after the Quantities Available deadline as outlined in each nomination cycle, Shipper shall provide a revised nomination ("**Revised Nomination**") to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantities Available, then the Revised Nomination shall be deemed to be the Quantities Available. If the Revised Nomination (delivered with the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
4. For Shippers electing firm all day transportation service, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.
5. For Transportation Services requiring Shipper to provide compressor fuel in kind, the nominated fuel requirements will be calculated by rounding to the nearest whole GJ.
6. All Timely Nominations shall have rollover options. Specifically, Shippers shall have the ability to nominate for several days, months or years, provided the Nomination start date and end date are both within the term of the Transportation Agreement.
7. Nominations received after the nomination deadline shall, if accepted by Union, be scheduled after Nominations received before the nomination deadline.
8. All Services are required to be nominated in whole Gigajoules (GJ).
9. To the extent Union is unable to complete a Nomination confirmation due to inaccurate, untimely or incomplete data involving an Interconnecting Pipeline entity, Union shall undertake reasonable efforts to confirm the transaction on a non-discriminatory basis until such time that the transaction is adequately verified by the parties, or until such time that Union determines that the Nomination is invalid at which time the Union shall reject the Nomination.
10. That portion of a Shipper's Nomination or Revised Nomination, as set out in paragraphs 1 and 3 above, which Union shall schedule for Transportation Services hereunder, shall be known as Shipper's "**Authorized Quantity**".
11. If on any day the actual quantities handled by Union, for each of the Transportation Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Transportation

## **SCHEDULE "B 2010"**

Services exceed Shipper's Authorized Quantity shall be deemed "**Unauthorized Overrun**".

12. The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20<sup>th</sup>) of the quantity received for that day. Union shall have the right to limit Transportation Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20<sup>th</sup>) of the quantity handled for that day, for each applicable Transportation Service.
13. The parties hereto recognize that with respect to Transportation Services, on any day, receipts of gas by Union and deliveries of gas by Union may not always be exactly equal, but each party shall cooperate with the other in order to balance as nearly as possible the quantities transacted on a daily basis, and any imbalances arising shall be allocated to the Facilitating Agreement and shall be subject to the respective terms and charges contained therein, and shall be resolved in a timely manner.
14. Shipper may designate via *Unionline* access request form, a third party as agent for purposes of providing a Nomination, and for giving and receiving notices related to Nominations, and Union shall only accept nominations from the agent. Any such designation, if acceptable to Union, shall be effective following the receipt and processing of the written notice and will remain in effect until revoked in writing by Shipper.

**RATE C1**  
**RECEIPT AND DELIVERY POINTS AND PRESSURES**

**1. Receipt and Delivery Points:**

The following defines each Receipt Point and/or Delivery Point, as indicated (R= Receipt Point; D= Delivery Point)

<b>R, D</b>	<b><u>DAWN (FACILITIES):</u></b>	Union's Compressor Station site situated in the northwest corner of Lot Twenty-Five (25), Concession II, in the Township of Dawn-Euphemia, in the County of Lambton. This point is applicable for quantities of gas that have been previously transported or stored under other contracts that Shipper may have in place with Union.
<b>R, D</b>	<b><u>DAWN (TCPL):</u></b>	At the junction of Union's and TCPL's facilities, at or adjacent to Dawn (Facilities).
<b>R, D</b>	<b><u>DAWN (TECUMSEH):</u></b>	At the junction of Union's and Enbridge Gas Distribution Inc.'s (Enbridge) Tecumseh Gas Storage's facilities, at or adjacent to Dawn (Facilities).
<b>R, D</b>	<b><u>DAWN (TSLE):</u></b>	At the junction of Union's and Enbridge Gas Distribution Inc.'s (" <b>Enbridge</b> ") NPS 16 Tecumseh Sombra Line Extension facilities; at or adjacent to Dawn (Facilities)
<b>R, D</b>	<b><u>DAWN (VECTOR):</u></b>	At the junction of Union's and Vector Pipeline Limited Partnership (" <b>Vector</b> ") facilities, at or adjacent to Dawn (Facilities).
<b>R, D</b>	<b><u>PARKWAY (TCPL):</u></b>	At the junction of Union's and TCPL's facilities, at or adjacent to Union's facilities situated in the Part Lot 9 and Part Lot 10, Concession IX, New Survey, Town of Milton, Regional Municipality of Halton (now part of City of Mississauga)
<b>R, D</b>	<b><u>KIRKWALL:</u></b>	At the junction of Union's and TCPL's facilities at or adjacent to Union's facilities situated in Part Lot Twenty-Five (25), Concession 7, Town of Flamborough.
<b>D</b>	<b><u>PARKWAY (CONSUMERS):</u></b>	At the junction of Union's and Enbridge's facilities, at or adjacent to Union's facilities situated in Part Lot 9 and Part Lot 10, Concession IX, New Survey, Town of Milton, Regional Municipality of Halton (now part of City of Mississauga)
<b>D</b>	<b><u>LISGAR:</u></b>	At the junction of the facilities of Union and Enbridge situated at 6620 Winston Churchill Boulevard, City of Mississauga.
<b>R, D</b>	<b><u>OJIBWAY:</u></b>	At the junction of Union's and Panhandle Eastern Pipe Line Company, LP's (" <b>Panhandle</b> ") facilities, located at the International Border between Canada and the United States in the St. Clair River.
<b>R, D</b>	<b><u>ST.CLAIR (MICHCON):</u></b>	At the junction of Michigan Consolidated Gas Company's (" <b>MichCon</b> ") and St. Clair Pipelines L.P.'s facilities, located at the International Border between Canada and the United States in the St. Clair River.

**R, D**      **BLUEWATER:**      At the junction of Bluewater Gas Storage, LLC ("**Bluewater**") and St. Clair Pipelines L.P.'s facilities, located at the International Border between Canada and the United States in the St. Clair River.

2. Receipt and Delivery Pressures:

(a) All Gas tendered by or on behalf of Shipper to Union shall be tendered at the Receipt Point(s) at Union's prevailing pressure at that Receipt Point, or at such pressure as per operating agreements between Union and the applicable Interconnecting Pipeline as amended or restated from time to time.

(b) All Gas tendered by or on behalf of Union to Shipper shall be tendered at the Delivery Point(s) at Union's prevailing pressure at that Delivery Point or at such pressure as per agreements between Union and the applicable Interconnecting Pipeline as amended or restated from time to time.

(c) Under no circumstances shall Union be obligated to receive or deliver gas hereunder at pressures exceeding the maximum allowable operating pressures prescribed under any applicable governmental regulations; nor shall Union be required to make any physical deliveries or to accept any physical receipts which its existing facilities cannot accommodate.

## APPENDIX C

UNION GAS LIMITED  
Infranchise Customers  
Summary of Average Interruptible Rate and Price Adjustment Changes for Rates 25, M4, M5A, M7, T1 and T2  
Effective January 1, 2016

Line No.	Particulars (cents / m <sup>3</sup> )	Monthly Charge Increase / (Decrease) (a)	Delivery Commodity Charge Increase / (Decrease) (b)	Delivery - Price Adjustment Increase / (Decrease) (c)	Gas Commodity Price Adjustment Rate (1) (d)
1	Rate 25 All Zones	(\$20.62)	(0.0210)		(0.2720)
2	Rate M4 Interruptible	(\$11.66)	0.4832		
3	Rate M5A Interruptible	(\$11.66)	0.4832		
4	Rate M7 Interruptible		0.3073		
5	Seasonal		0.3073		
6	Rate T1 - Interruptible Transportation - Union supplies fuel		0.0457		
7	Transportation - Customer supplies fuel		0.0452		
8	Rate T2 - Interruptible Transportation - Union supplies fuel		(0.0019)		
9	Transportation - Customer supplies fuel		(0.0024)		

Notes:

(1) Applies to sales service customers only.

## APPENDIX D

## APPENDIX E

UNION GAS LIMITED  
Miscellaneous Non-Energy Charges

Line No.	Service	Fee
	Residential Customer Class Service	
1	Connection Charge	\$35
2	Temporary Seal - Turn-off (Seasonal)	\$22
3	Temporary Seal - Turn-on (Seasonal)	\$35
4	Landlord Turn-on	\$35
5	Disconnect/Reconnect for Non-Payment	\$65
	Commercial/Industrial Customer Class Service	
6	Connection Charge	\$38
7	Temporary Seal - Turn-off (Seasonal)	\$22
8	Temporary Seal - Turn-on (Seasonal)	\$38
9	Landlord Turn-on	\$38
10	Disconnect/Reconnect for Non-Payment	\$65
	Statement of Account/History Statements	
11	History Statement (previous year)	\$15/statement
12	History Statement (beyond previous year)	\$40/hour
13	Duplicate Bills * (if processed by system)	No charge
14	Duplicate Bills * (if manually processed)	\$15/statement
	Dispute Meter Test Charges	
15	Meter Test - Residential Meter	\$50 flat fee for removal and test
16	Meter Test - Commercial/Industrial Meter	Hourly charge based on actual costs
	Direct Purchase Administration Charges	
17	Monthly fee per bundled t-service contract or unbundled U2 contract	\$75.00
18	Monthly per customer fee	\$0.19
19	Invoice Vendor Adjustment (IVA) fee (for each successfully submitted IVA transaction)	\$1.09

Notes:

- \* Duplicate bill charges only apply when customer wants two copies of a bill. Lost bills from the last billing period will be replaced free of charge.

## APPENDIX F

**UNION GAS LIMITED**

**Accounting Entries for  
Short-term Storage and Other Balancing Services  
Deferral Account No. 179-70**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 571 Storage Revenue
Credit	-	Account No. 179-70 Other Deferred Charges - Short-term Storage and Other Balancing Services

To record, as a debit (credit) in Deferral Account No. 179-70 the utility portion of actual net revenues for Short-term Storage and Other Balancing Services, less the 10% shareholder incentive to provide these services and less the net revenue forecast for these services as approved by the Board for ratemaking purposes. The utility portion of actual net revenues for Short-term Storage and Other Balancing Services is determined by allocating total margins received from the sale of these services based on the utility share of the total quantity of the services sold each calendar year. The utility share reflects the transactions supported by utility storage space (up to the 100 PJ cap – both planned and excess over planned).

Debit	-	Account No. 571 Storage Revenue
Credit	-	Account No. 179-70 Other Deferred Charges – Short-term Storage and Other Balancing Services

To record, as a credit in Deferral Account No. 179-70 payments by Union Gas Limited's non-utility business to its utility business for storage encroachment.

Debit	-	Account No. 179-70 Other Deferred Charges - Short-term Storage and Other Balancing Services
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-70, interest on the balance in Deferral Account No. 179-70. Simple interest will be computed monthly upon finalization of the year end balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Lost Revenue Adjustment Mechanism  
Deferral Account No. 179-75**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No.179-75 Other Deferred Charges - Lost Revenue Adjustment Mechanism
Credit	-	Account No. 529 Other Sales

To record, as a debit (credit) in Deferral Account No. 179-75, the difference between actual margin reductions related to Union's DSM plans and the margin reduction included in gas delivery rates as approved by the Board.

Debit	-	Income Account No. 179-75 Other Deferred Charges - Lost Revenue Adjustment Mechanism
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-75, interest expense on the balance in Deferral Account No. 179-75. Simple interest will be computed monthly upon finalization of the year end balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Transportation Tolls and Fuel – Northern and Eastern Operations Area  
Deferral Account No. 179-100**

This account is applicable to the Northern and Eastern Operations of Union Gas Limited. Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No.179-100 Other Deferred Charges - Transportation Tolls and Fuel – Northern and Eastern Operations Area
Credit	-	Account No. 663 Transportation of Gas by Others

To record, as a debit (credit) in Deferral Account No. 179-100, the difference in the costs between the actual per unit transportation and associated fuel costs and the forecast per unit transportation and associated fuel costs included in the rates as approved by the Board.

Debit	-	Account No. 179-100 Other Deferred Charges - Transportation Tolls and Fuel – Northern and Eastern Operations Area
Credit	-	Account No. 663 Transportation of Gas by Others

To record, as a debit (credit) in Deferral Account No. 179-100 charges that result from the Limited Balancing Agreement.

Debit	-	Account No. 500 Sales Revenue
Credit	-	Account No. 179-100 Other Deferred Charges - Transportation Tolls and Fuel – Northern and Eastern Operations Area

To record, as a credit (debit) in Deferral Account No. 179-100 revenue from T-Service customers for load balancing service resulting from the Limited Balancing Agreement.

Debit	-	Account No. 179-100 Other Deferred Charges - Transportation Tolls and Fuel – Northern and Eastern Operations Area
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-100 interest expense on the balance in Deferral Account No. 179-100. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Unbundled Services Unauthorized Storage Overrun  
Deferral Account No. 179-103**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A, prescribed under the Ontario Energy Board Act.

Debit	-	Account No.571 Storage Revenue
Credit	-	Account No. 179-103 Other Deferred Charges – Unbundled Services Unauthorized Storage Overrun

To record as a credit (debit) in Deferral Account No. 179-103 any unauthorized storage overrun charges incurred by customers electing unbundled service.

Debit	-	Account No. 179-103 Other Deferred Charges – Unbundled Services Unauthorized Storage Overrun
Credit	-	Account No. 323 Other Interest Expense

To record as a debit (credit) in Deferral Account No. 179-103, interest on the balance in Deferral Account No. 179-103. Simple interest will be computed on the monthly opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
North Purchase Gas Variance Account  
Deferral Account No. 179-105**

This account is applicable to the Northern and Eastern Operations area of Union Gas Limited. Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-105 Other Deferred Charges – North Purchase Gas Variance Account
Credit	-	Account No. 623 Cost of Gas

To record, as a debit (credit) in Deferral Account No. 179-105, the difference between the unit cost of gas purchased each month for the Northern and Eastern Operations area and the unit cost of gas included in the gas sales rates as approved by the Board, including the difference between the actual heat content of the gas purchased and the forecast heat content included in gas sales rates.

Debit	-	Account No. 179-105 Other Deferred Charges - North Purchase Gas Variance Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-105, interest expense on the balance in Deferral Account No. 179-105. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
South Purchase Gas Variance Account  
Deferral Account No. 179-106**

This account is applicable to the Southern Operations area of Union Gas Limited. Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -                Account No. 179-106  
   Other Deferred Charges – South Purchase Gas Variance Account

Credit              -                Account No. 623  
   Cost of Gas

To record, as a debit (credit) in Deferral Account No. 179-106, the difference between the unit cost of gas purchased each month for the Southern Operations and the unit cost of gas included in the gas sales rates as approved by the Board, including the difference between the actual heat content of the gas purchased and the forecast heat content included in gas sales rates.

Debit                -                Account No. 179-106  
   Other Deferred Charges - South Purchase Gas Variance Account

Credit              -                Account No. 323  
   Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-106, interest expense on the balance in Deferral Account No. 179-106. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Spot Gas Variance Account  
Deferral Account No. 179-107**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -            Account No. 179-107  
   Other Deferred Charges –Spot Gas Variance Account

Credit                -            Account No. 623  
   Cost of Gas

To record, as a debit (credit) in Deferral Account No. 179-107, the difference between the unit cost of spot gas purchased each month and the unit cost of gas included in the gas sales rates as approved by the Board on the spot volumes purchased in excess of planned purchases.

Debit                -            Account No. 623  
   Cost of Gas

Credit                -            Account No. 179-107  
   Other Deferred Charges –Spot Gas Variance Account

To record, as a credit (debit) in Deferral Account No. 179-107, the approved gas supply charges recovered through the delivery component of rates.

Debit                -            Account No. 179-107  
   Other Deferred Charges – Spot Gas Variance Account

Credit                -            Account No. 323  
   Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-107, interest expense on the balance in Deferral Account No. 179-107. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Unabsorbed Demand Cost (UDC) Variance Account  
Deferral Account No. 179-108**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-108 Other Deferred Charges – Unabsorbed Demand Cost Variance Account
Credit	-	Account No. 663 Transportation of Gas by Others

To record, as a debit (credit) in Deferral Account No. 179-108, the difference between the actual unabsorbed demand costs incurred by Union and the amount of unabsorbed demand charges included in rates as approved by the Board.

Debit	-	Account No. 663 Transportation of Gas by Others
Credit	-	Account No. 179-108 Other Deferred Charges – Unabsorbed Demand Cost Variance Account

To record, as a credit (debit) in Deferral Account No. 179-108, the benefit from the temporary assignment of unutilized capacity under Union's transportation contracts to the Northern and Eastern Operations Area. The benefit will be equal to the recovery of pipeline demand charges and other charges resulting from the temporary assignment of unutilized capacity that have been included in gas sales rates.

Debit	-	Account No. 179-108 Other Deferred Charges – Unabsorbed Demand Cost Variance Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-108, interest expense on the balance in Deferral Account No. 179-108. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Inventory Revaluation Account  
Deferral Account No. 179-109**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A, prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-109 Other Deferred Charges – Inventory Revaluation
Credit	-	Account No. 152 Gas in Storage - Available for Sale

To record, as a debit (credit) in Deferral Account No. 179-109, the decrease (increase) in the value of gas inventory available for sale to sales service customers due to changes in Union's weighted average cost of gas approved by the Board for rate making purposes.

Debit	-	Account No. 179-109 Other Deferred Charges – Inventory Revaluation Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-109, interest expense on the balance in Deferral Account No. 179-109. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Demand Side Management Variance Account  
Deferral Account No. 179-111**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -                Account No.179-111  
   Demand Side Management Variance Account

Credit              -                Account No. 728  
   General Expense

To record as a debit (credit) in Deferral Account No. 179-111, the difference between actual and the approved direct DSM expenditure budget currently approved for recovery in rates, provided that any excess over the approved direct DSM expenditure budget does not exceed 15% of the direct DSM expenditure budget. Any excess over the approved direct DSM expenditure budget for the year must be for incremental DSM volume savings that are cost effective as determined by the Total Resource Cost Test.

Debit                -                Account No.179-111  
   Other Deferred Charges – Demand Side Management Variance Account

Credit              -                Account No. 323  
   Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-111, interest expense on the balance in Deferral Account No. 179-111. Simple interest will be computed monthly upon finalization of the year end balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Gas Distribution Access Rule (GDAR) Costs  
Deferral Account No. 179-112**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-112 Other Deferred Charges - Deferred Gas Distribution Access Rule (GDAR) Costs
Credit	-	Account No. 728 General Expense

To record, as a debit (credit) in Deferral Account No. 179-112 the difference between the actual costs required to implement the appropriate process and system changes to achieve compliance with GDAR and the costs included in rates as approved by the Board.

Debit	-	Account No.179-112 Other Deferred Charges - Deferred Gas Distribution Access Rule (GDAR) Costs
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-112, interest on the balance in Deferral Account No. 179-112. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Carbon Dioxide Offset Credits  
Deferral Account No. 179-117**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -        Account No.179 -117  
Carbon Dioxide Offset Credits

Credit               -        Account No. 579  
Miscellaneous Operating Revenue

To record, as a debit in Deferral Account No. 179-117, the amounts representing proceeds from the sale of or other dealings in carbon dioxide offset credits earned as a result of Union's DSM activity.

Debit                -        Account No.179 -117  
Other Deferred Charges – Carbon Dioxide Offset Credits

Credit               -        Account No. 323  
Other Interest Expense

To record, as a debit in Deferral Account No. 179 -117, interest expense on the balance in Deferral Account No. 179-117. Simple interest will be computed monthly upon finalization of the year end balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
CGAAP to IFRS Conversion Costs  
Deferral Account No. 179-120**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-120 Other Deferred Charges - CGAAP to IFRS Conversion Costs
Credit	-	Account No. 728 General Expense

To record, as a debit (credit) in Deferral Account No. 179-120 the difference between the actual incremental one-time administrative costs incurred to convert accounting policies and processes from their current compliance with Canadian Generally Accepted Accounting Principles (CGAAP) to their future compliance with International Financial Reporting Standards (IFRS) and the costs included in rates as approved by the Board.

Debit	-	Account No. 179-120 Other Deferred Charges - CGAAP to IFRS Conversion Costs
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-120, interest on the balance in Deferral Account No. 179-120. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Conservation Demand Management  
Deferral Account No. 179-123**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -            Account No. 312  
                                        Non-Gas Operating Revenue

Credit               -            Account No.179-123  
                                        Other Deferred Charges – Conservation Demand Management

To record, as a credit in Deferral Account No. 179-123, 50% of the actual revenues generated from the Conservation Demand Management (CDM) program that will be paid to customers upon approval by the Board for rate making purposes.

Debit                -            Account No.179-123  
                                        Other Deferred Charges – Conservation Demand Management

Credit               -            Account No. 323  
                                        Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-123, interest expense on the balance in Deferral Account No. 179-123. Simple interest will be computed monthly on the opening balance in the said account at the short term debt rate as approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Demand Side Management Incentive  
Deferral Account No. 179-126**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-126 Other Deferred Charges – Demand Side Management Incentive
Credit	-	Account No. 319 Other Income

To record, as a debit in Deferral Account No. 179-126, the shareholder incentive earned by the Company in relation to its Demand Side Management (DSM) Programs.

Debit	-	Account No. 179-126 Other Deferred Charges – Demand Side Management Incentive
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-126, interest on the balance in Deferral Account No. 179-126. Simple interest will be computed monthly on the opening balance in the said account at the short term debt rate as approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Gas Supply Plan Review – Consultant Cost  
Deferral Account No. 179-128**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-128 Other Deferred Charges – Gas Supply Plan Review – Consultant Cost
Credit	-	Account No. 728 General Expense

To record as a debit in Deferral Account No. 179-128 the costs of hiring a consultant to undertake a review of the gas supply plan, gas supply planning process and gas supply planning methodology as directed by the Board in EB-2011-0210.

Debit	-	Account No. 179-128 Other Deferred Charges – Gas Supply Plan Review – Consultant Cost
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit in Deferral Account No. 179-128, interest on the balance in Deferral Account No. 179-128. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Upstream Transportation Optimization  
Deferral Account No. 179-131**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-131 Other Deferred Charges – Upstream Transportation Optimization
Credit	-	Account No. 626 Exchange Gas

To record as a debit in Deferral Account No. 179-131 a receivable from customers and a reduction in cost of gas for the unit rate of optimization revenues refunded to in-franchise customers multiplied by the actual distribution transportation volumes.

Debit	-	Account No. 579 Miscellaneous Operating Revenue
Credit	-	Account No. 179-131 Other Deferred Charges – Upstream Transportation Optimization

To record as a credit in Deferral Account No. 179-131 a payable to customers and a reduction in transportation revenue equal to the ratepayer portion (90%) of the actual net revenue from gas supply optimization activities.

Debit	-	Account No. 323 Other Interest Expense
Credit	-	Account No. 179-131 Other Deferred Charges – Upstream Transportation Optimization

To record, as a debit (credit) in Deferral Account No. 179-131, interest on the balance in Deferral Account No. 179-131. Simple interest will be computed monthly upon finalization of the year-end balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Deferral Clearing Variance Account  
Deferral Account No. 179-132**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-132 Other Deferred Charges – Deferral Clearing Variance Account
Credit	-	Account No. 179 Other Deferred Charges

To record as a debit (credit) in Deferral Account No. 179-132 a receivable from (payable to) ratepayers for the amount arising from differences between actual and forecast volumes used for the purposes of clearing non-gas commodity deferral account, earnings sharing and other balances.

Debit	-	Account No. 179-132 Other Deferred Charges – Deferral Clearing Variance Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-132, interest on the balance in Deferral Account No. 179-132. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Normalized Average Consumption (NAC) Account  
Deferral Account No. 179-133**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-133 Normalized Average Consumption Account
Credit	-	Account No. 500 Sales Revenue

To record as a debit (credit) in Deferral Account No. 179-133 the variance in revenue resulting from the difference between forecast normalized average consumption (NAC) included in rates as approved by the Board and actual NAC for general service rate classes Rate M1, Rate M2, Rate 01, and Rate 10.

Debit	-	Account No. 179-133 Normalized Average Consumption Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-133, interest on the balance in Deferral Account No. 179-133. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Tax Variance Deferral Account  
Deferral Account No. 179-134**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-134 Tax Variance Deferral Account
Credit	-	Account No. 300 Operating Revenues

To record as a debit (credit) in Deferral Account No. 179-134 50% of the variance in costs resulting from the difference between the actual tax rates and the approved tax rates included in rates as approved by the Board.

Debit	-	Account No. 179-134 Tax Variance Deferral Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-134, interest on the balance in Deferral Account No. 179-134. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Unaccounted for Gas (UFG) Volume Variance Account  
Deferral Account No. 179-135**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-135 UFG Volume Variance Account
Credit	-	Account No. 654 Gas Losses

To record as a debit (credit) in Deferral Account No. 179-135 the difference between the UFG recovered in revenue at rates approved by the Board and the actual cost of UFG expensed, in excess of \$5 million.

Debit	-	Account No. 179-135 UFG Volume Variance Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-135, interest on the balance in Deferral Account No. 179-135. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Parkway West Project Costs  
Deferral Account No. 179-136**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -        Account No.179-136  
                                 Other Deferred Charges – Parkway West Project Costs

Credit               -        Account No. 579  
                                 Miscellaneous Operating Revenue

To record, as a debit (credit) in Deferral Account No. 179-136, the difference between the actual revenue requirement related to the costs for the Parkway West Project and the revenue requirement included in rates as approved by the Board.

Debit                -        Account No.179-136  
                                 Other Deferred Charges – Parkway West Project Costs

Credit               -        Account No. 323  
                                 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-136, interest on the balance in Deferral Account No. 179-136. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Brantford-Kirkwall/Parkway D Project Costs  
Deferral Account No. 179-137**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -                Account No.179-137  
   Other Deferred Charges – Brantford-Kirkwall/Parkway D Project Costs

Credit               -                Account No. 579  
   Miscellaneous Operating Revenue

To record, as a debit (credit) in Deferral Account No. 179-137, the difference between the actual revenue requirement related to the costs for the Brantford-Kirkwall/Parkway D Project and the revenue requirement included in rates as approved by the Board.

Debit                -                Account No.179-137  
   Other Deferred Charges – Brantford-Kirkwall/Parkway D Project Costs

Credit               -                Account No. 323  
   Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-137, interest on the balance in Deferral Account No. 179-137. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Parkway Obligation Rate Variance  
Deferral Account No. 179-138**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -        Account No.179-138  
                                 Other Deferred Charges – Parkway Obligation Rate Variance

Credit              -        Account No. 300  
                                 Operating Revenue

To record, as a debit (credit) in Deferral Account No. 179-138, the rate variances associated with the timing differences between the effective date of the Parkway delivery obligation changes and the temporary capacity and the inclusion of the cost impacts in approved rates (January 1 of the following year).

Debit                -        Account No.179-138  
                                 Other Deferred Charges – Parkway Obligation Rate Variance

Credit              -        Account No. 323  
                                 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-138, interest on the balance in Deferral Account No. 179-138. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Energy East Pipeline Consultation Costs  
Deferral Account No. 179-139**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit                -        Account No.179-139  
                                 Other Deferred Charges – Energy East Pipeline Consultation Costs

Credit               -        Account No. 728  
                                 General Expense

To record, as a debit (credit) in Deferral Account No. 179-139, the consultation costs related to the Energy East Pipeline Project allocated by the Board.

Debit                -        Account No.179-139  
                                 Other Deferred Charges – Energy East Pipeline Consultation Costs

Credit               -        Account No. 323  
                                 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-139, interest on the balance in Deferral Account No. 179-139. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

**UNION GAS LIMITED**

**Accounting Entries for  
Unaccounted for Gas (UFG) Price Variance Account  
Deferral Account No. 179-141**

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the Ontario Energy Board Act.

Debit	-	Account No. 179-141 Other Deferred Charges - UFG Price Variance Account
Credit	-	Account No. 179-106/105 Other Deferred Charges – South/North Purchase Gas Variance Accounts

To record as a debit (credit) in Deferral Account No. 179-141, the variance between the actual price of Union's purchases and the applicable Board-approved reference price, applied to Union's actual experienced UFG volumes.

Debit	-	Account No. 179-141 Other Deferred Charges - UFG Price Variance Account
Credit	-	Account No. 323 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-141, interest on the balance in Deferral Account No. 179-141. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the Board in EB-2006-0117.

## APPENDIX G

Filed: 2014-12-12

EB-2014-0182

Exhibit A

Tab 9

Schedule 4

UNION GAS LIMITED  
Burlington to Oakville Project Revenue Requirement

Line No.	Particulars (\$000's)	2016 (a)	2017 (b)	2018 (c)
	<u>Rate Base Investment</u>			
1	Capital Expenditures	117,710	1,767	0
2	Average Investment	13,584	116,312	114,697
	<u>Revenue Requirement Calculation:</u>			
	<u>Operating Expenses:</u>			
3	Operating and Maintenance Expenses (1)	3	16	16
4	Depreciation Expense (2)	1,186	2,390	2,408
5	Property Taxes (3)	20	117	120
6	Total Operating Expenses	<u>1,208</u>	<u>2,523</u>	<u>2,544</u>
7	Required Return (6.031% x line 2) (4)	819	7,015	6,917
	<u>Income Taxes:</u>			
8	Income Taxes - Equity Return (5)	149	1,280	1,262
9	Income Taxes - Utility Timing Differences (6)	<u>(2,100)</u>	<u>(2,533)</u>	<u>(2,192)</u>
10	Total Income Taxes	<u>(1,951)</u>	<u>(1,254)</u>	<u>(930)</u>
11	Total Revenue Requirement (line 6 + line 7 + line 10)	<u>77</u>	<u>8,284</u>	<u>8,531</u>
12	Incremental Project Revenue	<u>-</u>	<u>-</u>	<u>-</u>
13	Net Revenue Requirement (line 11 - line 12)	<u>77</u>	<u>8,284</u>	<u>8,531</u>

Notes:

- (1) Expenses include labour, contractor services, materials and other operating expenses for the transmission lines of \$0.005 million and stations of \$0.011 million.
- (2) Depreciation expense at 2013 Board-approved depreciation rates.
- (3) Includes pipeline and station property taxes.
- (4) The required return of 6.031% assumes a capital structure of 64% long-term debt at 4.4% and 36% common equity at the 2013 Board-approved return of 8.93% ( $0.64 * 0.044 + 0.36 * 0.0893$ )  
 The 2018 required return calculation is as follows:  
 $\$114.697 \text{ million} * 64\% * 4.4\% = \$3.230 \text{ million plus}$   
 $\$114.697 \text{ million} * 36\% * 8.93\% = \$3.687 \text{ million for a total of } \$6.917 \text{ million.}$
- (5) Taxes related to the equity component of the return at a tax rate of 25.5%.
- (6) Taxes related to utility timing differences are negative as the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.

2017 Dawn Parkway Project - Revenue Requirement

UPDATED  
Filed: 2015-06-22  
EB-2015-0200  
Exhibit A  
Tab 10  
Schedule 1

UNION GAS LIMITED  
Lobo D, Bright C and Dawn H Compressor Project Revenue Requirement

Line No.	Particulars (\$000's)	2016 (a)	2017 (b)	2018 (c)
	<u>Rate Base Investment</u>			
1	Capital Expenditures	107,400	500,838	14,267
2	Average Investment	11,432	171,034	592,525
	<u>Revenue Requirement Calculation:</u>			
	<u>Operating Expenses:</u>			
3	Operating and Maintenance Expenses (1)	0	602	3,623
4	Depreciation Expense (2)	1,677	11,310	19,416
5	Property Taxes (3)	0	175	1,051
6	Total Operating Expenses	<u>1,677</u>	<u>12,086</u>	<u>24,091</u>
7	Required Return (5.77% x line 2) (4)	660	9,877	34,217
	<u>Income Taxes:</u>			
8	Income Taxes - Equity Return (5)	126	1,879	6,510
9	Income Taxes - Utility Timing Differences (6)	<u>(4,178)</u>	<u>(17,084)</u>	<u>(22,179)</u>
10	Total Income Taxes	<u>(4,053)</u>	<u>(15,205)</u>	<u>(15,669)</u>
11	Total Revenue Requirement (line 6 + line 7 + line 10)	<u>(1,716)</u>	<u>6,758</u>	<u>42,639</u>
12	Incremental Project Revenue (7)	-	2,925	17,551
13	Net Revenue Requirement (line 11 - line 12)	<u>(1,716)</u>	<u>3,833</u>	<u>25,088</u>

Notes:

- (1) Expenses include salaries and wages, employee-related expenses, fleet costs, materials and operating expenses.
- (2) Depreciation expense at 2013 Board-approved depreciation rates.
- (3) Property taxes in 2018 include \$0.366 million for the Dawn H compressor and facilities and \$0.685 million for Lobo D and Bright C compressors and facilities.
- (4) The required return of 5.77% assumes a capital structure of 64% long-term debt at 4.0% and 36% common equity at the 2013 Board-approved return of 8.93% ( $0.64 * 0.04 + 0.36 * 0.0893$ )  
The 2018 required return calculation is as follows:  
\$592.525 million \* 64% \* 4.0% = \$15.169 million plus  
\$592.525 million \* 36% \* 8.93% = \$19.048 million for a total of \$34.217 million.
- (5) Taxes related to the equity component of the return at a tax rate of 25.5%.
- (6) Taxes related to utility timing differences are negative as the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.
- (7) Project revenue assumes an estimated M12 Dawn-Parkway rate of \$2.937 GJ/mth, an M12 Kirkwall-Parkway rate of \$0.517 GJ/mth and a Dawn Compression rate of \$0.232 GJ/mth.  
The 2018 revenue is calculated as follows:  
M12 Dawn-Parkway demands of 441,778 GJ x \$2.937 x 12 / 1000 = \$15.570 million plus  
C1 Dawn-Parkway demands (North T-Service) of 5,975 GJ x \$2.937 x 12 / 1000 = \$0.211 million plus  
M12 Kirkwall-Parkway demands of 84,854 GJ x \$0.517 x 12 / 1000 = \$0.526 million plus  
M12/C1 Dawn Compression demands of 447,753 GJ x \$0.232 x 12 / 1000 = \$1.247 million

## APPENDIX H

RATE 25 - LARGE VOLUME INTERRUPTIBLE SERVICE**ELIGIBILITY**

Any customer in Union's Fort Frances, Western, Northern or Eastern Zones who is an end-user or who is authorized to serve an end-user of gas through one or more Company-owned meters at one location, and whose total maximum daily interruptible requirement is 3,000 m<sup>3</sup> or more or the interruptible portion of a maximum daily requirement for combined firm and interruptible service is 14,000 m<sup>3</sup> or more and whose operations, in the judgement of Union, can readily accept interruption and restoration of gas service.

**SERVICES AVAILABLE**

The following services are available under this rate schedule:

**(a) Sales Service**

For interruptible supply of natural gas by Union and associated transportation services necessary to ensure its delivery in accordance with customer's needs. For this service, the Monthly, Delivery and Gas Supply Charges shall apply.

**(b) Transportation Service**

For delivery of natural gas owned by the customer on Union's distribution system from the Point of Receipt from TCPL's system to the Point of Consumption on the customer's or end-user's premises, providing that, in the judgement of Union, acting reasonably, the customer-owned gas does not displace service from Union under a Rate 20 or Rate 100 contract specific to that location. The customer is responsible for obtaining the requisite regulatory approvals for the supply and transmission of such gas to Union's distribution system. For this service, the Monthly, Delivery, Transportation Account and Diversion Transaction Charges shall apply.

NOTE: Union has a short-term intermittent gas supply service under Rate 30 which customers may avail themselves of, if they qualify for use of the service.

**MONTHLY RATES AND CHARGES**APPLICABLE TO ALL SERVICES – ALL ZONES (1)

<u>MONTHLY CHARGE</u>	\$331.70
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<u>DELIVERY CHARGES</u>	<u>cents per m<sup>3</sup></u>
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A Delivery Price for all volumes delivered to the customer to be negotiated between Union and the customer and the average price during the period in which these rates remain in effect shall not exceed:	4.7871
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<u>UNAUTHORIZED OVERRUN NON - COMPLIANCE RATE</u>	<u>cents per m<sup>3</sup></u>
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Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect.	385.5000
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**Notes:**

(1) Either the utility or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates, charges and terms and conditions applicable thereto, different from the rates, charges and terms and conditions specified herein if changed rates, charges and terms and conditions are considered by either party to be necessary, desirable and in the public interest.



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Effective  
2016-01-01  
**Rate 25**  
Page 2 of 3

#### ADDITIONAL CHARGES FOR SALES SERVICE

##### Gas Supply Charge

As per applicable rate provided in Schedule "A".

##### Interruptible Service

Applicable all year at a price agreed upon between Union and the customer and the average price during the period in which these rates remain in effect.

#### **HEAT CONTENT ADJUSTMENT**

The gas supply commodity charges hereunder will be adjusted upwards or downwards as described below if the average total heating value of the gas per cubic metre ( $\text{m}^3$ ) determined in accordance with Union's Terms and Conditions in any month falls above or below 37.89 MJ per  $\text{m}^3$ , respectively.

The adjustment shall be determined by multiplying the amount otherwise payable by a fraction, where the numerator is the monthly weighted average total heating value per cubic meter and the denominator 37.89.

#### ADDITIONAL CHARGES FOR TRANSPORTATION – ALL ZONES

##### MONTHLY TRANSPORTATION ACCOUNT CHARGE:

For customers that currently have installed or will require installing telemetering equipment.

\$220.55

#### **THE BILL**

The bill will equal the sum of the monthly charges for all services selected plus the rates multiplied by the applicable gas volumes delivered or withdrawn for each service chosen plus all applicable taxes. If the customer transports its own gas, the Gas Supply Charge under Sales Service will not apply. If the customer selects Union's Sales Service which includes the Gas Supply Charge, no additional charges for Transportation will apply.

#### **MINIMUM BILL**

The minimum bill shall be the Monthly Charge and the Transportation Account Charge, if applicable.

#### **DELAYED PAYMENT**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

#### **SERVICE AGREEMENT**

All customers must enter into a Service Agreement with Union before receiving service under this rate schedule.



**uniongas**

Effective  
2016-01-01  
**Rate 25**  
Page 3 of 3

#### **TERMS AND CONDITIONS OF SERVICE**

1. Service shall be for a minimum term of one year.
2. If multiple end-users are receiving service from a customer under this rate, for billing purposes, the Monthly Charge, the Delivery Charge, the Transportation Account Charge and any other charge that is specific to the location of each end-user shall be used to develop a monthly bill for each end-user at each location. Upon request, Union will combine the individual bills on a single invoice or statement for administrative convenience. However, Union will not combine the volumes or demands of several end-use locations so that eligibility to a different rate class will result. Further, Union will not combine the monthly billing data of individual end-users to generate a single bill which is less than the sum of the monthly bills of the individual end-users involved at each location.
3. Customers must enter into a Service Agreement with Union prior to the commencement of service.
4. For the purposes of qualifying for a rate class, the total volumes of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.
5. The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



# uniongas

Effective  
2016-01-01  
Schedule "A"  
Page 1 of 2

Union Gas Limited  
Union North  
Gas Supply Charges

(A) Availability

Available to customers in Union's Fort Frances, Western, Northern and Eastern Delivery Zones.

(B) Applicability:

To all sales customers served under Rate 01A, Rate 10, Rate 20, Rate 100, Rate 25, and Natural Gas Liquefaction Service.

(C) Rates

Utility Sales

Rate 01A (cents / m<sup>3</sup>)

	<u>Fort Frances</u>	<u>Western</u>	<u>Northern</u>	<u>Eastern</u>
Storage	3.6643	3.3346	3.9402	4.4521
Storage - Price Adjustment	-	-	-	-
Commodity and Fuel (1)	12.2082	12.2968	12.4339	12.5430
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Transportation	5.7722	4.9572	6.4543	7.7197
Transportation - Price Adjustment	0.7006	0.7006	0.7006	0.7006
Total Gas Supply Charge	<u>20.2464</u>	<u>19.1903</u>	<u>21.4301</u>	<u>23.3165</u>

Rate 10 (cents / m<sup>3</sup>)

Storage	2.3917	2.0650	2.6651	3.1722
Storage - Price Adjustment	-	-	-	-
Commodity and Fuel (1)	12.2082	12.2968	12.4339	12.5430
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Transportation	5.0912	4.2767	5.7728	7.0374
Transportation - Price Adjustment	0.6688	0.6688	0.6688	0.6688
Total Gas Supply Charge	<u>18.2610</u>	<u>17.2084</u>	<u>19.4417</u>	<u>21.3225</u>

Notes:

(1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/m<sup>3</sup>.



# uniongas

Effective  
2016-01-01  
Schedule "A"  
Page 2 of 2

Union Gas Limited  
Union North  
Gas Supply Charges

Utility Sales

	<u>Fort Frances</u>	<u>Western</u>	<u>Northern</u>	<u>Eastern</u>
<u>Rate 20 (cents / m<sup>3</sup>)</u>				
Commodity and Fuel (1)	12.0025	12.0896	12.2244	12.3315
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Commodity Transportation - Charge 1	4.3859	3.9293	4.7668	5.4747
Transportation 1 - Price Adjustment	0.9480	0.9480	0.9480	0.9480
Commodity Transportation - Charge 2	-	-	-	-
Monthly Gas Supply Demand	54.0801	34.0754	73.2293	106.3242
Gas Supply Demand - Price Adjustment	-	-	-	-
Commissioning and Decommissioning Rate	7.0646	5.3840	8.6285	11.3709

Rate 100 (cents / m<sup>3</sup>)

Commodity and Fuel (1)	12.0025	12.0896	12.2244	12.3315
Commodity and Fuel - Price Adjustment	(2.0989)	(2.0989)	(2.0989)	(2.0989)
Commodity Transportation - Charge 1	7.0810	6.7390	7.3672	7.8982
Commodity Transportation - Charge 2	-	-	-	-
Monthly Gas Supply Demand	102.9596	78.6756	123.2688	160.9615
Commissioning and Decommissioning Rate	7.8704	6.5833	8.9469	10.9448

Rate 25 (cents / m<sup>3</sup>)

Gas Supply Charge:	Interruptible Service			
	Minimum	1.4848	1.4848	1.4848
	Maximum	675.9484	675.9484	675.9484

Natural Gas Liquefaction Service (\$ / GJ) (2)

Gas Supply Charge:	Interruptible Service	
	Minimum	0.3919
	Maximum	178.3976

Notes:

- (1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/m<sup>3</sup>.  
(2) Billing in energy (\$/GJ) will only apply to the Natural Gas Liquefaction Service.

Effective: January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

FIRM INDUSTRIAL AND COMMERCIAL CONTRACT RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer who enters into a contract for the purchase or transportation of gas for a minimum term of one year that specifies a daily contracted demand between 2 400 m<sup>3</sup> and 60 000 m<sup>3</sup>.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

1. Bills will be rendered monthly and shall be the total of:

(i) A Monthly Demand Charge			
First	8 450 m <sup>3</sup> of daily contracted demand		54.1798 ¢ per m <sup>3</sup>
Next	19 700 m <sup>3</sup> of daily contracted demand		24.2928 ¢ per m <sup>3</sup>
All Over	28 150 m <sup>3</sup> of daily contracted demand		20.4094 ¢ per m <sup>3</sup>
(ii) A Monthly Delivery Commodity Charge			
First 422 250 m <sup>3</sup> delivered per month			1.3040 ¢ per m <sup>3</sup>
Next volume equal to 15 days use of daily contracted demand			1.3040 ¢ per m <sup>3</sup>
For remainder of volumes delivered in the month			0.5625 ¢ per m <sup>3</sup>
Delivery- Price Adjustment (All Volumes)			0.0000 ¢ per m <sup>3</sup>

(iii) Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A"

2. Overrun Charge

Authorized overrun gas is available provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization. Overrun means gas taken on any day in excess of 103% of contracted daily demand. Authorized overrun will be available April 1 through October 31 and will be paid for at a Delivery Rate of 3.0853 ¢ per m<sup>3</sup> and, if applicable, the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all volumes purchased.

Unauthorized overrun gas taken in any month shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all gas supply volumes purchased.

3. Firm Minimum Annual Charge

In each contract year, the customer shall purchase from Union or pay for a minimum volume of gas or transportation services equivalent to 146 days use of firm contracted demand. Overrun gas volumes will not contribute to the minimum volume. In the event that the customer shall not take such minimum volume the customer shall pay an amount equal to the deficiency from the minimum volume times a Delivery Charge of 1.4950 ¢ per m<sup>3</sup> and, if applicable a gas supply commodity charge provided in Schedule "A".

In the event that the contract period exceeds one year the annual minimum volume will be prorated for any part year.



4. Interruptible Service

Union may agree, in its sole discretion, to combine a firm service with an interruptible service provided that the amount of interruptible volume to be delivered and agreed upon by Union and the customer shall be no less than 350,000 m<sup>3</sup> per year.

The price of all gas delivered by Union pursuant to any contract, contract amendment, or contract renewal shall be determined on the basis of the following schedules:

a) (i) Monthly Delivery Commodity Charge

<u>Daily Contracted Demand Level (CD)</u>	<u>Price per m<sup>3</sup></u>
2 400 m <sup>3</sup> ≤ CD < 17 000 m <sup>3</sup>	3.1371 ¢ per m <sup>3</sup>
17 000 m <sup>3</sup> ≤ CD < 30 000 m <sup>3</sup>	3.0072 ¢ per m <sup>3</sup>
30 000 m <sup>3</sup> ≤ CD < 50 000 m <sup>3</sup>	2.9389 ¢ per m <sup>3</sup>
50 000 m <sup>3</sup> ≤ CD ≤ 60 000 m <sup>3</sup>	2.8910 ¢ per m <sup>3</sup>

Delivery- Price Adjustment (All Volumes) - ¢ per m<sup>3</sup>

(ii) Days Use of Interruptible Contract Demand

The price determined under Paragraph 4(a) of "Rates" will be reduced by the amount based on the number of Days Use of Contracted Demand as scheduled below:

For 75 days use of contracted demand	0.0530 ¢ per m <sup>3</sup>
For each additional days use of contracted demand up to a maximum of 275 days, an additional discount of	0.00212 ¢ per m <sup>3</sup>

(iii) Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A"

(iv) Monthly Charge \$669.55 per month

- b) In each contract year, the customer shall take delivery from Union, or in any event pay for, if available and not accepted by the customer, a minimum volume of gas or transportation services as specified in the contract between the parties and which will not be less than 350 000 m<sup>3</sup> per annum. Overrun volumes will not contribute to the minimum volume. In the event that the customer shall not take such minimum volume, the customer shall pay an amount equal to the deficiency from the minimum volume times a Delivery Charge of 3.3281 ¢ per m<sup>3</sup>, and if applicable, a gas supply charge provided in Schedule "A".

In the event that the contract period exceeds one year, the annual minimum volume will be prorated for any part year.

- c) Overrun gas is available without penalty provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization. Overrun means gas taken on any day in excess of 105% of contracted daily demand.

Unauthorized overrun gas taken in any month shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all gas supply volumes purchased.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the delivery.



**uniongas**

Effective  
2016-01-01  
**Rate M4**  
Page 3 of 3

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems for all volumes. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union.

Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

INTERRUPTIBLE INDUSTRIAL AND COMMERCIAL CONTRACT RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer who enters into a contract for the purchase or transportation of gas for a minimum term of one year that specifies a daily contracted demand between 2 400 m<sup>3</sup> and 60 000 m<sup>3</sup> inclusive.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

**1. Interruptible Service**

The price of all gas delivered by Union pursuant to any contract, contract amendment, or contract renewal shall be determined on the basis of the following schedules:

**a) (i) Monthly Delivery Commodity Charge**

<u>Daily Contracted Demand Level (CD)</u>	<u>Price per m<sup>3</sup></u>
2 400 m <sup>3</sup> ≤ CD < 17 000 m <sup>3</sup>	3.1371 ¢ per m <sup>3</sup>
17 000 m <sup>3</sup> ≤ CD < 30 000 m <sup>3</sup>	3.0072 ¢ per m <sup>3</sup>
30 000 m <sup>3</sup> ≤ CD < 50 000 m <sup>3</sup>	2.9389 ¢ per m <sup>3</sup>
50 000 m <sup>3</sup> ≤ CD ≤ 60 000 m <sup>3</sup>	2.8910 ¢ per m <sup>3</sup>

Delivery- Price Adjustment (All Volumes)	0.0000 ¢ per m <sup>3</sup>
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**(ii) Days Use of Interruptible Contract Demand**

The price determined under Paragraph 1(a) of "Rates" will be reduced by the amount based on the number of Days

For 75 days use of contracted demand	0.0530 ¢ per m <sup>3</sup>
For each additional days use of contracted demand up to a maximum of 275 days, an additional discount of	0.00212 ¢ per m <sup>3</sup>

**(iii) Gas Supply Charge (if applicable)**

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A"

(iv) Monthly Charge	\$669.55 per month
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2. In each contract year, the customer shall take delivery from Union, or in any event pay for, if available and not accepted by the customer, a minimum volume of gas or transportation services as specified in the contract between the parties and which will not be less than 350 000 m<sup>3</sup> per annum. Overrun volumes will not contribute to the minimum volume. In the event that the customer shall not take such minimum volume, the customer shall pay an amount equal to the deficiency from the minimum volume times a Delivery Charge of 3.3281 ¢ per m<sup>3</sup>, and if applicable, a gas supply charge provided in Schedule "A".

In the event that the contract period exceeds one year, the annual minimum volume will be prorated for any part year.

3. Overrun gas is available without penalty provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization. Overrun means gas taken on any day in excess of 105% of contracted daily demand.

Unauthorized overrun gas taken in any month shall be paid for at the rate of 5.0184 ¢ per m<sup>3</sup> for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all gas supply volumes purchased.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the delivery.

4. Non-Interruptible Service

Union may agree, in its sole discretion, to combine an interruptible service with a firm service in which case the amount of firm daily demand to be delivered shall be agreed upon by Union and the customer.

- a) The monthly demand charge for firm daily deliveries will be 31.6776 ¢ per m<sup>3</sup>.
- b) The commodity charge for firm service shall be the rate for firm service at Union's firm rates net of a monthly demand charge of 31.6776 ¢ per m<sup>3</sup> of daily contracted demand and a delivery commodity price adjustment of 0.0000 ¢ per m<sup>3</sup>.
- c) The interruptible commodity charge will be established under Clause 1 of this schedule.

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Bundled Direct Purchase Delivery**

Where a customer elects transportation service under this rate schedule the customer must enter into a Bundled T Gas Contract with Union for delivery of gas to Union.

Bundled T Gas Contract Rates and Gas Purchase Contract Rates are described in rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



SPECIAL LARGE VOLUME  
INDUSTRIAL AND COMMERCIAL CONTRACT RATE

**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a Customer

- a) who enters into a contract for the purchase or transportation of gas for a minimum term of one year that specifies a combined maximum daily requirement for firm, interruptible and seasonal service of at least 60 000 m<sup>3</sup>; and
- b) who has site specific energy measuring equipment that will be used in determining energy balances.

**(C) Rates**

The identified rates (excluding gas supply charges, if applicable) represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated which may be higher than the identified rates.

**1. Bills will be rendered monthly and shall be the total of:**

(i) A Monthly Demand Charge

A negotiated Monthly Demand Charge of up to 28.8306 ¢ per m<sup>3</sup> for each m<sup>3</sup> of daily contracted firm demand.

(ii) A Monthly Delivery Commodity Charge

(1) A Monthly Firm Delivery Commodity Charge for all firm volumes of 0.4033 ¢ per m<sup>3</sup> for each m<sup>3</sup>, and a Delivery - Price Adjustment of 0.0000 ¢ per m<sup>3</sup>.

(2) A Monthly Interruptible Delivery Commodity Charge for all interruptible volumes to be negotiated between Union and the customer not to exceed an annual average of 5.1917 ¢ per m<sup>3</sup>, and a Delivery - Price Adjustment of 0.0000 ¢ per m<sup>3</sup>.

(3) A Monthly Seasonal Delivery Commodity Charge for all seasonal volumes to be negotiated between Union and the customer not to exceed an annual average of 4.9476 ¢ per m<sup>3</sup>, and a Delivery - Price Adjustment of 0.0000 ¢ per m<sup>3</sup>.

(iii) Gas Supply Charge (if applicable)

The gas supply charge is comprised of charges for transportation and for commodity and fuel. The applicable rates are provided in Schedule "A".

(iv) Overrun Gas

Overrun gas is available without penalty provided that it is authorized by Union in advance. Union will not unreasonably withhold authorization.



Unauthorized overrun gas taken in any month shall be paid for at the M1 rate in effect at the time the overrun occurs, plus, if applicable, the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup> for all the gas supply volumes purchased.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the delivery.

2. In negotiating the Monthly Interruptible and Seasonal Commodity Charges, the matters to be considered include:
  - (a) The volume of gas for which the customer is willing to contract,
  - (b) The load factor of the customer's anticipated gas consumption, the pattern of annual use, and the minimum annual quantity of gas which the customer is willing to contract to take or in any event pay for,
  - (c) Interruptible or curtailment provisions, and
  - (d) Competition.
3. In each contract year, the customer shall take delivery from Union, or in any event, pay for if available and not accepted by the customer, a minimum volume of gas as specified in the contract between the parties. Overrun gas volumes will not contribute to the minimum volume.
4. The contract may provide that the Monthly Demand Charge specified in Rate Section 1 above shall not apply on all or part of the daily contracted firm demand used by the customer during the testing, commissioning, phasing in, decommissioning and phasing out of gas-using equipment for a period not to exceed one year (the "transition period"). In such event, the contract will provide for a Monthly Delivery Commodity Charge to be applied on such volume during the transition of 3.7552 ¢ per m<sup>3</sup> and the total gas supply charge for utility sales provided in Schedule "A" per m<sup>3</sup>, if applicable.
5. Either the utility or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates and other charges different from the rates and other charges specified herein if the changed rates and other charges are considered by either party to be necessary, desirable and in the public interest.

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

**(E) Direct Purchase**

Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union, and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**(F) Bundled Direct Purchase Delivery and Short Term Supplemental Services**

Where a customer elects transportation service and/or a short term supplemental service under this rate schedule, the customer must enter into a Contract under rate schedule R1.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

BUNDLED DIRECT PURCHASE CONTRACT RATE**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer who enters into a Receipt Contract or Gas Purchase Contract for delivery and/or sale of gas to Union.

**(C) Rates**

	<u>Demand Charge Rate/GJ/month</u>	<u>Commodity Charges/Credits Rate/GJ</u>
a) Transportation by Union For gas delivered to Union at any point other than the Ontario Point(s) of Receipt, Union will charge a customer all approved tolls and charges, incurred by Union to transport the gas to the Ontario Point(s) of Receipt		
b) Firm Backstop Gas Applied to the contracted Firm Backstop Gas Supply Service	\$1.722	
Backstop Gas Commodity Charge On all quantities supplied by Union to the Ontario Point(s) of Receipt		\$4.597
c) Reasonable Efforts Backstop Gas Paid on all quantities of gas supplied by Union to the customer's Point(s) of Consumption		\$5.465
d) Banked Gas Purchase  T-service		Note (1)
e) Failure to Deliver Applied to all quantities not delivered to Union in the event the customer's supply fails		\$2.643
f) Short Term Storage / Balancing Service (2)  Maximum		\$6.000
g) Discretionary Gas Supply Service ("DGSS")		Note (3)
h) Parkway Delivery Commitment Incentive ("PDCI") (4)		\$(0.134)



**uniongas**

Effective  
2016-01-01  
**Rate R1**  
Page 2 of 2

**Notes:**

- (1) The charge for banked gas purchases shall be the higher of the daily spot cost at Dawn in the month of or the month following the month in which gas is sold under this rate and shall not be less than Union's approved weighted average cost of gas.
- (2) Short Term Storage / Balancing Service is:
  - i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
  - ii) short-term firm deliverability, OR
  - iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for short term storage services, the matters that are to be considered include:

  - i) The minimum amount of storage service to which a customer is willing to commit,
  - ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
  - iii) Utilization of facilities, and
  - iv) Competition
- (3) Discretionary Gas Supply Service price reflects the "back-to-back" price plus gas supply administration charge.
- (4) Parkway Delivery Commitment Incentive ("PDCI") effective November 1, 2016. |

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

STORAGE AND TRANSPORTATION RATES  
FOR CONTRACT CARRIAGE CUSTOMERS**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer:

- a) whose qualifying annual transportation volume for combined firm and interruptible service is at least 2 500 000 m<sup>3</sup> or greater and has a daily firm contracted demand up to 140,870 m<sup>3</sup>; and
- b) who enters into a Carriage Service Contract with Union for the transportation or the storage and transportation of Gas for use at facilities located within Union's gas franchise area; and
- c) who has meters with electronic recording at each Point of Consumption; and
- d) who has site specific energy measuring equipment that will be used in determining energy balances; and
- e) for whom Union has determined transportation and/or storage capacity is available.

For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.

**(C) Rates**

The following rates shall be charged for all quantities contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

**STORAGE SERVICE:**

	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
a) Annual Firm Storage Space				
Applied to contracted Maximum				
Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right:				
Applied to the contracted Maximum				
Annual Firm Injection/Withdrawal Right				
Union provides deliverability Inventory	\$1.586			
Customer provides deliverability Inventory (4)	\$1.195			
c) Incremental Firm Injection Right:				
Applied to the contracted Maximum				
Incremental Firm Injection Right	\$1.195			
d) Annual Interruptible Withdrawal Right:				
Applied to the contracted Maximum				
Annual Interruptible Withdrawal Right	\$1.195			



	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio	Commodity Charge <u>Rate/GJ</u>
e) Withdrawal Commodity Paid on all quantities withdrawn from storage up to the Maximum Daily Storage Withdrawal Quantity		\$0.029	0.403%	\$0.008
f) Injection Commodity Paid on all quantities injected into storage up to the Maximum Daily Storage Injection Quantity		\$0.029	0.403%	\$0.008
g) Short Term Storage / Balancing Service Maximum		\$6.000		

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Annual Firm Injection Rights are equal to 100% of their respective Annual Firm Withdrawal Rights. Injection Rights in excess of the Annual Firm Injection Rights will be charged at the Incremental Firm Injection Right.
3. Annual Firm Storage Space

The maximum storage space available to a customer at the rates specified herein is determined by one of the following storage allocation methodologies:

#### 3.1 Aggregate Excess

Aggregate excess is the difference between the customer's total 151-day winter consumption (November 1 through March 31) and the customer's average daily consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of winter. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

#### 3.2 Obligated daily contract quantity multiple of 15

Obligated daily contract quantity is the firm daily quantity of gas which the customer must deliver to Union. The 15 x obligated daily contract quantity calculation will be done using the daily contract quantity for the upcoming contract year. At each contract renewal, the 15 x obligated daily contract quantity calculation will be performed to set the new space allocation.

Customers may contract for less than their maximum entitlement of firm storage space.



4. Annual Injection/Withdrawal Right

The maximum level of deliverability available to a customer at the rates specified herein is determined by one of the following methodologies:

4.1 The greater of obligated daily contract quantity or firm daily contract demand less obligated daily contract quantity.

Customers may contract for less than their maximum entitlement of deliverability. A customer may contract up to this maximum entitlement with a combination of firm and interruptible deliverability as specified in Section (C) Storage Service.

5. Additional storage space or deliverability, in excess of the allocated entitlements per Notes 3 and 4, may be available at market prices.

6. Storage Space and Withdrawal Rights are not assignable to any other party without the prior written consent of Union.

7. Deliverability Inventory being defined as 20% of annual storage space.

8. Short Term Storage / Balancing Service is:

- i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, or
- ii) short-term firm deliverability, or
- iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
- ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) Utilization of facilities, and
- iv) Competition



**TRANSPORTATION CHARGES:**

	Demand Charge <u>Rate/m<sup>3</sup>/mo</u>	Commodity Charge <u>Rate/m<sup>3</sup></u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio (5)	Commodity Charge <u>Rate/m<sup>3</sup></u>
a) Annual Firm Transportation Demand Applied to the Firm Daily Contract Demand				
First 28,150 m <sup>3</sup> per month	34.5173 ¢			
Next 112,720 m <sup>3</sup> per month	23.8475 ¢			
b) Firm Transportation Commodity Paid on all firm quantities redelivered to the customer's Point(s) of Consumption				
Commodity Charge (All volumes)		0.1363 ¢	0.303%	0.0762 ¢
c) Interruptible Transportation Commodity Paid on all interruptible quantities redelivered to the customer's Point(s) of Consumption				
Maximum		5.1917 ¢	0.303%	5.1316 ¢

Notes:

- All demand charges are paid monthly during the term of the contract for not less than one year unless Union, at its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
- In negotiating the rate to be charged for the transportation of gas under Interruptible Transportation, the matters that are to be considered include:
  - The amount of the interruptible transportation for which customer is willing to contract,
  - The anticipated load factor for the interruptible transportation quantities,
  - Interruptible or curtailment provisions, and
  - Competition.
- In each contract year, the customer shall pay for a Minimum Interruptible Transportation Activity level as specified in the Contract. Overrun activity will not contribute to the minimum activity level.
- Transportation fuel ratios do not apply to customers served from dedicated facilities directly connected to third party transmission systems with custody transfer metering at the interconnect.
- Either Union or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates and other charges different from the rates and other charges specified herein if the changed rates and other charges are considered by either party to be necessary, desirable and in the public interest.



**SUPPLEMENTAL CHARGES:**

Rates for supplemental services are provided in Schedule "A".

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year.

**OVERRUN SERVICE:**

**1. Annual Storage Space**

Authorized

Authorized Overrun is provided as Storage/Balancing Service. It is payable on all quantities on any Day in excess of the customer's contracted Maximum Storage Space. Overrun will be authorized by Union at its sole discretion. Storage Space Overrun equal to the customer's firm deliveries from TCPL: less the customer's Firm Daily Contract Demand, all multiplied by the Days of Interruption called during the period of November 1 to March 31, will be automatically authorized until the following July 1.

Unauthorized

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space, and which has not been authorized by Union or provided for under a short term supplemental storage service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate will be \$6.000 per GJ applied to the greatest excess for each occurrence.

If on any Day the gas storage balance for the account of the customer is less than zero, the Unauthorized Overrun charge will apply for each GJ of gas below a zero inventory level and this amount of gas shall be deemed not to have been withdrawn from storage. The gas shall be deemed to have been sold to the customer at the highest spot price at Dawn in the month of occurrence and the month following occurrence as identified in the Canadian Gas Price Reporter and shall not be less than Union's approved weighted average cost of gas. If the customer has contracted to provide its own deliverability inventory, the zero inventory level shall be deemed to mean twenty percent (20%) of the Annual Firm Storage Space.

**2. Injection, Withdrawals and Transportation**

## Authorized

The following Overrun rates are applied to any quantities transported, injected or withdrawn in excess of 103% of the Contract parameters. Overrun will be authorized by Union at its sole discretion.

Automatic authorization of Injection Overrun will be given during all Days a customer has been interrupted.

	Union Providing Fuel	For Customers Providing Their Own Compressor Fuel Firm or Interruptible Service	
	Firm or Interruptible Service	Fuel Ratio	Commodity Charge
Storage Injections	\$0.104/GJ	0.860%	\$0.060/GJ
Storage Withdrawals	\$0.104/GJ	0.860%	\$0.060/GJ
Transportation	1.2711 ¢/m <sup>3</sup>	0.303%	1.2110 ¢/m <sup>3</sup>

## Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 5.0184 ¢ per m<sup>3</sup> or \$1.302 per GJ, as appropriate.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the transportation service.

**3. Storage / Balancing Service**

## Authorized

The following Overrun rates are applied to any quantities stored in excess of the Contract parameters. Overrun will be authorized by Union Gas at its sole discretion.

	Firm Service Rate/GJ
Space	\$6.000
Injection / Withdrawal Maximum	\$6.000

**OTHER SERVICES & CHARGES:****1. Monthly Charge**

In addition to the rates and charges described previously for each Point of Consumption, a Monthly Charge shall be applied as follows:

Monthly Charge	\$1,924.04
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**2. Diversion of Gas**

The availability of the right to divert gas will be based on Union's ability to accommodate the diversion. The price to be charged for the right to divert shall be determined through negotiation.

**3. Delivery Obligations**

Unless otherwise authorized by Union, all other customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**4. Additional Service Information**

Additional information on Union's T1 service offering can be found at:

The additional information consists of, but is not limited to, the following:

[www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features](http://www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features)

- i. Storage space and deliverability entitlement;
- ii. The determination of gas supply receipt points and delivery obligations;
- iii. The nomination schedule;
- iv. The management of multiple redelivery points by a common fuel manager; and
- v. The availability of supplemental transactional services including title transfers.

**5. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.

Rate/GJ

PDCI Effective November 1, 2016

\$(0.134)

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.



STORAGE AND TRANSPORTATION RATES  
FOR CONTRACT CARRIAGE CUSTOMERS

**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer:

- a) who has a daily firm contracted demand of at least 140 870 m<sup>3</sup>. Firm and/or interruptible daily contracted demand of less than 140,870 m<sup>3</sup> cannot be combined for the purposes of qualifying for this rate class; and
- b) who enters into a Carriage Service Contract with Union for the transportation or the storage and transportation of Gas for use at facilities located within Union's gas franchise area; and
- c) who has meters with electronic recording at each Point of Consumption; and
- d) who has site specific energy measuring equipment that will be used in determining energy balances; and
- e) for whom Union has determined transportation and/or storage capacity is available.

For the purposes of qualifying for a rate class, the total quantities of gas consumed or expected to be consumed on the customer's contiguous property will be used, irrespective of the number of meters installed.

**(C) Rates**

The following rates shall be charged for all quantities contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

**STORAGE SERVICE:**

	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
a) Annual Firm Storage Space Applied to contracted Maximum Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right: Applied to the contracted Maximum Annual Firm Injection/Withdrawal Right Union provides deliverability Inventory Customer provides deliverability Inventory (4)	\$1.586 \$1.195			
c) Incremental Firm Injection Right: Applied to the contracted Maximum Incremental Firm Injection Right	\$1.195			
d) Annual Interruptible Withdrawal Right: Applied to the contracted Maximum Annual Interruptible Withdrawal Right	\$1.195			



	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio	Commodity Charge <u>Rate/GJ</u>
e) Withdrawal Commodity Paid on all quantities withdrawn from storage up to the Maximum Daily Storage Withdrawal Quantity		\$0.029	0.403%	\$0.008
f) Injection Commodity Paid on all quantities injected into storage up to the Maximum Daily Storage Injection Quantity		\$0.029	0.403%	\$0.008
g) Short Term Storage / Balancing Service Maximum		\$6.000		

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Annual Firm Injection Rights are equal to 100% of their respective Annual Firm Withdrawal Rights. Injection Rights in excess of the Annual Firm Injection Rights will be charged at the Incremental Firm Injection Right.
3. Annual Firm Storage Space

The maximum storage space available to a customer at the rates specified herein is determined by one of the following storage allocation methodologies:

#### 3.1 Aggregate Excess

Aggregate excess is the difference between the customer's total 151-day winter consumption (November 1 through March 31) and the customer's average daily consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of winter. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

#### 3.2 Obligated daily contract quantity multiple of 15

Obligated daily contract quantity is the firm daily quantity of gas which the customer must deliver to Union. The 15 x obligated daily contract quantity calculation will be done using the daily contract quantity for the upcoming contract year. At each contract renewal, the 15 x obligated daily contract quantity calculation will be performed to set the new space allocation.

3.3 For new, large (daily firm transportation demand requirements in excess of 1,200,000 m<sup>3</sup>/day) gas fired power generation customers, storage space is determined by peak hourly consumption x 24 x 4 days. Should the customer elect firm deliverability less than their maximum entitlement (see Note 4.2), the maximum storage space available at the rates specified herein is 10 x firm storage deliverability contracted, not to exceed peak hourly consumption x 24 x 4 days.

Customers may contract for less than their maximum entitlement of firm storage space.



4. Annual Injection/Withdrawal Right

The maximum level of deliverability available to a customer at the rates specified herein is determined by one of the following methodologies:

4.1 The greater of obligated daily contract quantity or firm daily contract demand less obligated daily contract quantity.

4.2 For new, large (daily firm transportation demand requirements in excess of 1,200,000 m<sup>3</sup>/day) gas fired power generation customers, the maximum entitlement of firm storage deliverability is 24 times the customer's peak hourly consumption, with 1.2% firm deliverability available at the rates specified herein.

Customers may contract for less than their maximum entitlement of deliverability. A customer may contract up to this maximum entitlement with a combination of firm and interruptible deliverability as specified in Section (C) Storage Service.

5. Additional storage space or deliverability, in excess of the allocated entitlements per Notes 3 and 4, may be available at market prices.

6. Storage Space and Withdrawal Rights are not assignable to any other party without the prior written consent of Union.

7. Deliverability Inventory being defined as 20% of annual storage space.

8. Short Term Storage / Balancing Service is:

- i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, or
- ii) short-term firm deliverability, or
- iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
- ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) Utilization of facilities, and
- iv) Competition



**TRANSPORTATION CHARGES:**

	Demand Charge <u>Rate/m<sup>3</sup>/mo</u>	Commodity Charge <u>Rate/m<sup>3</sup></u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio (5) (6)	Commodity Charge <u>Rate/m<sup>3</sup></u>
a) Annual Firm Transportation Demand Applied to the Firm Daily Contract Demand				
First 140,870 m <sup>3</sup> per month	20.9062 ¢			
All over 140,870 m <sup>3</sup> per month	11.0584 ¢			
b) Firm Transportation Commodity Paid on all firm quantities redelivered to the customer's Point(s) of Consumption				
Commodity Charge (All volumes)		0.0641 ¢	0.282%	0.0083 ¢
c) Interruptible Transportation Commodity Paid on all interruptible quantities redelivered to the customer's Point(s) of Consumption				
Maximum		5.1917 ¢	0.282%	5.1358 ¢

Notes:

- All demand charges are paid monthly during the term of the contract for not less than one year unless Union, at its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
- Effective January 1, 2007, new customers and existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day and who are directly connected to i) the Dawn-Trafalgar transmission system in close proximity to Parkway or ii) a third party pipeline, have the option to pay for service using a Billing Contract Demand. The Billing Contract Demand shall be determined by Union such that the annual revenues over the term of the contract will recover the invested capital, return on capital and operating and maintenance costs associated with the dedicated service in accordance with Union's system expansion policy. The firm transportation demand charge will be applied to the Billing Contract Demand. For customers choosing the Billing Contract Demand option, the authorized transportation overrun rate will apply to all volumes in excess of the Billing Contract Demand but less than the daily firm demand requirement.
- In negotiating the rate to be charged for the transportation of gas under Interruptible Transportation, the matters that are to be considered include:
  - The amount of the interruptible transportation for which customer is willing to contract,
  - The anticipated load factor for the interruptible transportation quantities,
  - Interruptible or curtailment provisions, and
  - Competition.
- In each contract year, the customer shall pay for a Minimum Interruptible Transportation Activity level as specified in the Contract. Overrun activity will not contribute to the minimum activity level.
- Transportation fuel ratios do not apply to customers served from dedicated facilities directly connected to third party transmission systems with custody transfer metering at the interconnect.



6. Firm transportation fuel ratio does not apply to new customers or existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day that contract for M12 Dawn to Parkway transportation service equivalent to 100% of their daily firm demand requirement. If a customer with a daily firm demand requirement in excess of 1,200,000 m<sup>3</sup>/day contracts for M12 Dawn to Parkway transportation service at less than 100% of their firm daily demand requirement, the firm transportation fuel ratio will be applicable to daily volumes not transported under the M12 transportation contract.
7. Either Union or a customer, or potential customer, may apply to the Ontario Energy Board to fix rates and other charges different from the rates and other charges specified herein if the changed rates and other charges are considered by either party to be necessary, desirable and in the public interest.

**SUPPLEMENTAL CHARGES:**

Rates for supplemental services are provided in Schedule "A".

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year.

**OVERRUN SERVICE:**

**1. Annual Storage Space**

Authorized

Authorized Overrun is provided as Storage/Balancing Service. It is payable on all quantities on any Day in excess of the customer's contracted Maximum Storage Space. Overrun will be authorized by Union at its sole discretion. Storage Space Overrun equal to the customer's firm deliveries from TCPL: less the customer's Firm Daily Contract Demand, all multiplied by the Days of Interruption called during the period of November 1 to March 31, will be automatically authorized until the following July 1.

Unauthorized

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space, and which has not been authorized by Union or provided for under a short term supplemental storage service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate will be \$6.000 per GJ applied to the greatest excess for each occurrence.

If on any Day the gas storage balance for the account of the customer is less than zero, the Unauthorized Overrun charge will apply for each GJ of gas below a zero inventory level and this amount of gas shall be deemed not to have been withdrawn from storage. The gas shall be deemed to have been sold to the customer at the highest spot price at Dawn in the month of occurrence and the month following occurrence as identified in the Canadian Gas Price Reporter and shall not be less than Union's approved weighted average cost of gas. If the customer has contracted to provide its own deliverability inventory, the zero inventory level shall be deemed to mean twenty percent (20%) of the Annual Firm Storage Space.

**2. Injection, Withdrawals and Transportation**

## Authorized

The following Overrun rates are applied to any quantities transported, injected or withdrawn in excess of 103% of the Contract parameters. Overrun will be authorized by Union at its sole discretion.

Automatic authorization of Injection Overrun will be given during all Days a customer has been interrupted.

	Union Providing <u>Fuel</u>	For Customers Providing Their Own Compressor Fuel <u>Firm or Interruptible Service</u>	
	Firm or Interruptible <u>Service</u>	<u>Fuel Ratio</u>	<u>Commodity Charge</u>
Storage Injections	\$0.104/GJ	0.860%	\$0.060/GJ
Storage Withdrawals	\$0.104/GJ	0.860%	\$0.060/GJ
Transportation	0.7515 ¢/m <sup>3</sup>	0.282%	0.6956 ¢/m <sup>3</sup>

## Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 5.0184 ¢ per m<sup>3</sup> or \$1.302 per GJ, as appropriate.

Unauthorized Overrun Non-Compliance Rate:

Unauthorized overrun gas taken any month during a period when a notice of interruption is in effect shall be paid for at the rate of 385.5000 ¢ per m<sup>3</sup> (\$100 per GJ) for the transportation service.

**3. Storage / Balancing Service**

## Authorized

The following Overrun rates are applied to any quantities stored in excess of the Contract parameters. Overrun will be authorized by Union Gas at its sole discretion.

	Firm Service <u>Rate/GJ</u>
Space	\$6.000
Injection / Withdrawal Maximum	\$6.000



**OTHER SERVICES & CHARGES:**

**1. Monthly Charge**

In addition to the rates and charges described previously for each Point of Consumption, a Monthly Charge shall be applied as follows:

Monthly Charge	\$5,751.12
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**2. Diversion of Gas**

The availability of the right to divert gas will be based on Union's ability to accommodate the diversion. The price to be charged for the right to divert shall be determined through negotiation.

**3. Delivery Obligations**

Effective January 1, 2007, new customers and existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day who are delivering gas to Union under direct purchase arrangements may be entitled to non-obligated deliveries. The delivery options available to customers are detailed at [www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features](http://www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features)

Unless otherwise authorized by Union, all other customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**4. Nominations**

Effective January 1, 2007, new customers and existing customers with incremental daily firm demand requirements in excess of 1,200,000 m<sup>3</sup>/day who have non obligated deliveries may contract to use Union's 5 additional nomination windows (13 in total) for the purposes of delivering gas to Union. These windows are in addition to the standard NAESB and TCPL STS nomination windows. Customers taking the additional nomination window service will pay an additional monthly demand charge of \$0.068/GJ/day/month multiplied by the non-obligated daily contract quantity.

**5. Additional Service Information**

Additional information on Union's T2 service offering can be found at:

The additional information consists of, but is not limited to, the following:  
[www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features](http://www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features)

- i. Storage space and deliverability entitlement;
- ii. The determination of gas supply receipt points and delivery obligations;
- iii. The nomination schedule;
- iv. The management of multiple redelivery points by a common fuel manager; and
- v. The availability of supplemental transactional services including title transfers.

**6. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.

Rate/GJ

PDCI Effective November 1, 2016

\$(0.134)



**uniongas**

Effective  
2016-01-01  
**Rate T2**  
Page 8 of 8

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

STORAGE AND TRANSPORTATION RATES  
FOR CONTRACT CARRIAGE CUSTOMERS**(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a Distributor:

- a) whose minimum annual transportation of natural gas is 700 000 m<sup>3</sup> or greater; and
- b) who enters into a Carriage Service Contract with Union for the transportation or the storage and transportation of Gas for distribution to its customers; and
- c) who has meters with electronic recording at each Point of Redelivery; and
- d) for whom Union has determined transportation and/or storage capacity is available.

**(C) Rates**

The following rates shall be charged for all quantities contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

**STORAGE SERVICE:**

	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	<u>For Customers Providing Their Own Compressor Fuel</u>	
			<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
a) Annual Firm Storage Space Applied to contracted Maximum Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right: Applied to the contracted Maximum Annual Firm Injection/Withdrawal Right				
Union provides deliverability Inventory	\$1.586			
Customer provides deliverability Inventory (4)	\$1.195			
c) Incremental Firm Injection Right: Applied to the contracted Maximum Incremental Firm Injection Right	\$1.195			
d) Annual Interruptible Withdrawal Right: Applied to the contracted Maximum Annual Interruptible Withdrawal Right	\$1.195			



	Demand Charge <u>Rate/GJ/mo</u>	Commodity Charge <u>Rate/GJ</u>	For Customers Providing Their Own Compressor Fuel Fuel <u>Ratio</u>	Commodity Charge <u>Rate/GJ</u>
e) Withdrawal Commodity Paid on all quantities withdrawn from storage up to the Maximum Daily Storage Withdrawal Quantity		\$0.029	0.403%	\$0.008
f) Injection Commodity Paid on all quantities injected into storage up to the Maximum Daily Storage Injection Quantity		\$0.029	0.403%	\$0.008
g) Short Term Storage / Balancing Service Maximum		\$6.000		

Notes:

1. Demand charges for Annual Services are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.
2. Annual Firm Injection Rights are equal to 100% of their respective Annual Firm Withdrawal Rights. Injection Rights in excess of the Annual Firm Injection Rights will be charged at the Incremental Firm Injection Right.
3. Annual Firm Storage Space

The maximum storage space available to a customer at the rates specified herein is determined by one of the following storage allocation methodologies:

3.1 Aggregate Excess

Aggregate excess is the difference between the customer's total 151-day winter consumption (November 1 through March 31) and the customer's average daily consumption (Daily Contract Quantity) for the contract year multiplied by 151 days of winter. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

3.2 Obligated daily contract quantity multiple of 15

Obligated daily contract quantity is the firm daily quantity of gas which the customer must deliver to Union. The 15 x obligated daily contract quantity calculation will be done using the daily contract quantity for the upcoming contract year. At each contract renewal, the 15 x obligated daily contract quantity calculation will be performed to set the new space allocation.

Customers may contract for less than their maximum entitlement of firm storage space.

4. Annual Injection/Withdrawal Right

The maximum level of deliverability available to a customer at the rates specified herein is determined to be the greater of obligated daily contract quantity or firm daily contract demand less obligated daily contract quantity.

Customers may contract for less than their maximum entitlement of deliverability. A customer may contract up to this maximum entitlement with a combination of firm and interruptible deliverability as specified in Section (C) Storage Service.



5. Additional storage space or deliverability, in excess of the allocated entitlements per Notes 3 and 4, may be available at market prices.
6. Storage Space and Withdrawal Rights are not assignable to any other party without the prior written consent of Union.
7. Deliverability Inventory being defined as 20% of annual storage space.
8. Short Term Storage / Balancing Service is:
  - i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
  - ii) short-term firm deliverability, OR
  - iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for this service, the matters that are to be considered include:

- i) The minimum amount of storage service to which a customer is willing to commit,
- ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
- iii) Utilization of facilities, and
- iv) Competition

**TRANSPORTATION CHARGES:**

	Demand Charge <u>Rate/m<sup>3</sup>/mo</u>	Commodity Charge <u>Rate/m<sup>3</sup></u>	For Customers Providing Their Own Compressor Fuel	
			Fuel Ratio	Commodity Charge <u>Rate/m<sup>3</sup></u>
a) Annual Firm Transportation Demand (1) Applied to the Firm Daily Contract Demand	11.6340 ¢			
b) Firm Transportation Commodity Paid on all firm quantities redelivered to the Customer's Point(s) of Redelivery		0.0858 ¢	0.378%	0.0108 ¢

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year. Demand charges apply whether Union or the customer provides the fuel.

**SUPPLEMENTAL CHARGES**

Rates for supplemental services are provided in Schedule "A".

Notes:

1. All demand charges are paid monthly during the term of the contract for not less than one year unless Union, in its sole discretion, accepts a term of less than one year.

**OVERRUN SERVICE****1. Annual Storage Space****Authorized**

Authorized Overrun is provided as Storage/Balancing Service. It is payable on all quantities on any Day in excess of the customer's contracted Maximum Storage Space. Overrun will be authorized by Union at its sole discretion.

**Unauthorized**

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space, and which has not been authorized by Union or provided for under a short term supplemental storage service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate will be \$6.000 per GJ applied to the greatest excess for each occurrence.

If on any Day, the gas storage balance for the account of the customer is less than zero, the Unauthorized Overrun charge will apply for each GJ of gas below a zero inventory level and this amount of gas shall be deemed not to have been withdrawn from storage. The gas shall be deemed to have been sold to the customer at the highest spot price at Dawn in the month of occurrence and the month following occurrence as identified in the Canadian Gas Price Reporter and shall not be less than Union's approved weighted average cost of gas. If the customer has contracted to provide its own deliverability inventory, the zero inventory level shall be deemed to mean twenty percent (20%) of the Annual Firm Storage Space.

**2. Injection, Withdrawals and Transportation**

## Authorized

The following Overrun rates are applied to any quantities transported, injected or withdrawn in excess of 103% of the Contract parameters. Overrun will be authorized by Union at its sole discretion.

	Union Providing <u>Fuel</u>	For Customers Providing Their Own Compressor Fuel <u>Firm or Interruptible Service</u>	
	Firm or Interruptible <u>Service</u>	<u>Fuel Ratio</u>	<u>Commodity Charge</u>
Storage Injections	\$0.104/GJ	0.860%	\$0.060/GJ
Storage Withdrawals	\$0.104/GJ	0.860%	\$0.060/GJ
Transportation	0.4682 ¢/m <sup>3</sup>	0.378%	0.3933 ¢/m <sup>3</sup>

## Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 36.0¢ per m<sup>3</sup> or \$9.339 per GJ, as appropriate.

**3. Short Term Storage Services**

## Authorized

The following Overrun rates are applied to any quantities stored in excess of the Contract parameters. Overrun will be authorized by Union Gas at its sole discretion.

	Firm Service <u>Rate/GJ</u>
Space	\$6.000
Injection Maximum	\$6.000

**OTHER SERVICES & CHARGES****1. Monthly Charge**

In addition to the rates and charges described previously for each Point of redelivery a Monthly Charge shall be applied to each specific customer as follows:

	Monthly Charge
City of Kitchener	\$ 20,208.17
NRG	\$ 3,102.16
Six Nations	\$ 1,034.05

If a customer combines Sales Service with Contract Carriage Service, the monthly charge will be prorated such that the customer will under both services pay no more than the above monthly charge.

**2. Diversion of Gas**

The availability of the right to divert gas will be based on Union's ability to accommodate the diversion. The price to be charged for the right to divert shall be determined through negotiation.

3. Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must obligate to deliver at a point(s) specified by Union and must acquire and maintain firm transportation on all upstream pipeline systems. Customers initiating direct purchase arrangements must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**4. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.	<u>Rate/GJ</u>
PDCI Effective November 1, 2016	\$(0.134)

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

**STORAGE RATES FOR  
UNBUNDLED CUSTOMERS****(A) Availability**

Available to customers in Union's Southern Delivery Zone.

**(B) Applicability**

To a customer, or an agent, who is authorized to service residential and non-contract commercial and industrial end-users paying for the Monthly Fixed Charge and Delivery charge under Rate M1 or Rate M2:

- a) who enters into an Unbundled Service Contract with Union for the storage of Gas for use at facilities located within Union's gas franchise area;
- b) who contracts for Standard Peaking Service (SPS) with Union unless the customer can demonstrate that it has a replacement to the deliverability available in the SPS physically tied into Union's system and an OEB approved rate to provide the SPS replacement service;
- c) who accepts daily estimates of consumption at Points of Consumption as prepared by Union so that they may nominate an equivalent amount from storage, upstream transportation, or Ontario Producers authorized to sell to third parties;
- d) who nominates injections and withdrawals from storage and deliveries on upstream pipeline systems daily or Ontario Producers authorized to sell to third parties;
- e) for whom Union has determined storage capacity is available; and
- f) who accepts a monthly bill as prepared by Union.

**(C) Rates**

The following rates shall be charged for all volumes contracted or handled as appropriate. The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

<b>STORAGE SERVICE</b>	<b>Demand Charge <u>Rate/GJ/mo</u></b>	<b>Fuel <u>Ratio</u></b>	<b>Commodity Charge <u>Rate/GJ</u></b>
i) Standard Storage Service (SSS)			
a) Combined Storage Space & Deliverability Applied to contracted Maximum Storage Space	\$0.023		
b) Injection Commodity		0.403%	\$0.026
c) Withdrawal Commodity		0.403%	\$0.026
ii) Standard Peaking Service (SPS)			
a) Combined Storage Space & Deliverability Applied to contracted Maximum Storage Space	\$0.115		
b) Injection Commodity		0.403%	\$0.026
c) Withdrawal Commodity		0.860%	\$0.026



	Demand Charge <u>Rate/GJ/mo</u>	Fuel <u>Ratio</u>	Commodity Charge <u>Rate/GJ</u>
iii) Supplemental Service			
a) Incremental Firm Injection Right: (5) Applied to the contracted Maximum Incremental Firm Injection Right	\$1.039		
b) Incremental Firm Withdrawal Right: (5) Applied to the contracted Maximum Incremental Firm Withdrawal Right	\$1.039		
c) Short Term Storage / Balancing Service - Maximum			\$6.000

**Notes:**

1. Demand charges for Annual Services are paid monthly during the term of the Contract, which shall not be less than one year, unless Union, in its sole discretion, accepts a term of less than one year.
2. Daily Firm Injection and Withdrawal Rights shall be pursuant to the Storage Contract.
3. Storage Space, Withdrawal Rights, and Injection Rights are not assignable to any other party without the prior written consent of Union and where necessary, approval from the Ontario Energy Board.
4. Short Term Storage / Balancing service (less than 2 years) is:
  - i) a combined space and interruptible deliverability service for short-term or off-peak storage in Union's storage facilities, OR
  - ii) short-term incremental firm deliverability, OR
  - iii) a component of an operational balancing service offered.

In negotiating the rate to be charged for service, the matters that are to be considered include:

  - i) The minimum amount of storage service to which a customer is willing to commit,
  - ii) Whether the customer is contracting for firm or interruptible service during Union's peak or non-peak periods,
  - iii) Utilization of facilities,
  - iv) Competition, and
  - v) Term.
5. Union's ability to offer incremental injection and withdrawal rights is subject to annual asset availability.

**OVERRUN SERVICE****1. Injection and Withdrawal**

## Authorized

	<u>Fuel Ratio</u>	<u>Commodity Charge Rate/GJ</u>
Injection	0.860%	\$0.060
Withdrawal	0.860%	\$0.060

The Authorized Overrun rate is payable on all quantities on any Day in excess of the customer's contractual rights, for which authorization has been received. Overrun will be authorized by Union at its sole discretion.

## Unauthorized

If in any month, the customer has gas in storage in excess of the contracted Maximum Storage Space or the gas storage balance for the account of the customer is less than zero or the customer has injected or withdrawn volumes from storage which exceeds their contractual rights, and which has not been authorized by Union or provided for under a short term storage/balancing service, such an event will constitute an occurrence of Unauthorized Overrun. The Unauthorized Overrun rate during the November 1 to April 15 period will be \$60.00 per GJ. The Unauthorized Overrun rate during the April 16 to October 31 period will be \$6.000 per GJ.

**OTHER SERVICES & CHARGES**

1. Unless otherwise authorized by Union, customers who are delivering gas to Union under direct purchase arrangements must commit to provide a call at Parkway, throughout the winter period, for a specified number of days. Customers initiating direct purchase arrangements, who previously received Gas Supply service, must also accept, unless otherwise authorized by Union, an assignment from Union of transportation capacity on upstream pipeline systems.

**2. Parkway Delivery Commitment Incentive ("PDCI")**

For all Parkway Delivery Obligation ("PDO") volumes delivered to Union.	<u>Rate/GJ</u>
PDCI Effective November 1, 2016	\$(0.134)

**(D) Delayed Payment**

The monthly late payment charge equal to 1.5% per month or 18% per annum (for an approximate effective rate of 19.56% per annum) multiplied by the total of all unpaid charges will be added to the bill if full payment is not received by the late payment effective date, which is 20 days after the bill has been issued.

Effective

January 1, 2016  
O.E.B. Order # EB-2015-0116

Chatham, Ontario

Supersedes EB-2015-0255 Rate Schedule effective October 1, 2015.

RATE M12  
GENERAL TERMS & CONDITIONS

I. **DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Authorized Overrun"** shall mean the amount by which Shipper's Authorized Quantity exceeds the Contract Demand;

**"Available Capacity"** shall mean at any time, Union's remaining available capacity to provide Transportation Services;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days; provided however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days, commencing on November 1 of each year; except for the first Contract Year which shall commence on the Commencement Date and end on the first October 31 that follows such date;

**"cricondentherm hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"delivery"** shall mean any gas that is delivered by Union into Shipper's possession, or to the possession of Shipper's agent;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"Expansion Facilities"** shall mean any new facilities to be constructed by Union in order to provide Transportation Services;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"gas"** shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;

**"gross heating value"** shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

**"hydrocarbon dewpoint"** shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

**"Interruptible Service HUB Contract"** shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

**"interruptible service"** or **"Interruptible"** shall mean service subject to curtailment or interruption, after notice, at any time;

**"Interconnecting Pipeline"** shall mean a pipeline that directly connects to the Union pipeline system;

**"joule"** (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term **"megajoule"** (MJ) shall mean 1,000,000 joules. The term **"gigajoule"** (GJ) shall mean 1,000,000,000 joules;

**"Loaned Quantities"** shall mean those quantities of gas loaned to Shipper under the Facilitating Agreement;

**"m<sup>3</sup>"** shall mean cubic metre of gas and **"10<sup>3</sup>m<sup>3</sup>"** shall mean 1,000 cubic metres of gas;

**"Month"** shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

**"NAESB"** shall mean North American Energy Standards Board;

**"OEB"** means the Ontario Energy Board;

**"Open Season"** or **"open season"** shall mean an open access auction or bidding process held by Union as a method of allocating capacity;

**"pascal"** (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term **"kilopascal"** (kPa) shall mean 1,000 pascals;

**"receipt"** shall mean any gas that is delivered into Union's possession, or the possession of Union's agent;

**"Shipper"** shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

**"specific gravity"** shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Taxes"** shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

**"TCPL"** means TransCanada PipeLines Limited;

— **"Wobbe Number"** shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. **Natural Gas:** The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. **Freedom from objectionable matter:** The gas to be delivered to/by Union hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,

- b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than four hundred and sixty (460) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondentherm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas.
3. Non-conforming Gas: In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
4. Quality of Gas Received: The quality of the gas to be received by Union hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will also accept gas of a quality as set out in any other Interconnecting Pipeline's general terms and conditions, provided that all Interconnecting Pipelines accept such quality of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in Union's M12 Rate Schedule.

### **III. MEASUREMENTS**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
- a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
  - d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

**IV. RECEIPT POINT AND DELIVERY POINT**

1. Unless otherwise specified in the Contract, the point or points of receipt and point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where possession of the gas changes from one party to the other, and as per Schedule "D 2010".

**V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

**VI. FACILITIES ON SHIPPER'S PROPERTY**

Except under those conditions where Union is delivering to TCPL for TCPL or Shipper at Parkway (TCPL), or to an Interconnecting Pipeline, or where otherwise specified in the Contract, the following will apply:

1. Construction and Maintenance: Union, at its own expense may construct, maintain and operate on Shipper's property at the delivery point a measuring station properly equipped with a meter or meters and any other necessary measuring equipment for properly measuring the gas redelivered under the Contract. Shipper will grant to Union a lease and/or rights-of-way over property of Shipper as required by Union to install such facilities and to connect same to Union's pipeline.
2. Entry: Union, its servants, agents and each of them may at any reasonable time on notice (except in cases of emergency) to Shipper or his duly authorized representative enter Shipper's property for the purpose of constructing, maintaining, removing, operating and/or repairing station equipment.
3. Property: The said station and equipment will be and remain the property of Union notwithstanding it is constructed on and attached to the realty of Shipper, and Union may at its own expense remove it upon termination of the Contract and will do so if so requested by Shipper.

**VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the redelivery point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the delivery point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.

4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

**VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Transportation Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled in any of the Transportation Services to Shipper, the parties shall have the right to amend their statement for a period equal to the time during which the Interconnecting Pipeline retains the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,

- a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
- b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.

4. Taxes:

In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.

5. Set Off:

If either party shall, at any time, be in arrears under any of its payment obligations to the other party under the Contract, then the party not in arrears shall be entitled to reduce the amount payable by it to the other party in arrears under the Contract, or any other contract, by an amount equal to the amount of such arrears or other indebtedness to the other party. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract or any enhancement to the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.

X. ARBITRATION

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the

Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**XI. FORCE MAJEURE**

1. **Definition:** The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. **Notice:** In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. **Exclusions:** Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. **Notice of Remedy:** The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
5. **Obligation to Perform:** An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. **Upstream or Downstream Force Majeure:** An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. **Delay of Firm Transportation Services:** Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. **Demand Charge Relief for Firm Transportation Services:** Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm Contract Demand for that Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the M12 Rate Schedule divided by the number of days in the month for which such rate is being calculated.

- ~~9.~~ 9. Proration of Firm Transportation Service: If, due to the occurrence of an event of force majeure as outlined above, the capacity for gas deliveries by Union is impaired, it will be necessary for Union to curtail Shipper's gas receipts to Union hereunder, via proration based on utilization of such facilities for the Day. This prorating shall be determined by multiplying the capability of such facilities as available downstream of the impairment on the Day, by a fraction where the numerator is Shipper's nominated firm quantity and the denominator is the total of all such nominated firm quantities for nominated services and planned consumption for in-franchise customers on the Day. For the purposes of this Article XI, firm services shall mean all firm services provided by Union to in-franchise customers and ex-franchise shippers.

**XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

**XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

**XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. ALLOCATION OF CAPACITY**

- ~~1.~~ 1. Requests for Transportation Service: A potential shipper may request firm transportation service on Union's system at any time. Any request for firm M12 transportation service must include: potential shipper's legal name, Receipt Point(s), Delivery Point(s), Commencement Date, Initial Term, Contract Demand and proposed payment. This is applicable for M12 service requests for firm transportation service with minimum terms of ten (10) years where Expansion Facilities are required or a minimum term of five (5) years for use of existing capacity.
- ~~2.~~ 2. Expansion Facilities: If requests for firm transportation services cannot be met through existing capacity such that the only way to satisfy the requests for transportation service would require the construction of Expansion Facilities which create

new capacity, Union shall allocate any such new capacity by open season, subject to the terms of the open season, and these General Terms and Conditions.

3. Open Seasons: If requests for long-term firm transportation service can be met through existing facilities upon which long-term capacity is becoming available, Union shall allocate such long-term capacity by open season, subject to the terms of the open season, and these General Terms and Conditions. "Long-term", for the purposes of this Article XVI, means, in the case of a transportation service, a service that has a term of one year or greater.
4. Awarding Open Season Capacity: Capacity requests received during an open season shall be awarded starting with those bids with the highest economic value. If the economic values of two or more independent bids are equal, then service shall be allocated on a pro-rata basis. The economic value shall be based on the net present value which shall be calculated based on the proposed per-unit rate and the proposed term of the contract and without regard to the proposed Contract Demand ("NPV").
5. Available Capacity Previously Offered in Open Season: Union may at any time allocate capacity to respond to any M12 transportation service request through an open season. If a potential shipper requests M12 transportation service that can be provided through Available Capacity that was previously offered by Union in an open season but was not awarded, then:
  - a. Any such request must conform to the requirements of Section 1 of this Article XVI;
  - b. Union shall allocate capacity to serve such request pursuant to this Section 5, and subject to these General Terms and Conditions and Union's standard form M12 transportation contract;
  - c. Union may reject a request for M12 transportation service for any of the following reasons:
    - i) if there is insufficient Available Capacity to fully meet the request, but if that is the only reason for rejecting the request for service, Union must offer to supply the Available Capacity to the potential shipper;
    - ii) if the proposed monthly payment is less than Union's Monthly demand charge plus fuel requirements for the applicable service;
    - iii) if prior to Union accepting the request for transportation service Union receives a request for transportation service from one or more other potential shippers and there is, as a result, insufficient Available Capacity to service all the requests for service, in which case Union shall follow the procedure in Section 5 d hereof; -
    - iv) if Union does not provide the type of transportation service requested; or
    - v) if all of the conditions precedent specified in Article XXI Sections 1 and 2 herein have not been satisfied or waived.
  - d. Union will advise the potential shipper in writing whether Union accepts or rejects the request for service, subject to Article XVI 5 c, within 5 calendar days of receiving a request for M12 transportation service. If Union rejects a request for service, Union shall inform the potential shipper of the reasons why its request is being rejected; and
  - e. If Union has insufficient Available Capacity to service all pending requests for transportation service Union may:
    - i) Reject all the pending requests for transportation service and conduct an open season; or
    - ii) Union shall inform all the potential shippers who have submitted a pending request for transportation service that it does not have sufficient capacity to service all pending requests for service, and Union shall provide all such potential shippers with an equal opportunity to submit a revised request for service. Union shall then allocate the Available Capacity to the request for transportation service with the highest economic value to Union. If the economic values of two or more requests are equal, then service shall be allocated on a pro-rata basis. The economic value of any request shall be based on the NPV.

XVII. RENEWALS

Contracts with an Initial Term of five (5) years or greater will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter. Shipper may reduce the Contract Demand or terminate the Contract with notice in writing by Shipper at least two (2) years prior to the expiration thereof.

XVIII. SERVICE CURTAILMENT

1. Right to Curtail: Union shall have the right to curtail or not to schedule part or all of Transportation Services, in whole or in part, on all or a portion of its pipeline system at any time for reasons of Force Majeure or when, in Union sole discretion, acting reasonably, capacity or operating conditions so require or it is desirable or necessary to make modifications, repairs or operating changes to its pipeline system. Union shall provide Shipper such notice of such curtailment as is reasonable under the circumstances. If due to any cause whatsoever Union is unable to receive or deliver the quantities of Gas which Shipper has requested, then Union shall order curtailment by all Shippers affected and to the extent necessary to remove the effect of the disability. Union has a priority of service policy to determine the order of service curtailment. In order to place services on the priority of service list, Union considers the following business principles: appropriate level of access to core services, customer commitment, encouraging appropriate contracting, materiality, price and term, and promoting and enabling in-franchise consumption.

The Priority ranking for all services utilizing Union Gas' storage, transmission and distribution system as applied to both in-franchise and ex-franchise services are as follows; with number 1 having the highest priority and the last interrupted.

1. Firm In-franchise Transportation and Distribution services and firm Ex-franchise services (Note 1)
2. In-franchise Interruptible Distribution services
3. C1/M12 IT Transport and IT Exchanges with Take or Pay rates
4. Balancing (Hub Activity)  $\leq 100$  GJ/d; Balancing (Direct Purchase)  $\leq 500$  GJ/d; In-franchise distribution authorized overrun (Note 3)
5. C1/M12 IT Transport and IT Exchanges at premium rates
6. C1/M12 Overrun  $\leq 20\%$  of CD (Note 4)
7. Balancing (Direct Purchase)  $> 500$  GJ/d
8. Balancing (Hub Activity)  $> 100$  GJ/d; C1/M12 IT Transport and IT Exchanges
9. C1/M12 Overrun  $> 20\%$  of CD
10. C1/M12 IT Transport and IT Exchanges at a discount
11. Late Nominations

## Notes:

1. Nominated services must be nominated on the NAESB Timely Nomination Cycle otherwise they are considered to be late nomination and are therefore interruptible.
2. Higher value or more reliable IT is contemplated in the service and contract, when purchase at market competitive prices.
3. Captures the majority of customers that use Direct Purchase balancing transactions.
4. Captures the majority of customers that use overrun.

2. Capacity Procedures: Union reserves the right to change its procedures for sharing interruptible capacity and will provide Shipper with two (2) months prior notice of any such change.
3. Maintenance: Union's facilities from time to time may require maintenance or construction. If such maintenance or construction is required, and in Union's sole opinion, acting reasonably, such maintenance or construction may impact Union's ability to meet Shipper's requirements, Union shall provide at least ten (10) days notice to Shipper, except in the case of an emergency. In the event the maintenance impacts ~~on~~ Union's ability to meet Shipper's requirements, Union shall not be liable for any damages and shall not be deemed in breach of the Contract. To the extent that Union's ability to accept and/or deliver Shipper's gas is impaired, the Monthly demand charge shall be reduced in accordance with Article XI Section 8 and available capacity allocated in accordance with Article XI Section 9 herein.

Union shall use reasonable efforts to determine a mutually acceptable period during which such maintenance or construction will occur and also to limit the extent and duration of any impairments. Union will endeavour to schedule and complete the maintenance and construction, which would normally be expected to impact on Union's ability to meet Shipper's requirements, during the period from April 1 through to November 1.

**XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security) (if any) shall remain in place throughout the term hereof, unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract as a result of one of the following events ("**Material Event**"):
  - a. Shipper is in default, which default has not been remedied, of the Contract or is in default of any other material contract with Union or another party; or,
  - b. Shipper's corporate or debt rating falls below investment grade according to at least one nationally recognized rating agency; or,
  - c. Shipper ceases to be rated by a nationally recognized agency; or,
  - d. Shipper has exceeded credit available as determined by Union from time to time,

then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). The Security plus the Initial Financial Assurances shall not exceed twelve (12) months of Monthly demand charges (in accordance with Article IX herein) multiplied by Contract Demand. In the event that Shipper does not provide to Union such Security within such fourteen (14) day period, Union may deem a default under the Default and Termination provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

**XX. MISCELLANEOUS PROVISIONS**

1. Permanent Assignment: Shipper may assign the Contract to a third party ("Assignee"), up to the Contract Demand, (the "Capacity Assigned"). Such assignment shall require the prior written consent of Union and release of obligations by Union for the Capacity Assigned from the date of assignment. Such consent and release shall not be unreasonably withheld and shall be conditional upon the Assignee providing, amongst other things, financial assurances as per Article XXI herein. Any such assignment will be for the full rights, obligations and remaining term of the Contract as relates to the Capacity Assigned.
2. Temporary Assignment: Shipper may, upon notice to Union, assign all or a part of its service entitlement under the Contract (the "Assigned Quantity") and the corresponding rights and obligations to an Assignee on a temporary basis for not less than one calendar month. Such assignment shall not be unreasonably withheld and shall be conditional upon the Assignee executing the Facilitating Agreement as per Article XXI herein. Notwithstanding such assignment, Shipper shall remain obligated to Union to perform and observe the covenants and obligations contained herein in regard to the Assigned Quantity to the extent that Assignee fails to do so.

3. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

## **XXI. PRECONDITIONS TO TRANSPORTATION SERVICES**

1. Union Conditions: The obligations of Union to provide Transportation Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Transportation Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the transportation Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union.
2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of ~~Shipper~~ and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Transportation Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and shall, as required, have entered into the necessary contracts to purchase the gas quantities handled under the Contract; and,
  - b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,
  - c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract.
3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, and d and Section 2 a and b. Each party shall notify the other forthwith in writing ~~of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able~~ to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the ~~Contract~~ and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall ~~be released from all further obligations thereunder.~~
- ~~4.~~ 4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, then either party may, ~~upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of~~ no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any ~~rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.~~

**RATE M12  
NOMINATIONS**

1. For Transportation Services required on any Day under the Contract, Shipper shall provide Union with ~~a nomination(s) providing the Shipper's requested Receipt Point(s), contract numbers, the applicable service, the quantity of Gas to be transported, the requested details regarding the quantity of Gas it desires to be handled at the applicable Receipt Point(s) and/or~~ Delivery Point(s), and such additional information as Union determines to be necessary (a "Nomination").
2. All Nominations shall be submitted by electronic means via *Unionline*. Union, in its sole discretion, may amend or modify the nominating procedures or *Unionline* at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all ~~N~~ominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in *Unionline*.  
~~2. All times referred to herein are Eastern Clock Time. For greater certainty, NAESB nomination cycle timelines are as follows:~~
  - ~~a. The Timely Nomination Cycle: 12:45 pm for Nominations leaving control of the nominating party; 3:30 pm for receipt of Quantities Available by Shipper; 4:30 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 5:30 pm for receipt of Scheduled Quantities by Shipper (Day prior to flow).~~
  - ~~b. The Evening Nomination Cycle: 7:00 pm for Nominations leaving control of the nominating party; 9:00 pm for receipt of Quantities Available by Shipper; 10:00 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 11:00 pm for receipt of Scheduled Quantities by Shipper (Day prior to flow).~~
  - ~~c. The Intra-day 1 Nomination Cycle: 11:00 am for Nominations leaving control of the nominating party; 1:00 pm for receipt of Quantities Available by Shipper; 2:00 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 3:00 pm for receipt of Scheduled Quantities Available by Shipper, on Day. Quantities Available resulting from Intra-day 1 Nominations should be effective at 6:00 pm on same Day.~~

~~The Intra-day 2 Nomination Cycle: 6:00 pm for Nominations leaving control of the nominating party; 8:00 pm for receipt of Quantities Available by Shipper; 9:00 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 10:00 pm for receipt of Scheduled Quantities by Shipper on Day. Quantities Available resulting from Intra-day 2 Nominations should be effective at 10:00 pm on same Day.~~
3. Union shall determine whether or not all or any portion of the Nomination will be scheduled at each nomination cycle. With respect to each nomination cycle, in the event Union determines that it will not schedule such Nomination, Union shall advise Shipper of the reduced quantity (the "**Quantities Available**") for Transportation Services at the applicable points as outlined in each nomination cycle. After receiving such advice from Union, but no later than one half hour after the Quantities Available deadline as outlined in each nomination cycle, Shipper shall provide a revised nomination ("**Revised Nomination**") to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantities Available, then the Revised Nomination shall be deemed to be the Quantities Available. If the Revised Nomination (delivered with the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
4. For Shippers electing firm all day transportation service, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.

## SCHEDULE "B 2010"

5. For Transportation Services requiring Shipper to provide compressor fuel in kind, the nominated fuel requirements will be calculated by rounding to the nearest whole GJ.
6. All Timely Nominations shall have rollover options. Specifically, Shippers shall have the ability to nominate for several days, months or years, provided the Nomination start date and end date are both within the term of the Transportation Agreement.
7. Nominations received after the nomination deadline shall, if accepted by Union, be scheduled after Nominations received before the nomination deadline.
8. All Services are required to be nominated in whole Gigajoules (GJ).
9. -To the extent Union is unable to complete a Nomination confirmation due to inaccurate, untimely or incomplete data involving an Interconnecting Pipeline entity, Union shall undertake reasonable efforts to confirm the transaction on a non-discriminatory basis until such time that the transaction is adequately verified by the parties, or until such time that Union determines that the Nomination is invalid at which time the Union shall reject the Nomination.
10. That portion of a Shipper's Nomination or Revised Nomination, as set out in paragraphs 1 and 3 above, which Union shall schedule for Transportation Services hereunder, shall be known as Shipper's **"Authorized Quantity"**.
11. If on any day the actual quantities handled by Union, for each of the Transportation Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Transportation Services exceed Shipper's Authorized Quantity shall be deemed **"Unauthorized Overrun"**.
12. The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20<sup>th</sup>) of the quantity received for that day. Union shall have the right to limit Transportation Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20<sup>th</sup>) of the quantity handled for that day, for each applicable Transportation Service.
13. The parties hereto recognize that with respect to Transportation Services, on any day, receipts of gas by Union and deliveries of gas by Union may not always be exactly equal, but each party shall cooperate with the other in order to balance as nearly as possible the quantities transacted on a daily basis, and any imbalances arising shall be allocated to the Facilitating Agreement and shall be subject to the respective terms and charges contained therein, and shall be resolved in a timely manner.
14. Shipper may designate via Unionline access request form, a third party as agent for purposes of providing a Nomination, and for giving and receiving notices related to Nominations, and Union shall only accept nominations from the agent. ~~Shipper shall provide Union with written notice of such designation, such notice to be acceptable to Union.~~ Any such designation, if acceptable to Union, shall be effective ~~starting the Month~~ following the receipt and processing of the written notice and will remain in effect until revoked in writing by Shipper.

**RATE M12  
NOMINATIONS**

a) For Services provided either under this rate schedule or referenced to this rate schedule:

i) For Services required on any day Shipper shall provide Union with ~~a nomination (the "Shipper's Nomination") of details regarding~~ the quantity it desires to be handled at the applicable Receipt Point(s) and/or Delivery Point(s), and such additional information as Union determines to be necessary (a "Nomination"). ~~Such Shipper's Nomination is to be provided in writing so as to be received by Union's Gas Management Services on or before 1230 hours in the Eastern time zone, unless agreed to otherwise in writing by the parties, on the business day immediately preceding the day for which service is requested.~~

ii) ~~All Nominations shall be submitted by electronic means via Unionline. Union, in its sole discretion, may amend or modify the nominating procedures or Unionline at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all Nominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in Unionline. If, in Union's sole opinion, operating conditions permit, a change in Shipper's Nomination may be accepted after 1230 hours in the Eastern time zone.~~

iii) For customers electing firm all day transportation service, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.

b) Union shall determine whether or not all or any portion of ~~Shipper's the~~ Nomination will be accepted. In the event Union determines that it will not accept such ~~N~~omination, Union shall advise Shipper, ~~on or before 1730 hours in the Eastern time zone on the business day immediately preceding the day for which service is requested,~~ of the reduced quantity (the "Quantity Available") for Services at the applicable points ~~as outlined in each nomination cycle.~~ ~~Forthwith a~~ After receiving such advice from Union but no later than ~~1800 hours in the Eastern time zone on the same day one half hour after the Quantities Available deadline as outlined in each nomination cycle,~~ Shipper shall provide a "Revised Nomination" to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantity Available, then the Revised Nomination shall be deemed to be the Quantity Available. If the Revised Nomination (delivered within the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.

c) That portion of a Shipper's Nomination or Revised Nomination, as set out in (a) and (b), above, which Union shall accept for Services hereunder, shall be known as Shipper's "Authorized Quantity".

d) If on any day the actual quantities handled by Union, for each of the Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Services exceed Shipper's Authorized Quantity, such excess shall be deemed "Unauthorized Overrun".

e) The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20) of the quantity received for that day. Union shall have the right to limit Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20) of the quantity handled for that day, for each applicable Service.

f) A nomination for a daily quantity of gas on any day shall remain in effect and apply to subsequent days unless and until Union receives a new nomination from Shipper or unless Union gives Shipper written notice that it is not acceptable in accordance with either (a) or (b) of this schedule.

g) Except for periods of gas or quantity balancing as provided in the Contract, nominations by Shipper for deliveries to Union and redeliveries by Union shall be the same delivery of gas by Union either to Shipper or a Shipper's Account with Union.

**RATE M13  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Aid to Construction"** shall include any and all costs, expenses, amounts, damages, obligations, or other liabilities (whether of a capital or operating nature, and whether incurred before or after the date of the Contract) actually paid by Union (including amounts paid to affiliates for services rendered in accordance with the Affiliate Relationships Code as established by the OEB) in connection with or in respect of satisfying the conditions precedent set out in Article XXI herein (including without limitation the cost of construction, installation and connection of any required meter station as described in Article IX, Section 6, the obtaining of all governmental, regulatory and other third party approvals, and the obtaining of rights of way) whether resulting from Union's negligence or not, except for any costs that have arisen from the gross negligence, fraud, or wilful misconduct of Union;

**"Average Local Producer Heat" ("ALPH")** shall mean the heat content value as set by Union, and shall be determined by volumetrically averaging the gross heat content of all produced gas delivered to the Union system by Ontario Local Producers. The ALPH shall be expressed in GJ/10<sup>3</sup>m<sup>3</sup> and may be adjusted from time to time by Union;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days; provided however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days, commencing on November 1 of each year; except for the first Contract Year which shall commence on the Commencement Date and end on the first October 31 that follows such date;

**"cricondenthem hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Dawn Quantity"** shall mean the total daily quantity of gas in GJ delivered at Dawn (Facilities), which is equal to the total energy of all gas supplied daily to Union at the Receipt Point(s). The Dawn Quantity shall be calculated utilizing the following factor equation: Dawn Quantity = Produced Volume x ALPH;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"Delivery Point"** shall mean the point where Union shall deliver the Dawn Quantity and/or Market Quantity to Shipper and as further defined in Schedule 1 of the Contract;

**"Distribution Demand"** shall mean the varying demand for the supply of gas, as determined by Union, on Union's pipeline and distribution system for users of gas who are supplied or delivered gas by Union's pipeline and distribution system;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"Firm Daily Variability Demand"** shall mean the established quantity set forth in Schedule 2 of the Contract, which is the permitted difference between the Dawn Quantity and the Market Quantity;

"gas" shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;

"gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

"hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

"Interruptible Service HUB Contract" shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

"Interconnecting Pipeline" shall mean a pipeline that directly connects to the Union pipeline and distribution system;

"joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;

"m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;

"MAOP" shall mean the maximum allowable operating pressure of Union's pipeline and distribution system and as further defined in Schedule 1 of the Contract;

"Market Quantity" shall mean the daily quantity in GJ nominated for Name Change Service that Day by Shipper at Dawn (Facilities);

"Maximum Daily Quantity" shall mean the maximum quantity of gas Shipper may deliver to Union at a Receipt Point on any Day, as further defined in Schedule 1;

"Month" shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

"Name Change Service" shall mean an interruptible administrative service whereby Union acknowledges for Shipper a change in title of a gas quantity from Shipper to a third party at the Delivery Point;

"OEB" means the Ontario Energy Board;

"pascal" "(Pa)" shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" "(kPa)" shall mean 1,000 pascals;

"Produced Volume" shall mean the aggregate of all actual volumes of gas in 10<sup>3</sup>m<sup>3</sup>, delivered by Shipper to Union at all Receipt Points on any Day;

"Producer Balancing Account" shall mean the gas balance held by Union for Shipper, or owed by Shipper to Union, at the Delivery Point. Where the Producer Balancing Account is zero or a positive number, the account is in a credit position, and where the Producer Balancing Account is less than zero, the account is in a debit position;

"Producer Balancing Service" shall mean a Service whereby Union either calculates a credit or debit to the Producer Balancing Account by subtracting the Market Quantity from the Dawn Quantity. Where such amount is greater than zero, Union will credit the Producer Balancing Account, or where such amount is less than zero, Union will debit the Producer Balancing Account. This Service shall be performed on a retroactive basis on the terms and conditions contained in Schedule 2 of the Contract, as may be revised from time to time by Union;

"Receipt Point" shall mean the point(s) where Union shall receive gas from Shipper;

"Sales Agreement" shall mean the Ontario Gas Purchase Agreement(s) entered into between Shipper and Union;

"Shipper" shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

"specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

"System Capacity" shall mean the volumetric capacity that exists from time to time within Union's pipeline and distribution system which determines Union's ability to accept volumes of gas into Union's pipeline and distribution system hereunder. System Capacity shall be determined by Union and such determination, in addition to the physical characteristics of Union's pipeline and distribution system Distribution Demand, shall also include consideration of Union's local Distribution Demand, Union's total system Distribution Demand, availability of Union's gas storage capacity, and other gas being purchased and/or delivered into Union's pipeline and distribution system;

"Taxes" shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

"Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenthem hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of

butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,

- k. shall not exceed forty-three degrees Celsius (43°C), and,
- l. shall not be odourized by Shipper.

3. **Non-conforming Gas:**

- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
- b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.

4. **Quality of Gas Received:** The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will use reasonable efforts to accept gas of a quality that may deviate from the quality standards set out therein.

5. **Quality of Gas at Dawn:** The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.

**III. MEASUREMENTS**

- 1. **Service Unit:** The unit of the gas delivered to Union shall be a quantity of 10<sup>3</sup>m<sup>3</sup>. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
- 2. **Determination of Volume and Energy:**
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "**Manual for Determination of Supercompressibility Factors for Natural Gas**" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.

**IV. RECEIPT POINT AND DELIVERY POINT**

The point(s) of receipt and point of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in Schedule 1 of the Contract, where possession of the gas changes from one party to the other.

**V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

- | 1. **Possession of Gas:** Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
- | 2. **Liability:** Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

**VI. FACILITIES ON SHIPPER'S PROPERTY**

- | 1. **Meter Station:** Union shall provide, at the Receipt Point(s), according to the terms hereunder, the meter station required to receive and measure the Produced Volume of gas received by Union from Shipper. Shipper agrees, if requested by Union, to provide Union with sufficient detailed information regarding Shipper's current and expected operations in order to aid Union in Union's design of the meter station.
- | 2. **Union Obligations:** Pursuant to Article VI. Section 1 herein, Union shall purchase, install and maintain, at the Receipt Point(s):
  - a. a meter and any associated recording gauges as are necessary; and,
  - b. a suitable gas odourizing injection facility where Union deems such facility to be necessary.
- | 3. **Union Equipment:** All equipment installed by Union at the Receipt Point(s) shall remain the property of Union at all times, notwithstanding the fact that it may be affixed to Shipper's property. Union shall be entitled to remove said equipment at any time within a period of sixty (60) days from any termination or expiry of the Contract. Shipper shall take all necessary steps to ensure Union may enter onto the Receipt Point(s) to remove such equipment for a period of sixty (60) days after termination or expiry of the Contract or the Sales Agreement.
- | 4. **Shipper Obligations:** Upon Union's request Shipper shall, at Shipper's own cost and expense:
  - a. obtain a registered lease or freehold ownership at the Receipt Point(s) sufficient to provide Union with free uninterrupted access to, from, under and above the Receipt Point(s), for a term (and extended terms) identical to the Contract, plus sixty (60) days, and shall provide Union with a bona fide copy of such lease agreement prior to Union commencing the construction of the meter station;
  - b. furnish, install, set, and maintain suitable pressure and volume control equipment and such additional equipment as required on Shipper's delivery system, to protect against the overpressuring of Union's facilities, and to limit the daily flow of gas to the corresponding Maximum Daily Quantity applicable to the Receipt Point(s);
  - c. supply, install and maintain a gravel or cut stone covering on each Receipt Point and shall maintain such Receipt Point(s) in a safe and workmanlike manner; and,
  - d. install and maintain a fence satisfactory to Union around the perimeter of each Receipt Point which will adequately secure and protect Union's equipment therein.
- | 5. **Maintenance Costs:** Shipper shall within thirty (30) days of the delivery of an invoice by Union, reimburse Union for any actual costs reasonably incurred by Union for any repair, replacement, relocation, or upgrading of any meter station requested by Shipper, or as required by law, or by duly constituted regulatory body, or through good engineering

practice. Union shall be responsible for any costs incurred by Union to correct an error made by Union.

**VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas received or delivered hereunder is measured by a meter that is owned and operated by an upstream or downstream transporter (the "Transporter") whose facilities may or may not interconnect with Union's, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas received or delivered on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union pursuant to this Article VII, Section 2 shall be in accordance with the general terms and conditions as incorporated in that Transporter's gas tariff as approved by Transporter's regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Receipt Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Receipt Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
5. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.

**VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled in any of the Services to Shipper, the parties shall have the right to amend their statement for a period equal to the time during which the companies, that transport the gas contemplated herein for Union and Shipper, retain the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.
4. Taxes: In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.
5. Set Off: If either party shall, at any time, be in arrears under any of its payment obligations to the other party under the Contract, then the party not in arrears shall be entitled to reduce the amount payable by it to the other party in arrears under the Contract, or any other contract, by an amount equal to the amount of such arrears or other indebtedness to the other party. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.
6. Station and Connection Costs: In the event that a meter station must be constructed and/or installed in order to give effect to ~~this~~ the Contract, Shipper agrees to pay Union for a portion, as determined by Union, of Union's actual cost, as hereinafter defined, for constructing and installing such station. Shipper also agrees to pay the actual costs to connect such station to Union's pipeline and distribution system. Union shall advise Shipper as to the need for a meter station and shall provide Shipper with an estimate of the Aid to Construction. Such Aid to Construction shall include the costs of all pipe, fittings and materials, third party labour costs and Union's direct labour, labour saving devices, vehicles and

mobile equipment, but shall exclude the purchase costs of gas pressure control equipment and gas meters installed by Union.

**X. ARBITRATION**

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

**XI. FORCE MAJEURE**

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to

by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.

8. Firm Daily Variability Demand Charge Relief: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the Firm Daily Variability Demand for that Contract, then for that Day the Monthly charge shall be reduced by an amount equal to the applicable Firm Daily Variability Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Firm Daily Variability Demand Rate**" shall mean the monthly Firm Daily Variability Demand charge as provided in Schedule 2 of the Contract, divided by the number of days in the month for which such rate is being calculated.

## **XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

In the event that ~~this~~the Contract is terminated pursuant to this Article XII, the parties hereto agree that they shall continue to be bound only by the terms and conditions set forth in the Contract but only for the purpose of determining the actual quantities in Shipper's Producer Balancing Account with such determination being subject to Article X. Such extended period of time shall not exceed one (1) year from the date of termination of ~~this~~the Contract.

## **XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

## **XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

## **XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. RESERVED FOR FUTURE USE**

N/A

**XVII. RENEWALS**

The Contract will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter, subject to notice in writing by either party of termination at least three (3) months prior to the expiration thereof.

**XVIII. SERVICE CURTAILMENT**

1. Verbal Notice: Excepting instances of emergency, Shipper and Union agree to give at least twenty-four (24) hours verbal notice before a planned curtailment of receipt or delivery, shut-down or start-up.
2. Emergency: Shipper shall complete and maintain a plan which depicts all of the Shipper's gas production facilities including all emergency shut off valves and emergency equipment and provide a copy to Union upon Union's request. Shipper shall provide to Union the names and telephone numbers of those persons whom Union may contact in the event of an emergency situation arising within the Shipper's facilities.
3. Emergency Notice: In the event that Union is notified by a third party or if Union becomes aware of an emergency situation in which Shipper's gas production site, pipeline or associated equipment is involved, Union shall immediately notify Shipper or Shipper's representative of such emergency condition.
4. Right to Modify: Union shall have the right, at all times, to reconstruct or modify Union's pipeline and distribution system and the pressure carried therein, notwithstanding that such reconstruction or modification may reduce the System Capacity available to receive Shipper's gas, or Shipper's ability to deliver gas to Union. Should Union expect any such reconstruction or modification to reduce the delivery or receipt of gas by either party, Union will, where able, provide Shipper with six (6) months' notice or as much notice as is reasonably practical in the circumstances. Union shall use reasonable efforts to assist the Shipper in meeting its Market Quantity in these circumstances.

**XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security), if any, shall remain in place throughout the term hereof unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances (including the Initial Financial Assurances and Security), if any, throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract for any reason (a "**Material Event**"), then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). In the event that Shipper does not provide to Union such Security, Union may deem a default in accordance with the provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

3. Licence: Shipper represents and warrants to Union that Shipper possesses a licence to produce gas in the Province of Ontario.

XX. MISCELLANEOUS PROVISIONS

1. Assignment: Shipper may assign the Contract to a third party ("**Assignee**"), up to the Maximum Daily Quantity, (the "**Capacity Assigned**"). Such assignment shall require the prior written consent of Union and release of obligations by Union for the Capacity Assigned from the date of assignment. Such consent and release shall not be unreasonably withheld and shall be conditional upon the Assignee providing, amongst other things, financial assurances as per Article XXI herein. Any such assignment will be for the full rights, obligations and remaining term of the Contract as relates to the Capacity Assigned.
2. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

XXI. PRECONDITIONS TO SERVICES

1. Union Conditions: The obligations of Union to provide Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union; and,
  - e. Union shall, where applicable, have obtained all internal and external approvals including the governmental, regulatory and other approvals or authorizations required to construct any facilities necessary to provide the Services hereunder, which approvals and authorizations, if granted upon conditions, shall be conditions satisfactory to Union; and,
  - f. Union shall, where applicable, have completed and placed into service those facilities necessary to provide the Services hereunder; and,
  - g. Further to Article IX Section 6 herein, Shipper shall pay to Union a payment ("**First Prepayment**") towards the Aid to Construction at the time of the execution of this Agreement. Shipper shall pay a payment prior to installation of the meter station ("**Second Prepayment**"). The foregoing payments are specified in the attached Schedule 1 for the first meter station ("**Receipt Point #1**") to be installed under ~~this contract~~ the Contract. Payments for additional meter stations will be handled by written mutual agreement between the parties. Shipper shall pay Union the difference if the actual Aid to Construction is more than the Prepayments, within thirty (30) days of the delivery of an invoice from Union on which the actual costs for construction and installation of facilities are stated. Union shall pay Shipper the difference if the actual Aid to Construction is less than the Prepayments. In the event Shipper terminates this Agreement prior to Union incurring any costs related to the construction, installation or connection of the meter station, Shipper's Prepayments shall be returned to Seller, without interest, within fifteen (15) days notice to Union of such termination by Shipper. In the event Union has incurred costs, as set out herein, relative to the construction, installation or connection of the meter station prior to being notified by Shipper of Shipper's intention to terminate the Agreement, Union shall deduct such actual costs from Union's return of Shipper's Prepayments. "**Prepayments**" shall mean the sum of the First Prepayment and the Second

Prepayment.

- | 2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of Shipper and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and,
  - b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,
  - c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract; and,
  - d. Shipper shall have cancelled or renegotiated its Sales Agreement, on terms satisfactory to Union, as applicable.
- | 3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, d, e, f, g, and Section 2 a, b, and d. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.
- | 4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, or if any of the Shipper payments required under the condition precedent in this Article XXI Section 1 g have not been paid as required in such section, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.

**RATE M16  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Aid to Construction"** shall include any and all costs, expenses, amounts, damages, obligations, or other liabilities (whether of a capital or operating nature, and whether incurred before or after the date of the Contract) actually paid by Union (including amounts paid to affiliates for services rendered in accordance with the Affiliate Relationships Code as established by the OEB) in connection with or in respect of satisfying the conditions precedent set out in Article XXI herein (including without limitation the construction and placing into service of the Union Expansion Facilities, the obtaining of all governmental, regulatory and other third party approvals, and the obtaining of rights of way) whether resulting from Union's negligence or not, except for any costs that have arisen from the gross negligence, fraud, or wilful misconduct of Union;

**"Authorized Overrun"** shall mean the amount by which Shipper's Authorized Quantity exceeds the firm and interruptible contract demands;

**"Authorized Quantity"** shall have the meaning given thereto in Schedule "B 2010" of the C1 Rate Schedule;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days, beginning on the Commencement Date or on any anniversary of such date; provided, however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days;

**"cricondentherm hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Custody Transfer Point"** That point on the piping system at the Pool Station which is at the Shipper side of the insulating flange on the Union Expansion Facilities, and which point shall serve as the point of custody transfer;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"Dehydration Contract"** shall mean the contract for Dehydration Service between Union and the Shipper as detailed in Schedule 1 of the Contract;

**"Delivery Point"** shall mean the point(s) where Union shall deliver gas to Shipper as defined in Schedule 1 of the Contract;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

"gas" shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Sch. B, as amended, supplemented or re-enacted from time to time;

"gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

"hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

"Interconnecting Pipeline" shall mean a pipeline that directly connects to the Union pipeline system;

"Interruptible Service HUB Contract" shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

"interruptible" shall mean service subject to curtailment or interruption, after notice, at any time;

"joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;

"m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;

"Month" shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

"OEB" means the Ontario Energy Board;

"pascal" "(Pa)" shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" "(kPa)" shall mean 1,000 pascals;

"Pool Quantity" shall mean the actual daily quantity of gas delivered to or received from Shipper at the Custody Transfer Point;

"Pool Station" shall mean the physical location of Union's measurement and control facilities to the pool; the pool name as detailed in Schedule 1 of the Contract;

"Receipt Point" shall mean any one of the points where Union shall receive gas from Shipper as detailed in Schedule 1 of the Contract;

"Shipper" shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

"Shipper Quantity" shall, on any Day, be equal to the greater of: (i) the Authorized Quantity for that Day; and (ii) the nomination duly made by Shipper in good faith prior to the nomination deadline for the first nomination window applicable for that Day; provided that in no event shall the Shipper Quantity exceed the firm contract demand;

"specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

"Taxes" shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

"TCPL" means TransCanada PipeLines Limited;

"**Union Expansion Facilities**" shall mean any facilities necessary for Union to provide the Services, including without limiting the generality of the foregoing:

- a. a meter and any associated recording gauges as are necessary;
- b. pressure and/or flow control devices, over pressure protection and telemetry equipment as are necessary;
- c. a suitable gas odourizing injection facility if Union deems such a facility to be necessary
- d. piping, fittings, material, filtration facilities, cathodic protection and insulating flanges;
- e. gas chromatograph, moisture analyzer, piping, fittings, material, filtration facilities, cathodic protection and insulating flanges;

"**Wobbe Number**" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## II. GAS QUALITY

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondenthem hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one

point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,

k. shall not exceed forty-three degrees Celsius (43°C), and,

l. shall not be odourized by Shipper.

3. Non-conforming Gas:

- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
- b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.
- c. With respect to Article II 2. h. herein, Union may accept the gas subject to Shipper's obligations under the Dehydration Contract, if applicable.

4. Quality of Gas Received: The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II.

5. Quality of Gas at Dawn: The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.

6. Odourization of Gas:

- a. Union may odourize or deliver odourized gas under the Contract,
- b. Shipper shall if requested by Union monitor the mercaptan sulphur content of the gas delivered to Union under the Contract and shall provide at no cost to Union a continuous signal quantifying the mercaptan sulphur content in milligrams per cubic metre.

III. MEASUREMENTS

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.

2. Determination of Volume and Energy:

- a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "Act") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "Regulations"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.

- b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
- c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
- d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

**IV. RECEIPT POINT AND DELIVERY POINT**

The point or points of receipt and point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in Schedule 1 of the Contract, where possession of the gas changes from one party to the other.

**V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

- 1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
- 2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

**VI. FACILITIES ON SHIPPER'S PROPERTY**

- 1. Union Equipment: All of the Union Expansion Facilities shall remain the property of Union. Union shall be entitled to remove said equipment at any time within a period of sixty (60) days from any termination or expiry of the Contract. Shipper shall take all necessary steps to ensure Union may enter the Pool Station to remove such equipment for a period of sixty (60) days after termination or expiry of the Contract.
- 2. Shipper Obligations: Shipper shall, at Shipper's own cost and expense:
  - a. obtain the Pool Station Land Rights; and
  - b. furnish, install, set, and maintain suitable pressure and quantity control equipment and such additional equipment as required on Shipper's delivery system, to protect against the over pressuring of Union's facilities as set out in Article VI of the Contract and Schedule 1 of the Contract, protect Union from receiving gas not meeting the quality specification as set out in Article II herein, and to limit the daily flow of gas to the corresponding parameters as set out in the Article II of the Contract.
- 3. Maintenance Costs: Shipper shall within thirty (30) days of the delivery of an invoice by Union, reimburse Union for any actual costs reasonably incurred by Union for any repair, replacement, relocation, or upgrading of any meter station or any Union Expansion Facilities requested by Shipper, or as required by law or by duly constituted regulatory body, or through good engineering practice. Union shall be responsible for any costs incurred by Union to correct an error made by Union.

4. Operation and Maintenance: Subject to this Article VI Section 3, each party shall be fully responsible for the continued operation, maintenance, repair and replacement of its respective facilities. Both parties agree to maintain cathodic protection on their respective facilities.
5. Inspection: Each party shall inspect its facilities as required by industry standards or by the appropriate regulatory body.
6. Repair or Replacement: Each party shall decide, in its sole discretion, whether its facilities need to be repaired or replaced. In the event that repair or replacement is needed, the party undertaking such work will, to the extent possible, give the other party sixty (60) days' notice and will ensure that the work be done in a manner so as to minimize the amount of time the pipeline has restricted flows.

## **VII. MEASURING EQUIPMENT**

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Custody Transfer Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Custody Transfer Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.

7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

**VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled under the Contract, Union shall have the right to amend its statements for a period equal to the time during which the Interconnecting Pipeline retains the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such

overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.

4. Taxes: In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.
5. Set Off: If Shipper shall, at any time, be in arrears under any of its payment obligations to Union under the Contract, then Union shall be entitled to reduce the amount payable by Union to Shipper under the Contract or any other contract by an amount equal to the amount of such arrears or other indebtedness to Union. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.
6. Aid to Construction: Shipper agrees to reimburse Union for the Aid to Construction.

In the event Union has incurred costs, as set out herein, relative to the construction, installation or connection of the gas metering station prior to being notified by Shipper of Shipper's intention to terminate the Contract, Shipper shall promptly remit to Union such actual costs on presentation to Shipper of an invoice for same from Union.

All applicable Taxes will be applied to all amounts to be paid under this Section. Shipper warrants and represents that no payment to be made by Shipper under the Contract is subject to any withholding tax.

## X. ARBITRATION

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

## XI. FORCE MAJEURE

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and

any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

- | 2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
- | 3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
- | 4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.
- | 5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm contract demand for the Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the C1 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
- | 9. Unforeseen Reduction: In addition to the definition of force majeure in Article XI, Section 1 herein, for the purposes of the Contract, it shall also include the unforeseen reduction in natural gas usage and/or capacity of the local transmission system as described in Schedule 1 of the Contract, regardless of the duration of such unforeseen reduction, or any other cause, whether of the kind herein enumerated or otherwise, not within the reasonable control of the party claiming relief hereunder and which, by the exercise of due diligence, such party is unable to prevent or overcome.

## XII. DEFAULT AND TERMINATION

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make

delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

**XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

**XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. RESERVED FOR FUTURE USE**

N/A

**XVII. RENEWALS**

The Contract will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter. Shipper or Union may reduce the contract demands or terminate the Contract, with notice in writing to the other party, at least two (2) years prior to the expiration thereof.

**XVIII. SERVICE CURTAILMENT**

1. Capacity Sharing: Where requests for interruptible service hereunder exceed the capacity available for such Service, Union will authorize nominations from shippers and allocate capacity as per Union's procedures and policies and shippers shall be so advised. Any interruptible service provided herein are subordinate to any and all firm service supplied by Union, and subordinate to Union's own operational or system requirements.
2. Capacity Procedures: Union reserves the right to change its procedures and policies for sharing interruptible capacity and will provide Shipper with two (2) months' notice of any such change.

3. Maintenance: Union's facilities from time to time may require maintenance or construction. In the event that such event occurs and in Union's sole opinion, acting reasonably, may impact its ability to meet Shipper's requirements, Union shall provide at least ten (10) days' notice to the Shipper, except in the case of emergencies. In the event the maintenance impacts Union's ability to meet Shipper's requirements, Union shall not be liable for any damages and shall not be deemed to be in breach of the Contract. To the extent that Union's ability to receive or deliver gas is impaired, Demand Charge Relief shall be calculated and credited to Shipper's invoice in accordance with Article XI, Section 8 herein. Union shall use reasonable efforts to determine a mutually acceptable period during which such maintenance or construction will occur and also to limit the extent and duration of any impairments. Union will endeavour to schedule and complete the maintenance and construction, that can be scheduled and completed, and which would normally be expected to impact on Union's ability to meet its obligations of any Contract Year, during the period from April 1 through to October 31.
4. Shipper's Facilities: Shipper shall complete and maintain a plan which depicts all of Shipper's production storage facilities including all emergency shut off valves and emergency equipment and provide a copy to Union upon Union's request. Shipper shall provide to Union the names and telephone numbers of those persons whom Union may contact in the event of an emergency situation arising within the Shipper's facilities.

**XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security), if any, shall remain in place throughout the term hereof unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances (including the Initial Financial Assurances and Security), if any, throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract for any reason (a "Material Event"), then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "Security"). In the event that Shipper does not provide to Union such Security, Union may deem a default in accordance with the provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

3. Regulatory Approval License: Shipper represents and warrants to Union that Shipper possesses all licenses and permits needed to inject gas into, store gas in, and remove gas from the pool.

**XX. MISCELLANEOUS PROVISIONS**

1. Assignment: Shipper may not assign the Contract without the written consent of Union and, if required, the approval of the OEB. Should Union consent to the assignment, and if OEB approval is needed, Union will apply for OEB approval with all costs of the application to be paid by Shipper.
2. Title to Gas: Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

XXI. PRECONDITIONS TO TRANSPORTATION SERVICES

| 1. Union Conditions: The obligations of Union to provide Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:

- a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Services; and,
- b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the Services; and,
- c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
- d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union; and,
- e. Shipper shall have paid any amounts owing pursuant to Schedule 1 Aid to Construction; and,
- f. With regard to the Union Expansion Facilities:
  - i. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations required to construct the Union Expansion Facilities;
  - ii. Union shall have obtained all internal approvals that are necessary or appropriate to construct the Union Expansion Facilities;
  - iii. Union shall have completed and placed into service the Union Expansion Facilities; and,
- g. Shipper shall, at Shipper's own cost and expense, have obtained a registered lease or freehold ownership in Union's favour for the Union Expansion Facilities located at the Pool Station satisfactory to Union and sufficient to provide Union with free uninterrupted access to, from, under and above the Pool Station for a term (and extended terms) identical to the Contract, plus sixty (60) days (such land rights being referred to as the "**Pool Station Land Rights**"), and shall provide Union with a bona fide copy of such agreements prior to Union commencing the construction of the Union Expansion Facilities.

| 2. Shipper Conditions: The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of Shipper and which may be waived or extended in whole or in part in the manner provided in the Contract:

- a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and shall, as required, have entered into the necessary contracts to purchase the gas quantities handled under the Contract; and,
- b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,

- c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract.

3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, d, e, f i., f iii., and g and Section 2 a and b. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.

~~4.~~ 4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.

## SCHEDULE "A"

### **GENERAL TERMS & CONDITIONS M16 TRANSPORTATION AGREEMENT**

#### **I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

1. "Banking Day" shall mean a day on which the general offices of the Canadian Imperial Bank of Commerce, 99 King St. W., Chatham, Ontario are open for business;
2. "business day" shall mean a day on which the general offices of Union in Chatham, Ontario are open for business;
3. "Contract" shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;
4. "contract year" shall mean a period of three hundred and sixty-five (365) consecutive days, beginning on the day agreed upon by Union and Shipper as set forth in the Contract, or on any anniversary of such date; provided, however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days;
5. "day" shall mean a period of twenty-four (24) consecutive hours beginning at 9:00 a.m. Central Standard time. The reference date for any day shall be the calendar date upon which the twenty-four (24) hour period shall commence;
6. "month" shall mean the period beginning at 9:00 a.m. Central Standard time on the first day of a calendar month and ending at 9:00 a.m. Central Standard time on the first day of the following calendar month;
7. "firm" shall mean service not subject to curtailment or interruption except under Articles XI and XII of this Schedule "B";
8. "interruptible service" shall mean service subject to curtailment or interruption, after notice, at any time;
9. "gas" shall mean gas as defined in the Ontario Energy Board Act, R.S.O. 1980, c. 332, as amended, supplemented or reenacted from time to time;
10. "cubic metre" shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;
11. "m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;
12. "pascal" (Pa) shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" (kPa) shall mean 1,000 pascals;
13. "joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;
14. "gross heating value" shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;
15. "Shipper" shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);
16. "subsidiary" means a company in which more than fifty (50) per cent of the issued share capital (having full voting

## SCHEDULE "A"

rights under all circumstances) is owned or controlled directly or indirectly by another company, by one or more subsidiaries of such other company, or by such other company and one or more of its subsidiaries;

17. "TCPL" means TransCanada PipeLines Limited;
18. "NOVA" means Gas Transmission Ltd.;
19. "Panhandle" means CMS Panhandle Eastern Pipeline Company;
20. "MichCon" means Michigan Consolidated Gas Company;
21. "SCPL" means St. Clair Pipelines (1996) Ltd.;
22. "OEB" means the Ontario Energy Board;
23. "NEB" means the National Energy Board (Canada);
24. "GLGT" means Great Lakes Gas Transmission Company;
25. "CMS" means CMS Gas Transmission and Storage Company;
26. "Consumers" means The Consumers' Gas Company, Limited;
27. "cricondenthm hydrocarbon dewpoint" shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;
28. "hydrocarbon dewpoint" shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;
29. "specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute; and,
30. "Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## II. GAS QUALITY

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.
2. Freedom from objectionable matter: The gas to be delivered to Union at the Receipt Point(s) hereunder,
  - a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than one hundred (100) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,

## SCHEDULE "A"

- d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondentherm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas,
  - k. shall not exceed forty-three degrees Celsius (43°C), and,
  - l. shall not be odourized by Shipper.
3. Non-conforming Gas:
- a. In the event that the quality of the gas does not conform or if Union, acting reasonably, suspects the quality of the gas may not conform to the specifications herein, then Shipper shall, if so directed by Union acting reasonably, forthwith carry out, at Shipper's cost, whatever field testing of the gas quality as may be required to ensure that the quality requirements set out herein are met, and to provide Union with a certified copy of such tests. If Shipper does not carry out such tests forthwith, Union may conduct such test and Shipper shall reimburse Union for all costs incurred by Union for such testing.
  - b. If Shipper's gas fails at any time to conform to the requirements of this Article II, Union, in addition to its other remedies, may refuse to accept delivery of gas at the Receipt Points hereunder until such deficiency has been remedied by Shipper. Each Party agrees to notify the other verbally, followed by written notification, of any such deficiency of quality.
  - c. With respect to Article II 2. h. herein, Union may accept the gas subject to Shipper's obligations under the Dehydration Contract, if applicable.
4. Quality of Gas Received: The quality of the gas to be received by Union at the Receipt Point(s) hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II.
5. Quality of Gas at Dawn: The quality of the gas to be delivered to Union at Dawn (Facilities) or the gas to be delivered by Union to Shipper at Dawn (Facilities) hereunder is to be of a merchantable quality and in accordance with the quality standards and measurement standards as set out by Union in this Article II, except that total sulphur limit shall be not more than four hundred and sixty (460) milligrams per cubic metre of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
6. Odourization of Gas:
- a. Union may odourize or deliver odourized gas under the Contract,
  - b. Shipper shall if requested by Union monitor the mercaptan sulphur content of the gas delivered to Union under the Contract and shall provide at no cost to Union a continuous signal quantifying the mercaptan sulphur content in milligrams per cubic metre.

## III. MEASUREMENTS

## SCHEDULE "A"

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
  - a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "**Act**") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "**Regulations**"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.
  - c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
  - d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

## IV. POINT OF RECEIPT AND POINT OF DELIVERY

1. Unless otherwise specified in the Contract, the point or points of receipt for all gas to be covered thereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where Union takes possession of the gas. Whenever the phrase "receipt point" appears herein, it shall mean Point of Receipt as defined in this Article IV.
2. Unless otherwise specified in the Contract, the point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection as specified in the Contract, where Shipper takes possession of the gas. Whenever the phrase "delivery point" shall appear hereon, it shall mean Point of Delivery as defined in this Article IV.

## V. POSSESSION OF AND RESPONSIBILITY FOR GAS

N/A

## VI. FACILITIES ON SHIPPER'S PROPERTY

N/A

## VII. MEASURING EQUIPMENT

1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.
2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of

## SCHEDULE "A"

measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.

3. Check Measuring Equipment: Shipper may install, maintain and operate, at the Custody Transfer Point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the Custody Transfer Point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

## VIII. BILLING

1. Monthly Billing Date: Union shall render bills on or before the 10th day of each month for all services furnished during the preceding month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding month's billing, an adjustment based on any difference between actual quantities and estimated quantities. If presentation of a bill to Shipper is delayed after the 10th day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.

## IX. PAYMENTS

## SCHEDULE "A"

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a business day, then payment must be received in Union's account on the first business day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due, Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract may suspend service(s) until such amount is paid, provided however, that if Shipper, in good faith shall dispute the amount of any such bill or part thereof and shall pay to Union such amounts as it concedes to be correct and at any time thereafter within twenty (20) days of a demand made by Union shall furnish good and sufficient surety bond satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination which may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case, then Union shall not be entitled to suspend service(s) because of such non-payment unless and until default be made in the conditions of such bond or in payment for any further service(s) to Shipper hereunder.

Notwithstanding the foregoing paragraph, this does not relieve Shipper from the obligation to continue its deliveries of gas under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "bill" next following shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within six (6) years from the date of the incorrect billing. In the event any refund is issued with Shipper's- bill, the aforesaid date of refund shall be deemed to be the date of the issue of invoice.

## X. ARBITRATION

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act of the Province of Ontario, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under ~~this~~the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

## XI. FORCE MAJEURE

N/A

## XII. DEFAULT AND TERMINATION

N/A

XIII. MODIFICATION

N/A

XIV. NONWAIVER AND FUTURE DEFAULT

N/A

XV. LAWS, REGULATIONS AND ORDERS

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**RATE C1  
GENERAL TERMS & CONDITIONS**

**I. DEFINITIONS**

Except where the context expressly requires or states another meaning, the following terms, when used in these General Terms & Conditions and in any contract into which these General Terms & Conditions are incorporated, shall be construed to have the following meanings:

**"Authorized Overrun"** shall mean the amount by which Shipper's Authorized Quantity exceeds the Contract Demand;

**"Available Capacity"** shall mean at any time, Union's remaining available capacity to provide Transportation Services;

**"Business Day"** shall mean any day, other than Saturday, Sunday or any days on which national banks in the Province of Ontario are authorized to close;

**"Contract"** shall refer to the Contract to which these General Terms & Conditions shall apply, and into which they are incorporated;

**"Contract Year"** shall mean a period of three hundred and sixty-five (365) consecutive days; provided however, that any such period which contains a date of February 29 shall consist of three hundred and sixty-six (366) consecutive days, commencing on November 1 of each year; except for the first Contract Year which shall commence on the Commencement Date and end on the first October 31 that follows such date;

**"cricondenthm hydrocarbon dewpoint"** shall mean the highest hydrocarbon dewpoint temperature on the phase envelope;

**"cubic metre"** shall mean the volume of gas which occupies one cubic metre when such gas is at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

**"Day"** shall mean a period of twenty-four (24) consecutive hours beginning at 10:00 a.m. Eastern Clock Time. The reference date for any Day shall be the calendar date upon which the twenty-four (24) hour period shall commence;

**"delivery"** shall mean any gas that is delivered by Union into Shipper's possession, or to the possession of Shipper's agent;

**"Eastern Clock Time"** shall mean the local clock time in the Eastern Time Zone on any Day;

**"Expansion Facilities"** shall mean any new facilities to be constructed by Union in order to provide Transportation Services;

**"firm"** shall mean service not subject to curtailment or interruption except under Articles XI, XII and XVIII herein;

**"gas"** shall mean gas as defined in the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Sch. B, as amended, supplemented or re-enacted from time to time;

**"gross heating value"** shall mean the total heat expressed in megajoules per cubic metre (MJ/m<sup>3</sup>) produced by the complete combustion at constant pressure of one (1) cubic metre of gas with air, with the gas free of water vapour and the temperature of the gas, air and products of combustion at standard temperature and all water formed by the combustion reaction condensed to the liquid state;

**"hydrocarbon dewpoint"** shall mean temperature at a specific pressure where hydrocarbon vapour condensation begins;

**"Interruptible Service HUB Contract"** shall mean a contract between Shipper and Union under which Union provides interruptible HUB service;

"interruptible service" or "Interruptible" shall mean service subject to curtailment or interruption, after notice, at any time;

"Interconnecting Pipeline" shall mean a pipeline that directly connects to the Union pipeline system;

"joule" (J) shall mean the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force. The term "megajoule" (MJ) shall mean 1,000,000 joules. The term "gigajoule" (GJ) shall mean 1,000,000,000 joules;

"Limited Firm" shall mean gas service subject to interruption or curtailment on a limited number of Days as specified in the Contract;

"Loaned Quantities" shall mean those quantities of gas loaned to Shipper under the Facilitating Agreement;

"m<sup>3</sup>" shall mean cubic metre of gas and "10<sup>3</sup>m<sup>3</sup>" shall mean 1,000 cubic metres of gas;

"Month" shall mean the period beginning at 10:00 a.m. Eastern Clock Time on the first day of a calendar month and ending at 10:00 a.m. Eastern Clock Time on the first day of the following calendar month;

"NAESB" shall mean North American Energy Standards Board;

"OEB" means the Ontario Energy Board;

"Open Season" or "open season" shall mean an open access auction or bidding process held by Union as a method of allocating capacity;

"pascal" "(Pa)" shall mean the pressure produced when a force of one (1) newton is applied to an area of one (1) square metre. The term "kilopascal" "(kPa)" shall mean 1,000 pascals;

"receipt" shall mean any gas that is delivered into Union's possession, or the possession of Union's agent;

"Shipper" shall have the meaning as defined in the Contract, and shall also include Shipper's agent(s);

"specific gravity" shall mean density of the gas divided by density of air, with both at a temperature of 15 degrees Celsius, and at a pressure of 101.325 kilopascals absolute;

"Taxes" shall mean any tax (other than tax on income or tax on property), duty, royalty, levy, license, fee or charge not included in the charges and rates as per the applicable rate schedule (including but not limited to charges under any form of cap and trade, carbon tax, or similar system) and that is levied, assessed or made by any governmental authority on the gas itself, or the act, right, or privilege of producing, severing, gathering, storing, transporting, handling, selling or delivering gas under the Contract;

"TCPL" means TransCanada PipeLines Limited;

"Wobbe Number" shall mean gross heating value of the gas divided by the square root of its specific gravity.

## **II. GAS QUALITY**

1. Natural Gas: The minimum gross heating value of the gas delivered to/by Union hereunder, shall be thirty-six (36) megajoules per cubic metre. The maximum gross heating value of the gas delivered to/by Union hereunder shall be forty point two (40.2) megajoules per cubic metre. The gas to be delivered hereunder to Union may be a commingled supply from Shipper's gas sources of supply. The gas to be delivered by Union may be a commingled supply from Union's sources of gas supply; provided, however, that helium, natural gasoline, butane, propane and other hydrocarbons, except methane, may be removed prior to delivery to Shipper. Further, Union may subject, or permit the subjection of, the gas to compression, dehydration, cooling, cleaning and other processes.

2. Freedom from objectionable matter: The gas to be delivered to/by Union hereunder,
- a. shall be commercially free from bacteria, sand, dust, gums, crude oils, lubricating oils, liquids, chemicals or compounds used in the production, treatment, compression or dehydration of the gas or any other objectionable substance in sufficient quantity so as to render the gas toxic, unmerchantable or cause injury to, or interference with, the proper operation of the lines, regulators, meters or other appliances through which it flows,
  - b. shall not contain more than seven (7) milligrams of hydrogen sulphide per cubic metre of gas, nor more than four hundred and sixty (460) milligrams of total sulphur per cubic metre of gas,
  - c. shall not contain more than five (5) milligrams of mercaptan sulphur per cubic metre of gas,
  - d. shall not contain more than two point zero (2.0) molar percent by volume of carbon dioxide in the gas,
  - e. shall not contain more than zero point four (0.4) molar percent by volume of oxygen in the gas,
  - f. shall not contain more than zero point five (0.5) molar percent by volume of carbon monoxide in the gas,
  - g. shall not contain more than four point zero (4.0) molar percent by volume of hydrogen in the gas,
  - h. shall not contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas,
  - i. shall not have a cricondentherm hydrocarbon dewpoint exceeding minus eight (-8) degrees Celsius,
  - j. shall have Wobbe Number from forty seven point fifty (47.50) megajoules per cubic metre of gas to fifty one point forty six (51.46) megajoules per cubic metre of gas, maximum of one point five (1.5) mole percent by volume of butane plus (C4+) in the gas, and maximum of four point zero (4.0) mole percent by volume of total inerts in the gas in order to be interchangeable with other Interconnecting Pipeline gas.
3. Non-conforming Gas: In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in this Article II.
4. Quality of Gas Received: The quality of the gas to be received by Union hereunder is to be of a merchantable quality and in accordance with the quality standards as set out by Union in this Article II, but, Union will also accept gas of a quality as set out in any other Interconnecting Pipeline's general terms and conditions, provided that all Interconnecting Pipelines accept such quality of gas. In addition to any other right or remedy of a party, each party shall be entitled to refuse to accept delivery of any gas which does not conform to any of the specifications set out in Union's C1 Rate Schedule.

### **III. MEASUREMENTS**

1. Storage, Transportation, and/or Sales Unit: The unit of the gas delivered to Union shall be a megajoule or a gigajoule. The unit of gas transported or stored by Union shall be a megajoule or a gigajoule. The unit of gas delivered by Union shall be a megajoule, a gigajoule, a cubic metre (m<sup>3</sup>) or one thousand cubic metres (10<sup>3</sup>m<sup>3</sup>) at Union's discretion.
2. Determination of Volume and Energy:
- a. The volume and energy amounts determined under the Contract shall be determined in accordance with the Electricity and Gas Inspection Act (Canada), RSC 1985, c E-4- (the "Act") and the Electricity and Gas Inspection Regulations, SOR 86/131 (the "Regulations"), and any documents issued under the authority of the Act and Regulations and any amendments thereto.
  - b. The supercompressibility factor shall be determined in accordance with either the "Manual for Determination of Supercompressibility Factors for Natural Gas" (PAR Project NX-19) published in 1962 or with American Gas

## SCHEDULE "A 2010"

Association Transmission Measurement Committee Report No. 8, Nov. 1992, at Union's discretion, all as amended from time to time.

- c. The volume and/or energy of the gas delivered to/by Union hereunder shall be determined by the measurement equipment designated in Article VII herein.
- d. Upon request by Union, Shipper shall obtain measurement of the total quantity of gas received by Union hereunder from the Interconnecting Pipeline. Such measurement shall be done in accordance with established practices between Union and the Interconnecting Pipeline.

### **IV. RECEIPT POINT AND DELIVERY POINT**

- 1. Unless otherwise specified in the Contract, the point or points of receipt and point or points of delivery for all gas to be covered hereunder shall be on the outlet side of the measuring stations located at or near the point or points of connection specified in the Contract, where possession of the gas changes from one party to the other, and as per Schedule "C 2010".

### **V. POSSESSION OF AND RESPONSIBILITY FOR GAS**

- | 1. Possession of Gas: Union accepts no responsibility for any gas prior to such gas being delivered to Union at the Receipt Point or after its delivery by Union at the Delivery Point. As between the parties hereto, Union shall be deemed to be in control and possession of and responsible for all such gas from the time that such gas enters Union's system until such gas is delivered to Shipper.
- | 2. Liability: Shipper agrees that Union is not a common carrier and is not an insurer of Shipper's gas, and that Union shall not be liable to Shipper or any third party for loss of gas in Union's possession, except to the extent such loss is caused entirely by Union's negligence or wilful misconduct.

### **VI. FACILITIES ON SHIPPER'S PROPERTY**

Except under those conditions where Union is delivering to TCPL for TCPL or Shipper at Parkway (TCPL), or to an Interconnecting Pipeline, or where otherwise specified in the Contract, the following will apply:

- 1. Construction and Maintenance: Union, at its own expense may construct, maintain and operate on Shipper's property at the delivery point a measuring station properly equipped with a meter or meters and any other necessary measuring equipment for properly measuring the gas redelivered under the Contract. Shipper will grant to Union a lease and/or rights-of-way over property of Shipper as required by Union to install such facilities and to connect same to Union's pipeline.
- 2. Entry: Union, its servants, agents and each of them may at any reasonable time on notice (except in cases of emergency) to Shipper or his duly authorized representative enter Shipper's property for the purpose of constructing, maintaining, removing, operating and/or repairing station equipment.
- 3. Property: The said station and equipment will be and remain the property of Union notwithstanding it is constructed on and attached to the realty of Shipper, and Union may at its own expense remove it upon termination of the Contract and will do so if so requested by Shipper.

### **VII. MEASURING EQUIPMENT**

- 1. Metering by Union: Union will install and operate meters and related equipment as required and in accordance with the Act and Regulations referenced in Article III herein.

2. Metering by Others: In the event that all or any gas delivered to/by Union hereunder is measured by a meter that is owned and operated by an Interconnecting Pipeline, then Union and Shipper agree to accept that metering for the purpose of determining the volume and energy of gas delivered to/by Union on behalf of the Shipper. The standard of measurement and tests for the gas delivered to/by Union hereunder shall be in accordance with the general terms and conditions as incorporated in that Interconnecting Pipeline company's gas tariff as approved by its regulatory body.
3. Check Measuring Equipment: Shipper may install, maintain and operate, at the redelivery point, at its own expense, such check measuring equipment as desired, provided that such equipment shall be so installed as not to interfere with the operation of Union's measuring equipment at or near the delivery point, and shall be installed, maintained and operated in conformity with the same standards and specifications applicable to Union's metering facilities.
4. Rights of Parties: The measuring equipment installed by either party, together with any building erected by it for such equipment, shall be and remain its property. However, Union and Shipper shall have the right to have representatives present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's measuring equipment used in measuring or checking the measurement of deliveries of gas to/by Union under the Contract. Either party will give the other party reasonable notice of its intention to carry out the acts herein specified. The records from such measuring equipment shall remain the property of their owner, but upon request each will submit to the other its records and charts, together with calculations therefrom, for inspection and verification, subject to return within ten (10) days after receipt thereof.
5. Calibration and Test of Measuring Equipment: The accuracy of Union's measuring equipment shall be verified by Union at reasonable intervals, and if requested, in the presence of representatives of Shipper, but Union shall not be required to verify the accuracy of such equipment more frequently than once in any thirty (30) day period. In the event either party notifies the other that it desires a special test of any measuring equipment, the parties shall co-operate to secure a prompt verification of the accuracy of such equipment. The expense of any such special test, if called for by Shipper, shall be borne by Shipper if the measuring equipment tested is found to be in error by not more than two per cent (2%). If, upon test, any measuring equipment is found to be in error by not more than two per cent (2%), previous recordings of such equipment shall be considered accurate in computing receipts and deliveries of gas, but such equipment shall be adjusted at once to record as near to absolute accuracy as possible. If the test conducted shows a percentage of inaccuracy greater than two percent (2%), the financial adjustment, if any, shall be calculated in accordance with the Act and Regulations, as may be amended from time to time and in accordance with any successor statutes and regulations.
6. Preservation of Metering Records: Union and Shipper shall each preserve for a period of at least six (6) years all test data, and other relevant records.
7. Error in Metering or Meter Failure: In the event of an error in metering or a meter failure, (such error or failure being determined through check measurement by Union or any other available method), then Shipper shall enforce its rights as Shipper with the Interconnecting Pipeline(s) to remedy such error or failure including enforcing any inspection and/or verification rights and procedures.

**VIII. BILLING**

1. Monthly Billing Date: Union shall render bills on or before the tenth (10<sup>th</sup>) day of each month for all Transportation Services furnished during the preceding Month. Such charges may be based on estimated quantities, if actual quantities are unavailable in time to prepare the billing. Union shall provide, in a succeeding Month's billing, an adjustment based on any difference between actual quantities and estimated quantities, without any interest charge. If presentation of a bill to Shipper is delayed after the tenth (10<sup>th</sup>) day of the month, then the time of payment shall be extended accordingly, unless Shipper is responsible for such delay.
2. Right of Examination: Both Union and Shipper shall have the right to examine at any reasonable time the books, records and charts of the other to the extent necessary to verify the accuracy of any statement, chart or computation made under or pursuant to the provisions of the Contract.
3. Amendment of Statements: For the purpose of completing a final determination of the actual quantities of gas handled in any of the Transportation Services to Shipper, the parties shall have the right to amend their statement for a period equal to

the time during which the Interconnecting Pipeline retains the right to amend their statements, which period shall not exceed three (3) years from the date of termination of the Contract.

**IX. PAYMENTS**

1. Monthly Payments: Shipper shall pay the invoiced amount directly into Union's bank account as directed on the invoice on or before the twentieth (20<sup>th</sup>) day of each month. If the payment date is not a Business Day, then payment must be received in Union's account on the first Business Day preceding the twentieth (20<sup>th</sup>) day of the month.
2. Remedies for Non-payment: Should Shipper fail to pay all of the amount of any bill as herein provided when such amount is due,
  - a. Shipper shall pay to Union interest on the unpaid portion of the bill accruing at a rate per annum equal to the minimum commercial lending rate of Union's principal banker in effect from time to time from the due date until the date of payment; and,
  - b. If such failure to pay continues for thirty (30) days after payment is due, Union, in addition to any other remedy it may have under the Contract, may suspend Services until such amount is paid. Notwithstanding such suspension, all demand charges shall continue to accrue hereunder as if such suspension were not in place.

If Shipper in good faith disputes the amount of any such bill or part thereof Shipper shall pay to Union such amounts as it concedes to be correct. At any time thereafter, within twenty (20) days of a demand made by Union, Shipper shall furnish financial assurances satisfactory to Union, guaranteeing payment to Union of the amount ultimately found due upon such bill after a final determination. Such a final determination may be reached either by agreement, arbitration decision or judgement of the courts, as may be the case. Union shall not be entitled to suspend Services because of such non-payment unless and until default occurs in the conditions of such financial assurances or default occurs in payment of any other amount due to Union hereunder.

Notwithstanding the foregoing, Shipper is not relieved from the obligation to continue its deliveries of gas to Union under the terms of any agreement, where Shipper has contracted to deliver specified quantities of gas to Union.

3. Billing Adjustments: If it shall be found that at any time or times Shipper has been overcharged or undercharged in any form whatsoever under the provisions of the Contract and Shipper shall have actually paid the bills containing such overcharge or undercharge, Union shall refund the amount of any such overcharge and interest shall accrue from and including the first day of such overcharge as paid to the date of refund and shall be calculated but not compounded at a rate per annum determined each day during the calculation period to be equal to the minimum commercial lending rate of Union's principal banker, and the Shipper shall pay the amount of any such undercharge, but without interest. In the event Union renders a bill to Shipper based upon measurement estimates, the required adjustment to reflect actual measurement shall be made on the bill next following the determination of such actual measurement, without any charge of interest. In the event an error is discovered in the amount billed in any statement rendered by Union, such error shall be adjusted by Union. Such overcharge, undercharge or error shall be adjusted by Union on the bill next following its determination (where the term "**bill next following**" shall mean a bill rendered at least fourteen (14) days after the day of its determination), provided that claim therefore shall have been made within three (3) years from the date of the incorrect billing. In the event any refund is issued with Shipper's bill, the aforesaid date of refund shall be deemed to be the date of the issue of bill.

4. Taxes:

In addition to the charges and rates as per the applicable rate schedules and price schedules, Shipper shall pay all Taxes which are imposed currently or subsequent to the execution of the Contract by any legal authority having jurisdiction and any amount in lieu of such Taxes paid or payable by Union.

Shipper shall make reasonable efforts to eliminate/minimize the withholding tax related to the fees/payments paid to Union, including but not limited to requesting from Union the relevant documentation necessary to determine the appropriate withholding, if any, for tax purposes. In the event taxes are withheld from the fees/payment paid by Shipper, Shipper shall

remit such withheld taxes to the applicable taxing authority and Shipper will provide Union, after the calendar year end, Union's Federal Form 1042-S and a comparable state/international form, if applicable, within the applicable statutory time frame.

5. Set Off:

If either party shall, at any time, be in arrears under any of its payment obligations to the other party under the Contract, then the party not in arrears shall be entitled to reduce the amount payable by it to the other party in arrears under the Contract, or any other contract, by an amount equal to the amount of such arrears or other indebtedness to the other party. In addition to the foregoing remedy, Union may, upon forty-eight (48) hours verbal notice, to be followed by written notice, take possession of any or all of Shipper's gas under the Contract or any enhancement to the Contract, which shall be deemed to have been assigned to Union, to reduce such arrears or other indebtedness to Union.

X. ARBITRATION

If and when any dispute, difference or question shall arise between the parties hereto touching the Contract or anything herein contained, or the construction hereof, or the rights, duties or liabilities of the parties in relation to any matter hereunder, the matter in dispute shall be submitted and referred to arbitration within ten (10) days after written request of either party. Upon such request each party shall appoint an arbitrator, and the two so appointed shall appoint a third. A majority decision of the arbitrators shall be final and binding upon both parties. In all other respects the provisions of the Arbitration Act, 1991, or any act passed in amendment thereof or substitution therefore, shall apply to each such submission. Operations under the Contract shall continue, without prejudice, during any such arbitration and the costs attributable to such arbitration shall be shared equally by the parties hereto.

XI. FORCE MAJEURE

1. Definition: The term "**force majeure**" as used herein shall mean acts of God, strikes, lockouts or any other industrial disturbance, acts of the public enemy, sabotage, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of governments and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or lines of pipe, inability to obtain materials, supplies, permits or labour, any laws, orders, rules, regulations, acts or restraints of any governmental body or authority (civil or military), any act or omission that is excused by any event or occurrence of the character herein defined as constituting force majeure, any act or omission by parties not controlled by the party having the difficulty and any other similar cases not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.
2. Notice: In the event that either the Shipper or Union is rendered unable, in whole or in part, by force majeure, to perform or comply with any obligation or condition of the Contract, such party shall give notice and full particulars of such force majeure in writing delivered by hand, fax or other direct written electronic means to the other party as soon as possible after the occurrence of the cause relied on and subject to the provision of this Article.
3. Exclusions: Neither party shall be entitled to the benefit of the provisions of force majeure hereunder if any or all of the following circumstances prevail: the failure resulting in a condition of force majeure was caused by the negligence of the party claiming suspension; the failure was caused by the party claiming suspension where such party failed to remedy the condition by making all reasonable efforts (short of litigation, if such remedy would require litigation); the party claiming suspension failed to resume the performance of such condition obligations with reasonable dispatch; the failure was caused by lack of funds; the party claiming suspension did not, as soon as possible after determining, or within a period within which it should acting reasonably have determined, that the occurrence was in the nature of force majeure and would affect its ability to observe or perform any of its conditions or obligations under the Contract, give to the other party the notice required hereunder.
4. Notice of Remedy: The party claiming suspension shall likewise give notice as soon as possible after the force majeure condition is remedied, to the extent that the same has been remedied, and that such party has resumed or is then in a position to resume the performance of the obligations and conditions of the Contract.

5. Obligation to Perform: An event of force majeure on Union's system will excuse the failure to deliver gas by Union or the failure to accept gas by Union hereunder, and both parties shall be excused from performance of their obligations hereunder, except for payment obligations, to the extent of and for the duration of the force majeure.
6. Upstream or Downstream Force Majeure: An event of force majeure upstream or downstream of Union's system shall not relieve Shipper of any payment obligations.
7. Delay of Firm Transportation Services: Despite Article XI herein, if Union is prevented, by reason of an event of force majeure on Union's system from delivering gas on the Day or Days upon which Union has accepted gas from Shipper, Union shall thereafter make all reasonable efforts to deliver such quantities as soon as practicable and on such Day or Days as are agreed to by Shipper and Union. If Union accepts such gas on this basis, Shipper shall not receive any demand charge relief as contemplated under Article XI herein.
8. Demand Charge Relief for Firm Transportation Services: Despite Article XI herein, if on any Day Union fails to accept gas from Shipper by reason of an event of force majeure on Union's system and fails to deliver the quantity of gas nominated hereunder by Shipper up to the firm Contract Demand for that Contract, then for that Day the Monthly demand charge shall be reduced by an amount equal to the applicable Daily Demand Rate, as defined in this paragraph, multiplied by the difference between the quantity of gas actually delivered by Union during such Day and the quantity of gas which Shipper in good faith nominated on such Day. The term "**Daily Demand Rate**" shall mean the Monthly demand charge or equivalent pursuant to the C1 Rate Schedule divided by the number of days in the month for which such rate is being calculated.
- ~~9.~~ 9. Proration of Firm Transportation Service: If, due to the occurrence of an event of force majeure as outlined above, the capacity for gas deliveries by Union is impaired, it will be necessary for Union to curtail Shipper's gas receipts to Union hereunder, via proration based on utilization of such facilities for the Day. This prorating shall be determined by multiplying the capability of such facilities as available downstream of the impairment on the Day, by a fraction where the numerator is Shipper's nominated firm quantity and the denominator is the total of all such nominated firm quantities for nominated services and planned consumption for in-franchise customers on the Day. For the purposes of this Article XI, firm services shall mean all firm services provided by Union to in-franchise customers and ex-franchise shippers.

## **XII. DEFAULT AND TERMINATION**

In case of the breach or non-observance or non-performance on the part of either party hereto of any covenant, proviso, condition, restriction or stipulation contained in the Contract (but not including herein failure to take or make delivery in whole or in part of the gas delivered to/by Union hereunder occasioned by any of the reasons provided for in Article XI herein) which has not been waived by the other party, then and in every such case and as often as the same may happen, the non-defaulting party may give written notice to the defaulting party requiring it to remedy such default and in the event of the defaulting party failing to remedy the same within a period of thirty (30) days from receipt of such notice, the non-defaulting party may at its sole option declare the Contract to be terminated and thereupon the Contract shall be terminated and be null and void for all purposes other than and except as to any liability of the parties under the same incurred before and subsisting as of termination. The right hereby conferred upon each party shall be in addition to, and not in derogation of or in substitution for, any other right or remedy which the parties respectively at law or in equity shall or may possess.

## **XIII. AMENDMENT**

Subject to Article XV herein and the ability of Union to amend the applicable rate schedules and price schedules, with the approval of the OEB (if required), no amendment or modification of the Contract shall be effective unless the same shall be in writing and signed by each of the Shipper and Union.

## **XIV. NON-WAIVER AND FUTURE DEFAULT**

No waiver of any provision of the Contract shall be effective unless the same shall be in writing and signed by the party

entitled to the benefit of such provision and then such waiver shall be effective only in the specific instance and for the specified purpose for which it was given. No failure on the part of Shipper or Union to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy under the Contract shall operate as a waiver thereof.

**XV. LAWS, REGULATIONS AND ORDERS**

The Contract and the respective rights and obligations of the parties hereto are subject to all present and future valid laws, orders, rules and regulations of any competent legislative body, or duly constituted authority now or hereafter having jurisdiction and the Contract shall be varied and amended to comply with or conform to any valid order or direction of any board, tribunal or administrative agency which affects any of the provisions of the Contract.

**XVI. ALLOCATION OF CAPACITY**

1. Requests for Transportation Service: A potential shipper may request transportation service on Union's system at any time. Any request for C1 transportation service must include: potential shipper's legal name, Receipt Point(s), Delivery Point(s), Commencement Date, Initial Term, Contract Demand, proposed payment, and type of transportation service requested.
2. Expansion Facilities: If requests for firm transportation services cannot be met through existing capacity such that the only way to satisfy the requests for transportation service would require the construction of Expansion Facilities which create new capacity, Union shall allocate any such new capacity by open season, subject to the terms of the open season, and these General Terms and Conditions.
3. Open Seasons: If requests for long-term transportation service can be met through existing facilities upon which long-term capacity is becoming available, Union shall allocate such long-term capacity by open season, subject to the terms of the open season, and these General Terms and Conditions. "Long-term", for the purposes of this Article XVI, means, in the case of a transportation service, a service that has a term of one year or greater.
4. Awarding Open Season Capacity: Capacity requests received during an open season shall be awarded starting with those bids with the highest economic value. If the economic values of two or more independent bids are equal, then service shall be allocated on a pro-rata basis. The economic value shall be based on the net present value which shall be calculated based on the proposed per-unit rate and the proposed term of the contract and without regard to the proposed Contract Demand ("NPV").
5. Available Capacity Previously Offered in Open Season: Union may at any time allocate capacity to respond to any C1 transportation service request through an open season. If a potential shipper requests C1 transportation service that can be provided through Available Capacity that was previously offered by Union in an open season but was not awarded, then:
  - a. Any such request must conform to the requirements of Section 1 of this Article XVI;
  - b. Union shall allocate capacity to serve such request pursuant to this Section 5, and subject to these General Terms and Conditions and Union's standard form C1 transportation contract;
  - c. Union may reject a request for C1 transportation service for any of the following reasons:
    - i) if there is insufficient Available Capacity to fully meet the request, but if that is the only reason for rejecting the request for service, Union must offer to supply the Available Capacity to the potential shipper;
    - ii) if the proposed monthly payment is less than Union's Monthly demand charge plus fuel requirements for the applicable service;

- iii) if prior to Union accepting the request for transportation service Union receives a request for transportation service from one or more other potential shippers and there is, as a result, insufficient Available Capacity to service all the requests for service, in which case Union shall follow the procedure in Section 5 d hereof;
  - iv) if Union does not provide the type of transportation service requested; or
  - v) if all of the conditions precedent specified in Article XXI Sections 1 and 2 herein have not been satisfied or waived.
- d. Union will advise the potential shipper in writing whether Union accepts or rejects the request for service, subject to Article XVI 5(c) within 5 calendar days of receiving a request for C1 transportation service. If Union rejects a request for service, Union shall inform the potential shipper of the reasons why its request is being rejected; and
- e. If Union has insufficient Available Capacity to service all pending requests for transportation service Union may:
- i) Reject all the pending requests for transportation service and conduct an open season; or
  - ii) Union shall inform all the potential shippers who have submitted a pending request for transportation service that it does not have sufficient capacity to service all pending requests for service, and Union shall provide all such potential shippers with an equal opportunity to submit a revised request for service. Union shall then allocate the Available Capacity to the request for transportation service with the highest economic value to Union. If the economic values of two or more requests are equal, then service shall be allocated on a pro-rata basis. The economic value of any request shall be based on the NPV.

**XVII. RENEWALS**

1. Contracts with an Initial Term of five (5) years or greater, with Receipt Points and Delivery Points of Parkway or Kirkwall or Dawn (Facilities), will continue in full force and effect beyond the Initial Term, automatically renewing for a period of one (1) year, and every one (1) year thereafter. Shipper may reduce the Contract Demand or terminate the Contract with notice in writing by Shipper at least two (2) years prior to the expiration thereof.

For all other contracts, the Contract will continue in full force and effect until the end of the Initial Term, but shall not renew.

**XVIII. SERVICE CURTAILMENT**

1. Right to Curtail: Union shall have the right to curtail or not to schedule part or all of Transportation Services, in whole or in part, on all or a portion of its pipeline system at any time for reasons of Force Majeure or when, in Union sole discretion, acting reasonably, capacity or operating conditions so require or it is desirable or necessary to make modifications, repairs or operating changes to its pipeline system. Union shall provide Shipper such notice of such curtailment as is reasonable under the circumstances. If due to any cause whatsoever Union is unable to receive or deliver the quantities of Gas which Shipper has requested, then Union shall order curtailment by all Shippers affected and to the extent necessary to remove the effect of the disability. Union has a priority of service policy to determine the order of service curtailment. In order to place services on the priority of service list, Union considers the following business principles: appropriate level of access to core services, customer commitment, encouraging appropriate contracting, materiality, price and term, and promoting and enabling in-franchise consumption.

The Priority ranking for all services utilizing Union Gas' storage, transmission and distribution system as applied to both in-franchise and ex-franchise services are as follows; with number 1 having the highest priority and the last interrupted.

- 1. Firm In-franchise Transportation and Distribution services and firm Ex-franchise services (Note 1)
- 2. In-franchise Interruptible Distribution services
- 3. C1/M12 IT Transport and IT Exchanges with Take or Pay rates
- 4. Balancing (Hub Activity) < = 100 GJ/d; Balancing (Direct Purchase) < = 500 GJ/d; In-franchise distribution authorized overrun (Note 3)

5. C1/M12 IT Transport and IT Exchanges at premium rates
6. C1/M12 Overrun < = 20% of CD (Note 4)
7. Balancing (Direct Purchase) > 500 GJ/d
8. Balancing (Hub Activity) > 100 GJ/d; C1/M12 IT Transport and IT Exchanges
9. C1/M12 Overrun > 20% of CD
10. C1/M12 IT Transport and IT Exchanges at a discount
11. Late Nominations

Notes:

1. Nominated services must be nominated on the NAESB Timely Nomination Cycle otherwise they are considered to be late nomination and are therefore interruptible.
2. Higher value or more reliable IT is contemplated in the service and contract, when purchase at market competitive prices.
3. Captures the majority of customers that use Direct Purchase balancing transactions.
4. Captures the majority of customers that use overrun.

2. Capacity Procedures: Union reserves the right to change its procedures for sharing interruptible capacity and will provide Shipper with two (2) months prior notice of any such change.

3. Maintenance: Union's facilities from time to time may require maintenance or construction. If such maintenance or construction is required, and in Union's sole opinion, acting reasonably, such maintenance or construction may impact Union's ability to meet Shipper's requirements, Union shall provide at least ten (10) days notice to Shipper, except in the case of an emergency. In the event the maintenance impacts ~~on~~ Union's ability to meet Shipper's requirements, Union shall not be liable for any damages and shall not be deemed in breach of the Contract. To the extent that Union's ability to accept and/or deliver Shipper's gas is impaired, the Monthly demand charge shall be reduced in accordance with Article XI Section 8 and available capacity allocated in accordance with Article XI Section 9 herein.

Union shall use reasonable efforts to determine a mutually acceptable period during which such maintenance or construction will occur and also to limit the extent and duration of any impairments. Union will endeavour to schedule and complete the maintenance and construction, which would normally be expected to impact on Union's ability to meet Shipper's requirements, during the period from April 1 through to November 1.

## **XIX. SHIPPER'S REPRESENTATIONS AND WARRANTIES**

1. Shipper's Warranty: Shipper warrants that it will, if required, maintain, or have maintained on its behalf, all external approvals including the governmental, regulatory, import/export permits and other approvals or authorizations that are required from any federal, state or provincial authorities for the gas quantities to be handled under the Contract. Shipper further warrants that it shall maintain in effect the Facilitating Agreements.
2. Financial Representations: Shipper represents and warrants that the financial assurances (including the Initial Financial Assurances and Security) (if any) shall remain in place throughout the term hereof, unless Shipper and Union agree otherwise. Shipper shall notify Union in the event of any change to the financial assurances throughout the term hereof. Should Union have reasonable grounds to believe that Shipper will not be able to perform or continue to perform any of its obligations under the Contract as a result of one of the following events ("**Material Event**")
  - a. Shipper is in default, which default has not been remedied, of the Contract or is in default of any other material contract with Union or another party; or,
  - b. Shipper's corporate or debt rating falls below investment grade according to at least one nationally recognized rating agency; or,
  - c. Shipper ceases to be rated by a nationally recognized agency; or,
  - d. Shipper has exceeded credit available as determined by Union from time to time,

then Shipper shall within fourteen (14) days of receipt of written notice by Union, obtain and provide to Union a letter of credit or other security in the form and amount reasonably required by Union (the "**Security**"). The Security plus the Initial Financial Assurances shall not exceed twelve (12) months of Monthly demand charges (in accordance with Article IX herein) multiplied by Contract Demand. In the event that Shipper does not provide to Union such Security within such fourteen (14) day period, Union may deem a default under the Default and Termination provisions of Article XII herein.

In the event that Shipper in good faith, reasonably believes that it should be entitled to reduce the amount of or value of the Security previously provided, it may request such a reduction from Union and to the extent that the Material Event has been mitigated or eliminated, Union shall return all or a portion of the Security to Shipper within fourteen (14) Business Days after receipt of the request.

**XX. MISCELLANEOUS PROVISIONS**

1. **Permanent Assignment:** Shipper may assign the Contract to a third party ("Assignee"), up to the Contract Demand, (the "Capacity Assigned"). Such assignment shall require the prior written consent of Union and release of obligations by Union for the Capacity Assigned from the date of assignment. Such consent and release shall not be unreasonably withheld and shall be conditional upon the Assignee providing, amongst other things, financial assurances as per Article XXI herein. Any such assignment will be for the full rights, obligations and remaining term of the Contract as relates to the Capacity Assigned.
2. **Temporary Assignment:** Shipper may, upon notice to Union, assign all or a part of its service entitlement under the Contract (the "Assigned Quantity") and the corresponding rights and obligations to an Assignee on a temporary basis for not less than one calendar month. Such assignment shall not be unreasonably withheld and shall be conditional upon the Assignee executing the Facilitating Agreement as per Article XXI herein. Notwithstanding such assignment, Shipper shall remain obligated to Union to perform and observe the covenants and obligations contained herein in regard to the Assigned Quantity to the extent that Assignee fails to do so.
3. **Title to Gas:** Shipper represents and warrants to Union that Shipper shall have good and marketable title to, or legal authority to deliver to Union, all gas delivered to Union hereunder. Furthermore, Shipper hereby agrees to indemnify and save Union harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses arising from or out of claims of any or all third parties to such gas or on account of Taxes, or other charges thereon.

**XXI. PRECONDITIONS TO TRANSPORTATION SERVICES**

1. **Union Conditions:** The obligations of Union to provide Transportation Services hereunder are subject to the following conditions precedent, which are for the sole benefit of Union and which may be waived or extended in whole or in part in the manner provided in the Contract:
  - a. Union shall have obtained, in form and substance satisfactory to Union, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required to provide the Transportation Services; and,
  - b. Union shall have obtained all internal approvals that are necessary or appropriate to provide the Transportation Services; and,
  - c. Union shall have received from Shipper the requisite financial assurances reasonably necessary to ensure Shipper's ability to honour the provisions of the Contract (the "**Initial Financial Assurances**"). The Initial Financial Assurances, if required, will be as determined solely by Union; and,
  - d. Shipper and Union shall have entered into the Interruptible Service HUB Contract or equivalent (the "**Facilitating Agreement**") with Union.
2. **Shipper Conditions:** The obligations of Shipper hereunder are subject to the following conditions precedent, which are for the sole benefit of —Shipper and which may be waived or extended in whole or in part in the manner provided in the

Contract:

- a. Shipper shall, as required, have entered into the necessary contracts with Union and/or others to facilitate the Transportation Services contemplated herein, including contracts for upstream and downstream transportation, and shall specifically have an executed and valid Facilitating Agreement; and shall, as required, have entered into the necessary contracts to purchase the gas quantities handled under the Contract; and,
- b. Shipper shall have obtained, in form and substance satisfactory to Shipper, and all conditions shall have been satisfied under, all governmental, regulatory and other third party approvals, consents, orders and authorizations, that are required from federal, state, or provincial authorities for the gas quantities handled under the Contract; and,
- c. Shipper shall have obtained all internal approvals that are necessary or appropriate for the Shipper to execute the Contract.

3. Satisfaction of Conditions: Union and Shipper shall each use due diligence and reasonable efforts to satisfy and fulfil the conditions precedent specified in this Article XXI Section 1 a, c, and d and Section 2 a and b. Each party shall notify the other forthwith in writing of the satisfaction or waiver of each condition precedent for such party's benefit. If a party concludes that it will not be able to satisfy a condition precedent that is for its benefit, such party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations thereunder.

~~4.~~ 4. Non-Satisfaction of Conditions: If any of the conditions precedent in this Article XXI Section 1 c or Section 2 are not satisfied or waived by the party entitled to the benefit of that condition by the Conditions Date as such term is defined in the Contract, then either party may, upon written notice to the other party, terminate the Contract and upon the giving of such notice, the Contract shall be of no further force and effect and each of the parties shall be released from all further obligations hereunder, provided that any rights or remedies that a party may have for breaches of the Contract prior to such termination and any liability a party may have incurred before such termination shall not thereby be released.

**RATE C1  
NOMINATIONS**

1. For Transportation Services required on any Day under the Contract, Shipper shall provide Union with ~~a nomination(s) providing the Shipper's requested Receipt Point(s), contract numbers, the applicable service, the quantity of Gas to be transported, the requested details regarding the quantity of Gas it desires to be handled at the applicable Receipt Points(s) and/or~~ Delivery Point(s), and such additional information as Union determines to be necessary (a "Nomination").
2. All Nominations shall be submitted by electronic means via *Unionline*. Union, in its sole discretion, may amend or modify the nominating procedures or *Unionline* at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all ~~N~~ominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in *Unionline*.
  - ~~2. All times referred to herein are Eastern Clock Time. For greater certainty, NAESB nomination cycle timelines are as follows:~~
    - ~~a. The Timely Nomination Cycle: 12:45 pm for Nominations leaving control of the nominating party; 3:30 pm for receipt of Quantities Available by Shipper; 4:30 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 5:30 pm for receipt of Scheduled Quantities by Shipper (Day prior to flow).~~
    - ~~b. The Evening Nomination Cycle: 7:00 pm for Nominations leaving control of the nominating party; 9:00 pm for receipt of Quantities Available by Shipper; 10:00 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 11:00 pm for receipt of Scheduled Quantities by Shipper (Day prior to flow).~~
    - ~~c. The Intra-day 1 Nomination Cycle: 11:00 am for Nominations leaving control of the nominating party; 1:00 pm for receipt of Quantities Available by Shipper; 2:00 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 3:00 pm for receipt of Scheduled Quantities Available by Shipper, on Day. Quantities Available resulting from Intra-day 1 Nominations should be effective at 6:00 pm on same Day.~~

~~The Intra-day 2 Nomination Cycle: 6:00 pm for Nominations leaving control of the nominating party; 8:00 pm for receipt of Quantities Available by Shipper; 9:00 pm for receipt of completed confirmations by Union from upstream and downstream connected parties; 10:00 pm for receipt of Scheduled Quantities by Shipper on Day. Quantities Available resulting from Intra-day 2 Nominations should be effective at 10:00 pm on same Day.~~
3. Union shall determine whether or not all or any portion of the Nomination will be scheduled at each nomination cycle. With respect to each nomination cycle, in the event Union determines that it will not schedule such Nomination, Union shall advise Shipper of the reduced quantity (the "Quantities Available") for Transportation Services at the applicable points as outlined in each nomination cycle. After receiving such advice from Union, but no later than one half hour after the Quantities Available deadline as outlined in each nomination cycle, Shipper shall provide a revised nomination ("Revised Nomination") to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantities Available, then the Revised Nomination shall be deemed to be the Quantities Available. If the Revised Nomination (delivered with the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
4. For Shippers electing firm all day transportation service, nominations shall be provided to Union's Gas Management

## SCHEDULE "B 2010"

Services as outlined in the F24 –T Agreement.

5. For Transportation Services requiring Shipper to provide compressor fuel in kind, the nominated fuel requirements will be calculated by rounding to the nearest whole GJ.
6. All Timely Nominations shall have rollover options. Specifically, Shippers shall have the ability to nominate for several days, months or years, provided the Nomination start date and end date are both within the term of the Transportation Agreement.
7. Nominations received after the nomination deadline shall, if accepted by Union, be scheduled after Nominations received before the nomination deadline.
8. All Services are required to be nominated in whole Gigajoules (GJ).
9. -To the extent Union is unable to complete a Nomination confirmation due to inaccurate, untimely or incomplete data involving an Interconnecting Pipeline entity, Union shall undertake reasonable efforts to confirm the transaction on a non-discriminatory basis until such time that the transaction is adequately verified by the parties, or until such time that Union determines that the Nomination is invalid at which time the Union shall reject the Nomination.
10. That portion of a Shipper's Nomination or Revised Nomination, as set out in paragraphs 1 and 3 above, which Union shall schedule for Transportation Services hereunder, shall be known as Shipper's **"Authorized Quantity"**.
11. If on any day the actual quantities handled by Union, for each of the Transportation Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Transportation Services exceed Shipper's Authorized Quantity shall be deemed **"Unauthorized Overrun"**.
12. The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20<sup>th</sup>) of the quantity received for that day. Union shall have the right to limit Transportation Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20<sup>th</sup>) of the quantity handled for that day, for each applicable Transportation Service.
13. The parties hereto recognize that with respect to Transportation Services, on any day, receipts of gas by Union and deliveries of gas by Union may not always be exactly equal, but each party shall cooperate with the other in order to balance as nearly as possible the quantities transacted on a daily basis, and any imbalances arising shall be allocated to the Facilitating Agreement and shall be subject to the respective terms and charges contained therein, and shall be resolved in a timely manner.
14. Shipper may designate via Unionline access request form, a third party as agent for purposes of providing a Nomination, and for giving and receiving notices related to Nominations, and Union shall only accept nominations from the agent. ~~Shipper shall provide Union with written notice of such designation, such notice to be acceptable to Union.~~ Any such designation, if acceptable to Union, shall be effective ~~starting the Month~~ following the receipt and processing of the written notice and will remain in effect until revoked in writing by Shipper.

**RATE C1  
NOMINATIONS**

- a) For Services provided either under this rate schedule or referenced to this rate schedule:
- i) For Services required on any day Shipper shall provide Union with ~~a nomination (the "Shipper's Nomination") of details regarding~~ the quantity it desires to be handled at the applicable Receipt Point(s), and/or Delivery Point(s), ~~and such additional information as Union determines to be necessary (a "Nomination"). Such Shipper's Nomination is to be provided in writing so as to be received by Union's Gas Management Services on or before 1230 hours in the Eastern time zone, unless agreed to otherwise in writing by the parties, on the business days immediately preceding the day for which service is requested.~~
  - ii) ~~All Nominations shall be submitted by electronic means via Unionline. Union, in its sole discretion, may amend or modify the nominating procedures or Unionline at any time. Nominations shall be submitted so as to be received by Union in accordance with timelines established by Union, which reflect the NAESB standard nomination cycles. Union will accept all Nominations on each of the nomination cycles. Nominations made after the applicable deadline shall not be accepted except at the sole discretion of Union. The nomination cycle timelines are posted on Union's website and the nomination deadlines are provided in Unionline. If, in Union's sole opinion, operating conditions permit, a change in Shipper's Nomination may be accepted after 1230 hours in the Eastern time zone.~~
  - iii) For customers electing firm all day transportation, nominations shall be provided to Union's Gas Management Services as outlined in the F24 –T Agreement.
- b) Union shall determine whether or not all or any portion of ~~Shipper's the~~ Nomination will be accepted. In the event Union determines that it will not accept such ~~Nomination~~, Union shall advise Shipper, ~~on or before 1730 hours in the Eastern time zone on the business day immediately preceding the day for which service is requested,~~ of the reduced quantity (the "Quantity Available") for Services at the applicable points ~~as outlined in each nomination cycle.~~ ~~Forthwith a~~ After receiving such advice from Union but no later than ~~1800 hours in the Eastern time zone on the same day, one half hour after the Quantities Available deadline as outlined in each nomination cycle,~~ Shipper shall provide a "Revised Nomination" to Union which shall be no greater than the Quantity Available. If such Revised Nomination is not provided within the time allowed as required above or such Revised Nomination is greater than the Quantity Available, then the Revised Nomination shall be deemed to be the Quantity Available. If the Revised Nomination (delivered within the time allowed as required above) is less than the Quantity Available, then such lesser amount shall be the Revised Nomination.
- c) That portion of a Shipper's Nomination or Revised Nomination, as set out in (a) and (b), above, which Union shall accept for Services hereunder, shall be known as Shipper's **"Authorized Quantity"**.
- d) If on any day the actual quantities handled by Union, for each of the Services authorized, exceed Shipper's Authorized Quantity, and such excess was caused by either Shipper's incorrect nomination or by its delivering or receiving too much gas, then the amount by which the actual quantities handled for each of the Services exceed Shipper's Authorized Quantity, such excess shall be deemed **"Unauthorized Overrun"**.
- e) The daily quantity of gas nominated by Shipper will be delivered by Shipper at rates of flow that are as nearly constant as possible, however, Union shall use reasonable efforts to take receipt of gas on any day at an hourly rate of flow up to one twentieth (1/20) of the quantity received for that day. Union shall have the right to limit Services when on any day the cumulative hourly imbalance between receipts and deliveries exceeds one twentieth (1/20) of the quantity handled for that day, for each applicable Service.
- f) A nomination for a daily quantity of gas on any day shall remain in effect and apply to subsequent days unless and until Union receives a new nomination from the Shipper or unless Union gives Shipper written notice that it is not acceptable in accordance with either (a) or (b) of this schedule.
- g) Except for periods of gas or quantity balancing as provided in the Contract, nominations by Shipper for deliveries to Union and redeliveries by Union shall be the same delivery of gas by Union either to Shipper or a Shipper's Account with Union.

## APPENDIX I

**Table 3**  
**Current and Proposed Customer-Related Cost Adjustments**  
**for Small Volume General Service Rate 01 and Rate M1**

Line No.	Particulars (3)	Billing Units	Current Approved Forecast (1)	Prior to MCC Change (1)		Current MCC Change to First Delivery Block Only		Proposed MCC Change Over All Delivery Blocks (2)	
			Usage (a)	Proposed Revenue (\$000's) (b)	Proposed Rates (cents / m <sup>3</sup> ) (c) = (b / a)	Proposed Revenue (\$000's) (d)	Proposed Rates (cents / m <sup>3</sup> ) (e) = (d / a)	Proposed Revenue (\$000's) (f)	Proposed Rates (cents / m <sup>3</sup> ) (g) = (f / a)
1	Rate 01 General Service Monthly Charge	bills	3,839,732	79,273	\$20.65	80,634	\$21.00	80,634	\$21.00
2	Monthly Delivery Charge First 100 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	273,618	26,299	9.6114	24,937	9.1137	25,878	9.4579
3	Next 200 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	310,686	29,107	9.3687	29,107	9.3687	28,642	9.2190
4	Next 200 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	135,534	12,182	8.9880	12,182	8.9880	11,987	8.8444
5	Next 500 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	92,571	7,997	8.6386	7,997	8.6386	7,869	8.5006
6	Over 1,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	115,512	9,645	8.3501	9,645	8.3501	9,491	8.2167
7	Delivery Commodity charge		<u>927,922</u>	<u>85,230</u>	<u>9.1850</u>	<u>83,868</u>	<u>9.0383</u>	<u>83,868</u>	<u>9.0383</u>
8	Total Delivery - Rate 01		<u>927,922</u>	<u>164,503</u>	<u>17.7281</u>	<u>164,503</u>	<u>17.7281</u>	<u>164,503</u>	<u>17.7281</u>
9	Rate M1 General Service Monthly Charge	bills	12,706,802	264,441	\$20.81	266,843	\$21.00	266,843	\$21.00
10	Monthly Delivery Charge First 100 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	879,923	40,023	4.5485	37,621	4.2755	39,227	4.4580
11	Next 150 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	781,347	33,743	4.3185	33,743	4.3185	33,071	4.2326
12	All over 250 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	1,260,246	46,939	3.7246	46,939	3.7246	46,005	3.6505
13	Delivery Commodity charge		<u>2,921,516</u>	<u>120,705</u>	<u>4.1316</u>	<u>118,303</u>	<u>4.0494</u>	<u>118,303</u>	<u>4.0494</u>
14	Total Delivery - Rate M1		<u>2,921,516</u>	<u>385,146</u>	<u>13.1831</u>	<u>385,146</u>	<u>13.1831</u>	<u>385,146</u>	<u>13.1831</u>

**Notes:**

- (1) EB-2015-0116, Rate Order Working Papers, Schedule 4, pp.2 and 10, col. (o),(p).
- (2) EB-2015-0116, Rate Order Working Papers, Schedule 4, pp.2 and 10, col. (q), (r).
- (3) Proposed monthly customer charge (MCC) changes occur prior to the application of the NAC volume adjustments by rate class.



**2016 Rates**  
**Overview of Working Papers**

- Schedule 1**      **Calculation of Price Cap Index** – This schedule provides the calculation of the average annual percentage change in the GDP IPI FDD over the four quarters ending June 2015.
- Schedule 2**      **Calculation of Price Cap Adjustment** – This schedule takes the 2016 PCI and applies it to 2015 approved revenue adjusted for DSM costs, Parkway Delivery Obligation costs, Capital Pass-through costs, and Upstream Transportation costs to arrive at the overall price cap adjustment.
- Schedule 3**      **Summary of 2016 Proposed Rates** – This schedule summarizes the proposed changes to rates for 2016 by rate class.
- Schedule 4**      **Detailed In-franchise and Ex-franchise Rates** – This schedule provides detailed support for the proposed rate changes summarized in Schedule 3.
- Schedule 5**      **Rate Impact Continuity** – This schedule provides the rate class-specific impacts of each of the adjustments to the 2015 revenue to arrive at the final 2016 revenue.
- Schedule 6**      **Percentage Change in Average Unit Price – In-franchise Rate Classes** – This schedule identifies average unit price changes for in-franchise rate classes.
- Schedule 7**      **Summary of Approved 2015 Revenue Changes** – This schedule shows the approved revenue changes that occurred during the 2015 year.
- Schedule 8**      **General Service Customer Bill Impacts** – This schedule provides illustrative customer bill impacts for general service customers in Rates M1, M2, R01, and R10.
- Schedule 9**      **Calculation of Sales Service and Direct Purchase Impacts for Typical Small and Large Customers** – This schedule provides illustrative customer bill impacts for all In-Franchise rate classes in Union North and Union South.
- Schedule 10**      **Summary of 2016 Capital Pass Through Adjustments** – This schedule summarizes the 2016 capital pass-through adjustments by rate class related to Union’s Parkway projects.

- Schedule 11**      **Calculation of 2016 DSM Budget** – This schedule shows the calculation of the 2016 DSM budget included in 2016 rates.
- Schedule 12**      **Calculation of 2016 NAC Target Percentage Change** – This schedule shows the calculation of the NAC target percentage change used to adjust billing units for General Service classes M1, M2, R01 and R10.
- Schedule 13**      **Summary of S&T Transactional Margin Included in 2016 Rates** – This schedule shows the approved reference amounts included in 2016 rates.
- Schedule 14**      **Summary of Gas Supply Optimization Margin Included in 2016 Rates** – This schedule summarizes the gas supply optimization margin amounts included in 2016 rates and shows the allocation of the ratepayer portion of the margin to rate classes.
- Schedule 15**      **Total Upstream Transportation Costs in Union North Rates** – This schedule provides the upstream transportation costs by rate class. Adjustments to upstream transportation costs are managed through the QRAM and will not be adjusted as part of the price cap formula.
- Schedule 16**      **Calculation of 2016 Gas Supply Admin Charge** – This schedule shows the calculation of the 2016 Gas Supply Administration charge included in Union’s Commodity & Fuel rate.
- Schedule 17**      **2014 Lost Revenue Adjustment Mechanism (“LRAM”) and 2011 LRAM Volume Adjustment** – This schedule provides the 2014 post-audited LRAM-related volume adjustments by contract rate class for 2016 rate calculation as well as the 2011 LRAM-related volume adjustment from EB-2014-0273 (2013 DSM Deferrals).
- Schedule 18**      **Calculation of Supplemental Service Charges** – This schedule provides the calculation of Union’s charges for supplemental services.
- Schedule 19**      **Unbundled Delivery Rate Detail - Southern Operations Area** – This schedule provides the derivation of the Rate U2 delivery rates.
- Schedule 20**      **Parkway Delivery Obligation** – This schedule identifies the 2016 delivery impacts to Union South In-Franchise customers and the 2016 incremental fuel costs related to the Parkway Delivery Obligation.
- Schedule 21**      **Ex-Franchise Transportation Fuel Ratios** – This schedule shows the continuity of fuel ratios which include both the application of the Price Cap Index (PCI) and the Parkway Delivery Obligation (PDO) compressor fuel pass-through shown at Working Paper Schedule 20, page 2.

***Schedule 22***     **In-Franchise Transportation Fuel Ratios** – This schedule shows the continuity of fuel ratios which include both the application of the Price Cap Index (PCI) and the Parkway Delivery Obligation (PDO) compressor fuel pass-through shown at Working Paper Schedule 20, page 2.

UNION GAS LIMITED  
Calculation of Price Cap Index  
Effective January 1, 2016

Line No.	Particulars	Annual % Change in GDP IPI FDD (1)			
1	July - September 2014	2.25%			
2	October - December 2014	2.15%			
3	January - March 2015	1.86%			
4	April - June 2015	1.68%			
5	Inflation Factor (Average % Change)	1.99%			
		<u>Inflation Factor (a)</u>	<u>X Factor (2) (b)</u>	<u>2016 PCI (c) = (a-b)</u>	
6	2016 Price Cap Index	1.99%	1.19%		0.80%

Notes:

- (1) Gross Domestic Product Implicit Price Index Final Domestic Demand, sourced from Statistics Canada CanSim Table 380-0066.
- (2) Equal to 60% of the Inflation factor in column (a) per EB-2013-0202 Settlement Agreement, Page 12.

UNION GAS LIMITED  
Calculation of Price Cap Adjustment  
Effective January 1, 2016

Line No.	Particulars (\$000's)	General Service (a)	In-Franchise Contract (b)	Total In-Franchise (c) = (a+b)	Ex-Franchise (d)	Total Company (e) = (c+d)
	<u>Calculation of Price Cap Base Revenue</u>					
1	2015 Approved Revenue (1)	752,399	135,381	887,780	182,232	1,070,012
	Current year's pre-cap adjustments:					
2	2015 DSM	(19,840)	(12,748)	(32,588)	-	(32,588) (2)
3	2015 Capital Pass-Throughs	4,284	1,134	5,418	(11,728)	(6,310) (3)
4	One-Time Adjustments - Decision	(3,940)	(2,137)	(6,077)	(967)	(7,043) (4)
5	Upstream Transportation	(109,497)	(10,684)	(120,181)	-	(120,181) (5)
6	Price Cap Base Revenue	<u>623,405</u>	<u>110,947</u>	<u>734,352</u>	<u>169,537</u>	<u>903,889</u>
7	2016 Price Cap Adjustment (Line 6 * PCI %)	<u>4,987</u>	<u>888</u>	<u>5,875</u>	<u>1,356</u>	<u>7,231</u>
8	2016 PCI %	0.80% (6)				

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e). Rates per Board-approved October 1, 2015 QRAM (EB-2015-0255), excluding Gas Supply Admin charge revenue, C1 Market Based Storage Services, Short-Term Transportation, Exchanges and Other Transactional revenue not subject to escalation.
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 3, column (c).
- (3) EB-2015-0116, Rate Order, Working Papers, Schedule 3, column (d).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 3, column (e).
- (5) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (e).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 1, column (c).

UNION GAS LIMITED  
Summary of 2016 Proposed Rates

Line No.	Particulars	Adjustments to 2015 Base Rates															Rate Change (%)
		Current Approved Revenue (1) (\$000's)	Current Approved Rates (2) (cents / m <sup>3</sup> )	2015 DSM (3) (\$000's)	2015 Capital Pass-Throughs (4) (\$000's)	2015 Parkway Delivery Obligation (5) (\$000's)	Upstream Transportation (6) (\$000's)	Adjusted Revenue (\$000's)	Price Cap Index (7) (\$000's)	Price Cap Index (%)	2016 DSM (8) (\$000's)	2016 Capital Pass-Throughs (9) (\$000's)	Add Back Upstream Transportation (\$000's)	2016 Parkway Delivery Obligation (10) (\$000's)	Proposed Revenue (\$000's)	Proposed Rates (cents / m <sup>3</sup> )	
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
<u>North Delivery</u>																	
1	Rate 01	160,716	17.3200	(3,843)	1,587	-	(1,836)	156,624	1,253	0.80%	9,124	(4,335)	1,836	-	164,503	17.0578	-1.5%
2	Rate 10	19,903	5.7399	(1,222)	201	-	(485)	18,397	147	0.80%	2,576	(544)	485	-	21,061	5.7932	0.9%
3	Rate 20	13,449	2.1746	(1,004)	167	-	(132)	12,480	100	0.80%	2,130	(448)	132	-	14,394	2.3650	8.8%
4	Rate 25	4,464	2.7980	-	51	-	-	4,516	36	0.80%	-	(138)	-	-	4,414	2.7662	-1.1%
5	Rate 100	15,530	0.8361	(1,852)	142	-	(9)	13,811	110	0.80%	595	(381)	9	-	14,144	0.7791	-6.8%
6	Total North Delivery	<u>214,062</u>		<u>(7,920)</u>	<u>2,147</u>	<u>-</u>	<u>(2,461)</u>	<u>205,828</u>	<u>1,647</u>		<u>14,425</u>	<u>(5,846)</u>	<u>2,461</u>	<u>-</u>	<u>218,515</u>		
<u>South Delivery &amp; Storage</u>																	
7	Rate M1	391,973	13.4168	(10,763)	3,890	(2,936)	-	382,164	3,057	0.80%	25,137	(7,204)	-	3,198	406,353	13.4652	0.4%
8	Rate M2	51,221	4.4689	(4,012)	538	(992)	-	46,754	374	0.80%	9,385	(309)	-	1,080	57,284	4.8945	9.5%
9	Rate M4	12,576	3.2957	(1,655)	138	(308)	-	10,751	86	0.80%	3,337	(30)	-	332	14,477	4.0073	21.6%
10	Rate M5A	13,296	2.5981	(2,763)	126	(40)	-	10,619	85	0.80%	4,476	(338)	-	39	14,881	3.0942	19.1%
11	Rate M7	4,262	3.0518	(933)	46	(139)	-	3,236	26	0.80%	1,221	24	-	150	4,657	3.6871	20.8%
12	Rate M9	771	1.2693	-	8	(53)	-	726	6	0.80%	-	30	-	57	819	1.3480	6.2%
13	Rate M10	10	5.4186	-	0	(1)	-	9	0	0.80%	-	0	-	1	11	5.9498	9.8%
14	Rate T1	10,867	2.0522	(1,855)	99	(179)	-	8,933	71	0.80%	2,101	(61)	-	192	11,236	2.1807	6.3%
15	Rate T2	43,429	0.9177	(2,687)	420	(1,070)	-	40,093	321	0.80%	1,351	286	-	1,158	43,209	0.9334	1.7%
16	Rate T3	4,768	1.7482	-	47	(345)	-	4,470	36	0.80%	-	234	-	345	5,084	1.8643	6.6%
17	Total South Delivery & Storage	<u>533,174</u>		<u>(24,668)</u>	<u>5,314</u>	<u>(6,064)</u>	<u>-</u>	<u>507,755</u>	<u>4,062</u>		<u>47,009</u>	<u>(7,368)</u>	<u>-</u>	<u>6,552</u>	<u>558,011</u>		
18	Total In-Franchise Delivery	<u>747,236</u>		<u>(32,588)</u>	<u>7,461</u>	<u>(6,064)</u>	<u>(2,461)</u>	<u>713,584</u>	<u>5,709</u>		<u>61,434</u>	<u>(13,214)</u>	<u>2,461</u>	<u>6,552</u>	<u>776,526</u>		

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 7, column (f).  
(2) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (c).  
(3) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).  
(4) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (l).  
(5) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (n).  
(6) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

Notes:

- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 2, line 7.  
(8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (h).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.

UNION GAS LIMITED  
Summary of 2016 Proposed Rates

Line No.	Particulars	Adjustments to 2015 Base Rates															Rate Change (%)
		Current Approved Revenue (1) (\$000's)	Current Approved Rates (2) (cents / m <sup>3</sup> )	2015 DSM (3) (\$000's)	2015 Capital Pass-Throughs (4) (\$000's)	2015 Parkway Delivery Obligation (5) (\$000's)	Upstream Transportation (6) (\$000's)	Adjusted Revenue (\$000's)	Price Cap Index (7) (\$000's)	Price Cap Index (%)	2016 DSM (8) (\$000's)	2016 Capital Pass-Throughs (9) (\$000's)	Add Back Upstream Transportation (\$000's)	2016 Parkway Delivery Obligation (10) (\$000's)	Proposed Revenue (\$000's)	Proposed Rates (cents / m <sup>3</sup> )	
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
<u>North Transportation &amp; Storage</u>																	
1	Rate 01	97,865	10.5535	-	(1,537)	(9)	(80,955)	15,366	123	0.80%	-	3,386	80,955	8	99,837	10.6087	0.5%
2	Rate 10	30,721	8.9165	-	(396)	(3)	(26,222)	4,100	33	0.80%	-	870	26,222	3	31,227	8.9265	0.1%
3	Rate 20	9,949	8.1591	-	(104)	(1)	(8,664)	1,179	9	0.80%	-	228	8,664	1	10,082	8.2680	1.3%
4	Rate 25	1,800	4.1944	-	1	-	(1,781)	20	0	0.80%	-	(2)	1,781	-	1,799	3.9483	-5.9%
5	Rate 100	209	-	-	(7)	(0)	(98)	104	1	0.80%	-	15	98	0	217	-	0.0%
6	Total North Transportation & Storage	<u>140,543</u>		<u>-</u>	<u>(2,043)</u>	<u>(12)</u>	<u>(117,720)</u>	<u>20,768</u>	<u>166</u>		<u>-</u>	<u>4,495</u>	<u>117,720</u>	<u>12</u>	<u>143,161</u>		
7	Gas Supply Admin Charge	<u>6,774</u>		<u>-</u>	<u>14</u>	<u>-</u>	<u>-</u>	<u>6,789</u>	<u>-</u>		<u>-</u>	<u>(40)</u>	<u>-</u>	<u>-</u>	<u>6,749</u>		
8	Total In-Franchise	<u>894,554</u>		<u>(32,588)</u>	<u>5,432</u>	<u>(6,077)</u>	<u>(120,181)</u>	<u>741,141</u>	<u>5,875</u>		<u>61,434</u>	<u>(8,758)</u>	<u>120,181</u>	<u>6,564</u>	<u>926,436</u>		
<u>Ex-Franchise</u>																	
9	Rate M12	172,976		-	(11,598)	(726)	-	160,652	1,285	0.80%	-	38,490	-	673	201,100		16.3%
10	Rate M13	419		-	1	-	-	421	3	0.80%	-	(1)	-	-	423		0.9%
11	Rate M16	760		-	2	(3)	-	759	6	0.80%	-	(6)	-	3	763		0.3%
12	Rate C1	45,526		-	(134)	(237)	-	45,155	62		-	496	-	220	45,932		0.9%
13	Total Ex-Franchise	<u>219,682</u>		<u>-</u>	<u>(11,728)</u>	<u>(967)</u>	<u>-</u>	<u>206,987</u>	<u>1,356</u>		<u>-</u>	<u>38,979</u>	<u>-</u>	<u>896</u>	<u>248,218</u>		
14	Total Company	<u>1,114,236</u>		<u>(32,588)</u>	<u>(6,296)</u>	<u>(7,043)</u>	<u>(120,181)</u>	<u>948,128</u>	<u>7,231</u>		<u>61,434</u>	<u>30,221</u>	<u>120,181</u>	<u>7,460</u>	<u>1,174,655</u>		

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 7, column (f).  
(2) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (c).  
(3) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).  
(4) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (l).  
(5) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (n).  
(6) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

Notes:

- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 2, line 7.  
(8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (h).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000s) (b)	Current Approved Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000s) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
1	Rate 01 General Service Monthly Charge	bills	3,839,732	80,634	\$21.00	-	1,157	-	-	81,792	654	
	Monthly Delivery Charge - All Zones											
2	First 100 m³	10³m³	273,618	24,710	9.0309	(1,186)	133	-	(578)	23,079	185	
3	Next 200 m³	10³m³	310,686	27,349	8.8028	(1,313)	147	-	(621)	25,562	204	
4	Next 200 m³	10³m³	135,534	11,446	8.4451	(549)	61	-	(260)	10,698	86	
5	Next 500 m³	10³m³	92,571	7,514	8.1168	(361)	40	-	(171)	7,023	56	
6	Over 1,000 m³	10³m³	115,512	9,063	7.8457	(435)	49	-	(206)	8,471	68	
7	Delivery Commodity charge - 01		927,922	80,082	8.6302	(3,843)	430	-	(1,836)	74,833	599	0.80%
8	Total Delivery - 01		927,922	160,716	17.3200	(3,843)	1,587	-	(1,836)	156,624	1,253	0.80%
	Gas Transportation											
9	Fort Frances	10³m³	12,888	743	5.7686	-	(0)	-	(742)	1	0	
10	Western	10³m³	179,519	8,894	4.9541	-	(3)	-	(8,878)	12	0	
11	Northern	10³m³	403,458	26,024	6.4503	-	(10)	-	(25,979)	36	0	
12	Eastern	10³m³	331,099	25,544	7.7149	-	(9)	-	(25,499)	35	0	
13	Transportation - 01		926,963	61,205	6.6027	-	(23)	-	(61,098)	84	1	0.80%
	Storage											
14	Fort Frances	10³m³	12,901	467	3.6175	-	(19)	(0)	(253)	195	2	
15	Western	10³m³	179,704	5,916	3.2920	-	(244)	(1)	(3,204)	2,466	20	
16	Northern	10³m³	403,875	15,710	3.8899	-	(649)	(4)	(8,509)	6,549	52	
17	Eastern	10³m³	331,441	14,568	4.3952	-	(602)	(3)	(7,890)	6,072	49	
18	Storage - 01		927,922	36,660	3.9508	-	(1,514)	(9)	(19,856)	15,281	122	0.80%
19	Total Rate 01		927,922	258,582	27.8668	(3,843)	50	(9)	(82,790)	171,990	1,376	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Prior to MCC Change (11)										MCC Change (11)		NAC / LRAM Volume Adjustment (12) (10 <sup>3</sup> m <sup>3</sup> ) (s)	Proposed			Rate Change (%) (w)
			2016 DSM (8) (\$000's) (k)	2016 Capital Pass-Throughs (9) (\$000's) (l)	Add Back Upstream Transportation (\$000's) (m) = (-g)	2016 Parkway Delivery Obligation (10) (\$000's) (n)	Proposed Revenue (\$000's) (o) = (h+i+k++l+m+n)	Proposed Rates (cents / m <sup>3</sup> ) (p) = (o / a)	Proposed Revenue (\$000's) (q)	Proposed Rates (cents / m <sup>3</sup> ) (r) = (q / a)						Usage including NAC & LRAM (t) = (a + s)	Revenue (\$000's) (u)	Rates (cents / m <sup>3</sup> ) (v) = (u / t)	
1	Rate 01 General Service Monthly Charge	bills	-	(3,173)	-	-	79,273	\$20.65	80,634	\$21.00	-	3,839,732	80,634	\$21.00					
	Monthly Delivery Charge - All Zones																		
2	First 100 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	2,815	(358)	578	-	26,299	9.6114	25,878	9.4579	10,752	284,370	25,878	9.1003					
3	Next 200 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	3,116	(397)	621	-	29,107	9.3687	28,642	9.2190	12,209	322,895	28,642	8.8704					
4	Next 200 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	1,304	(166)	260	-	12,182	8.9880	11,987	8.8444	5,326	140,860	11,987	8.5100					
5	Next 500 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	856	(109)	171	-	7,997	8.6386	7,869	8.5006	3,638	96,209	7,869	8.1792					
6	Over 1,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	1,033	(131)	206	-	9,645	8.3501	9,491	8.2167	4,539	120,052	9,491	7.9060					
7	Delivery Commodity charge - 01		<u>9,124</u>	<u>(1,161)</u>	<u>1,836</u>	<u>-</u>	<u>85,230</u>	<u>9.1850</u>	<u>83,868</u>	<u>9.0383</u>	<u>36,464</u>	<u>964,386</u>	<u>83,868</u>	<u>8.6965</u>					
8	Total Delivery - 01		<u>9,124</u>	<u>(4,335)</u>	<u>1,836</u>	<u>-</u>	<u>164,503</u>	<u>17.7281</u>	<u>164,503</u>	<u>17.7281</u>	<u>36,464</u>	<u>964,386</u>	<u>164,503</u>	<u>17.0578</u>					<u>-1.5%</u>
	Gas Transportation																		
9	Fort Frances	10 <sup>3</sup> m <sup>3</sup>	-	1	742	-	744	5.7722			-	12,888	744	5.7722					
10	Western	10 <sup>3</sup> m <sup>3</sup>	-	9	8,878	-	8,899	4.9572			-	179,519	8,899	4.9572					
11	Northern	10 <sup>3</sup> m <sup>3</sup>	-	26	25,979	-	26,040	6.4543			-	403,458	26,040	6.4543					
12	Eastern	10 <sup>3</sup> m <sup>3</sup>	-	25	25,499	-	25,560	7.7197			-	331,099	25,560	7.7197					
13	Transportation - 01		<u>-</u>	<u>60</u>	<u>61,098</u>	<u>-</u>	<u>61,243</u>	<u>6.6068</u>			<u>-</u>	<u>926,963</u>	<u>61,243</u>	<u>6.6068</u>					<u>0.1%</u>
	Storage																		
14	Fort Frances	10 <sup>3</sup> m <sup>3</sup>	-	42	253	0	491	3.8083			507	13,408	491	3.6643					
15	Western	10 <sup>3</sup> m <sup>3</sup>	-	537	3,204	1	6,228	3.4656			7,062	186,766	6,228	3.3346					
16	Northern	10 <sup>3</sup> m <sup>3</sup>	-	1,425	8,509	3	16,539	4.0951			15,871	419,746	16,539	3.9402					
17	Eastern	10 <sup>3</sup> m <sup>3</sup>	-	1,322	7,890	3	15,336	4.6270			13,025	344,466	15,336	4.4521					
18	Storage - 01		<u>-</u>	<u>3,326</u>	<u>19,856</u>	<u>8</u>	<u>38,594</u>	<u>4.1592</u>			<u>36,464</u>	<u>964,386</u>	<u>38,594</u>	<u>4.0019</u>					<u>1.3%</u>
19	Total Rate 01		<u>9,124</u>	<u>(949)</u>	<u>82,790</u>	<u>8</u>	<u>264,340</u>	<u>28.4873</u>			<u>36,464</u>	<u>964,386</u>	<u>264,340</u>	<u>27.4101</u>					<u>-1.6%</u>

Notes:

- (8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.  
(11) MCC = Monthly Customer Charge.  
(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast (1)	Current Approved Revenue (2)	Current Approved Rates (3)	2015 DSM (4)	2015 Capital Pass-Throughs (5)	2015 Parkway Delivery Obligation (10)	Upstream Transportation (7)	Adjusted Revenue	Price Cap Index	Price Cap Index
			Usage (a)	(\$000's) (b)	(cents / m³) (c)	(\$000's) (d)	(\$000's) (e)	(\$000's) (f)	(\$000's) (g)	(\$000's) (h) = (b+d+e+f+g)	(\$000's) (i)	(%) (j)
1	Rate 10 General Service											
	Monthly Charge	bills	24,629	1,724	\$70.00	-	64	-	-	1,788	14	
	Monthly Delivery Charge - All Zones											
2	First 1,000 m³	10³m³	25,432	1,816	7.1390	(122)	14	-	(49)	1,659	13	
3	Next 9,000 m³	10³m³	137,301	7,997	5.8241	(537)	60	-	(214)	7,305	58	
4	Next 20,000 m³	10³m³	87,335	4,457	5.1033	(300)	33	-	(118)	4,072	33	
5	Next 70,000 m³	10³m³	66,220	3,060	4.6205	(206)	23	-	(81)	2,796	22	
6	Over 100,000 m³	10³m³	30,458	850	2.7914	(57)	6	-	(22)	777	6	
7	Delivery Commodity charge - 10		346,746	18,179	5.2427	(1,222)	137	-	(485)	16,609	133	0.80%
8	Total Delivery - 10		346,746	19,903	5.7399	(1,222)	201	-	(485)	18,397	147	0.80%
	Gas Transportation											
9	Fort Frances	10³m³	2,824	144	5.0913	-	0	-	(144)	0	0	
10	Western	10³m³	48,124	2,058	4.2768	-	0	-	(2,057)	1	0	
11	Northern	10³m³	139,364	8,045	5.7729	-	0	-	(8,041)	5	0	
12	Eastern	10³m³	153,218	10,783	7.0376	-	0	-	(10,777)	6	0	
13	Transportation - 10		343,530	21,030	6.1218	-	0	-	(21,018)	12	0	0.80%
	Storage											
14	Fort Frances	10³m³	2,851	68	2.3829	-	(3)	(0)	(36)	29	0	
15	Western	10³m³	48,575	999	2.0574	-	(41)	(0)	(537)	422	3	
16	Northern	10³m³	140,669	3,735	2.6553	-	(153)	(1)	(2,006)	1,575	13	
17	Eastern	10³m³	154,652	4,888	3.1606	-	(200)	(1)	(2,625)	2,062	16	
18	Storage - 10		346,746	9,690	2.7947	-	(396)	(3)	(5,204)	4,087	33	0.80%
19	Total Rate 10		346,746	50,624	14.5996	(1,222)	(195)	(3)	(26,707)	22,497	180	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Prior to MCC Change (11)												MCC Change (11)		NAC / LRAM Volume Adjustment (12) (10 <sup>3</sup> m <sup>3</sup> ) (s)	Proposed			Rate Change (%) (w)
			2016 DSM (8) (\$000's) (k)	2016 Capital Pass-Throughs (9) (\$000's) (l)	Add Back Upstream Transportation (\$000's) (m) = (-g)	2016 Parkway Delivery Obligation (10) (\$000's) (n)	Proposed Revenue (\$000's) (o) = (h+i+k+l+m+n)	Proposed Rates (cents / m <sup>3</sup> ) (p) = (o / a)	Proposed Revenue (\$000's) (q)	Proposed Rates (cents / m <sup>3</sup> ) (r) = (q / a)	Usage including NAC & LRAM (t) = (a + s)	Revenue (\$000's) (u)	Rates (cents / m <sup>3</sup> ) (v) = (u / t)								
1	Rate 10 General Service Monthly Charge	bills	-	(175)	-	-	1,627	\$66.07	1,724	\$70.00	-	24,629	1,724	\$70.00							
	Monthly Delivery Charge - All Zones																				
2	First 1,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	257	(37)	49	-	1,941	7.6318	1,923	7.5613	1,232	26,664	1,923	7.2119							
3	Next 9,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	1,133	(162)	214	-	8,549	6.2261	8,470	6.1687	6,652	143,953	8,470	5.8836							
4	Next 20,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	632	(90)	118	-	4,765	5.4556	4,765	5.4556	4,231	91,566	4,765	5.2035							
5	Next 70,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	434	(62)	81	-	3,271	4.9394	3,271	4.9394	3,208	69,428	3,271	4.7112							
6	Over 100,000 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup>	120	(17)	22	-	909	2.9841	909	2.9841	1,476	31,934	909	2.8462							
7	Delivery Commodity charge - 10		2,576	(369)	485	-	19,434	5.6046	19,337	5.5767	16,799	363,545	19,337	5.3190							
8	Total Delivery - 10		2,576	(544)	485	-	21,061	6.0739	21,061	6.0739	16,799	363,545	21,061	5.7932			0.9%				
	Gas Transportation																				
9	Fort Frances	10 <sup>3</sup> m <sup>3</sup>	-	(0)	144	-	144	5.0912			-	2,824	144	5.0912							
10	Western	10 <sup>3</sup> m <sup>3</sup>	-	(0)	2,057	-	2,058	4.2767			-	48,124	2,058	4.2767							
11	Northern	10 <sup>3</sup> m <sup>3</sup>	-	(0)	8,041	-	8,045	5.7728			-	139,364	8,045	5.7728							
12	Eastern	10 <sup>3</sup> m <sup>3</sup>	-	(0)	10,777	-	10,783	7.0374			-	153,218	10,783	7.0374							
13	Transportation - 10		-	(1)	21,018	-	21,030	6.1216			-	343,530	21,030	6.1216			0.0%				
	Storage																				
14	Fort Frances	10 <sup>3</sup> m <sup>3</sup>	-	6	36	0	71	2.5075			138	2,989	71	2.3917							
15	Western	10 <sup>3</sup> m <sup>3</sup>	-	90	537	0	1,052	2.1650			2,353	50,928	1,052	2.0650							
16	Northern	10 <sup>3</sup> m <sup>3</sup>	-	336	2,006	1	3,931	2.7942			6,815	147,484	3,931	2.6651							
17	Eastern	10 <sup>3</sup> m <sup>3</sup>	-	439	2,625	1	5,144	3.3259			7,493	162,144	5,144	3.1722							
18	Storage - 10		-	871	5,204	3	10,197	2.9408			16,799	363,545	10,197	2.8049			0.4%				
19	Total Rate 10		2,576	326	26,707	3	52,288	15.0796			16,799	363,545	52,288	14.3828			-1.5%				

Notes:

- (8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.  
(11) MCC = Monthly Customer Charge.  
(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast (1)	Current Approved Revenue (2)	Current Approved Rates (3)	2015 DSM (4)	2015 Capital Pass-Throughs (5)	2015 Parkway Delivery Obligation (10)	Upstream Transportation (7)	Adjusted Revenue	Price Cap Index	Price Cap Index
			Usage (a)	(\$000's) (b)	(cents / m³) (c)	(\$000's) (d)	(\$000's) (e)	(\$000's) (f)	(\$000's) (g)	(h) = (b+d+e+f+g)	(\$000's) (i)	(%) (j)
1	Rate 20 Medium Volume Firm Service Monthly Charge	bills	748	727	\$972.44	-	20	-	-	748	6	
2	Monthly Demand Charge											
	First 70,000 m³	10³m³/d	23,260	6,487	27.8909	(435)	64	-	-	6,115	49	
3	All over 70,000 m³	10³m³/d	19,701	3,231	16.4012	(217)	32	-	-	3,046	24	
	Monthly Commodity Charge											
4	First 852,000 m³	10³m³	325,233	1,751	0.5383	(212)	31	-	(80)	1,490	12	
5	All over 852,000 m³	10³m³	293,227	1,150	0.3922	(139)	20	-	(52)	979	8	
6	Delivery (Commodity/Demand)		618,460	12,619	2,0404	(1,004)	146	-	(132)	11,630	93	0.80%
7	Transportation Account Charge	10³m³	460	102	\$222.35	-	-	-	-	102	1	
8	Total Delivery - 20		618,460	13,449	2,1746	(1,004)	167	-	(132)	12,480	100	0.80%
	Gas Supply Demand Charge											
9	Fort Frances		-	-	54.0901	-	-	-	-	-	-	
10	Western	10³m³	2,850	882	33.2652	-	(18)	(0)	(878)	(15)	(0)	
11	Northern	10³m³	702	502	71.4880	-	(10)	(0)	(500)	(9)	(0)	
12	Eastern	10³m³	3,521	3,654	103.7960	-	(76)	(1)	(3,641)	(63)	(1)	
	Commodity Transportation 1											
13	Fort Frances	10³m³	-	-	4.3859	-	-	-	-	-	-	
14	Western	10³m³	24,899	978	3.9299	-	-	-	(996)	(17)	(0)	
15	Northern	10³m³	7,775	371	4.7675	-	-	-	(377)	(7)	(0)	
16	Eastern	10³m³	40,782	2,233	5.4755	-	-	-	(2,272)	(39)	(0)	
	Commodity Transportation 2											
17	Fort Frances		-	-	-	-	-	-	-	-	-	
18	Western	10³m³	10,903	-	-	-	-	-	-	-	-	
19	Northern	10³m³	6,194	-	-	-	-	-	-	-	-	
20	Eastern	10³m³	31,381	-	-	-	-	-	-	-	-	
	Storage (GJ's)											
21	Demand	GJ/d	99,288	1,228	12.366	-	-	-	-	1,228	10	
22	Commodity	GJ	639,477	101	0.158	-	-	-	-	101	1	
23	Gas Supply Transportation - 20		121,935	9,949	8.1591	-	(104)	(1)	(8,664)	1,179	9	0.80%
24	Total Rate 20		618,460	23,398	3.7832	(1,004)	63	(1)	(8,796)	13,660	109	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units						Prior to MCC Change (11)		MCC Change (11)		NAC / LRAM	Proposed			Rate Change (%)
			2016 DSM (8)	2016 Capital	Add Back	2016 Parkway	Proposed	Proposed	Proposed	Proposed	VOLUME	Usage	Revenue	Rates	Rate	
			Pass-Throughs (9)	Upstream	Delivery	Revenue	Rates	Revenue	Rates	Adjustment (12)	including					
			(\$000's)	(\$000's)	Obligation (10)	(\$000's)	(cents / m³)	(\$000's)	(cents / m³)	(10³m³)	NAC & LRAM	(\$000's)	(cents / m³)	Change		
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+k+l+m+n)	(p) = (o / a)	(q)	(r) = (q / a)	(s)	(t) = (a + s)	(u)	(v) = (u / t)	(w)	
1	Rate 20 Medium Volume Firm Service Monthly Charge	bills	-	(56)	-	-	698	\$932.79			-	748	698	\$932.79		
2	Monthly Demand Charge															
3	First 70,000 m³	10³m³/d	924	(170)	-	-	6,918	29.7442			-	23,260	6,918	29.7442		
3	All over 70,000 m³	10³m³/d	460	(85)	-	-	3,446	17.4911			-	19,701	3,446	17.4911		
4	Monthly Commodity Charge															
5	First 852,000 m³	10³m³	450	(83)	80	-	1,949	0.5992			(5,178)	320,055	1,949	0.6089		
5	All over 852,000 m³	10³m³	296	(54)	52	-	1,280	0.4366			(4,668)	288,559	1,280	0.4436		
6	Delivery (Commodity/Demand)		2,130	(392)	132	-	13,593	2,197.9			(9,846)	608,614	13,593	2,233.4	9.5%	
7	Transportation Account Charge	10³m³	-	-	-	-	103	\$224.13			-	460	103	\$224.13		
8	Total Delivery - 20		2,130	(448)	132	-	14,394	2,327.4			(9,846)	608,614	14,394	2,365.0	8.8%	
9	Gas Supply Demand Charge															
9	Fort Frances		-	-	-	-	-	54.0801			-	-	-	54.0801		
10	Western	10³m³	-	40	878	0	903	34.0754			-	2,650	903	34.0754		
11	Northern	10³m³	-	23	500	0	514	73.2293			-	702	514	73.2293		
12	Eastern	10³m³	-	165	3,641	1	3,743	106.3242			-	3,521	3,743	106.3242		
13	Commodity Transportation 1															
13	Fort Frances	10³m³	-	-	-	-	-	4.3859			-	-	-	4.3859		
14	Western	10³m³	-	-	996	-	978	3.9293			-	24,899	978	3.9293		
15	Northern	10³m³	-	-	377	-	371	4.7668			-	7,775	371	4.7668		
16	Eastern	10³m³	-	-	2,272	-	2,233	5.4747			-	40,782	2,233	5.4747		
17	Commodity Transportation 2															
17	Fort Frances		-	-	-	-	-	-			-	-	-	-		
18	Western	10³m³	-	-	-	-	-	-			-	10,903	-	-		
19	Northern	10³m³	-	-	-	-	-	-			-	6,194	-	-		
20	Eastern	10³m³	-	-	-	-	-	-			-	31,381	-	-		
21	Storage (GJ's)															
21	Demand	GJ/d	-	-	-	-	1,238	12.464			-	99,288	1,238	12.464		
22	Commodity	GJ	-	-	-	-	102	0.159			-	639,477	102	0.159		
23	Gas Supply Transportation - 20		-	228	8,664	1	10,082	8,268.0			-	121,935	10,082	8,268.0	1.3%	
24	Total Rate 20		2,130	(221)	8,796	1	24,475	3,957.5			(9,846)	608,614	24,475	4,021.5	6.3%	

Notes:

(8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).

(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).

(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.

(11) MCC = Monthly Customer Charge.

(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Adjustments to 2015 Base Rates												
Line No.	Particulars	Billing Units	Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000's) (b)	Current Approved Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000's) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
1	Rate 25 Large Volume Interruptible Service											
2	Monthly Charge	bills	842	297	\$352.32	-	11	-	-	308	2	
3	Monthly Delivery Charge	10³m³	159,555	4,160	2,6071	-	40	-	-	4,200	34	
4	Transportation Account Charge	bills	36	8	\$222.35	-	-	-	-	8	0	
5	Total Delivery - 25		159,555	4,464	2,7980	-	51	-	-	4,516	36	0.80%
6	Gas Supply Transportation	10³m³	42,913	1,800	4,1944	-	1	-	(1,781)	20	0	
7	Total Rate 25		159,555	6,264	3,9261	-	52	-	(1,781)	4,535	36	0.80%
8	Rate 100 Large Volume Firm Service											
9	Monthly Charge	bills	226	331	\$1,464.29	-	7	-	-	338	3	
10	Demand	10³m³/d	71,975	11,081	15,3958	(1,389)	101	-	-	9,794	78	
11	Commodity	10³m³	1,857,374	4,068	0,2190	(463)	34	-	(9)	3,630	29	
12	Delivery (Commodity/Demand)		1,857,374	15,480	0,8334	(1,852)	135	-	(9)	13,754	110	0.80%
13	Transportation Account Charge	bills	226	50	\$222.35	-	-	-	-	50	0	
14	Total Delivery - 100		1,857,374	15,530	0,8361	(1,852)	142	-	(9)	13,811	110	0.80%
15	Gas Supply Demand Charge											
16	Fort Frances	10³m³/d	-	-	102.9596	-	-	-	-	-	-	
17	Western	10³m³/d	-	-	78.6756	-	-	-	-	-	-	
18	Northern	10³m³/d	-	-	123.2688	-	-	-	-	-	-	
19	Eastern	10³m³/d	-	-	160.9615	-	-	-	-	-	-	
20	Commodity Transportation 1											
21	Fort Frances	-	-	-	7.0810	-	-	-	-	-	-	
22	Western	10³m³	-	-	6.7390	-	-	-	-	-	-	
23	Northern	10³m³	-	-	7.3672	-	-	-	-	-	-	
24	Eastern	10³m³	-	-	7.8982	-	-	-	-	-	-	
25	Commodity Transportation 2											
26	Fort Frances	-	-	-	-	-	-	-	-	-	-	
27	Western	10³m³	-	-	-	-	-	-	-	-	-	
28	Northern	10³m³	-	-	-	-	-	-	-	-	-	
29	Eastern	10³m³	-	-	-	-	-	-	-	-	-	
30	Storage (GJ's)											
31	Demand	GJ/d	15,600	193	12.366	-	(6)	(0)	(98)	89	1	
32	Commodity	GJ	100,000	16	0.158	-	(1)	(0)	-	15	0	
33	Gas Supply - 100		-	209	-	-	(7)	(0)	(98)	104	1	0.80%
34	Total Rate 100		1,857,374	15,739	0.8474	(1,852)	135	(0)	(107)	13,915	111	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union North  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Prior to MCC Change (11)					MCC Change (11)		NAC / LRAM Volume Adjustment (12) (10 <sup>3</sup> m <sup>3</sup> ) (s)	Proposed			Rate Change (%) (w)
			2016 DSM (8) (\$000's) (k)	2016 Capital Pass-Throughs (9) (\$000's) (l)	Add Back Upstream Transportation (\$000's) (m) = (-g)	2016 Parkway Delivery Obligation (10) (\$000's) (n)	Proposed Revenue (\$000's) (o) = (h+i+k+l+m+n)	Proposed Rates (cents / m <sup>3</sup> ) (p) = (o / a)	Proposed Revenue (\$000's) (q)	Proposed Rates (cents / m <sup>3</sup> ) (r) = (q / a)	Usage including NAC & LRAM (t) = (a + s)	Revenue (\$000's) (u)	Rates (cents / m <sup>3</sup> ) (v) = (u / t)	
1	Rate 25 Large Volume Interruptible Service													
2	Monthly Charge	bills	-	(31)	-	-	279	\$331.70		-	842	279	\$331.70	
3	Monthly Delivery Charge	10 <sup>3</sup> m <sup>3</sup>	-	(107)	-	-	4,126	2.5861		-	159,555	4,126	2.5861	
4	Transportation Account Charge	bills	-	-	-	-	8	\$224.13		-	36	8	\$224.13	
4	Total Delivery - 25		-	(138)	-	-	4,414	2.7662		-	159,555	4,414	2.7662	-1.1%
5	Gas Supply Transportation	10 <sup>3</sup> m <sup>3</sup>	-	(2)	1,781	-	1,799	4.1912		-	42,913	1,799	3.9483	
6	Total Rate 25		-	(141)	1,781	-	6,212	3.8934		-	159,555	6,212	3.8934	-0.8%
7	Rate 100 Large Volume Firm Service													
8	Monthly Charge	bills	-	(19)	-	-	322	\$1,423.71		-	226	322	\$1,423.71	
9	Demand	10 <sup>3</sup> m <sup>3</sup> /d	446	(272)	-	-	10,046	13.9580		-	71,975	10,046	13.9580	
10	Commodity	10 <sup>3</sup> m <sup>3</sup>	149	(91)	9	-	3,726	0.2006		(41.824)	1,815,550	3,726	0.2052	
11	Delivery (Commodity/Demand)		595	(362)	9	-	14,094	0.7588		(41.824)	1,815,550	14,094	0.7763	-6.9%
12	Transportation Account Charge	bills	-	-	-	-	51	\$224.13		-	226	51	\$224.13	
12	Total Delivery - 100		595	(381)	9	-	14,144	0.7615		(41.824)	1,815,550	14,144	0.7791	-6.8%
13	Gas Supply Demand Charge													
14	Fort Frances	10 <sup>3</sup> m <sup>3</sup> /d	-	-	-	-	-	102.9596		-	-	-	102.9596	
15	Western	10 <sup>3</sup> m <sup>3</sup> /d	-	-	-	-	-	78.6756		-	-	-	78.6756	
16	Northern	10 <sup>3</sup> m <sup>3</sup> /d	-	-	-	-	-	123.2688		-	-	-	123.2688	
16	Eastern	10 <sup>3</sup> m <sup>3</sup> /d	-	-	-	-	-	160.9615		-	-	-	160.9615	
17	Commodity Transportation 1													
18	Fort Frances	-	-	-	-	-	-	7.0810		-	-	-	7.0810	
19	Western	10 <sup>3</sup> m <sup>3</sup>	-	-	-	-	-	6.7390		-	-	-	6.7390	
20	Northern	10 <sup>3</sup> m <sup>3</sup>	-	-	-	-	-	7.3672		-	-	-	7.3672	
20	Eastern	10 <sup>3</sup> m <sup>3</sup>	-	-	-	-	-	7.8982		-	-	-	7.8982	
21	Commodity Transportation 2													
22	Fort Frances	-	-	-	-	-	-	-		-	-	-	-	
23	Western	10 <sup>3</sup> m <sup>3</sup>	-	-	-	-	-	-		-	-	-	-	
24	Northern	10 <sup>3</sup> m <sup>3</sup>	-	-	-	-	-	-		-	-	-	-	
24	Eastern	10 <sup>3</sup> m <sup>3</sup>	-	-	-	-	-	-		-	-	-	-	
25	Storage (GJ's)													
26	Demand	GJ/d	-	14	98	0	201	12.464		-	15,600	201	12.464	
27	Commodity	GJ	-	1	-	0	17	0.159		-	100,000	17	0.159	
27	Gas Supply - 100		-	15	98	0	217	-		-	-	217	-	
28	Total Rate 100		595	(366)	107	0	14,362	0.7732		(41.824)	1,815,550	14,362	0.7910	-6.7%

Notes:

(8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).

(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).

(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.

(11) MCC = Monthly Customer Charge.

(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000's) (b)	Current Approved Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000's) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
1	M1 Monthly Charge	bills	12,706,802	266,843	\$21.00	-	2,613	-	-	269,455	2,156	
	Monthly Delivery Commodity Charge											
2	First 100 m³	10³m³	879,923	34,306	3.8988	(3,569)	296	(974)	-	30,060	240	
3	Next 150 m³	10³m³	781,347	28,923	3.7017	(3,009)	250	(821)	-	25,343	203	
4	All over 250 m³	10³m³	1,260,246	40,235	3.1926	(4,186)	348	(1,142)	-	35,255	282	
5	Total Delivery - M1		2,921,516	370,307	12.6752	(10,763)	3,506	(2,936)	-	360,114	2,881	0.80%
6	Storage	10³m³	2,921,516	21,666	0.7416	-	384	-	-	22,050	176	
7	Total Rate M1		2,921,516	391,973	13.4168	(10,763)	3,890	(2,936)	-	382,164	3,057	0.80%
8	M2 Monthly Charge	bills	81,451	5,702	\$70.00	-	81	-	-	5,783	46	
	Monthly Delivery Commodity Charge											
9	First 1,000 m³	10³m³	62,323	2,251	3.6124	(237)	19	(59)	-	1,975	16	
10	Next 6,000 m³	10³m³	303,299	10,753	3.5455	(1,131)	92	(280)	-	9,435	75	
11	Next 13,000 m³	10³m³	342,713	11,502	3.3563	(1,210)	98	(299)	-	10,092	81	
12	All over 20,000 m³	10³m³	437,832	13,644	3.1163	(1,435)	117	(355)	-	11,971	96	
13	Total Delivery - M2		1,146,167	43,853	3.8261	(4,012)	407	(992)	-	39,256	314	0.80%
14	Storage	10³m³	1,146,167	7,368	0.6428	-	131	-	-	7,499	60	
15	Total Rate M2		1,146,167	51,221	4.4689	(4,012)	538	(992)	-	46,754	374	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units						Prior to MCC Change (11)		MCC Change (11)		NAC / LRAM Volume Adjustment (12) (10³m³) (s)	Proposed			Rate Change (%) (w)
			2016 DSM (8) (\$000's) (k)	2016 Capital Pass-Throughs (9) (\$000's) (l)	Add Back Upstream Transportation (\$000's) (m) = (-g)	2016 Parkway Delivery Obligation (10) (\$000's) (n)	Proposed Revenue (\$000's) (o) = (h+i+k+l+m+n)	Proposed Rates (cents / m³) (p) = (o / a)	Proposed Revenue (\$000's) (q)	Proposed Rates (cents / m³) (r) = (q / a)	Usage including NAC & LRAM (t) = (a + s)		Revenue (\$000's) (u)	Rates (cents / m³) (v) = (u / t)		
1	M1															
	Monthly Charge	bills	-	(7,170)	-	-	264,441	\$20.81	266,843	\$21.00	-	12,706,802	266,843	\$21.00		
	Monthly Delivery Commodity Charge															
2	First 100 m³	10³m³	8,335	327	-	1,060	40,023	4.5485	39,227	4.4580	29,001	908,925	39,227	4.3157		
3	Next 150 m³	10³m³	7,027	276	-	894	33,743	4.3185	33,071	4.2326	25,752	807,099	33,071	4.0975		
4	All over 250 m³	10³m³	9,775	383	-	1,244	46,939	3.7246	46,005	3.6505	41,537	1,301,783	46,005	3.5340		
5	Total Delivery - M1		25,137	(6,184)	-	3,198	385,146	13.1831	385,146	13.1831	96,290	3,017,807	385,146	12.7624	0.7%	
6	Storage	10³m³	-	(1,020)	-	-	21,207	0.7259			96,290	3,017,807	21,207	0.7027	-5.2%	
7	Total Rate M1		25,137	(7,204)	-	3,198	406,353	13.9090			96,290	3,017,807	406,353	13.4652	0.4%	
8	M2															
	Monthly Charge	bills	-	(223)	-	-	5,606	\$68.82	5,702	\$70.00	-	81,451	5,702	\$70.00		
	Monthly Delivery Commodity Charge															
9	First 1,000 m³	10³m³	554	15	-	64	2,624	4.2104	2,607	4.1838	1,317	63,640	2,607	4.0973		
10	Next 6,000 m³	10³m³	2,645	74	-	304	12,534	4.1324	12,454	4.1063	6,408	309,707	12,454	4.0214		
11	Next 13,000 m³	10³m³	2,829	79	-	326	13,407	3.9119	13,407	3.9119	7,240	349,953	13,407	3.8310		
12	All over 20,000 m³	10³m³	3,356	94	-	386	15,903	3.6322	15,903	3.6322	9,250	447,082	15,903	3.5570		
13	Total Delivery - M2		9,385	38	-	1,080	50,073	4.3687	50,073	4.3687	24,215	1,170,382	50,073	4.2784	11.8%	
14	Storage	10³m³	-	(348)	-	-	7,211	0.6291			24,215	1,170,382	7,211	0.6161	-4.2%	
15	Total Rate M2		9,385	(309)	-	1,080	57,284	4.9979			24,215	1,170,382	57,284	4.8945	9.5%	

Notes:

- (8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.  
(11) MCC = Monthly Customer Charge.  
(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Adjustments to 2015 Base Rates												
Line No.	Particulars	Billing Units	Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000's) (b)	Current Approved Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000's) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
M4 Firm Commercial/Industrial Contract Rate												
Monthly Demand Charge												
1	First 8,450 m³	10³m³/d	12,905	6,174	47.8404	(707)	59	(131)	-	5,395	43	
2	Next 19,700 m³	10³m³/d	7,864	1,687	21.4504	(193)	16	(36)	-	1,474	12	
3	All over 28,150 m³	10³m³/d	4,507	812	18.0214	(93)	8	(17)	-	710	6	
Monthly Delivery Commodity Charge												
4	First Block	10³m³	373,554	3,867	1.0353	(656)	55	(122)	-	3,144	25	
5	All remaining use	10³m³	8,039	36	0.4466	(6)	1	(1)	-	29	0	
7	Total Rate M4		381,593	12,576	3.2957	(1,655)	138	(308)	-	10,751	86	0.80%
M5A Interruptible Commercial/Industrial Contract Rate												
Firm contracts												
8	Monthly Demand Charge	10³m³/d	626	179	28.5955	(31)	3	(2)	-	148	1	
9	Monthly Delivery Commodity Charge	10³m³	16,626	336	2.0180	(59)	1	(1)	-	276	2	
10	Total Delivery - Firm M5A		16,626	514	3.0939	(90)	4	(4)	-	424	3	0.80%
Interruptible contracts												
11	Monthly Charge	bills	1,692	1,153	\$681.21	-	16	-	-	1,169	9	
12	Delivery Commodity Charge (Avg Price)	10³m³	495,144	11,629	2.3487	(2,673)	106	(37)	-	9,026	72	
13	Total Delivery -Interruptible M5A		495,144	12,782	2.5815	(2,673)	122	(37)	-	10,195	82	0.80%
14	Total Rate M5A		511,770	13,296	2.5981	(2,763)	126	(40)	-	10,619	85	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units					Prior to MCC Change (11)		MCC Change (11)		NAC / LRAM Volume Adjustment (12) (10 <sup>3</sup> m <sup>3</sup> ) (s)	Proposed			Rate Change (%) (w)
			2016 DSM (8)	2016 Capital	Add Back Upstream	2016 Parkway	Proposed Revenue	Proposed Rates	Proposed Revenue	Proposed Rates		Usage including	Revenue	Rates	
			(8)	Pass-Throughs (9)	Transportation	Delivery Obligation (10)	(000's)	(cents / m <sup>3</sup> )	(000's)	(cents / m <sup>3</sup> )		including	(000's)	(cents / m <sup>3</sup> )	
			(\$000's)	(\$000's)	(\$000's)	(\$000's)	(o) = (h+i+k+l+m+n)	(p) = (o / a)	(q)	(r) = (q / a)		NAC & LRAM	(u)	(v) = (u / t)	
			(k)	(l)	(m) = (-g)	(n)						(t) = (a + s)			
M4 Firm Commercial/Industrial Contract Rate															
Monthly Demand Charge															
1	First 8,450 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup> /d	1,425	(13)	-	142	6,992	54.1798	-	-	-	12,905	6,992	54.1798	
2	Next 19,700 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup> /d	389	(4)	-	39	1,910	24.2928	-	-	-	7,864	1,910	24.2928	
3	All over 28,150 m <sup>3</sup>	10 <sup>3</sup> m <sup>3</sup> /d	188	(2)	-	19	920	20.4094	-	-	-	4,507	920	20.4094	
Monthly Delivery Commodity Charge															
4	First Block	10 <sup>3</sup> m <sup>3</sup>	1,323	(12)	-	132	4,612	1.2345	(19,904)	(19,904)	-	353,650	4,612	1.3040	
5	All remaining use	10 <sup>3</sup> m <sup>3</sup>	12	(0)	-	1	43	0.5325	(428)	(428)	-	7,611	43	0.5625	
7	Total Rate M4		3,337	(30)	-	332	14,477	3.7938			(20,332)	361,261	14,477	4.0073	21.6%
M5A Interruptible Commercial/Industrial Contract Rate															
Firm contracts															
8	Monthly Demand Charge	10 <sup>3</sup> m <sup>3</sup> /d	51	(5)	-	3	198	31.6776	-	-	-	626	198	31.6776	
9	Monthly Delivery Commodity Charge	10 <sup>3</sup> m <sup>3</sup>	95	(2)	-	1	373	2.2423	(1,002)	(1,002)	-	15,624	373	2.3861	
10	Total Delivery - Firm M5A		146	(7)	-	4	571	3.4342	(1,002)	(1,002)	-	15,624	571	3.6544	18.1%
Interruptible contracts															
11	Monthly Charge	bills	-	(45)	-	-	1,133	\$669.55	-	-	-	1,692	1,133	\$669.55	
12	Delivery Commodity Charge (Avg Price)	10 <sup>3</sup> m <sup>3</sup>	4,330	(286)	-	35	13,177	2.6613	(29,833)	(29,833)	-	465,311	13,177	2.8319	
13	Total Delivery - Interruptible M5A		4,330	(331)	-	35	14,310	2.8901	(29,833)	(29,833)	-	465,311	14,310	3.0754	19.1%
14	Total Rate M5A		4,476	(338)	-	39	14,881	2.9077			(30,835)	480,935	14,881	3.0942	19.1%

Notes:

- (8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.  
(11) MCC = Monthly Customer Charge.  
(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Adjustments to 2015 Base Rates												
Line No.	Particulars	Billing Units	Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000's) (b)	Current Approved Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000's) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
M7 Special Large Volume Contract Rate Firm Contracts												
1	Monthly Demand Charge	10³m³/d	14,220	3,743	26.3233	(804)	44	(118)	-	2,866	23	
2	Monthly Delivery Commodity Charge	10³m³	135,227	461	0.3410	(99)	0	(21)	-	341	3	
3	Total Delivery - Firm M7		135,227	4,204	3.1091	(903)	44	(139)	-	3,207	26	0.80%
Interruptible / Seasonal Contracts												
4	Monthly Delivery Commodity Charge	10³m³	4,418	57	1.2978	(30)	1	-	-	29	0	
5	Total Rate M7		139,645	4,262	3.0518	(933)	46	(139)	-	3,236	26	0.80%
M9 Large Wholesale Service												
6	Monthly Demand Charge	10³m³/d	3,993	648	16.2405	-	8	(42)	-	614	5	
7	Monthly Delivery Commodity Charge	10³m³	60,750	123	0.2019	-	0	(11)	-	112	1	
8	Total Rate M9		60,750	771	1.2693	-	8	(53)	-	726	6	0.80%
M10 Small Wholesale Service												
9	Monthly Delivery Commodity Charge	10³m³	189	10	5.4186	-	0	(1)	-	9	0	
10	Total Rate M10		189	10	5.4186	-	0	(1)	-	9	0	0.80%

Notes:

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- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
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- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

		Prior to MCC Change (11)						MCC Change (11)		NAC / LRAM	Proposed				
Line		Billing	2016	2016 Capital	Add Back	2016 Parkway	Proposed	Proposed	Proposed	Proposed	NAC / LRAM	Usage	Revenue	Rates	Rate
No.	Particulars	Units	DSM (8)	Pass-Throughs (9)	Upstream	Delivery	Revenue	Rates	Revenue	Rates	Volume	including			Change
			(\$000's)	(\$000's)	Transportation	Obligation (10)	(\$000's)	(cents / m³)	(\$000's)	(cents / m³)	Adjustment (12)	NAC & LRAM	(\$000's)	(cents / m³)	(%)
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+k+l+m+n)	(p) = (o / a)	(q)	(r) = (q / a)	(s)	(t) = (a + s)	(u)	(v) = (u / t)	(w)
M7 Special Large Volume Contract Rate															
Firm Contracts															
1	Monthly Demand Charge	10³m³/d	1,053	28	-	130	4,100	28.8306			-	14,220	4,100	28.8306	
2	Monthly Delivery Commodity Charge	10³m³	130	(0)	-	20	493	0.3647			(12,917)	122,310	493	0.4033	
3	Total Delivery - Firm M7		1,183	28	-	150	4,593	3.3965			(12,917)	122,310	4,593	3.7552	20.8%
Interruptible / Seasonal Contracts															
4	Monthly Delivery Commodity Charge	10³m³	39	(4)	-	-	64	1.4518			(422)	3,996	64	1.6051	23.7%
5	Total Rate M7		1,221	24	-	150	4,657	3.3349			(13,339)	126,306	4,657	3.6871	20.8%
M9 Large Wholesale Service															
6	Monthly Demand Charge	10³m³/d	-	30	-	47	696	17.4339			-	3,993	696	17.4339	
7	Monthly Delivery Commodity Charge	10³m³	-	(0)	-	10	123	0.2022			-	60,750	123	0.2022	
8	Total Rate M9		-	30	-	57	819	1.3480			-	60,750	819	1.3480	6.2%
M10 Small Wholesale Service															
9	Monthly Delivery Commodity Charge	10³m³	-	0	-	1	11	5.9498			-	189	11	5.9498	
10	Total Rate M10		-	0	-	1	11	5.9498			-	189	11	5.9498	9.8%

Notes:

(8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).

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(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.

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UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Adjustments to 2015 Base Rates												
Line No.	Particulars	Billing Units	Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000's) (b)	Current Approved Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000's) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
T1 Storage and Transportation Storage (\$/GJ's)												
Demand:												
	Firm injection / withdrawal											
1	Union provides deliverability inventory	GJ/d/mo.	492,360	789	1.603	-	9	-	-	798	6	
2	Customer provides deliverability inventory	GJ/d/mo.	166,800	202	1.208	-	2	-	-	204	2	
3	Incremental firm injection right	GJ/d/mo.	-	-	1.208	-	-	-	-	-	-	
4	Interruptible	GJ/d/mo.	62,244	76	1.208	-	-	-	-	76	1	
5	Space	GJ/d/mo.	22,396,680	254	0.011	-	3	-	-	257	2	
6	Commodity (Customer Provides)	GJ	2,750,300	21	0.008	-	0	-	-	21	0	
7	Commodity (Union Provides)	GJ	-	-	0.029	-	-	-	-	-	-	
8	Customer supplied fuel	GJ	16,442	53	-	-	-	-	-	53	0	
Transportation (cents/ m3)												
Demand:												
9	First 28,150 m³	10³m³/d/mo.	12,448	4,077	32.7527	(1,034)	41	(73)	-	3,011	24	
10	Next 112,720 m³	10³m³/d/mo.	13,002	2,942	22.6284	(746)	30	(53)	-	2,173	17	
Commodity												
Firm												
11	All Volumes	10³m³	468,507	346	0.0739	-	1	-	-	347	3	
12	Interruptible	10³m³	61,046	785	1.2862	(75)	6	-	-	716	6	
13	Monthly Charges	Meter/mo.	528	1,022	\$1,935.18	-	8	-	-	1,030	8	
14	Customer supplied fuel	10³m³	2,979	301	-	-	-	(53)	-	247	2	
15	Total Rate T1		529,553	10,867	2.0522	(1,855)	99	(179)	-	8,933	71	0.80%
T2 Storage and Transportation Storage (\$/GJ's)												
Demand:												
Firm injection / withdrawal												
16	Union provides deliverability inventory	GJ/d/mo.	1,516,920	2,432	1.603	-	28	-	-	2,460	20	
17	Customer provides deliverability inventory	GJ/d/mo.	1,336,556	1,615	1.208	-	19	-	-	1,633	13	
18	Incremental firm injection right	GJ/d/mo.	-	-	1.208	-	-	-	-	-	-	
19	Interruptible	GJ/d/mo.	415,704	504	1.208	-	-	-	-	504	4	
20	Space	GJ/d/mo.	106,645,056	1,208	0.011	-	16	-	-	1,224	10	
21	Commodity (Customer Provides)	GJ	7,869,782	60	0.008	-	0	-	-	60	0	
22	Commodity (Union Provides)	GJ	-	-	0.029	-	-	-	-	-	-	
23	Customer supplied fuel	GJ	47,061	152	-	-	-	-	-	152	1	
Transportation (cents/ m3)												
Demand:												
24	First 140,870 m³	10³m³/d/mo.	49,971	10,452	20.9163	(932)	94	(295)	-	9,320	75	
25	All Over 140,870 m³	10³m³/d/mo.	167,088	18,486	11.0637	(1,648)	167	(522)	-	16,483	132	
Commodity												
Firm												
26	All Volumes	10³m³	4,384,983	353	0.0080	-	1	-	-	354	3	
27	Interruptible	10³m³	347,637	3,397	0.9771	(107)	33	-	-	3,323	27	
28	Monthly Charges	Meter/mo.	444	2,639	\$5,943.28	-	63	-	-	2,701	22	
29	Customer supplied fuel	10³m³	23,922	2,132	-	-	-	(253)	-	1,879	15	
30	Total Rate T2		4,732,620	43,429	0.9177	(2,687)	420	(1,070)	-	40,093	321	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

						Prior to MCC Change (11)		MCC Change (11)		NAC / LRAM	Proposed				
Line No.	Particulars	Billing Units	2016 DSM (8) (\$000's)	2016 Capital Pass-Throughs (9) (\$000's)	Add Back Upstream Transportation (\$000's)	2016 Parkway Delivery Obligation (10) (\$000's)	Proposed Revenue (\$000's)	Proposed Rates (cents / m³)	Proposed Revenue (\$000's)	Proposed Rates (cents / m³)	Volume Adjustment (12) (10³m³)	Usage including NAC & LRAM (t) = (a + s)	Revenue (\$000's)	Rates (cents / m³)	Rate Change (%)
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+k+l+m+n)	(p) = (o / a)	(q)	(r) = (q / a)	(s)	(t) = (a + s)	(u)	(v) = (u / t)	(w)
T1 Storage and Transportation															
Storage (\$/GJ's)															
Demand:															
Firm injection / withdrawal															
1	Union provides deliverability inventory	GJ/d/mo.	-	(23)	-	-	782	1.586	-	-	-	492,360	782	1.586	
2	Customer provides deliverability inventory	GJ/d/mo.	-	(6)	-	-	200	1.195	-	-	-	166,800	200	1.195	
3	Incremental firm injection right	GJ/d/mo.	-	-	-	-	-	1.195	-	-	-	-	-	1.195	
4	Interruptible	GJ/d/mo.	-	-	-	-	77	1.195	-	-	-	62,244	77	1.195	
5	Space	GJ/d/mo.	-	(9)	-	-	250	0.011	-	-	-	22,396,680	250	0.011	
6	Commodity (Customer Provides)	GJ	-	(0)	-	-	21	0.008	-	-	-	2,750,300	21	0.008	
7	Commodity (Union Provides)	GJ	-	-	-	-	-	0.029	-	-	-	-	-	0.029	
8	Customer supplied fuel	GJ	-	-	-	-	54	-	-	-	-	16,442	54	-	
Transportation (cents/ m3)															
Demand															
9	First 28,150 m³	10³m³/d/mo.	1,171	10	-	81	4,297	34.5173	-	-	-	12,448	4,297	34.5173	
10	Next 112,720 m³	10³m³/d/mo.	845	7	-	58	3,101	23.8475	-	-	-	13,002	3,101	23.8475	
Commodity															
Firm															
11	All Volumes	10³m³	-	(2)	-	-	348	0.0742	-	-	(12,640)	455,867	348	0.0762	
12	Interruptible	10³m³	85	(16)	-	-	791	1.2955	-	-	(1,647)	59,399	791	1.3314	
13	Monthly Charges	Meter/mo.	-	(22)	-	-	1,016	\$1,924.04	-	-	-	528	1,016	\$1,924.04	
14	Customer supplied fuel	10³m³	-	-	-	53	302	-	-	-	-	2,979	302	-	
15	Total Rate T1		2,101	(61)	-	192	11,236	2.1219			(14,287)	515,266	11,236	2.1807	6.3%
T2 Storage and Transportation															
Storage (\$/GJ's)															
Demand:															
Firm injection / withdrawal															
16	Union provides deliverability inventory	GJ/d/mo.	-	(74)	-	-	2,406	1.586	-	-	-	1,516,920	2,406	1.586	
17	Customer provides deliverability inventory	GJ/d/mo.	-	(49)	-	-	1,598	1.195	-	-	-	1,336,556	1,598	1.195	
18	Incremental firm injection right	GJ/d/mo.	-	-	-	-	-	1.195	-	-	-	-	-	1.195	
19	Interruptible	GJ/d/mo.	-	-	-	-	508	1.195	-	-	-	415,704	508	1.195	
20	Space	GJ/d/mo.	-	(42)	-	-	1,191	0.011	-	-	-	106,645,056	1,191	0.011	
21	Commodity (Customer Provides)	GJ	-	(1)	-	-	60	0.008	-	-	-	7,869,782	60	0.008	
22	Commodity (Union Provides)	GJ	-	-	-	-	-	0.029	-	-	-	-	-	0.029	
23	Customer supplied fuel	GJ	-	-	-	-	153	-	-	-	-	47,061	153	-	
Transportation (cents/ m3)															
Demand															
24	First 140,870 m³	10³m³/d/mo.	469	258	-	327	10,447	20.9062	-	-	-	49,971	10,447	20.9062	
25	All Over 140,870 m³	10³m³/d/mo.	829	455	-	578	18,477	11.0584	-	-	-	167,088	18,477	11.0584	
Commodity															
Firm															
26	All Volumes	10³m³	-	(3)	-	-	354	0.0081	-	-	(96,049)	4,288,934	354	0.0083	
27	Interruptible	10³m³	54	(89)	-	-	3,314	0.9533	-	-	(7,615)	340,022	3,314	0.9747	
28	Monthly Charges	Meter/mo.	-	(170)	-	-	2,553	\$5,751.12	-	-	-	444	2,553	\$5,751.12	
29	Customer supplied fuel	10³m³	-	-	-	253	2,147	-	-	-	-	23,922	2,147	-	
30	Total Rate T2		1,351	286	-	1,158	43,209	0.9130			(103,663)	4,628,957	43,209	0.9334	1.7%

Notes:

- (8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).  
(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.  
(11) MCC = Monthly Customer Charge.  
(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Adjustments to 2015 Base Rates												
Line No.	Particulars	Billing Units	Current Approved Forecast (1) Usage (a)	Current Approved Revenue (2) (\$000's) (b)	Current Approved Rates (3) Rates (3) (cents / m³) (c)	2015 DSM (4) (\$000's) (d)	2015 Capital Pass-Throughs (5) (\$000's) (e)	2015 Parkway Delivery Obligation (10) (\$000's) (f)	Upstream Transportation (7) (\$000's) (g)	Adjusted Revenue (\$000's) (h) = (b+d+e+f+g)	Price Cap Index (\$000's) (i)	Price Cap Index (%) (j)
T3												
Storage (\$/GJ's)												
Demand:												
	Firm injection / withdrawal											
1	Union provides deliverability inventory	GJ/d/mo.	-	-	1.603	-	-	-	-	-	-	-
2	Customer provides deliverability inventory	GJ/d/mo.	679,320	820	1.208	-	11	-	-	831	7	
3	Incremental firm injection right	GJ/d/mo.	-	-	1.208	-	-	-	-	-	-	
4	Interruptible	GJ/d/mo.	-	-	1.208	-	-	-	-	-	-	
5	Space	GJ/d/mo.	36,614,256	415	0.011	-	5	-	-	420	3	
6	Commodity (Customer Provides)	GJ	4,459,672	34	0.008	-	0	-	-	34	0	
7	Commodity (Union Provides)	GJ	-	-	0.029	-	-	-	-	-	-	
8	Customer supplied fuel	GJ	26,668	86	-	-	-	-	-	86	1	
Transportation (cents/ m3)												
9	Demand	10³m³/d/mo.	28,200	2,947	10.4499	-	28	(296)	-	2,679	21	
10	Commodity	10³m³	272,712	29	0.0108	-	0	-	-	30	0	
11	Monthly Charges	Meter/mo.	12	244	\$20,369.55	-	2	-	-	247	2	
12	Customer supplied fuel	10³m³	1,972	192	-	-	-	(49)	-	143	1	
13	Total Rate T3		272,712	4,768	1.7482	-	47	(345)	-	4,470	36	0.80%

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 8, column (e).
- (3) EB-2015-0255, Appendix A, rates effective October 1, 2015 (Excludes Price Adjustments).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (a).
- (5) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (m).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 9, column (g).
- (7) EB-2015-0116, Rate Order, Working Papers, Schedule 15, column (c).

UNION GAS LIMITED  
Union South  
In-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	2016 DSM (8) (\$000's)	2016 Capital Pass-Throughs (9) (\$000's)	Add Back Upstream Transportation (\$000's)	2016 Parkway Delivery Obligation (10) (\$000's)	Prior to MCC Change (11)		MCC Change (11)		NAC / LRAM Volume Adjustment (12) (10³m³)	Proposed			Rate Change (%)
							Proposed Revenue (\$000's)	Proposed Rates (cents / m³)	Proposed Revenue (\$000's)	Proposed Rates (cents / m³)		Usage including NAC & LRAM (t) = (a + s)	Revenue (\$000's)	Rates (cents / m³) (v) = (u / t)	
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+k+l+m+n)	(p) = (o / a)	(q)	(r) = (q / a)	(s)		(u)	(v) = (u / t)	(w)
T3															
Storage (\$/GJ's)															
Demand:															
	Firm injection / withdrawal														
1	Union provides deliverability inventory	GJ/d.mo.	-	-	-	-	-	1.586	-	-	-	-	-	1.586	
2	Customer provides deliverability inventory	GJ/d.mo.	-	(29)	-	-	808	1.195	-	-	-	679,320	808	1.195	
3	Incremental firm injection right	GJ/d.mo.	-	-	-	-	-	1.195	-	-	-	-	-	1.195	
4	Interruptible	GJ/d.mo.	-	-	-	-	-	1.195	-	-	-	-	-	1.195	
5	Space	GJ/d.mo.	-	(15)	-	-	409	0.011	-	-	-	36,614,256	409	0.011	
6	Commodity (Customer Provides)	GJ	-	(0)	-	-	34	0.008	-	-	-	4,459,672	34	0.008	
7	Commodity (Union Provides)	GJ	-	-	-	-	-	0.029	-	-	-	-	-	0.029	
8	Customer supplied fuel	GJ	-	-	-	-	87	-	-	-	-	26,668	87	-	
Transportation (cents/ m3)															
9	Demand	10³m³/d.mo.	-	284	-	296	3,281	11.6340	-	-	-	28,200	3,281	11.6340	
10	Commodity	10³m³	-	(0)	-	-	30	0.0108	-	-	-	272,712	30	0.0108	
11	Monthly Charges	Meter/mo.	-	(6)	-	-	242	\$20,208.17	-	-	-	12	242	\$20,208.17	
12	Customer supplied fuel	10³m³	-	-	-	49	193	-	-	-	-	1,972	193	0	
13	Total Rate T3		-	234	-	345	5,084	1.8643	-	-	-	272,712	5,084	1.8643	6.6%

Notes:

(8) EB-2015-0116, Rate Order, Working Papers, Schedule 11, column (f).

(9) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).

(10) EB-2015-0116, Rate Order, Working Papers, Schedule 20.

(11) MCC = Monthly Customer Charge.

(12) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 2 and 3, column (c) and EB-2015-0116, Rate Order, Working Papers, Schedule 17, column (a).

UNION GAS LIMITED  
Union South  
Ex-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast Usage (1)	Current Approved Revenue (2)	Current Approved Rates (3)	2015 DSM (\$000's)	2015 Capital Pass-Throughs (\$000's)	2015 Parkway Delivery Obligation (\$000's)	Upstream Transportation (\$000's)	Adjusted Revenue (\$000's)	Price Cap Index (\$000's)	Price Cap Index (%)
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h) = (b+d+e+f+g)	(i)	(j)
<b><u>M12 Transportation Service</u></b>												
<b><u>Demand:</u></b>												
Dawn to Kirkwall												
1	- 12 months	GJ/d/mo	419,318	12,340	2.193	-	(792)	-	-	11,547	92	
2	- 10 months	GJ/d/mo	304,563	6,680	2.193	-	(429)	-	-	6,251	50	
3	- 2 months	GJ/d/mo	18,365	81	2.193	-	(5)	-	-	75	1	
4	- F24-T - 12 months	GJ/d/mo	49,500	41	0.069	-	0	-	-	41	0	
Dawn to Parkway												
5	- 12 months	GJ/d/mo	3,286,550	112,299	2.604	-	(9,180)	-	-	103,119	825	
6	- 10 months	GJ/d/mo	65,000	1,693	2.604	-	(112)	-	-	1,581	13	
7	- 3 months	GJ/d/mo	2,000	16	2.604	-	(1)	-	-	15	0	
8	- F24-T - 12 months	GJ/d/mo	307,000	323	0.069	-	0	-	-	323	3	
M12-X Easterly (between Dawn, Kirkwall and Parkway)												
9	- 12 months	GJ/d/mo	391,011	12,219	2.604	-	(807)	-	-	11,412	91	
M12-X Westerly (between Dawn, Kirkwall and Parkway)												
10	- 12 months	GJ/d/mo	391,011	3,002	0.640	-	(228)	-	-	2,775	22	
Kirkwall to Parkway												
11	- 12 months	GJ/d/mo	88,497	436	0.411	-	(33)	-	-	403	3	
12	- 2 months	GJ/d/mo	174,752	144	0.411	-	(11)	-	-	133	1	
<b><u>Commodity:</u></b>												
13	Easterly - Providing Own Fuel	GJ	705,499,899	23,652		-	-	(726)	-	22,926	183	
14	Westerly - Providing Own Fuel	GJ										
	Parkway to Kirkwall/Dawn		905,475	12		-	-	-	-	12	0	
15	Kirkwall to Dawn		5,031,274	38		-	-	-	-	38	0	
16	<b>Total Rate M12</b>		<u>711,436,648</u>	<u>172,976</u>		<u>-</u>	<u>(11,598)</u>	<u>(726)</u>	<u>-</u>	<u>160,652</u>	<u>1,285</u>	<u>0.80%</u>

Notes:  
(1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (r).  
(2) EB-2015-0116, Rate Order, Working Papers, Schedule 7, Page 2, column (e).  
(3) EB-2015-0255, Appendix A, rates effective October 1, 2015.

UNION GAS LIMITED  
Union South  
Ex-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	2016 DSM (\$000's)	2016 Capital Pass-Throughs (4) (\$000's)	Add Back Upstream Transportation (\$000's)	2016 Parkway Delivery Obligation (5) (\$000's)	Proposed Revenue (\$000's)	Proposed Rates (\$/ GJ)	Demand Adjustments	LRAM Volume Adjustment (r)	Proposed			Rate Change (%)
									Demand Adjustment (q)		Usage including Adjustment (r) = (a + q )	Revenue (\$000's) (s)	Rates (\$/ GJ) (t) = (s/ r)	
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+j+k+l+m+n)	(p) = (o / a)						(u)
	<b><u>M12 Transportation Service</u></b>													
	<b><u>Demand:</u></b>													
	Dawn to Kirkwall													
1	- 12 months	GJ/d/mo	-	1,981	-	-	13,621				419,318	13,621	2.421	
2	- 10 months	GJ/d/mo	-	1,073	-	-	7,374				304,563	7,374	2.421	
3	- 2 months	GJ/d/mo	-	13	-	-	89				18,365	89	2.421	
4	- F24-T - 12 months	GJ/d/mo	-	(0)	-	-	41				49,500	41	0.069	
	Dawn to Parkway													
5	- 12 months	GJ/d/mo	-	32,396	-	-	136,340		347,622		3,634,172	136,340	2.883	
6	- 10 months	GJ/d/mo	-	280	-	-	1,874				65,000	1,874	2.883	
7	- 3 months	GJ/d/mo	-	2	-	-	17				2,000	17	2.883	
8	- F24-T - 12 months	GJ/d/mo	-	(0)	-	-	326				307,000	326	0.069	
	M12-X Easterly (between Dawn, Kirkwall and Parkway)													
9	- 12 months	GJ/d/mo	-	2,023	-	-	13,527				391,011	13,527	2.883	
	M12-X Westerly (between Dawn, Kirkwall and Parkway)													
10	- 12 months	GJ/d/mo	-	577	-	-	3,374				391,011	3,374	0.719	
	Kirkwall to Parkway													
11	- 12 months	GJ/d/mo	-	117	-	-	524		6,050		94,547	524	0.462	
12	- 2 months	GJ/d/mo	-	28	-	-	161				174,752	161	0.462	
	<b><u>Commodity:</u></b>													
13	Easterly - Providing Own Fuel	GJ	-	-	-	673	23,783				705,499,899	23,783		
	Westerly - Providing Own Fuel	GJ												
14	Parkway to Kirkwall/Dawn		-	-	-	-	12				905,475	12		
15	Kirkwall to Dawn		-	-	-	-	38				5,031,274	38		
16	<b>Total Rate M12</b>		-	38,490	-	673	201,100	-	353,672	-	711,436,648	201,100	16.3%	

Notes:  
(4) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(5) EB-2015-0116, Rate Order, Working Papers, Schedule 20, column (c).

UNION GAS LIMITED  
Union South  
Ex-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast Usage (1)	Current Approved Revenue (2)	Current Approved Rates (3)	2015 DSM (\$000's)	2015 Capital Pass-Throughs (\$000's)	2015 Parkway Delivery Obligation (\$000's)	Upstream Transportation (\$000's)	Adjusted Revenue (\$000's)	Price Cap Index (\$000's)	Price Cap Index (%)
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h) = (b+d+e+f+g)	(i)	(j)
<b><u>M13 Transportation of Locally Produced Gas</u></b>												
1	Monthly Fixed Charge	monthly	15	169	\$938.96		-	-	-	169	1	
2	Transmission Commodity Charge	GJ	5,934,507	203	0.034		1	-	-	204	2	
3	Commodity	GJ	5,934,507	47	0.008		-	-	-	47	0	
4	<b>Total Rate M13</b>		<u>5,934,507</u>	<u>419</u>			<u>1</u>	<u>-</u>	<u>-</u>	<u>421</u>	<u>3</u>	<u>0.80%</u>
<b><u>M16 Transportation Service</u></b>												
5	Monthly Fixed Charge	monthly	4	72	\$1,493.78		-	-	-	72	1	
6	Transmission Commodity Charge	GJ	6,236,394	214	0.034		0	-	-	214	2	
Charges West of Dawn:												
7	Firm Demand Charge	GJ/d	17,846	228	1.064		2	-	-	230	2	
8	Fuel & UFG to Dawn	GJ	4,098,775	33	0.008		-	-	-	33	0	
9	Fuel & UFG to Pool	GJ	4,098,775	93	0.023		-	-	-	93	1	
Charges East of Dawn:												
10	Firm Demand Charge	GJ/d	9,067	83	0.759		-	-	-	83	1	
11	Fuel & UFG to Dawn	GJ	2,137,619	17	0.008		-	-	-	17	0	
12	Fuel & UFG to Pool	GJ	2,137,619	21	0.010		-	(3)	-	18	0	
13	<b>Total Rate M16</b>		<u>12,472,788</u>	<u>760</u>			<u>2</u>	<u>(3)</u>	<u>-</u>	<u>759</u>	<u>6</u>	<u>0.80%</u>

Notes:  
(1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (r).  
(2) EB-2015-0116, Rate Order, Working Papers, Schedule 7, Page 2, column (e).  
(3) EB-2015-0255, Appendix A, rates effective October 1, 2015.

UNION GAS LIMITED  
Union South  
Ex-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	2016 DSM	2016 Capital	Add Back	2016 Parkway	Proposed	Proposed	Volume Adjustments		Proposed			Rate Change (%)
			(\$000's)	Pass-Throughs (4)	Upstream Transportation	Delivery Obligation (5)	Revenue (\$000's)	Rates (\$/ GJ)	Demand Adjustment	LRAM Volume Adjustment	Usage including Adjustment	Revenue (\$000's)	Rates (\$/ GJ)	
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+j+k+l+m+n)	(p) = (o / a)	(q)	(r)	(r) = (a + q )	(s)	(t) = (s/ r)	(u)
<b><u>M13 Transportation of Locally Produced Gas</u></b>														
1	Monthly Fixed Charge	monthly	-	-	-	-	170				15	170	\$946.47	
2	Transmission Commodity Charge	GJ	-	(1)	-	-	205				5,934,507	205	0.035	
3	Commodity	GJ	-	-	-	-	48				5,934,507	48	0.008	
4	<b>Total Rate M13</b>		<u>-</u>	<u>(1)</u>	<u>-</u>	<u>-</u>	<u>423</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>5,934,507</u>	<u>423</u>		<u>0.9%</u>
<b><u>M16 Transportation Service</u></b>														
5	Monthly Fixed Charge	monthly	-	-	-	-	72				4	72	\$1,505.73	
6	Transmission Commodity Charge	GJ	-	(0)	-	-	216				6,236,394	216	0.035	
Charges West of Dawn:														
7	Firm Demand Charge	GJ/d	-	(6)	-	-	226				17,846	226	\$1.055	
8	Fuel & UFG to Dawn	GJ	-	-	-	-	33				4,098,775	33	0.008	
9	Fuel & UFG to Pool	GJ	-	-	-	-	94				4,098,775	94	0.023	
Charges East of Dawn:														
10	Firm Demand Charge	GJ/d	-	-	-	-	83				9,067	83	\$0.765	
11	Fuel & UFG to Dawn	GJ	-	-	-	-	17				2,137,619	17	0.008	
12	Fuel & UFG to Pool	GJ	-	-	-	3	21				2,137,619	21	0.010	
13	<b>Total Rate M16</b>		<u>-</u>	<u>(6)</u>	<u>-</u>	<u>3</u>	<u>763</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>12,472,788</u>	<u>763</u>		<u>0.3%</u>

Notes:  
(4) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(5) EB-2015-0116, Rate Order, Working Papers, Schedule 20, column (c).

UNION GAS LIMITED  
Union South  
Ex-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	Adjustments to 2015 Base Rates									
			Current Approved Forecast Usage (1)	Current Approved Revenue (2)	Current Approved Rates (3) (\$/ GJ)	2015 DSM (\$000's)	2015 Capital Pass-Throughs (\$000's)	2015 Parkway Delivery Obligation (\$000's)	Upstream Transportation (\$000's)	Adjusted Revenue (\$000's)	Price Cap Index (\$000's)	Price Cap Index (%)
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h) = (b+d+e+f+g)	(i)	(j)
	<b>C1 Cross Franchise Transportation Service</b>											
	Storage Service:											
1	Peak Storage(Short-term)	GJ	22,489,337	7,847		-	56	-	-	7,904	-	
	Commodity											
2	Off Peak Storage/ Balancing /Loans	GJ	-	2,500		-	-	-	-	2,500	-	
	Transportation Service:											
	Demand:											
3	St.Clair & Dawn, Ojibway & Dawn - 12 months	GJ/mo	85,460	3,234	1.064	-	10	-	-	3,243	26	
	Parkway to Dawn/Kirkwall											
4	- 12 months	GJ/mo	347,371	2,667	0.640	-	(202)	-	-	2,465	20	
5	- 3 months	GJ/mo	54,357	104	0.640	-	(8)	-	-	96	1	
6	Kirkwall to Dawn	GJ/mo	-	-	1.128	-	-	-	-	-	-	
	Dawn to Parkway											
7	- 12 months	GJ/mo	7,065	418	2.604	-	-	-	-	418	3	
8	- 12 months North T-Service	GJ/mo	-	-		-	-	-	-	-	-	
9	Kirkwall to Parkway	GJ/mo	-	-	0.411	-	-	-	-	-	-	
	Dawn to Dawn Vector											
10	- 12 months	GJ/mo	92,845	32	0.029	-	-	-	-	32	0	
	Dawn to Dawn TCPL											
11	- 12 months	GJ/mo	500,000	816	0.136	-	-	-	-	816	7	
	Firm Commodity											
	Easterly											
	Union Providing Fuel											
12	Dawn to Parkway (TCPL)	GJ	2,423,295	93		-	-	(8)	-	85	1	
	Providing Own Fuel											
13	Dawn to Dawn TCPL	GJ	5,000,000	84		-	-	-	-	84	1	
14	Dawn to Dawn Vector	GJ	18,280,703	247		-	-	-	-	247	2	
15	Ojibway to Dawn	GJ	9,968,577	167		-	-	-	-	167	1	
	Westerly - Providing Own Fuel											
16	Parkway to Kirkwall	GJ				-	-	-	-	-	-	
17	Parkway to Dawn	GJ	3,990,264	52		-	-	-	-	52	0	
18	Short-term Transportation	GJ	177,529,686	11,280		-	11	(229)	-	11,061	-	
19	Exchanges			14,918		-	-	-	-	14,918	-	
20	Other Transactional			1,067		-	-	-	-	1,067	-	
21	<b>Total Rate C1</b>		<u>217,192,525</u>	<u>45,526</u>		<u>-</u>	<u>(134)</u>	<u>(237)</u>	<u>-</u>	<u>45,155</u>	<u>62</u>	
22	<b>Total Ex-Franchise</b>			<u>219,682</u>		<u>-</u>	<u>(11,728)</u>	<u>(967)</u>	<u>-</u>	<u>206,987</u>	<u>1,356</u>	<u>0.66%</u>

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (r).  
(2) EB-2015-0116, Rate Order, Working Papers, Schedule 7, Page 2, column (e).  
(3) EB-2015-0255, Appendix A, rates effective October 1, 2015.

UNION GAS LIMITED  
Union South  
Ex-Franchise Customers  
Effective January 1, 2016

Line No.	Particulars	Billing Units	2016 DSM	2016 Capital	Add Back	2016 Parkway	Proposed	Proposed	Volume Adjustments		Proposed			Rate Change (%)
			(\$000's)	Pass-Throughs (4)	Upstream Transportation	Delivery Obligation (5)	Revenue (\$000's)	Rates (\$/ GJ)	Demand Adjustment	LRAM Volume Adjustment	Usage including Adjustment	Revenue (\$000's)	Rates (\$/ GJ)	
			(k)	(l)	(m) = (-g)	(n)	(o) = (h+i+j+k+l+m+n)	(p) = (o / a)	(q)	(r)	(r) = (a + q )	(s)	(t) = (s/ r)	(u)
	<b>C1 Cross Franchise Transportation Service</b>													
	Storage Service:													
1	Peak Storage(Short-term)	GJ	-	(150)	-	-	7,754				22,489,337	7,754		
	Commodity													
2	Off Peak Storage/ Balancing /Loans	GJ	-	-	-	-	2,500					2,500		
	Transportation Service:													
	Demand:													
3	St.Clair & Dawn, Ojibway & Dawn - 12 months	GJ/mo	-	(27)	-	-	3,243				85,460	3,243	1.055	
	Parkway to Dawn/Kirkwall													
4	- 12 months	GJ/mo	-	513	-	-	2,997				347,371	2,997	0.719	
5	- 3 months	GJ/mo	-	20	-	-	117				54,357	117	0.719	
6	Kirkwall to Dawn	GJ/mo	-	-	-	-	-				-	-	1.268	
	Dawn to Parkway													
7	- 12 months	GJ/mo	-	-	-	-	421				7,065	421	2.883	
8	- 12 months North T-Service	GJ/mo	-	168	-	-	168		4,853		4,853	168	2.883	
9	Kirkwall to Parkway	GJ/mo	-	-	-	-	-				-	-	0.462	
	Dawn to Dawn Vector													
10	- 12 months	GJ/mo	-	-	-	-	33				92,845	33	0.029	
	Dawn to Dawn TCPL													
11	- 12 months	GJ/mo	-	-	-	-	822				500,000	822	0.137	
	Firm Commodity													
	Easterly													
	Union Providing Fuel													
12	Dawn to Parkway (TCPL)	GJ	-	-	-	8	93				2,423,295	93		
	Providing Own Fuel													
13	Dawn to Dawn TCPL	GJ	-	-	-	-	84				5,000,000	84		
14	Dawn to Dawn Vector	GJ	-	-	-	-	249				18,280,703	249		
15	Ojibway to Dawn	GJ	-	-	-	-	168				9,968,577	168		
	Westerly - Providing Own Fuel													
16	Parkway to Kirkwall	GJ	-	-	-	-	-				-	-		
17	Parkway to Dawn	GJ	-	-	-	-	52				3,990,264	52		
18	Short-term Transportation	GJ	-	(29)	-	212	11,245				177,529,686	11,245		
19	Exchanges		-	-	-	-	14,918					14,918		
20	Other Transactional		-	-	-	-	1,067					1,067		
21	<b>Total Rate C1</b>		-	496	-	220	45,932	-	4,853	-	217,192,525	45,932		0.9%
22	<b>Total Ex-Franchise</b>		-	38,979	-	896	248,218	-	358,525	-		248,218		

Notes:  
(4) EB-2015-0116, Rate Order, Working Papers, Schedule 10, column (d).  
(5) EB-2015-0116, Rate Order, Working Papers, Schedule 20, column (c).

UNION GAS LIMITED  
Rate Impact Continuity  
Effective January 1, 2016

Line No.	Particulars	2015 Current Approved Revenue (2) (\$000s)	Price Cap Index (2) (\$000s)	DSM (2) (\$000s)	Capital Pass-Throughs (2) (\$000s)	2016 Parkway Delivery Obligation (2) (\$000s)	Total Excluding Volume Adjustments	Volume Adjustments	Total Including Volume Adjustments
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
<u>North Delivery</u>									
1	R01 Revenue (\$000s)	160,716	1,253	5,281	(2,748)	-	164,503		164,503
2	Volumes (10 <sup>3</sup> m <sup>3</sup> )	927,922	927,922	927,922	927,922	927,922	927,922	36,464	964,386
3	Average rate (cents / m <sup>3</sup> )	17.3200	0.1350	0.5691	(0.2961)	-	17.7281	(0.6703)	17.0578
4	Average rate change (1)		0.8%	3.3%	-1.7%	0.0%	2.4%	-3.9%	-1.5%
5	R10 Revenue (\$000s)	19,903	147	1,354	(343)	-	21,061		21,061
6	Volumes (10 <sup>3</sup> m <sup>3</sup> )	346,746	346,746	346,746	346,746	346,746	346,746	16,799	363,545
7	Average rate (cents / m <sup>3</sup> )	5.7399	0.0424	0.3905	(0.0990)	-	6.0739	(0.2807)	5.7932
8	Average rate change (1)		0.7%	6.8%	-1.7%	0.0%	5.8%	-4.9%	0.9%
9	R20 Revenue (\$000s)	13,449	100	1,127	(282)	-	14,394		14,394
10	Volumes (10 <sup>3</sup> m <sup>3</sup> )	618,460	618,460	618,460	618,460	618,460	618,460	(9,846)	608,614
11	Average rate (cents / m <sup>3</sup> )	2.1746	0.0161	0.1822	(0.0455)	-	2.3274	0.0377	2.3650
12	Average rate change (1)		0.7%	8.4%	-2.1%	0.0%	7.0%	1.7%	8.8%
13	R25 Revenue (\$000s)	4,464	36	-	(87)	-	4,414		4,414
14	Volumes (10 <sup>3</sup> m <sup>3</sup> )	159,555	159,555	159,555	159,555	159,555	159,555	-	159,555
15	Average rate (cents / m <sup>3</sup> )	2.7980	0.0226	-	(0.0545)	-	2.7662	-	2.7662
16	Average rate change (1)		0.8%	0.0%	-1.9%	0.0%	-1.1%	0.0%	-1.1%
17	R100 Revenue (\$000s)	15,530	110	(1,257)	(239)	-	14,144		14,144
18	Volumes (10 <sup>3</sup> m <sup>3</sup> )	1,857,374	1,857,374	1,857,374	1,857,374	1,857,374	1,857,374	(41,824)	1,815,550
19	Average rate (cents / m <sup>3</sup> )	0.8361	0.0059	(0.0677)	(0.0129)	-	0.7615	0.0175	0.7791
20	Average rate change (1)		0.7%	-8.1%	-1.5%	0.0%	-8.9%	2.1%	-6.8%
<u>South Delivery &amp; Storage</u>									
21	M1 - Delivery Revenue (\$000s)	370,307	2,881	14,374	(2,678)	262	385,146		385,146
22	Volumes (10 <sup>3</sup> m <sup>3</sup> )	2,921,516	2,921,516	2,921,516	2,921,516	2,921,516	2,921,516	96,290	3,017,807
23	Average rate (cents / m <sup>3</sup> )	12.6752	0.0986	0.4920	(0.0917)	0.0090	13.1831	(0.4206)	12.7624
24	M1 - Storage Revenue (\$000s)	21,666	176	-	(636)	-	21,207		21,207
25	Volumes (10 <sup>3</sup> m <sup>3</sup> )	2,921,516	2,921,516	2,921,516	2,921,516	2,921,516	2,921,516	96,290	3,017,807
26	Average rate (cents / m <sup>3</sup> )	0.7416	0.0060	-	(0.0218)	-	0.7259	(0.0232)	0.7027
27	M1 Revenue (\$000s)	391,973	3,057	14,374	(3,314)	262	406,353	-	406,353
28	Total Average rate (cents / m <sup>3</sup> )	13.4168	0.1046	0.4920	(0.1134)	0.0090	13.9090	(0.4438)	13.4652
29	Average rate change (1)		0.8%	3.7%	-0.8%	0.1%	3.7%	-3.3%	0.4%
30	M2 - Delivery Revenue (\$000s)	43,853	314	5,372	446	88	50,073		50,073
31	Volumes (10 <sup>3</sup> m <sup>3</sup> )	1,146,167	1,146,167	1,146,167	1,146,167	1,146,167	1,146,167	24,215	1,170,382
32	Average rate (cents / m <sup>3</sup> )	3.8261	0.0274	0.4687	0.0389	0.0076	4.3687	(0.0904)	4.2784
33	M2 - Storage Revenue (\$000s)	7,368	60	-	(217)	-	7,211		7,211
34	Volumes (10 <sup>3</sup> m <sup>3</sup> )	1,146,167	1,146,167	1,146,167	1,146,167	1,146,167	1,146,167	24,215	1,170,382
35	Average rate (cents / m <sup>3</sup> )	0.6428	0.0052	-	(0.0189)	-	0.6291	(0.0130)	0.6161
36	M2 Revenue (\$000s)	51,221	374	5,372	229	88	57,284	-	57,284
37	Total Average rate (cents / m <sup>3</sup> )	4.4689	0.0326	0.4687	0.0200	0.0076	4.9979	(0.1034)	4.8945
38	Average rate change (1)		0.7%	10.5%	0.4%	0.2%	11.8%	-2.3%	9.5%
39	M4 Revenue (\$000s)	12,576	86	1,682	108	24	14,477		14,477
40	Volumes (10 <sup>3</sup> m <sup>3</sup> )	381,593	381,593	381,593	381,593	381,593	381,593	(20,332)	361,261
41	Average rate (cents / m <sup>3</sup> )	3.2957	0.0225	0.4408	0.0282	0.0064	3.7938	0.2135	4.0073
42	Average rate change (1)		0.7%	13.4%	0.9%	0.2%	15.1%	6.5%	21.6%
43	M5 Revenue (\$000s)	13,296	85	1,713	(212)	(2)	14,881		14,881
44	Volumes (10 <sup>3</sup> m <sup>3</sup> )	511,770	511,770	511,770	511,770	511,770	511,770	(30,835)	480,935
45	Average rate (cents / m <sup>3</sup> )	2.5981	0.0166	0.3347	(0.0413)	(0.0004)	2.9077	0.1864	3.0942
46	Average rate change (1)		0.6%	12.9%	-1.6%	0.0%	11.9%	7.2%	19.1%

Notes:

- (1) Average rate change is compared to column (a).  
(2) EB-2015-0116, Rate Order, Working Paper, Schedule 3.

UNION GAS LIMITED  
Rate Impact Continuity  
Effective January 1, 2016

Line No.	Particulars	2015 Current Approved Revenue (2) (\$000s)	Price Cap Index (2) (\$000s)	DSM (2) (\$000s)	Capital Pass-Throughs (2) (\$000s)	2016 Parkway Delivery Obligation (2) (\$000s)	Total Excluding Volume Adjustments	Volume Adjustments	Total Including Volume Adjustments
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
<u>South Delivery &amp; Storage (cont.)</u>									
1	M7 Revenue (\$000s)	4,262	26	289	70	11	4,657		4,657
2	Volumes (10 <sup>3</sup> m <sup>3</sup> )	139,645	139,645	139,645	139,645	139,645	139,645	(13,339)	126,306
3	Average rate (cents / m <sup>3</sup> )	3.0518	0.0185	0.2067	0.0498	0.0082	3.3349	0.3522	3.6871
4	Average rate change (1)		0.6%	6.8%	1.6%	0.3%	9.3%	11.5%	20.8%
5	M9 Revenue (\$000s)	771	6	-	38	4	819		819
6	Volumes (10 <sup>3</sup> m <sup>3</sup> )	60,750	60,750	60,750	60,750	60,750	60,750	-	60,750
7	Average rate (cents / m <sup>3</sup> )	1.2693	0.0096	-	0.0627	0.0064	1.3480	-	1.3480
8	Average rate change (1)		0.8%	0.0%	4.9%	0.5%	6.2%	0.0%	6.2%
9	M10 Revenue (\$000s)	10	0	-	1	0	11		11
10	Volumes (10 <sup>3</sup> m <sup>3</sup> )	189	189	189	189	189	189	-	189
11	Average rate (cents / m <sup>3</sup> )	5.4186	0.0396	-	0.4191	0.0725	5.9498	-	5.9498
12	Average rate change (1)		0.7%	0.0%	7.7%	1.3%	9.8%	0.0%	9.8%
13	T1 Revenue (\$000s)	10,867	71	246	38	13	11,236		11,236
14	Volumes (10 <sup>3</sup> m <sup>3</sup> )	529,553	529,553	529,553	529,553	529,553	529,553	(14,287)	515,266
15	Average rate (cents / m <sup>3</sup> )	2.0522	0.0135	0.0465	0.0072	0.0025	2.1219	0.0588	2.1807
16	Average rate change (1)		0.7%	2.3%	0.3%	0.1%	3.4%	2.9%	6.3%
17	T2 Revenue (\$000s)	43,429	321	(1,335)	707	87	43,209		43,209
18	Volumes (10 <sup>3</sup> m <sup>3</sup> )	4,732,620	4,732,620	4,732,620	4,732,620	4,732,620	4,732,620	(103,663)	4,628,957
19	Average rate (cents / m <sup>3</sup> )	0.9177	0.0068	(0.0282)	0.0149	0.0018	0.9130	0.0204	0.9334
20	Average rate change (1)		0.7%	-3.1%	1.6%	0.2%	-0.5%	2.2%	1.7%
21	T3 Revenue (\$000s)	4,768	36	-	281	-	5,084		5,084
22	Volumes (10 <sup>3</sup> m <sup>3</sup> )	272,712	272,712	272,712	272,712	272,712	272,712	-	272,712
23	Average rate (cents / m <sup>3</sup> )	1.7482	0.0131	-	0.1030	-	1.8643	-	1.8643
24	Average rate change (1)		0.8%	0.0%	5.9%	0.0%	6.6%	0.0%	6.6%
<u>North Transportation &amp; Storage</u>									
25	R01 Revenue (\$000s)	97,865	123	-	1,849	(0)	99,837		99,837
26	Volumes (10 <sup>3</sup> m <sup>3</sup> )	927,922	927,922	927,922	927,922	927,922	927,922	36,464	964,386
27	Average rate (cents / m <sup>3</sup> )	10.5467	0.0132	-	0.1993	(0.0000)	10.7592	(0.4068)	10.3524
28	Average rate change (1)		0.1%	0.0%	1.9%	0.0%	2.0%	-3.9%	-1.8%
29	R10 Revenue (\$000s)	30,721	33	-	474	(0)	31,227		31,227
30	Volumes (10 <sup>3</sup> m <sup>3</sup> )	346,746	346,746	346,746	346,746	346,746	346,746	16,799	363,545
31	Average rate (cents / m <sup>3</sup> )	8.8597	0.0095	-	0.1366	(0.0000)	9.0057	(0.4162)	8.5895
32	Average rate change (1)		0.1%	0.0%	1.5%	0.0%	1.6%	-4.7%	-3.0%
33	R20 Revenue (\$000s)	9,949	9	-	123	(0)	10,082		10,082
34	Volumes (10 <sup>3</sup> m <sup>3</sup> )	121,935	121,935	121,935	121,935	121,935	121,935	-	121,935
35	Average rate (cents / m <sup>3</sup> )	8.1591	0.0077	-	0.1012	(0.0000)	8.2680	-	8.2680
36	Average rate change (1)		0.1%	0.0%	1.2%	0.0%	1.3%	0.0%	1.3%
37	R25 Revenue (\$000s)	1,800	0	-	(2)	-	1,799		1,799
38	Volumes (10 <sup>3</sup> m <sup>3</sup> )	42,913	42,913	42,913	42,913	42,913	42,913	1,799	44,711
39	Average rate (cents / m <sup>3</sup> )	4.1944	0.0004	-	(0.0036)	-	4.1912	(0.1686)	4.0226
40	Average rate change (1)		0.0%	0.0%	-0.1%	0.0%	-0.1%	-4.0%	-4.1%
41	R100 Revenue (\$000s)	209	1	-	8	(0)	217		217
42	Change (1)		0.4%	0.0%	3.8%	0.0%	4.2%	0.0%	4.2%
<u>Ex-Franchise</u>									
43	M12 Revenue (\$000s)	172,976	1,285	-	26,893	(53)	201,100		201,100
44	Change (1)		0.7%	0.0%	15.5%	0.0%	16.3%	0.0%	16.3%
45	M13 Revenue (\$000s)	419	3	-	1	-	423		423
46	Change (1)		0.8%	0.0%	0.1%	0.0%	0.9%	0.0%	0.9%
47	M16 Revenue (\$000s)	760	6	-	(4)	(0)	763		763
48	Change (1)		0.8%	0.0%	-0.5%	0.0%	0.3%	0.0%	0.3%
49	C1 Revenue (\$000s)	45,526	62	-	362	(17)	45,932		45,932
50	Change (1)		0.1%	0.0%	0.8%	0.0%	0.9%	0.0%	0.9%
51	Gas Supply Admin	6,774	-	-	(26)	-	6,749	-	6,749
52	Totals	1,114,236	7,231	28,846	23,925	416	1,174,655	-	1,174,655

Notes:

- (1) Average rate change is compared to column (a).  
(2) EB-2015-0116, Rate Order, Working Paper, Schedule 3.

UNION GAS LIMITED  
Union North  
Percentage Change in Average Unit Price  
Effective January 1, 2016

Line No.	Particulars (cents/m <sup>3</sup> )	Rate Class	Current Approved Rates (1) (cents / m <sup>3</sup> ) (a)	Rate Change (b) = (c - a)	Proposed Rates (2) (cents / m <sup>3</sup> ) (c)	Percent Change (3) (%) (d) = (b / a)
	Small Volume General Service	01				
1	Delivery		17.3200	(0.2622)	17.0578	-1.5%
2	Gas Supply Transportation		6.6027	0.0041	6.6068	0.1%
3	Storage		3.9508	0.0511	4.0019	1.3%
4	Total		<u>27.8735</u>	<u>(0.2070)</u>	<u>27.6665</u>	<u>-0.7%</u>
	Large Volume General Service	10				
5	Delivery		5.7399	0.0533	5.7932	0.9%
6	Gas Supply Transportation		6.1218	(0.0002)	6.1216	0.0%
7	Storage		2.7947	0.0102	2.8049	0.4%
8	Total		<u>14.6564</u>	<u>0.0633</u>	<u>14.7197</u>	<u>0.4%</u>
	Medium Volume Firm Service	20				
9	Delivery		2.1746	0.1904	2.3650	8.8%
10	Gas Supply Transportation		8.1591	0.1089	8.2680	1.3%
11	Total		<u>10.3337</u>	<u>0.2993</u>	<u>10.6330</u>	<u>2.9%</u>
	Large Volume High Load Factor	100				
12	Delivery		<u>0.8361</u>	<u>(0.0570)</u>	<u>0.7791</u>	<u>-6.8%</u>
	Large Volume Interruptible	25				
13	Delivery		<u>2.7980</u>	<u>(0.0318)</u>	<u>2.7662</u>	<u>-1.1%</u>

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (c).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (v).
- (3) Excludes Gas Supply Commodity related costs.

UNION GAS LIMITED  
Union South  
Percentage Change in Average Unit Price  
Effective January 1, 2016

Line No.	Particulars (cents/m <sup>3</sup> )	Rate Class	Current Approved Rates (1) (cents / m <sup>3</sup> ) (a)	Rate Change (b) = (c - a)	Proposed Rates (2) (cents / m <sup>3</sup> ) (c)	Percent Change (3) (%) (d) = (b / a)
1	General Service Delivery	M1	12.6752	0.0872	12.7624	0.7%
2	Storage		0.7416	(0.0389)	0.7027	-5.2%
3	Total		<u>13.4168</u>	<u>0.0483</u>	<u>13.4651</u>	<u>0.4%</u>
4	General Service Delivery	M2	3.8261	0.4523	4.2784	11.8%
5	Storage		0.6428	(0.0267)	0.6161	-4.2%
6	Total		<u>4.4689</u>	<u>0.4256</u>	<u>4.8945</u>	<u>9.5%</u>
7	Firm Contract Commercial / Industrial Delivery	M4	<u>3.2957</u>	<u>0.7116</u>	<u>4.0073</u>	<u>21.6%</u>
8	Firm Contract Commercial / Industrial Delivery	M5 (F)	<u>3.0939</u>	<u>0.5605</u>	<u>3.6544</u>	<u>18.1%</u>
9	Interruptible Contract Commercial / Industrial Delivery	M5 (I)	<u>2.5815</u>	<u>0.4939</u>	<u>3.0754</u>	<u>19.1%</u>
10	Firm Special Large Volume Contract Delivery	M7 (F)	<u>3.1091</u>	<u>0.6461</u>	<u>3.7552</u>	<u>20.8%</u>
11	Interruptible Special Large Volume Contract Delivery	M7 (I)	<u>1.2978</u>	<u>0.3073</u>	<u>1.6051</u>	<u>23.7%</u>
12	Large Wholesale Service Delivery	M9	<u>1.2693</u>	<u>0.0787</u>	<u>1.3480</u>	<u>6.2%</u>
13	Small Wholesale Service Delivery	M10	<u>5.4186</u>	<u>0.5312</u>	<u>5.9498</u>	<u>9.8%</u>
14	Storage and Transportation Delivery	T1 (F/I)	<u>2.0522</u>	<u>0.1285</u>	<u>2.1807</u>	<u>6.3%</u>
15	Delivery excluding fuel		<u>1.9854</u>	<u>0.1262</u>	<u>2.1116</u>	<u>6.4%</u>
16	Storage and Transportation Delivery	T2 (F/I)	<u>0.9177</u>	<u>0.0157</u>	<u>0.9334</u>	<u>1.7%</u>
17	Delivery excluding fuel		<u>0.8694</u>	<u>0.0144</u>	<u>0.8838</u>	<u>1.7%</u>
18	Storage and Transportation Distributor	T3	<u>1.7482</u>	<u>0.1161</u>	<u>1.8643</u>	<u>6.6%</u>

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (c).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (v).
- (3) Excludes Gas Supply Commodity related costs.

UNION GAS LIMITED  
Summary of Approved 2015 Revenue Changes

Line No.	Particulars (\$000's)	Approved 2014 Revenue per EB-2014-0271 (1) 2015 Rates (a)	Revenue change per EB-2014-0356 Jan 2015 QRAM (b)	Revenue change per EB-2015-0035 Apr 2015 QRAM (c)	Revenue change per EB-2015-0187 Jul 2015 QRAM (d)	Revenue change per EB-2015-0255 Oct 2015 QRAM (e)	2015 Revenue per EB-2015-0116 (f) = (a+b+c+d+e)
<u>North Delivery</u>							
1	Rate 01	160,987	295	(676)	118	(7)	160,716
2	Rate 10	19,985	89	(205)	36	(2)	19,903
3	Rate 20	13,476	30	(69)	12	(1)	13,449
4	Rate 25	4,464	-	-	-	-	4,464
5	Rate 100	15,529	2	(2)	-	-	15,530
6	Total In-Franchise North Delivery	<u>214,442</u>	<u>144</u>	<u>1,987</u>	<u>1,987</u>	<u>(10)</u>	<u>214,062</u>
<u>South Delivery &amp; Storage</u>							
7	Rate M1	392,465	540	(1,236)	216	(12)	391,974
8	Rate M2	51,387	182	(416)	72	(5)	51,221
9	Rate M4	12,629	57	(132)	23	(2)	12,576
10	Rate M5A	13,363	73	(167)	29	(2)	13,296
11	Rate M7	4,281	21	(49)	9	(1)	4,262
12	Rate M9	780	9	(21)	4	(0)	771
13	Rate M10	10	0	(0)	0	(0)	10
14	Rate T1	10,878	11	(26)	4	-	10,868
15	Rate T2	43,462	34	(79)	12	-	43,429
16	Rate T3	4,768	-	-	-	-	4,768
17	Total In-Franchise South Delivery and Storage	<u>534,023</u>	<u>928</u>	<u>(2,125)</u>	<u>369</u>	<u>(20)</u>	<u>533,175</u>
18	Total In-franchise Delivery	<u>748,466</u>	<u>1,072</u>	<u>(138)</u>	<u>2,356</u>	<u>(30)</u>	<u>747,238</u>

Notes:

- (1) EB-2014-0271, Working Papers, Schedule 3.
- (2) EB-2014-0356, Tab 2, Schedule 4, column (g).
- (3) EB-2015-0035, Tab 2, Schedule 4, column (g).
- (4) EB-2015-0187, Tab 2, Schedule 4, column (g).
- (5) EB-2015-0255, Tab 2, Schedule 4, column (g).
- (6) EB-2015-0116, Working Papers, Schedule 3.

UNION GAS LIMITED  
Summary of Approved 2015 Revenue Changes

Line No.	Particulars (\$000's)	Approved 2014 Revenue per EB-2014-0271 (1) 2015 Rates (a)	Revenue change per EB-2014-0356 Jan 2015 QRAM (b)	Revenue change per EB-2015-0035 Apr 2015 QRAM (c)	Revenue change per EB-2015-0187 Jul 2015 QRAM	Revenue change per EB-2015-0255 Oct 2015 QRAM (d)	2015 Revenue per EB-2015-0116 (e) = (a+b+c+d)
<u>North Transportation &amp; Storage</u>							
1	Rate 01	79,122	13,779	5,882	-	(918)	97,865
2	Rate 10	24,846	4,270	1,953	-	(348)	30,721
3	Rate 20	8,060	1,359	659	-	(129)	9,949
4	Rate 25	1,454	240	144	-	(38)	1,800
5	Rate 100	168	33	5	-	2	209
6	Total Northern Transportation and Storage	<u>113,650</u>	<u>19,682</u>	<u>8,643</u>	<u>-</u>	<u>(1,431)</u>	<u>140,544</u>
7	Gas Supply Admin Charge	<u>6,774</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>6,774</u>
8	Total In-Franchise	<u>868,890</u>	<u>20,755</u>	<u>8,505</u>	<u>2,356</u>	<u>(1,462)</u>	<u>894,556</u>
<u>Ex-Franchise</u>							
9	Rate M12	172,976	-	-	-	-	172,976
10	Rate M13	422	3	(6)	1	(0)	419
11	Rate M16	768	9	(21)	3	(0)	759
12	Rate C1	45,526	5	(12)	2	5	45,526
13	Total Ex-Franchise	<u>219,692</u>	<u>16</u>	<u>(39)</u>	<u>6</u>	<u>5</u>	<u>219,681</u>
14	Total Union Gas	<u>1,088,582</u>	<u>20,771</u>	<u>8,465</u>	<u>2,362</u>	<u>(1,457)</u>	<u>1,114,236</u>

Notes:

- (1) EB-2014-0271, Working Papers, Schedule 3.
- (2) EB-2014-0356, Tab 2, Schedule 4, column (g).
- (3) EB-2015-0035, Tab 2, Schedule 4, column (g).
- (4) EB-2015-0187, Tab 2, Schedule 4, column (g).
- (5) EB-2015-0255, Tab 2, Schedule 4, column (g).
- (6) EB-2015-0116, Working Papers, Schedule 3.

UNION GAS LIMITED  
Union South  
General Service Customer Bill Impacts

Line No.	Particulars	Rate M1 - Residential (Annual Consumption of 2,200 m³)				Rate M2 - Commercial (Annual Consumption of 93,000 m³)			
		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (a)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (b)	Impact (\$) (c) = (b) - (a)		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (d)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (e)	Impact (\$) (f) = (e) - (d)	
	<u>Delivery Charges</u>								
1	Monthly Charge	252.00	252.00	-		840.00	840.00	-	
2	Delivery Commodity Charge	81.31	90.01	8.69		2,562.34	2,910.62	348.27	
3	Storage Services	16.32	15.46	(0.86)		469.24	449.75	(19.49)	
4	Total Delivery Charge	349.63	357.46	7.84	2.2%	3,871.59	4,200.37	328.78	8.5%
	<u>Gas Supply Charges</u>								
5	Transportation to Union	77.35	77.35	-		2,566.53	2,566.53	-	
6	Commodity & Fuel	275.72	275.70	(0.02)		9,148.73	9,148.21	(0.51)	
7	Total Gas Supply Charges	353.06	353.05	(0.02)	0.0%	11,715.26	11,714.75	(0.51)	0.0%
8	Total Bill	702.69	710.51	7.82	1.1%	15,586.85	15,915.12	328.27	2.1%
9	Impact - Sales Service (line 8)			7.82				328.27	
10	Impact - Direct Purchase (line 4)			7.84				328.78	

Notes:

(1) Excludes temporary charges/(credits) and prospective recovery.

UNION GAS LIMITED  
Union North  
General Service Customer Bill Impacts

Line No.	Particulars	(Fort Frances) Rate 01 - Residential (Annual Consumption of 2,200 m³)				(Western) Rate 01 - Residential (Annual Consumption of 2,200 m³)			
		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (a)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (b)	Impact (\$) (c) = (b) - (a)		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (d)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (e)	Impact (\$) (f) = (e) - (d)	
	<u>Delivery Charges</u>								
1	Monthly Charge	252.00	252.00	-		252.00	252.00	-	
2	Delivery Commodity Charge	195.51	197.02	1.50		195.51	197.02	1.50	
3	Total Delivery Charge	447.51	449.02	1.50	0.3%	447.51	449.02	1.50	0.3%
	<u>Supply Charges</u>								
4	Transportation to Union	126.91	126.99	0.08		108.99	109.06	0.07	
5	Storage Services	79.59	80.61	1.03		72.42	73.36	0.94	
6	Subtotal	206.50	207.60	1.11	0.5%	181.42	182.42	1.00	0.6%
7	Commodity & Fuel	268.60	268.58	(0.02)		270.55	270.53	(0.02)	
8	Total Gas Supply Charge	475.09	476.19	1.09		451.96	452.95	0.99	
9	Total Bill	922.61	925.20	2.59	0.3%	899.48	901.97	2.49	0.3%
10	Impact - Sales Service (line 9)			2.59				2.49	
11	Impact - Direct Purchase (line 3 + line 6)			2.61				2.51	

Notes:

(1) Excludes temporary charges/(credits) and prospective recovery.

UNION GAS LIMITED  
Union North  
General Service Customer Bill Impacts

Line No.	Particulars	(Northern) Rate 01 - Residential (Annual Consumption of 2,200 m³)				(Eastern) Rate 01 - Residential (Annual Consumption of 2,200 m³)			
		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (a)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (b)	Impact (\$) (c) = (b) - (a)		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (d)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (e)	Impact (\$) (f) = (e) - (d)	
	<u>Delivery Charges</u>								
1	Monthly Charge	252.00	252.00	-		252.00	252.00	-	
2	Delivery Commodity Charge	195.47	196.97	1.50		195.26	196.76	1.50	
3	Total Delivery Charge	447.47	448.97	1.50	0.3%	447.26	448.76	1.50	0.3%
	<u>Supply Charges</u>								
4	Transportation to Union	141.91	142.00	0.09		169.73	169.83	0.11	
5	Storage Services	85.58	86.68	1.11		96.69	97.95	1.25	
6	Subtotal	227.48	228.68	1.20	0.5%	266.42	267.78	1.36	0.5%
7	Commodity & Fuel	273.56	273.55	(0.02)		275.96	275.95	(0.02)	
8	Total Gas Supply Charge	501.05	502.23	1.18		542.39	543.73	1.34	
9	Total Bill	948.51	951.20	2.68	0.3%	989.64	992.49	2.84	0.3%
10	Impact - Sales Service (line 9)			2.68				2.84	
11	Impact - Direct Purchase (line 3 + line 6)			2.70				2.86	

Notes:

(1) Excludes temporary charges/(credits) and prospective recovery.

UNION GAS LIMITED  
Union North  
General Service Customer Bill Impacts

Line No.	Particulars	(Fort Frances) Rate 10 - Residential (Annual Consumption of 93,000 m³)				(Western) Rate 10 - Residential (Annual Consumption of 93,000 m³)			
		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (a)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (b)	Impact (\$) (c) = (b) - (a)		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (d)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (e)	Impact (\$) (f) = (e) - (d)	
	<u>Delivery Charges</u>								
1	Monthly Charge	840.00	840.00	-		840.00	840.00	-	
2	Delivery Commodity Charge	5,488.90	5,550.66	61.76		5,488.90	5,550.66	61.76	
3	Total Delivery Charge	6,328.90	6,390.66	61.76	1.0%	6,328.90	6,390.66	61.76	1.0%
	<u>Supply Charges</u>								
4	Transportation to Union	4,734.92	4,734.81	(0.11)		3,977.43	3,977.33	(0.10)	
5	Storage Services	2,216.10	2,224.28	8.18		1,913.38	1,920.45	7.07	
6	Subtotal	6,951.02	6,959.10	8.08	0.1%	5,890.81	5,897.78	6.97	0.1%
7	Commodity & Fuel	11,354.27	11,353.62	(0.65)		11,436.67	11,436.02	(0.65)	
8	Total Gas Supply Charge	18,305.29	18,312.72	7.43		17,327.48	17,333.80	6.32	
9	Total Bill	24,634.20	24,703.38	69.19	0.3%	23,656.38	23,724.46	68.08	0.3%
10	Impact - Sales Service (line 9)			69.19				68.08	
11	Impact - Direct Purchase (line 3 + line 6)			69.84				68.73	

Notes:

(1) Excludes temporary charges/(credits) and prospective recovery.

UNION GAS LIMITED  
Union North  
General Service Customer Bill Impacts

Line No.	Particulars	(Northern) Rate 10 - Residential (Annual Consumption of 93,000 m³)				(Eastern) Rate 10 - Residential (Annual Consumption of 93,000 m³)			
		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (a)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (b)	Impact (\$) (c) = (b) - (a)		EB-2015-0255 Approved 01-Oct-15 Total Bill (\$) (1) (d)	EB-2015-0116 Proposed 01-Jan-16 Total Bill (\$) (1) (e)	Impact (\$) (f) = (e) - (d)	
	<u>Delivery Charges</u>								
1	Monthly Charge	840.00	840.00	-		840.00	840.00	-	
2	Delivery Commodity Charge	5,483.90	5,545.94	62.04		5,496.74	5,558.06	61.32	
3	Total Delivery Charge	6,323.90	6,385.94	62.04	1.0%	6,336.74	6,398.06	61.32	1.0%
	<u>Supply Charges</u>								
4	Transportation to Union	5,368.83	5,368.70	(0.12)		6,544.94	6,544.78	(0.16)	
5	Storage Services	2,469.43	2,478.54	9.11		2,939.36	2,950.15	10.79	
6	Subtotal	7,838.26	7,847.25	8.99	0.1%	9,484.30	9,494.93	10.63	0.1%
7	Commodity & Fuel	11,564.18	11,563.52	(0.65)		11,665.64	11,664.99	(0.65)	
8	Total Gas Supply Charge	19,402.43	19,410.77	8.34		21,149.94	21,159.91	9.98	
9	Total Bill	25,726.33	25,796.71	70.38	0.3%	27,486.67	27,557.97	71.29	0.3%
10	Impact - Sales Service (line 9)			70.38				71.29	
11	Impact - Direct Purchase (line 3 + line 6)			71.03				71.95	

Notes:

(1) Excludes temporary charges/(credits) and prospective recovery.

UNION GAS LIMITED  
Calculation of Sales Service and Direct Purchase Impacts for Typical Small and Large Customers - Union North

Line No.	Particulars	EB-2015-0255 2015 Oct QRAM Rates (1)		2016 IR Rates Proposed		Impact		
		Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Unit Rate (cents/m <sup>3</sup> )	Delivery Rate Change (\$)	Bill (%)
		(a)	(b)	(c)	(d)	(e) = (d-b)	(f) = (c-a)	(g) = (f/a)
<u>Small Rate 01</u>								
1	Delivery Charges	447	20.3299	449	20.3981	0.0682	1.50	0.3%
2	Gas Supply Charges	542	24.6538	544	24.7148	0.0610	1.34	0.2%
3	Total Bill	990	44.9837	992	45.1129	0.1292	2.84	0.3%
4	Sales Service Impact						2.84	0.3%
5	Bundled-T (Direct Purchase) Impact						2.86	0.4%
<u>Small Rate 10</u>								
6	Delivery Charges	4,492	7.4871	4,530	7.5493	0.0622	37.31	0.8%
7	Gas Supply Charges	14,792	24.6538	14,829	24.7148	0.0610	36.60	0.2%
8	Total Bill	19,285	32.1409	19,358	32.2641	0.1232	73.91	0.4%
9	Sales Service Impact						73.91	0.4%
10	Bundled-T (Direct Purchase) Impact						74.33	0.6%
<u>Large Rate 10</u>								
11	Delivery Charges	14,505	5.8021	14,709	5.8836	0.0815	203.76	1.4%
12	Gas Supply Charges	61,634	24.6538	61,787	24.7148	0.0610	152.50	0.2%
13	Total Bill	76,140	30.4559	76,496	30.5984	0.1425	356.27	0.5%
14	Sales Service Impact						356.27	0.5%
15	Bundled-T (Direct Purchase) Impact						358.02	0.8%
<u>Small Rate 20</u>								
16	Delivery Charges	74,675	2.4892	79,431	2.6477	0.1585	4,755.74	6.4%
17	Gas Supply Charges	656,568	21.8856	660,779	22.0260	0.1404	4,210.99	0.6%
18	Total Bill	731,243	24.3748	740,210	24.6737	0.2989	8,966.73	1.2%
19	Sales Service Impact						8,966.73	1.2%
20	Bundled-T (Direct Purchase) Impact						8,987.73	2.5%
<u>Large Rate 20</u>								
21	Delivery Charges	286,251	1.9083	308,792	2.0586	0.1503	22,540.97	7.9%
22	Gas Supply Charges	3,078,125	20.5208	3,096,157	20.6410	0.1202	18,032.08	0.6%
23	Total Bill	3,364,376	22.4292	3,404,949	22.6997	0.2705	40,573.05	1.2%
24	Sales Service Impact						40,573.05	1.2%
25	Bundled-T (Direct Purchase) Impact						40,678.05	2.7%
<u>Average Rate 25</u>								
26	Delivery Charges	63,539	2.7929	62,814	2.7611	(0.0319)	(725.19)	-1.1%
27	Gas Supply Charges	375,980	16.5266	370,365	16.2798	(0.2468)	(5,615.25)	-1.5%
28	Total Bill	439,520	19.3195	433,179	19.0408	(0.2787)	(6,340.44)	-1.4%
29	Sales Service Impact						(6,340.44)	-1.4%
30	T-Service (Direct Purchase) Impact						(725.19)	-1.1%
<u>Small Rate 100</u>								
31	Delivery Charges	261,451	0.9683	239,985	0.8888	(0.0795)	(21,466.56)	-8.2%
32	Gas Supply Charges	6,128,454	22.6980	6,128,265	22.6973	(0.0007)	(189.00)	0.0%
33	Total Bill	6,389,905	23.6663	6,368,250	23.5861	(0.0802)	(21,655.56)	-0.3%
34	Sales Service Impact						(21,655.56)	-0.3%
35	T-Service (Direct Purchase) Impact						(21,466.56)	-8.2%
<u>Large Rate 100</u>								
36	Delivery Charges	2,113,543	0.8806	1,933,281	0.8055	(0.0751)	(180,262.56)	-8.5%
37	Gas Supply Charges	53,386,743	22.2445	53,385,063	22.2438	(0.0007)	(1,680.00)	0.0%
38	Total Bill	55,500,286	23.1251	55,318,344	23.0493	(0.0758)	(181,942.56)	-0.3%
39	Sales Service Impact						(181,942.56)	-0.3%
40	T-Service (Direct Purchase) Impact						(180,262.56)	-8.5%

Notes:

(1) Reflects Board-approved rates per Appendix A in Union's October 2015 QRAM filing (EB-2015-0255).

UNION GAS LIMITED  
Calculation of Sales Service and Direct Purchase Impacts for Typical Small and Large Customers - Union South

Line No.	Particulars	EB-2015-0255 2015 Oct QRAM Rates (1)		2016 IR Rates Proposed		Impact		
		Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Unit Rate (cents/m <sup>3</sup> )	Delivery Rate Change (\$)	Bill (%)
		(a)	(b)	(c)	(d)	(e) = (d-b)	(f) = (c-a)	(g) = (f/a)
<b>Small Rate M1</b>								
1	Delivery Charges	350	15.8921	357	16.2484	0.3563	7.84	2.2%
2	Gas Supply Charges	353	16.0483	353	16.0476	(0.0007)	(0.02)	0.0%
3	Total Bill	703	31.9404	711	32.2960	0.3556	7.82	1.1%
4	Sales Service Impact						7.82	1.1%
5	Direct Purchase Impact						7.84	2.2%
<b>Small Rate M2</b>								
6	Delivery Charges	3,343	5.5710	3,613	6.0218	0.4508	270.48	8.1%
7	Gas Supply Charges	9,629	16.0483	9,629	16.0476	(0.0007)	(0.42)	0.0%
8	Total Bill	12,972	21.6193	13,242	22.0694	0.4501	270.06	2.1%
9	Sales Service Impact						270.06	2.1%
10	Direct Purchase Impact						270.48	8.1%
<b>Large Rate M2</b>								
11	Delivery Charges	10,800	4.3201	11,895	4.7579	0.4379	1,094.65	10.1%
12	Gas Supply Charges	40,121	16.0483	40,119	16.0476	(0.0007)	(1.75)	0.0%
13	Total Bill	50,921	20.3684	52,014	20.8055	0.4372	1,092.90	2.1%
14	Sales Service Impact						1,092.90	2.1%
15	Direct Purchase Impact						1,094.65	10.1%
<b>Small Rate M4</b>								
16	Delivery Charges	36,615	4.1846	42,618	4.8706	0.6860	6,002.62	16.4%
17	Gas Supply Charges	140,423	16.0483	140,417	16.0476	(0.0007)	(6.13)	0.0%
18	Total Bill	177,038	20.2329	183,034	20.9182	0.6853	5,996.49	3.4%
19	Sales Service Impact						5,996.49	3.4%
20	Direct Purchase Impact						6,002.62	16.4%
<b>Large Rate M4</b>								
21	Delivery Charges	270,707	2.2559	322,360	2.6863	0.4304	51,652.92	19.1%
22	Gas Supply Charges	1,925,796	16.0483	1,925,712	16.0476	(0.0007)	(84.00)	0.0%
23	Total Bill	2,196,503	18.3042	2,248,072	18.7339	0.4297	51,568.92	2.3%
24	Sales Service Impact						51,568.92	2.3%
25	Direct Purchase Impact						51,652.92	19.1%
<b>Small Rate M5</b>								
26	Delivery Charges	30,069	3.6448	33,916	4.1110	0.4662	3,846.48	12.8%
27	Gas Supply Charges	132,398	16.0483	132,393	16.0476	(0.0007)	(5.77)	0.0%
28	Total Bill	162,468	19.6931	166,308	20.1586	0.4655	3,840.71	2.4%
29	Sales Service Impact						3,840.71	2.4%
30	Direct Purchase Impact						3,846.48	12.8%
<b>Large Rate M5</b>								
31	Delivery Charges	164,682	2.5336	195,950	3.0146	0.4810	31,268.08	19.0%
32	Gas Supply Charges	1,043,140	16.0483	1,043,094	16.0476	(0.0007)	(45.50)	0.0%
33	Total Bill	1,207,821	18.5819	1,239,044	19.0622	0.4803	31,222.58	2.6%
34	Sales Service Impact						31,222.58	2.6%
35	Direct Purchase Impact						31,268.08	19.0%
<b>Small Rate M7</b>								
36	Delivery Charges	643,961	1.7888	716,034	1.9890	0.2002	72,072.54	11.2%
37	Gas Supply Charges	5,777,388	16.0483	5,777,136	16.0476	(0.0007)	(252.00)	0.0%
38	Total Bill	6,421,349	17.8371	6,493,170	18.0366	0.1995	71,820.54	1.1%
39	Sales Service Impact						71,820.54	1.1%
40	Direct Purchase Impact						72,072.54	11.2%
<b>Large Rate M7</b>								
41	Delivery Charges	2,451,653	4.7147	2,700,680	5.1936	0.4789	249,026.72	10.2%
42	Gas Supply Charges	8,345,116	16.0483	8,344,752	16.0476	(0.0007)	(364.00)	0.0%
43	Total Bill	10,796,769	20.7630	11,045,432	21.2412	0.4782	248,662.72	2.3%
44	Sales Service Impact						248,662.72	2.3%
45	Direct Purchase Impact						249,026.72	10.2%

Notes:

(1) Reflects Board-approved rates per Appendix A in Union's October 2015 QRAM filing (EB-2015-0255).

UNION GAS LIMITED  
Calculation of Sales Service and Direct Purchase Impacts for Typical Small and Large Customers - Union South

EB-2015-0255								
2015 Oct QRAM Rates (1)				2016 IR Rates Proposed		Impact		
Line		Bill	Unit Rate	Bill	Unit Rate	Unit Rate	Delivery	
No.	Particulars	(\$)	(cents/m <sup>3</sup> )	(\$)	(cents/m <sup>3</sup> )	(cents/m <sup>3</sup> )	Rate Change	Bill
		(a)	(b)	(c)	(d)	(e) = (d-b)	(f) = (c-a)	(g) = (f/a)
<u>Small Rate M9</u>								
1	Delivery Charges	124,024	1.7845	132,127	1.9011	0.1166	8,103.37	6.5%
2	Gas Supply Charges	1,115,357	16.0483	1,115,308	16.0476	(0.0007)	(48.65)	0.0%
3	Total Bill	1,239,381	17.8328	1,247,435	17.9487	0.1159	8,054.72	0.6%
4	Sales Service Impact						8,054.72	0.6%
5	Direct Purchase Impact						8,103.37	6.5%
<u>Large Rate M9</u>								
6	Delivery Charges	368,343	1.8255	392,477	1.9451	0.1196	24,133.80	6.6%
7	Gas Supply Charges	3,238,226	16.0483	3,238,085	16.0476	(0.0007)	(141.25)	0.0%
8	Total Bill	3,606,569	17.8738	3,630,561	17.9927	0.1189	23,992.55	0.7%
9	Sales Service Impact						23,992.55	0.7%
10	Direct Purchase Impact						24,133.80	6.6%
<u>Average Rate M10</u>								
11	Delivery Charges	5,121	5.4186	5,623	5.9498	0.5312	501.98	9.8%
12	Gas Supply Charges	15,166	16.0483	15,165	16.0476	(0.0007)	(0.66)	0.0%
13	Total Bill	20,286	21.4669	20,788	21.9974	0.5305	501.32	2.5%
14	Sales Service Impact						501.32	2.5%
15	Direct Purchase Impact						501.98	9.8%
<u>Small Rate T1</u>								
16	Delivery Charges	129,998	1.7248	135,490	1.7977	0.0729	5,492.29	4.2%
17	Gas Supply Charges	1,209,560	16.0483	1,209,508	16.0476	(0.0007)	(52.76)	0.0%
18	Total Bill	1,339,558	17.7731	1,344,998	17.8453	0.0722	5,439.53	0.4%
19	Sales Service Impact						5,439.53	0.4%
20	Direct Purchase Impact						5,492.29	4.2%
<u>Average Rate T1</u>								
21	Delivery Charges	198,345	1.7149	207,452	1.7936	0.0787	9,106.77	4.6%
22	Gas Supply Charges	1,856,136	16.0483	1,856,055	16.0476	(0.0007)	(80.96)	0.0%
23	Total Bill	2,054,482	17.7632	2,063,508	17.8412	0.0780	9,025.81	0.4%
24	Sales Service Impact						9,025.81	0.4%
25	Direct Purchase Impact						9,106.77	4.6%
<u>Large Rate T1</u>								
26	Delivery Charges	437,508	1.7074	459,263	1.7923	0.0849	21,755.21	5.0%
27	Gas Supply Charges	4,112,229	16.0483	4,112,050	16.0476	(0.0007)	(179.37)	0.0%
28	Total Bill	4,549,737	17.7557	4,571,313	17.8399	0.0842	21,575.84	0.5%
29	Sales Service Impact						21,575.84	0.5%
30	Direct Purchase Impact						21,755.21	5.0%
<u>Small Rate T2</u>								
31	Delivery Charges	494,864	0.8351	492,534	0.8312	(0.0039)	(2,330.13)	-0.5%
32	Gas Supply Charges	9,509,581	16.0483	9,509,166	16.0476	(0.0007)	(414.79)	0.0%
33	Total Bill	10,004,445	16.8834	10,001,700	16.8788	(0.0046)	(2,744.93)	0.0%
34	Sales Service Impact						(2,744.93)	0.0%
35	Direct Purchase Impact						(2,330.13)	-0.5%
<u>Average Rate T2</u>								
36	Delivery Charges	1,141,889	0.5773	1,139,669	0.5762	(0.0011)	(2,219.18)	-0.2%
37	Gas Supply Charges	31,741,908	16.0483	31,740,524	16.0476	(0.0007)	(1,384.53)	0.0%
38	Total Bill	32,883,797	16.6256	32,880,193	16.6238	(0.0018)	(3,603.70)	0.0%
39	Sales Service Impact						(3,603.70)	0.0%
40	Direct Purchase Impact						(2,219.18)	-0.2%
<u>Large Rate T2</u>								
41	Delivery Charges	1,860,652	0.5028	1,858,612	0.5022	(0.0006)	(2,039.99)	-0.1%
42	Gas Supply Charges	59,392,993	16.0483	59,390,402	16.0476	(0.0007)	(2,590.62)	0.0%
43	Total Bill	61,253,645	16.5511	61,249,014	16.5498	(0.0013)	(4,630.62)	0.0%
44	Sales Service Impact						(4,630.62)	0.0%
45	Direct Purchase Impact						(2,039.99)	-0.1%
<u>Large Rate T3</u>								
46	Delivery Charges	3,220,759	1.1810	3,552,739	1.3027	0.1217	331,979.64	10.3%
47	Gas Supply Charges	43,765,640	16.0483	43,763,731	16.0476	(0.0007)	(1,908.98)	0.0%
48	Total Bill	46,986,399	17.2293	47,316,470	17.3503	0.1210	330,070.66	0.7%
49	Sales Service Impact						330,070.66	0.7%
50	Direct Purchase Impact						331,979.64	10.3%

Notes:

(1) Reflects Board-approved rates per Appendix A in Union's October 2015 QRAM filing (EB-2015-0255).

UNION GAS LIMITED  
Summary of 2016 Capital Pass Through Adjustments  
Related to Parkway Projects, Burlington - Oakville Pipeline, 2016 Dawn to Parkway, and 2017 Dawn to Parkway

Line No.	Particulars (\$000s)	Delivery (a)	Transportation (b)	Storage (c)	Total (d) = (a + b + c)
<u>Union North In-Franchise</u>					
1	Rate 01	(4,335)	60	3,326	(949)
2	Rate 10	(544)	(1)	871	326
3	Rate 20	(448)	(5)	233	(221)
4	Rate 25	(138)	(2)	-	(141)
5	Rate 100	(381)	(2)	16	(366)
6	Total Union North In-Franchise	<u>(5,846)</u>	<u>50</u>	<u>4,445</u>	<u>(1,350)</u>
<u>Union South In-Franchise</u>					
7	Rate M1	(6,184)	-	(1,020)	(7,204)
8	Rate M2	38	-	(348)	(309)
9	Rate M4	33	-	(63)	(30)
10	Rate M5A	(286)	-	(52)	(338)
11	Rate M7	47	-	(23)	24
12	Rate M9	38	-	(8)	30
13	Rate M10	1	-	(0)	0
14	Rate T1	(24)	-	(38)	(61)
15	Rate T2	452	-	(166)	286
16	Rate T3	278	-	(44)	234
17	Total Union South In-Franchise	<u>(5,606)</u>	<u>-</u>	<u>(1,762)</u>	<u>(7,368)</u>
<u>Ex-Franchise</u>					
18	Excess Utility Space	-	(22)	(128)	(150)
19	Rate M12	-	39,189	-	39,189
20	Rate M13	-	(1)	-	(1)
21	Rate M16	-	(6)	-	(6)
22	Rate C1	-	(53)	-	(53)
23	Total Ex-Franchise	<u>-</u>	<u>39,107</u>	<u>(128)</u>	<u>38,979</u>
24	Total (line 6 + line 17 + line 23)	<u>(11,452)</u>	<u>39,157</u>	<u>2,556</u>	<u>30,261</u>
25	Gas Supply Admin				(40)
26	Grand Total (1)				<u>30,221</u>

Note:

- (1) Sum of projects from EB-2012-0433/EB-2013-0074 Parkway Projects, EB-2014-0182, Burlington Oakville, EB-2014-0261, Dawn to Parkway 2016 System Expansion EB-2015-0200, 2017 Dawn to Parkway Project.

UNION GAS LIMITED  
Summary of 2016 Capital Pass Through Adjustments  
Related to Parkway Projects, Burlington - Oakville Pipeline, 2016 Dawn to Parkway, and 2017 Dawn to Parkway

Line No.	Particulars (\$000s)	Parkway Projects (1) (a)	BOP (b)	2016 D-P Expansion (c)	2017 D-P Expansion (d)	Total (e) = (a + b + c + d)
<u>Union North In-Franchise</u>						
1	Rate 01	662	(403)	(548)	(660)	(949)
2	Rate 10	462	(61)	16	(91)	326
3	Rate 20	(17)	(41)	(90)	(73)	(221)
4	Rate 25	(66)	(11)	(42)	(22)	(141)
5	Rate 100	(161)	(31)	(113)	(60)	(366)
6	Total Union North In-Franchise	<u>879</u>	<u>(547)</u>	<u>(776)</u>	<u>(905)</u>	<u>(1,350)</u>
<u>Union South In-Franchise</u>						
7	Rate M1	(3,684)	85	(2,158)	(1,447)	(7,204)
8	Rate M2	(184)	192	(134)	(183)	(309)
9	Rate M4	(38)	71	(21)	(43)	(30)
10	Rate M5A	(160)	(26)	(99)	(52)	(338)
11	Rate M7	6	26	4	(13)	24
12	Rate M9	13	10	8	(1)	30
13	Rate M10	(0)	0	0	(0)	0
14	Rate T1	(61)	66	(34)	(33)	(61)
15	Rate T2	(96)	557	(49)	(125)	286
16	Rate T3	101	71	65	(4)	234
17	Total Union South In-Franchise	<u>(4,102)</u>	<u>1,052</u>	<u>(2,418)</u>	<u>(1,900)</u>	<u>(7,368)</u>
<u>Ex-Franchise</u>						
18	Excess Utility Space	(70)	(13)	(46)	(21)	(150)
19	Rate M12	34,538	(414)	3,945	1,120	39,189
20	Rate M13	(1)	2	(1)	(1)	(1)
21	Rate M16	(3)	(0)	(2)	(1)	(6)
22	Rate C1	(34)	(1)	(12)	(6)	(53)
23	Total Ex-Franchise	<u>34,430</u>	<u>(426)</u>	<u>3,884</u>	<u>1,091</u>	<u>38,979</u>
24	Total (line 6 + line 17 + line 23)	<u>31,207</u>	<u>78</u>	<u>690</u>	<u>(1,714)</u>	<u>30,261</u>
25	Gas Supply Admin	(30)	(1)	(6)	(2)	(40)
26	Grand Total (1)	<u>31,177</u>	<u>77</u>	<u>683</u>	<u>(1,716)</u>	<u>30,221</u>

Note:

- (1) EB-2012-0433, Schedule 12-6 Updated and EB-2013-0074, Schedule 9-7.
- (2) EB-2014-0182, Exhibit A, Tab 9, Schedule 9.
- (3) EB-2014-0261, Settlement Agreement, Appendix 3, Schedule 6.
- (4) EB-2015-0200, Exhibit A, Tab 10, Schedule 5 Updated.

UNION GAS LIMITED  
Calculation of 2016 DSM Budget  
Allocation by Rate Class

Line No.	Particulars (\$000's)	2015			2016				
		Approved DSM Budget (1) (a) = (b + c)	DSM Program Budget (b)	Low Income Program Budget (c)	DSM Program Budget (1) (d)	Low Income Program Budget (1) (e)	Inflation Factor Budget (1) (f)	100% Utility Incentive (1) (g)	DSM Budget (1) (h) = (d + e + f + g)
	<u>Union North</u>								
1	Rate 01	3,843	2,057	1,786	5,181	3,304	143	496	9,124
2	Rate 10	1,222	917	305	1,933	450	40	152	2,576
3	Rate 20	1,004	909	94	1,681	276	33	141	2,130
4	Rate 100	1,852	1,655	196	293	292	10	-	595
5	Total Union North	<u>7,920</u>	<u>5,539</u>	<u>2,381</u>	<u>9,089</u>	<u>4,322</u>	<u>225</u>	<u>789</u>	<u>14,425</u>
	<u>Union South</u>								
6	Rate M1	10,763	6,414	4,349	15,455	7,356	383	1,943	25,137
7	Rate M2	4,012	3,420	592	7,665	965	145	610	9,385
8	Rate M4	1,655	1,508	147	2,835	210	51	241	3,337
9	Rate M5A	2,763	2,659	104	3,802	282	69	323	4,476
10	Rate M7	933	861	71	1,037	77	19	88	1,221
11	Rate T1	1,855	1,748	107	1,679	204	32	187	2,101
12	Rate T2	2,687	2,115	572	517	812	22	-	1,351
13	Total Union South	<u>24,668</u>	<u>18,725</u>	<u>5,943</u>	<u>32,990</u>	<u>9,908</u>	<u>721</u>	<u>3,391</u>	<u>47,009</u>
14	Total Union (line 5 + line 13)	<u>32,588</u>	<u>24,264</u>	<u>8,324</u>	<u>42,078</u>	<u>14,230</u>	<u>946</u>	<u>4,180</u>	<u>61,434</u>

Notes:

(1) EB-2015-0029, Exhibit A, Tab 3, Appendix E, Schedule 1.

UNION GAS LIMITED  
Calculation of 2016 NAC Target Percentage Change  
to General Service Rate Classes

Line No.	Particulars (m <sup>3</sup> )	2013 Actual NAC (1)(2) (a)	2014 Actual NAC (1)(3) (b)	NAC Variance (c) = (b - a)	2016 NAC Target % Change (d) = (c / a)
1	Rate 01	2,901	3,015	114	3.9%
2	Rate 10	169,025	177,214	8,189	4.8%
3	Rate M1	2,761	2,852	91	3.3%
4	Rate M2	169,121	172,694	3,573	2.1%

Notes:

- (1) NAC based on 2013 Board-approved 50:50 weather normal methodology.
- (2) 2013 actual NAC calculated using 2015 weather normal
- (3) 2014 actual NAC calculated using 2016 weather normal  
2014 actual NAC is adjusted for February 29th day

UNION GAS LIMITED  
Calculation of 2016 NAC Target Percentage Change  
Volumetric Adjustments to Union North General Service Rate Classes

Line No.	Particulars (10 <sup>3</sup> m <sup>3</sup> )	Approved 2015 Billing Units (1) (a)	2016 NAC Target % Change (2) (b)	Change in Billing Units (c) = (a x b)	Proposed 2016 Billing Units (d) = (a + c)
<u>Rate 01 Delivery</u>					
1	First 100 m <sup>3</sup>	273,618	3.9%	10,752	284,370
2	Next 200 m <sup>3</sup>	310,686	3.9%	12,209	322,895
3	Next 200 m <sup>3</sup>	135,534	3.9%	5,326	140,860
4	Next 500 m <sup>3</sup>	92,571	3.9%	3,638	96,209
5	All Over 100 m <sup>3</sup>	115,512	3.9%	4,539	120,052
6	Total Rate 01 Delivery	<u>927,922</u>		<u>36,464</u>	<u>964,386</u>
<u>Rate 01 Storage</u>					
7	Fort Frances Zone	12,901	3.9%	507	13,408
8	Western Zone	179,704	3.9%	7,062	186,766
9	Northern Zone	403,875	3.9%	15,871	419,746
10	Eastern Zone	331,441	3.9%	13,025	344,466
11	Total Rate 01 Storage	<u>927,922</u>		<u>36,464</u>	<u>964,386</u>
<u>Rate 10 Delivery</u>					
12	First 1,000 m <sup>3</sup>	25,432	4.8%	1,232	26,664
13	Next 9,000 m <sup>3</sup>	137,301	4.8%	6,652	143,953
14	Next 20,000 m <sup>3</sup>	87,335	4.8%	4,231	91,566
15	Next 70,000 m <sup>3</sup>	66,220	4.8%	3,208	69,428
16	All Over 100,000 m <sup>3</sup>	30,458	4.8%	1,476	31,934
17	Total Rate 10	<u>346,746</u>		<u>16,799</u>	<u>363,545</u>
<u>Rate 10 Storage</u>					
18	Fort Frances Zone	2,851	4.8%	138	2,989
19	Western Zone	48,575	4.8%	2,353	50,928
20	Northern Zone	140,669	4.8%	6,815	147,484
21	Eastern Zone	154,652	4.8%	7,493	162,144
22	Total Rate 10 Storage	<u>346,746</u>		<u>16,799</u>	<u>363,545</u>

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 1, column (d).

UNION GAS LIMITED  
Calculation of 2016 NAC Target Percentage Change  
Volumetric Adjustments to Union South General Service Rate Classes

Line No.	Particulars (10 <sup>3</sup> m <sup>3</sup> )	Approved 2015 Billing Units (1) (a)	2016 NAC Target % Change (2) (b)	Change in Billing Units (c) = (a x b)	Proposed 2016 Billing Units (d) = (a + c)
<u>Rate M1 Delivery</u>					
1	First 100 m <sup>3</sup>	879,923	3.3%	29,001	908,925
2	Next 150 m <sup>3</sup>	781,347	3.3%	25,752	807,099
3	All Over 250 m <sup>3</sup>	1,260,246	3.3%	41,537	1,301,783
4	Total Rate M1 Delivery	<u>2,921,516</u>		<u>96,290</u>	<u>3,017,807</u>
5	Rate M1 Storage	<u>2,921,516</u>	3.3%	<u>96,290</u>	<u>3,017,807</u>
<u>Rate M2 Delivery</u>					
6	First 1,000 m <sup>3</sup>	62,323	2.1%	1,317	63,640
7	Next 6,000 m <sup>3</sup>	303,299	2.1%	6,408	309,707
8	Next 13,000 m <sup>3</sup>	342,713	2.1%	7,240	349,953
9	All Over 20,000 m <sup>3</sup>	437,832	2.1%	9,250	447,082
10	Total Rate M2 Delivery	<u>1,146,167</u>		<u>24,215</u>	<u>1,170,382</u>
11	Rate M2 Storage	<u>1,146,167</u>	2.1%	<u>24,215</u>	<u>1,170,382</u>

Notes:

- (1) EB-2014-0271, Rate Order, Working Papers, Schedule 4, column (u).  
(2) EB-2015-0116, Rate Order, Working Papers, Schedule 12, Page 1, column (d).

UNION GAS LIMITED  
Summary of S&T Transactional Margin Included In 2016 In-Franchise Rates

Line No.	Particulars (\$000s)	Total Revenue (1) (a)	Allocated Cost (2) (b)	Total Margin (c) = (a - b)	Shareholder Portion of Margin (d) = (c) * 10%	Margin Included in 2013 In-Franchise Rates (e) = (c - d)	Margin Included in 2016 In-Franchise Rates (f)	Variance (g) = (f - e)
<b><u>Long-Term Transportation</u></b>								
1	M12 Long-term Transportation	120,604	125,384	(4,781)				
2	M12-X	13,896	11,623	2,272				
3	F24-T	359	359	0				
4	M12 Fuel	22,674	22,673	1				
5	C1 Long-term Transportation	6,954	1,669	5,286				
6	C1 Fuel	626	632	(6)				
7	M13	411	211	200				
8	M16	736	451	286				
9	Heritage Pool M16 Transmission Charge (3)			56				
10	Total Long-Term Transportation	<u>166,260</u>	<u>163,002</u>	<u>3,314</u>	<u>-</u>	<u>3,314</u>	<u>3,314</u>	<u>-</u>
<b><u>Short-Term Transportation</u></b>								
11	Short-term Transportation	11,067	5,843	5,224				
12	Other Transactional	<u>1,067</u>	<u>-</u>	<u>1,067</u>				
13	Total Short-Term Transportation	<u>12,134</u>	<u>5,843</u>	<u>6,291</u>	<u>-</u>	<u>6,291</u>	<u>6,291</u>	<u>-</u>
<b><u>Short-term Storage and Other Balancing Services Acct. 179-70</u></b>								
14	Short Term Peak Storage Services	7,883	5,626	2,257				
15	Less: Non-utility System Integrity Costs (4)	-	(300)	300				
16	Off Peak Storage/Balancing/Loans Services	<u>2,500</u>	<u>-</u>	<u>2,500</u>				
17	Total Short-term Storage and Other Balancing Services	<u>10,383</u>	<u>5,327</u>	<u>5,056</u>	<u>506</u>	<u>4,551</u>	<u>4,551</u>	<u>-</u>
18	Total S&T Transactional Margin Included in Rates	<u>188,777</u>	<u>174,171</u>	<u>14,661</u>	<u>506</u>	<u>14,156</u>	<u>14,156</u>	<u>-</u>

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 14, Page 9 - 11, column (g).
- (2) EB-2011-0210, Rate Order, Working Papers, Schedule 14, Page 9 - 11, column (e).
- (3) EB-2011-0210, Rate Order, Working Papers, Schedule 39, line 4.
- (4) Excludes the non-utility portion of system integrity costs of \$0.300 million as per EB-2011-0210 Board Decision.

UNION GAS LIMITED  
Summary of Gas Supply Optimization Margin Included In 2016 Gas Supply Transportation Rates

Line No.	Particulars (\$000s)	Total Revenue (1) (a)	Allocated Cost (b)	Total Margin (c) = (a - b)	Portion of Margin (d) = (c) * 10%	Margin in 2013 Gas Supply Transportation Rates (e) = (c - d)	Margin in 2016 Gas Supply Transportation Rates (f)	Variance (g) = (f - e)
	<u>Exchanges (2)</u>							
1	Base Exchanges	9,118	-	9,118	912	8,206	8,206	-
2	FT-RAM Related Exchanges	5,800	-	5,800	580	5,220	5,220	-
3	Total Exchanges Revenue	<u>14,918</u>	<u>-</u>	<u>14,918</u>	<u>1,492</u>	<u>13,426</u>	<u>13,426</u>	<u>-</u>

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 14, Page 11, Line 18, column (g).  
(2) EB-2011-0210, Board Decision, page 40.

UNION GAS LIMITED  
2016 Gas Supply Optimization Margin - Allocation of Ratepayer Portion and Calculation of Unit Rates

Line No.	Rate Class	Union North FT Demand Allocation Units TRANSALLO (\$000s) (a)	Union North Margin (\$000s) (b)	Union South Landed Supply Allocation Units S_SUPPLYVOL (10 <sup>3</sup> m <sup>3</sup> ) (c)	Union South Margin (\$000s) (d)	Total Margin (\$000s) (1) (e) = (b + d)	Billing Units (10 <sup>3</sup> m <sup>3</sup> ) (2) (f)	2016 Unit Rate (cents/m <sup>3</sup> ) (g) = (e / f)
1	Rate 01	65,876	(3,920)			(3,920)	926,963	(0.4229)
2	Rate 10	22,548	(1,342)			(1,342)	343,530	(0.3906)
3	Rate 20	8,016	(477)			(477) (3)		
4	Rate 100	-	-			-	-	-
5	Rate 25	1,961	(117)			(117)	42,913	(0.2720)
6	Total Union North	<u>98,400</u>	<u>(5,856)</u>			<u>(5,856)</u>		
7	Rate M1			2,271,443	(6,415)	(6,415)	2,271,443	(0.2824)
8	Rate M2			378,137	(1,068)	(1,068)	378,137	(0.2824)
9	Rate M4			16,855	(48)	(48)	16,855	(0.2824)
10	Rate M5 - Firm			226	(1)	(1)	226	(0.2824)
11	Rate M5 - Int			13,906	(39)	(39)	13,906	(0.2824)
12	Rate M10			48	(0)	(0)	48	(0.2824)
13	Total Union South			<u>2,680,616</u>	<u>(7,571)</u>	<u>(7,571)</u>	<u>2,680,616</u>	
14	Total Exchanges Revenue					<u>(13,426)</u>		

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 43, Line 3, column (e).  
(2) Union North billing units per EB-2015-0116, Rate Order, Working Papers, Schedule 4, Column (t).  
Union South billing units are 2013 Board-approved Sales volumes per EB-2011-0210.  
(3) Rate 20 margin will be refunded 60% in the Gas Supply Demand Charge and 40% in the Commodity Transportation 1 Charge.  
The Rate 20 unit rates are calculated below:

Margin Allocated to Gas Supply Demand Charge (\$000s)	(286)
Total Gas Supply Demand Billing Units (10 <sup>3</sup> m <sup>3</sup> )	<u>6,873</u>
Unit Rate (cents/m <sup>3</sup> )	<u>(4.1642)</u>
Margin Allocated to Commodity Transportation Charge 1 (\$000s)	(191)
Total Commodity Transportation 1 Billing Units (10 <sup>3</sup> m <sup>3</sup> )	<u>73,456</u>
Unit Rate (cents/m <sup>3</sup> )	<u>(0.2597)</u>

UNION GAS LIMITED  
Allocation of Long-term and Short-term Transportation-related S&T Margin to Union North and Union South

Line No.	Particulars (\$000s)	Design Day Demand (10 <sup>3</sup> m <sup>3</sup> /d) (1) (a)	Easterly Flow Volume (10 <sup>3</sup> m <sup>3</sup> /d) (2) (b)	Available Capacity (10 <sup>3</sup> m <sup>3</sup> /d) (c) = (a - b)	Distance (km) (d)	Available Capacity - Distance (10 <sup>3</sup> m <sup>3</sup> /d x km) (e) = (c x d)	Allocated Proportion (%) (f)	Allocated Proportion (\$000s) (g)
<u>Union North</u>								
1	North In-fran	6,956	938	6,018	228.94	1,377,858	37%	3,513
<u>Union South</u>								
2	South: In-fran	43,674	21,874	21,800	82.15	1,790,897	48%	4,566
3	St. Clair	2,833	1,419	1,414	29.40	41,571	1%	106
4	Ojibway	9,619	4,818	4,801	116.05	557,186	15%	1,420
5	Total Union South	56,126	28,111	28,015		2,389,654	63%	6,092
6	Total Union North and Union South	63,082	29,048	34,034		3,767,512	100%	9,605 (3)

Notes:

- (1) EB-2011-0210, Exhibit G3, Tab 5, Schedule 23, Page 8, Line 5, Union North, updated for EB-2011-0210 Board Decision.  
EB-2011-0210, Exhibit G3, Tab 5, Schedule 23, Page 8, Line 2, South In-fran, updated for EB-2011-0210 Board Decision.  
EB-2011-0210, Exhibit G3, Tab 5, Schedule 23, Page 9, Line 4, St. Clair-Ojibway, updated for EB-2011-0210 Board Decision.
- (2) Easterly annual volumes on Dawn to Parkway for Union North and Union South are 342,196 10<sup>3</sup>m<sup>3</sup> and 10,260,364 10<sup>3</sup>m<sup>3</sup> respectively divided by 365.
- (3) EB-2011-0210, Rate Order, Working Papers, Schedule 40, Line 10 + Line 13, column (e).

UNION GAS LIMITED  
Total Upstream Transportation Costs in Union North Rates  
Effective January 1, 2016

Line No.	Particulars (\$000s)	Upstream Transportation Costs per EB-2014-0271 (1) (a)	Change in Upstream Transportation Costs in 2015 (2) (b)	Upstream Transportation Costs per EB-2015-0116 (3) (c) = (a + b)
1	Rate 01	64,046	18,744	82,790
2	Rate 10	20,832	5,875	26,707
3	Rate 20	6,907	1,889	8,796
4	Rate 25	1,436	346	1,781
5	Rate 100	73	34	107
6	Total Union North	<u>93,293</u>	<u>26,888</u>	<u>120,181</u>

Notes:

- (1) EB-2014-0271, Working Papers, Schedule 15, column (d).  
Excludes FT Transportation fuel of \$1.463 million and Black Creek Storage of \$0.042 million.
- (2) Upstream Transportation costs in 2015 updated at EB-2014-0356, Working Papers Schedule 4, EB-2015-0035, Working Papers, Schedule 4, EB-2015-0255, Working Papers, Schedule 4.
- (3) EB-2015-0116, Rate Order, Working Papers, Schedule 3, column (l).

UNION GAS LIMITED  
Calculation of 2016 Gas Supply Admin Charge

Line No.	Particulars	EB-2014-0271 2015 Board Approved (a)	2016 Capital Pass Throughs (3) (b)	EB-2015-0116 2016 Proposed (c) = (a + b )
1	Costs (\$000s)	6,774 (1)	(26)	6,749
2	2013 Approved Sales Volumes (10 <sup>3</sup> m <sup>3</sup> )	3,533,863 (2)		3,533,863
3	Gas Supply Admin Charge Unit Rate (cents/m <sup>3</sup> ) (4)	<u>0.1917</u>		<u>0.1910</u>

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 3, column (a).
- (2) EB-2011-0210, Rate Order, Working Papers, Schedule 14, column (a).
- (3) EB-2015-0116, Rate Order, Working Papers, Schedule 3, Page 2, line 7, column (d) + (k).
- (4) Line 1 / Line 2 x 100.

UNION GAS LIMITED  
2014 Lost Revenue Adjustment Mechanism ("LRAM") and 2011 LRAM Volume Adjustment  
Volumes for 2016 Rate Calculations

Line No.	Particulars (10 <sup>9</sup> m <sup>3</sup> )	2014 - Pre-Audit Post RR Full Year Impact DSM Volumes by Rate Class (a)	Customer Rate Class Adjustment (b)	2011 Actual LRAM Volumes (1) (c)	Total Volume Adjustment by Rate Class (d) = (a + b + c)
<u>Union South</u>					
	Contract				
1	Rate M4	(10,830)	(1,522)	(7,981)	(20,332)
2	Rate M5A	(9,959)	(6,462)	(14,414)	(30,835)
3	Rate M7	(8,543)	7,984	(12,780)	(13,339)
4	Rate T1	(5,893)		(8,394)	(14,287)
5	Rate T2	(47,045)		(56,618)	(103,663)
6	Total Union South	<u>(82,270)</u>	<u>-</u>	<u>(100,186)</u>	<u>(182,457)</u>
<u>Union North</u>					
	Contract				
7	Rate 20	(7,682)	2,413	(4,577)	(9,846)
8	Rate 100	(30,361)	(2,413)	(9,050)	(41,824)
9	Total Union North	<u>(38,043)</u>	<u>-</u>	<u>(13,627)</u>	<u>(51,670)</u>
10	Total (line 6 + line 9)	<u>(120,313)</u>	<u>-</u>	<u>(113,813)</u>	<u>(234,127)</u>

Notes:

(1) EB-2014-0273, Exhibit A, Tab 4 Schedule 2, Page 2 of 4, Corrected, column (a).

**UNION GAS LIMITED**  
Calculation of Supplemental Service Charges  
Commissioning and Decommissioning Rates  
Effective January 1, 2016

Line No.	Particulars	Ft. Frances (a)	Western (b)	Northern (c)	Eastern (d)
<b>Union North</b>					
<b><u>Rate 20 - At 50% Load Factor</u></b>					
<b>Delivery (cents / m<sup>3</sup>)</b>					
1	Monthly Demand (1)	29.7442	29.7442	29.7442	29.7442
2	Line 1 x 12 months	356.9304	356.9304	356.9304	356.9304
3	Line 2 / 365 days	0.9779	0.9779	0.9779	0.9779
4	Line 3 @ 50% Load Factor	1.9558	1.9558	1.9558	1.9558
5	Delivery Commodity Charge (1)	0.6089	0.6089	0.6089	0.6089
6	Total Delivery Commissioning	<u>2.5647</u>	<u>2.5647</u>	<u>2.5647</u>	<u>2.5647</u>
<b>Gas Supply (cents / m<sup>3</sup>)</b>					
7	Monthly Demand (1)	54.0801	34.0754	73.2293	106.3242
8	Gas Supply Demand - Price Adjustment (1)	-	-	-	-
9	(Line 7 + Line 8) x 12 months	648.9607	408.9048	878.7516	1,275.8904
10	Line 9 / 365 days	1.7780	1.1203	2.4075	3.4956
11	Line 10 @ 50% Load Factor	3.5559	2.2406	4.8151	6.9912
12	Commodity Transportation 1 (1)	4.3859	3.9293	4.7668	5.4747
13	Commodity Transportation 1 - Price Adjustment	-	-	-	-
14	(Line 12 + Line 13) x (4/5)	3.5087	3.1434	3.8134	4.3798
15	Commodity Transportation 2 (1)	-	-	-	-
16	Line 15 * (1/5)	-	-	-	-
17	Total Commodity Transportation Charge for Commissioning Rate	<u>7.0646</u>	<u>5.3840</u>	<u>8.6285</u>	<u>11.3709</u>
<b><u>Rate 100 - At 70% Load Factor</u></b>					
<b>Delivery (cents / m<sup>3</sup>)</b>					
18	Monthly Demand (2)	13.9580	13.9580	13.9580	13.9580
19	Line 18 x 12 months	167.4960	167.4960	167.4960	167.4960
20	Line 19 / 365 days	0.4589	0.4589	0.4589	0.4589
21	Line 20 @ 70% Load Factor	0.6556	0.6556	0.6556	0.6556
22	Commodity Charge (2)	0.2052	0.2052	0.2052	0.2052
23	Total Delivery Commissioning	<u>0.8608</u>	<u>0.8608</u>	<u>0.8608</u>	<u>0.8608</u>
<b>Gas Supply (cents / m<sup>3</sup>)</b>					
24	Monthly Demand (2)	102.9596	78.6756	123.2688	160.9615
25	Line 24 x 12 months	1,235.5152	944.1072	1,479.2256	1,931.5380
26	Line 25 / 365 days	3.3850	2.5866	4.0527	5.2919
27	Line 26 @ 70% Load Factor	4.8357	3.6951	5.7895	7.5598
28	Commodity Transportation 1 (2)	7.0810	6.7390	7.3672	7.8982
29	Line 28 * (3/7)	3.0347	2.8881	3.1574	3.3849
30	Commodity Transportation 2 (2)	-	-	-	-
31	Line 30 * (4/7)	-	-	-	-
32	Total Commodity Transportation Charge for Commissioning Rate	<u>7.8704</u>	<u>6.5833</u>	<u>8.9469</u>	<u>10.9448</u>

**Notes:**

- (1) Appendix A, Page 3.  
(2) Appendix A, Page 4.

UNION GAS LIMITED  
Union South  
Calculation of Supplemental Service Charges  
Effective January 1, 2016

Line No.	Particulars	cents / m <sup>3</sup> (a)	\$ / GJ (b)
	<u>Minimum annual gas supply commodity charge - Rate M4, Rate M5A</u>		
1	Compressor Fuel	0.5214	
2	Transportation Tolls	3.5158	
3	Administration Charge	0.1910	
4	Minimum annual gas supply commodity charge	<u>4.2282</u>	<u>1.097</u>
	<u>Gas Supply Commodity Charges</u>		
5	Commodity Cost of Gas	11.8194	
6	FT Transportation Commodity	-	
7	FT Fuel	0.5214	
8	Total Gas Supply Commodity Charge	<u>12.3408</u>	<u>3.201</u>
	<u>Firm Gas Supply Service Monthly Demand Charge</u>		
9	FT Demand Charge	<u>227.3366</u>	<u>58.972</u>

UNION GAS LIMITED  
Union South  
Calculation of Supplemental Service Charges  
Effective January 1, 2016

Line No.	Particulars		cents / m <sup>3</sup> (a)	\$ / GJ (b)
	Firm Backstop Gas:			
	Demand:			
1	Monthly space charge	0.0424		
2	Units required (1) Note: Each unit of added delivery requires 43 m <sup>3</sup> of additional inventory.	43		
3	Number of months	12	21.8810 (a)	
	Inventory carrying costs:			
4	Sales WACOG	16.0476		
5	Overrun storage withdrawal	0.4009		
6		16.4485		
7	Units required (m <sup>3</sup> )	43		
8	Pre-tax return (%)	8.170%	57.7853 (b)	
9	Annual demand charge		79.6663 (a) + (b)	
10	Number of months	12		
11	Monthly demand charge		6.6389	1.722
	Commodity:			
12	Sales WACOG		16.0476	
13	Overrun storage withdrawal		0.4009	
14	Overrun transportation		1.2711	
15	Commodity charge		17.7196	4.597
	Reasonable Efforts Backstop Gas:			
16	M1 Block 1 plus Storage		5.0184	
17	Sales WACOG		16.0476	
18			21.0660	5.465
	Supplemental Inventory:			
19	Sales WACOG		16.0476	
20	Injection commodity		0.2012	
21	Space charge (line 1 x 12)		0.5089	
22			16.7577	4.347
	Carrying costs (1/2 year)			
23	(line 8 x line 22) / 2		0.6846	
24	Total (line 22 + line 23)		17.4422	4.525
	Supplemental Gas Sales:			
25	Supplemental inventory		17.4422	
26	Overrun storage withdrawal		0.4009	
27	Overrun transportation		1.2711	
28	Total		19.1142	
	Failure to Deliver:			
29	M1 Block 1 plus Storage		5.0184	1.302
30	Failure to Deliver Adjustment		5.1708	1.341
31	Failure to Deliver Charge		10.1892	2.643

Notes:

(1) Each unit of added delivery requires 43 m<sup>3</sup> of additional inventory.

UNION GAS LIMITED  
Union South  
Calculation of Supplemental Service Charges  
Calculation of Minimum, Maximum & Seasonal Charges  
Effective January 1, 2016

Line No.	Particulars	cents / m <sup>3</sup>
	<u>Minimum Charges</u>	(a)
1	Rate M4 (F) Minimum annual delivery commodity charge:	
2	Monthly delivery commodity charge (1st Block M4)	1.3040
3	Administration Fee	0.191
	Minimum annual delivery commodity charge	<u>1.4950</u>
4	Rate M4 (I) / M5 Minimum annual delivery commodity charge:	
5	Monthly delivery commodity charge (1st block M5)	3.1371
6	Administration Fee	0.191
	Minimum annual delivery commodity charge	<u>3.3281</u>
	<u>Maximum Charges</u>	
7	Rate 25 Interruptible Average Rate 10 Firm Delivery Charge	5.319
8	Percent of Average Firm Delivery Price	90%
9	R25 Maximum interruptible delivery commodity charge	<u>4.7871</u>
10	Rate M7 Interruptible Maximum interruptible delivery commodity charge:	
11	M7 firm commodity charge	0.4033
12	M7 firm demand charge commoditized at a Load Factor of 19.79%	4.7884
	M7 maximum interruptible charge	<u>5.1917</u>
13	Rate T1 Interruptible Maximum interruptible delivery commodity charge	<u>5.1917</u>
14	Rate T2 Interruptible Maximum interruptible delivery commodity charge	<u>5.1917</u>
	<u>Rate M7 - Commissioning and Decommissioning Rate</u>	
	Delivery (cents / m <sup>3</sup> )	
15	Monthly Demand (1)	28.8306
16	Annual Demand (line 15 x 12 months)	345.9672
17	Daily Demand (line 16 / 365 days)	0.9479
18	@ Class Average Firm Load Factor of	3.3519
19	Delivery Commodity Charge (1)	0.4033
20	Delivery - Price Adjustment	-
21	Total Delivery Commissioning	<u>3.7552</u>

Notes:

(1) Appendix A, Page 9.

UNION GAS LIMITED  
Union South  
Calculation of Supplemental Service Charges  
Effective January 1, 2016

Line No.	Particulars	Union Supplies Fuel (a)	Customer Supplies Fuel (b)
<u>Rate T1 / Rate T2 / Rate T3 - At 100% Load Factor</u>			
	Authorized Storage Overrun (\$ / GJ)		
1	Monthly Demand (1)	1.586	1.586
2	Annual Demand (line 1 x 12 months)	19.032	19.032
3	Daily Demand (line 2 / 365 days)	0.052	0.052
4	@ 100% Load Factor	0.052	0.052
5	Commodity Charge (WACOG / Heat Value * Overrun Fuel Ratio + Injection Commodity) (2)	0.052	0.008
6	Total Storage Overrun	<u>0.104</u>	<u>0.060</u>
<u>Rate T1 - At 100% Load Factor</u>			
	Authorized Transportation Overrun (cents / m <sup>3</sup> )		
7	Monthly Demand (3)	34.5173	34.5173
8	Annual Demand (line 7 x 12 months)	414.2076	414.2076
9	Daily Demand (line 8 / 365 days)	1.1348	1.1348
10	@ 100% Load Factor	1.1348	1.1348
11	Commodity Charge (WACOG / 10 * Transportation Fuel Ratio + Firm Commodity Transport) (4)	0.1363	0.0762
12	Total Transportation Overrun	<u>1.2711</u>	<u>1.2110</u>
<u>Rate T2 - At 100% Load Factor</u>			
	Authorized Transportation Overrun (cents / m <sup>3</sup> )		
13	Monthly Demand (5)	20.9062	20.9062
14	Annual Demand (line 13 x 12 months)	250.8744	250.8744
15	Daily Demand (line 14 / 365 days)	0.6873	0.6873
16	@ 100% Load Factor	0.6873	0.6873
17	Commodity Charge (WACOG / 10 * Transportation Fuel Ratio + Firm Commodity Transport) (6)	0.0641	0.0083
18	Total Transportation Overrun	<u>0.7515</u>	<u>0.6956</u>
<u>Rate T3 - At 100% Load Factor</u>			
	Authorized Transportation Overrun (cents / m <sup>3</sup> )		
19	Monthly Demand (7)	11.6340	11.6340
20	Annual Demand (line 19 x 12 months)	139.6080	139.6080
21	Daily Demand (line 20 / 365 days)	0.3825	0.3825
22	@ 100% Load Factor	0.3825	0.3825
23	Commodity Charge (7)	0.0858	0.0108
24	Total Transportation Overrun	<u>0.4682</u>	<u>0.3933</u>

Notes:

- (1) Appendix A, Page 9.
- (2)  $\$194.138/10^3\text{m}^3 / 38.55 \text{ GJ}/10^3\text{m}^3 * 0.859\% + \$0.008/\text{GJ}$ .
- (3) Appendix A, Page 9.
- (4)  $\$194.138/10^3\text{m}^3 / 10 * 0.301\% + 0.0739 \text{ cents}/\text{m}^3$ .
- (5) Appendix A, Page 11.
- (6)  $\$194.138/10^3\text{m}^3 / 10 * 0.279\% + 0.0108 \text{ cents}/\text{m}^3$ .
- (7) Appendix A, Page 12.

UNION GAS LIMITED  
Union South  
Calculation of Union Supplied Fuel Rates for  
In-Franchise Semi-Unbundled Rates T1, T2 and T3  
Effective January 1, 2016

Line No.	Particulars	Union Supplies Fuel (a)	Customer Supplies Fuel (b)
<u>Rate T1 Transportation Service (cents/m³)</u>			
1	Ontario Landed Reference Price as per EB-2015-0116	19.8147	
2	2016 Fuel Ratio as per EB-2015-0116	0.303%	
3	Fuel Rate (line 1 x line 2)	0.0601	
4	Firm Transportation Commodity Charge All volumes	<u>0.1363</u>	<u>0.0762</u>
5	Interruptible Transportation Commodity Charge - Maximum	<u>5.1917</u>	<u>5.1316</u>
<u>Rate T2 Transportation Service (cents/m³)</u>			
6	Ontario Landed Reference Price as per EB-2015-0116	19.8147	
7	2016 Fuel Ratio as per EB-2015-0116	0.282%	
8	Fuel Rate (line 6 x line 7)	0.0558	
9	Firm Transportation Commodity Charge All volumes	<u>0.0641</u>	<u>0.0083</u>
10	Interruptible Transportation Commodity Charge - Maximum	<u>5.1917</u>	<u>5.1359</u>
<u>Rate T3 Transportation Service (cents/m³)</u>			
11	Ontario Landed Reference Price as per EB-2015-0116	19.8147	
12	2016 Fuel Ratio as per EB-2015-0116	0.378%	
13	Fuel Rate (line 11 x line 12)	0.0750	
14	Firm Transportation Commodity Charge	<u>0.0858</u>	<u>0.0108</u>
<u>Rate T1, Rate T2 &amp; Rate T3 Storage Service (\$/GJ)</u>			
15	Ontario Landed Reference Price as per EB-2015-0116	5.140	
16	2016 Fuel Ratio as per EB-2015-0116	0.403%	
17	Fuel Rate (line 15 x line 16)	0.021	
18	Storage Commodity Charge	<u>0.029</u>	<u>0.008</u>
<u>Rate T1, Rate T2 &amp; Rate T3 Annual Firm Injection/Withdrawal Right (\$/GJ)</u>			
19	Customer provides deliverability Inventory Rate		(1) 1.195
Inventory Carrying Costs			
20	Space	75,177,124 (2)	
21	Inventory Percentage	20%	
22	Inventory (line 20 x line 21)	<u>15,035,425</u>	
23	Ontario Landed Reference Price as per EB-2015-0116	5.14	
24	ICC %	8.2%	
25	Inventory Carrying Costs (line 22 * line 23 * line 24)	<u>6,314</u>	
26	Deliverability Demand Allocation Units	1,332,764 (3)	
27	Line 25 / line 26 x 1000 / 12	0.395	
28	Union provides deliverability Inventory as per EB-2015-0116 (line 19 + line 27)	<u>1.590</u>	

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 19, Page 1, line 3, column (i).  
(2) EB-2011-0210, Rate Order, Working Papers, Schedule 19, Page 2, line 8, column (b).  
(3) EB-2011-0210, Rate Order, Working Papers, Schedule 19, Page 1, line 5, column (e).

UNION GAS LIMITED  
Southern Operations Area  
Unbundled Delivery Rate Detail  
Effective January 1, 2016

Line No.	Particulars	Billing Units	2016 Forecast (1) Usage (a)	SSS & SPS (\$000's) (b)	Gas Supply Balancing Costs (\$000's) (c)	Gas in Storage Inventory Carrying Costs (\$000's) (d)	Unbundled Storage Revenue (\$000's) (e) = (b + c + d)	Unbundled Storage Rates (cents/m³) (f) = (e / a)	Unbundled Delivery Rates (6) (cents/m³) (g)
<u>Rate M1</u>									
Monthly delivery commodity charge:									
1	First 100 m³	10³m³	908,925	4,190	-	2,196	6,386	0.7026	4.3157
2	Next 150 m³	10³m³	807,099	3,721	-	1,950	5,671	0.7026	4.0975
3	All over 250 m³	10³m³	1,301,783	6,001	-	3,145	9,146	0.7026	3.5340
4	Total		<u>3,017,807</u>	<u>13,912</u> (2)	<u>-</u>	<u>7,291</u> (3)	<u>21,203</u>		
<u>Rate M2</u>									
Monthly delivery commodity charge:									
5	First 1,000 m³	10³m³	63,640	257	-	135	392	0.6160	4.0973
6	Next 6,000 m³	10³m³	309,707	1,249	-	659	1,908	0.6160	4.0214
7	Next 13,000 m³	10³m³	349,953	1,411	-	745	2,156	0.6160	3.8310
8	All over 20,000 m³	10³m³	447,082	1,803	-	951	2,754	0.6160	3.5570
9	Total		<u>1,170,382</u>	<u>4,720</u> (4)	<u>-</u>	<u>2,490</u> (5)	<u>7,210</u>		

Notes:

- (1) EB-2015-0116, Rate Order, Working Papers, Schedule 4, column (t).
- (2) EB-2015-0116, Rate Order, Working Papers, Schedule 19, Page 2, line 6, column (a).
- (3) EB-2015-0116, Rate Order, Working Papers, Schedule 19, Page 2, line 10, column (a).
- (4) EB-2015-0116, Rate Order, Working Papers, Schedule 19, Page 2, line 6, column (b).
- (5) EB-2015-0116, Rate Order, Working Papers, Schedule 19, Page 2, line 10, column (b).
- (6) EB-2015-0116, Rate Order, Working Papers, Schedule 4, Page 10, column (v).

UNION GAS LIMITED  
Southern Operations Area  
Unbundled Delivery Cost Detail  
Effective January 1, 2016

Line No.	Particulars (\$000's)	Rate M1 (a)	Rate M2 (b)
	<u>SSS/ SPS</u>		
1	Storage Dehydrator (1)	173	58
2	Storage Ex. Dehydrator (2)	9,636	3,260
3	Storage Space (3)	11,394	3,891
4	Storage	21,203	7,210
5	Less: ICC on Gas in Storage (4)	7,291	2,490
6	Total SSS/SPS	<u>13,912</u>	<u>4,720</u>
	<u>Gas Supply Balancing</u>		
7	Total Gas Supply Balancing	<u>-</u>	<u>-</u>
	<u>Gas In Storage Inventory Carrying Costs</u>		
8	Gas in Storage (5)	89,246	30,481
9	ICC %	8.2%	8.2%
10	Gas in Storage Inventory Carrying Costs	<u>7,291</u>	<u>2,490</u>

Notes:

- (1) EB-2011-0210, Rate Order, Working Papers, Schedule 18, Page 2, line 1, updated for PCI and Capital Pass Throughs per EB-2014-0271.
- (2) EB-2011-0210, Rate Order, Working Papers, Schedule 18, Page 2, line 2, updated for PCI and Capital Pass Throughs per EB-2014-0271.
- (3) EB-2011-0210, Rate Order, Working Papers, Schedule 18, Page 2, line 3, updated for PCI and Capital Pass Throughs per EB-2014-0271.
- (4) Per line 10.
- (5) EB-2011-0210, Exhibit G3, Tab 5, Schedule 9, page 16 of 40, updated for EB-2011-0210 Board Decision.

UNION GAS LIMITED  
2016 Rate Adjustment Summary based on  
Parkway Delivery Obligation Reduction of 165 T/J/d and 67 T/J/d of M12 Turnback

Line No.	Rate Class (\$000's)	In Rates		
		Dawn-Parkway Demand Costs	Compressor Fuel Costs	Total Costs
		(a)	(b)	(c) = (a + b)
1	Rate M1	2,889	309	3,198
2	Rate M2	971	109	1,080
3	Rate M4	282	50	332
4	Rate M5 - Firm	3	1	4
5	Rate M5 - Interruptible	-	35	35
6	Rate M7 - Firm	130	20	150
7	Rate M7 - Interruptible	-	-	-
8	Rate M9	47	10	57
9	Rate M10	1	0	1
10	Rate T1 - Firm	139	45	185
11	Rate T1 - Interruptible	-	5	5
12	Rate T2 - Firm	905	234	1,139
13	Rate T2 - Interruptible	-	6	6
14	Rate T3	328	46	374
15	Total South In-franchise	5,694	871	6,565
16	Excess Utility Storage Space	-	-	-
17	Rate C1 - Firm	-	8	8
18	Rate C1 - Interruptible	-	217	217
19	Rate M12	-	687	687
20	Rate M13	-	-	-
21	Rate M16	-	3	3
22	Total Ex-franchise	-	914	914
23	Rate 01	-	8	8
24	Rate 10	-	3	3
25	Rate 20	-	1	1
26	Rate 100	-	0	0
27	Rate 25	-	-	-
28	Total North In-franchise	-	12	12
29	Total Costs (line 15 + line 22 + line 28)	5,694	1,797	7,491

UNION GAS LIMITED  
2016 Delivery Impacts to Union South In-Franchise customers of M12 Demand Costs  
Based on 212 TJ per day of M12 Dawn to Parkway Capacity

Line No.	Rate Class	2013 Approved Dawn-Parkway Design Day Demands (1) (10 <sup>3</sup> m <sup>3</sup> /d) (a)	Dawn-Parkway Demand Costs of 146 TJ/d (2) (\$000's) (b)	Dawn-Parkway Demand Costs of 19 TJ/d (2) (\$000's) (c)	Dawn-Parkway Demand Costs of 48 TJ/d (2) (\$000's) (d)	Dawn-Parkway Demand Costs of 212 TJ/d (\$000's) (e) = (b + c + d)	T2 BCD Revenue Credit of 48 TJ/d (\$000's) (f)	Total Demand Costs (\$000's) (g) = (e + f)
1	Rate M1	22,132	2,563	326	836	3,725	(836)	2,889
2	Rate M2	7,435	861	110	281	1,252	(281)	971
3	Rate M4	2,162	250	32	82	364	(82)	282
4	Rate M5 Firm	20	2	0	1	3	(1)	3
5	Rate M5 Interruptible	-	-	-	-	-	-	-
6	Rate M7 Firm	997	115	15	38	168	(38)	130
7	Rate M7 Interruptible	-	-	-	-	-	-	-
8	Rate M9	356	41	5	13	60	(13)	47
9	Rate M10	11	1	0	0	2	(0)	1
10	Rate T1 Firm	1,068	124	16	40	180	(40)	139
11	Rate T1 Interruptible	-	-	-	-	-	-	-
12	Rate T2 Firm	6,931	803	102	262	1,167	(262)	905
13	Rate T2 Interruptible	-	-	-	-	-	-	-
14	Rate T3	2,511	291	37	95	423	(95)	328
15	Total	43,624	5,052 (3)	643 (4)	1,649 (5)	7,343	(1,649) (5)	5,694

Notes:

- (1) In-franchise Design Day Demand Allocation Factor per EB-2011-0210, Exhibit G3, Tab 5, Schedule 23, Page 7, line 2, Updated for Board Decision.  
(2) Allocated using column (a).  
(3) Calculated as 146 TJ x \$2.883/GJ/day/month x 12 = \$5.052 million. Rate represents the M12 Dawn to Parkway demand rate per 2016 Rates, Appendix A.  
(4) Calculated as 19 TJ x \$2.883/GJ/day/month x 12 = \$0.643 million. Rate represents the M12 Dawn to Parkway demand rate per 2016 Rates, Appendix A.  
(5) Calculated as 48 TJ x \$2.883/GJ/day/month x 12 = \$1.649 million. Rate represents the M12 Dawn to Parkway demand rate per 2016 Rates, Appendix A.

UNION GAS LIMITED  
2016 Commodity Cost Adjustments based on  
Parkway Delivery Obligation Reduction of 165 TJ/d and 66 TJ/d of M12 Turnback

Line No.	Rate Class	2013 Board-Approved Compressor Fuel Allocation				Adjusted Compressor Fuel Allocation				Difference (GJ) (i) = (h - d)	Compressor Fuel Cost (1) (\$000's) (j)=(i x 5.14/1000)
		Dawn Station Compressor Fuel (GJ)	D-P Easterly Compressor Fuel (GJ)	D-P Westerly Compressor Fuel (GJ)	Total Compressor Fuel (GJ)	Dawn Station Compressor Fuel (GJ)	D-P Easterly Compressor Fuel (GJ)	D-P Westerly Compressor Fuel (GJ)	Total Compressor Fuel (GJ)		
		(a)	(b)	(c)	(d) = (a+b+c)	(e)	(f)	(g)	(h) = (e+f+g)		
1	Rate M1	37,867	37,469	-	75,337	65,720	69,812	-	135,532	60,196	309
2	Rate M2	13,397	13,256	-	26,653	23,251	24,699	-	47,950	21,297	109
3	Rate M4	6,107	6,042	-	12,149	10,598	11,258	-	21,857	9,708	50
4	Rate M5 - Firm	156	154	-	310	270	287	-	557	248	1
5	Rate M5 - Interruptible	4,233	4,189	-	8,422	7,347	7,804	-	15,151	6,729	35
6	Rate M7 - Firm	2,457	2,431	-	4,888	4,264	4,529	-	8,793	3,905	20
7	Rate M7 - Interruptible	-	-	-	-	-	-	-	-	-	-
8	Rate M9	1,261	1,248	-	2,509	2,189	2,325	-	4,514	2,005	10
9	Rate M10	4	4	-	8	7	7	-	14	6	0
10	Rate T1 - Firm	5,563	5,505	-	11,068	9,655	10,256	-	19,912	8,844	45
11	Rate T1 - Interruptible	593	587	-	1,179	1,029	1,093	-	2,122	942	5
12	Rate T2 - Firm	28,658	28,356	-	57,014	49,736	52,833	-	102,569	45,555	234
13	Rate T2 - Interruptible	673	666	-	1,340	1,169	1,241	-	2,410	1,070	6
14	Rate T3	5,662	5,603	-	11,265	9,827	10,439	-	20,265	9,001	46
15	Total South In-franchise	106,631	105,510	-	212,141	185,061	196,585	-	381,646	169,505	871
16	Excess Utility Storage Space	-	-	-	-	-	-	-	-	-	-
17	Rate C1 - Firm	35,316	10,023	4,718	50,057	35,340	10,808	5,444	51,592	1,535	8
18	Rate C1 - Interruptible	226,118	520,843	-	746,960	226,877	562,223	-	789,100	42,140	217
19	Rate M12	1,135,933	2,479,902	1,009	3,616,843	1,132,730	2,616,541	1,167	3,750,437	133,594	687
20	Rate M13	-	-	-	-	-	-	-	-	-	-
21	Rate M16	-	-	-	-	146	470	-	615	615	3
22	Total Ex-franchise	1,397,366	3,010,768	5,726	4,413,861	1,395,092	3,190,041	6,611	4,591,744	177,883	914
23	Rate 01	28,728	27,573	-	56,300	28,840	29,025	-	57,865	1,565	8
24	Rate 10	9,042	8,679	-	17,721	9,078	9,136	-	18,213	492	3
25	Rate 20	3,212	3,083	-	6,295	3,225	3,245	-	6,470	175	1
26	Rate 100	102	98	-	200	102	103	-	205	6	0
27	Rate 25	-	-	-	-	-	-	-	-	-	-
28	Total North In-franchise	41,084	39,432	-	80,516	41,245	41,509	-	82,754	2,238	12
29	Total (line 15 + line 22 + line 28)	1,545,082	3,155,710	5,726	4,706,518	1,621,397	3,428,135	6,611	5,056,144	349,626	1,797

Notes:

(1) Compressor fuel cost based on EB-2015-0255 October 2015 QRAM Ontario Landed reference price of \$5.140/GJ.

UNION GAS LIMITED  
Estimated Fuel Impact of the Parkway Delivery Obligated Reduction

Line No.	Particulars (GJs)	Allocation of Fuel (Updated for PDO)					Allocation of Fuel (as filed in EB-2011-0210)					Difference (k) = (e - j)
		Dawn (a)	Lobo (b)	Bright (c)	Parkway (d)	Total (e) = (a+b+c+d)	Dawn (f)	Lobo (g)	Bright (h)	Parkway (i)	Total (j) = (f+g+h+i)	
1	M12 Easterly	1,132,730	658,864	789,616	1,168,061	3,749,270	1,135,933	644,630	772,860	1,062,411	3,615,834	133,436
2	M12 Westerly	-	-	-	1,167	1,167	-	-	-	1,009	1,009	158
3	C1 LT Easterly	3,379	2,063	2,468	6,277	14,187	3,356	2,017	2,413	5,593	13,379	808
4	C1 ST Easterly	226,877	120,670	147,087	294,467	789,100	226,118	116,353	141,989	262,500	746,960	42,140
5	C1 LT Westerly	-	-	-	5,444	5,444	-	-	-	4,718	4,718	726
6	C1 ST Westerly	-	-	-	-	-	-	-	-	-	-	-
7	M16 to Pool	146	157	313	-	615	-	-	-	-	-	615
8	Infranchise - North	41,245	16,921	24,588	-	82,754	41,084	15,975	23,457	-	80,516	2,238
9	Infranchise - South	185,061	86,417	110,168	-	381,646	106,631	46,265	59,245	-	212,141	169,505
10	Total	1,589,437	885,091	1,074,239	1,475,416	5,024,183	1,513,121	825,240	999,964	1,336,232	4,674,557	349,626

Notes:

- (1) Sales of Dawn to Parkway transportation services were reduced by 66 TJ per day.
- (2) Compressor throughput was adjusted to account for a shift of 165 TJ of delivered supply from Parkway to Dawn and 66 TJ/d of M12 turnback.
- (3) Compressor fuel costs increased to reflect the change in flows outlined in note (2).
- (4) Based on contract quantities from 2013 Rates filing.
- (5) Allocation of fuel is consistent with YCR formula in the current M12 Rate Schedule.
- (6) The total fuel excludes C1 Dawn to Dawn-Vector and C1 Dawn to Dawn-TCPL fuel of 31,960 GJ.

UNION GAS LIMITED  
Continuity of M12 Monthly Transportation Fuel Ratios and Rates including Parkway Delivery Obligation (PDO) Pass-through  
Firm or Interruptible Transportation Commodity  
Effective January 1, 2016

Line No. Particulars		VT1 Easterly Dawn to Parkway (TCPL) With Dawn Compression						VT1 Easterly Dawn to Kirkwall, Lisgar, Parkway (Consumers) With Dawn Compression						VT3 Westerly Parkway to Kirkwall, Dawn						
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	
		(%)	(%)	(%)	(%)	(%)	(\$/GJ)	(%)	(%)	(%)	(%)	(%)	(\$/GJ)	(%)	(%)	(%)	(%)	(%)	(\$/GJ)	
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)	
1	April	0.813	0.007	0.819	0.037	0.856	0.044	0.540	0.004	0.544	-	0.003	0.541	0.028	0.155	0.001	0.156	-	0.156	0.008
2	May	0.574	0.005	0.579	0.029	0.608	0.031	0.364	0.003	0.366	0.001	0.368	0.019	0.155	0.001	0.156	-	0.156	0.008	
3	June	0.470	0.004	0.473	0.032	0.505	0.026	0.263	0.002	0.265	0.004	0.270	0.014	0.361	0.003	0.364	0.031	0.395	0.020	
4	July	0.457	0.004	0.461	0.030	0.491	0.025	0.251	0.002	0.253	0.004	0.257	0.013	0.361	0.003	0.364	0.030	0.394	0.020	
5	August	0.360	0.003	0.363	0.028	0.390	0.020	0.156	0.001	0.157	-	0.000	0.157	0.008	0.359	0.003	0.362	0.032	0.393	0.020
6	September	0.356	0.003	0.359	0.027	0.386	0.020	0.156	0.001	0.157	-	0.000	0.157	0.008	0.356	0.003	0.358	0.031	0.389	0.020
7	October	0.706	0.006	0.712	0.023	0.734	0.038	0.469	0.004	0.473	-	0.012	0.461	0.024	0.155	0.001	0.156	-	0.156	0.008
8	November	0.851	0.007	0.858	0.019	0.877	0.045	0.612	0.005	0.616	0.001	0.618	0.032	0.155	0.001	0.156	-	0.156	0.008	
9	December	0.957	0.008	0.965	0.024	0.989	0.051	0.712	0.006	0.717	0.011	0.728	0.037	0.155	0.001	0.156	-	0.156	0.008	
10	January	1.100	0.009	1.109	0.030	1.139	0.059	0.842	0.007	0.848	0.015	0.864	0.044	0.155	0.001	0.156	-	0.156	0.008	
11	February	1.046	0.008	1.055	0.027	1.082	0.056	0.796	0.006	0.803	0.012	0.815	0.042	0.155	0.001	0.156	-	0.156	0.008	
12	March	0.985	0.008	0.993	0.018	1.011	0.052	0.729	0.006	0.734	-	0.003	0.731	0.038	0.155	0.001	0.156	-	0.156	0.008
		M12-X Easterly Kirkwall to Parkway (TCPL)						M12-X Easterly Kirkwall to Lisgar, Parkway (Consumers)						M12-X Westerly Parkway to Kirkwall, Dawn						
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)	
13	April	0.428	0.003	0.431	0.040	0.471	0.024	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
14	May	0.366	0.003	0.369	0.028	0.396	0.020	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
15	June	0.361	0.003	0.364	0.027	0.391	0.020	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
16	July	0.361	0.003	0.364	0.026	0.390	0.020	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
17	August	0.359	0.003	0.362	0.028	0.389	0.020	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
18	September	0.356	0.003	0.358	0.027	0.385	0.020	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
19	October	0.392	0.003	0.395	0.035	0.430	0.022	0.155	0.001	0.156	-	0.156	0.008	0.272	0.002	0.274	0.018	0.291	0.015	
20	November	0.394	0.003	0.397	0.018	0.415	0.021	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008	
21	December	0.401	0.003	0.404	0.013	0.417	0.021	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008	
22	January	0.413	0.003	0.417	0.015	0.432	0.022	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008	
23	February	0.405	0.003	0.408	0.015	0.424	0.022	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008	
24	March	0.412	0.003	0.415	0.021	0.436	0.022	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008	

UNION GAS LIMITED

Continuity of M12 Monthly Transportation Authorized Overrun Fuel Ratios and Rates including Parkway Delivery Obligation (PDO) Pass-through  
Firm or Interruptible Transportation Commodity  
Effective January 1, 2016

Line No.	Particulars	VT1 Easterly Dawn to Parkway (TCPL) With Dawn Compression						VT1 Easterly Dawn to Kirkwall, Lisgar, Parkway (Consumers) With Dawn Compression						VT3 Westerly Parkway to Kirkwall, Dawn					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
1	April	1.421	0.011	1.432	0.037	1.469	0.170	1.148	0.009	1.157	(0.003)	1.154	0.139	0.763	0.006	0.769	-	0.769	0.134
2	May	1.182	0.009	1.192	0.029	1.221	0.158	0.972	0.008	0.979	0.001	0.980	0.130	0.763	0.006	0.769	-	0.769	0.134
3	June	1.078	0.009	1.086	0.032	1.118	0.152	0.871	0.007	0.878	0.004	0.883	0.125	0.969	0.008	0.977	0.031	1.008	0.147
4	July	1.065	0.009	1.073	0.030	1.104	0.152	0.859	0.007	0.866	0.004	0.870	0.124	0.969	0.008	0.977	0.030	1.006	0.147
5	August	0.968	0.008	0.976	0.028	1.003	0.146	0.764	0.006	0.770	(0.000)	0.770	0.119	0.967	0.008	0.975	0.032	1.006	0.147
6	September	0.964	0.008	0.972	0.027	0.999	0.146	0.764	0.006	0.770	(0.000)	0.770	0.119	0.964	0.008	0.971	0.031	1.002	0.146
7	October	1.314	0.011	1.325	0.023	1.347	0.164	1.077	0.009	1.086	(0.012)	1.074	0.135	0.763	0.006	0.769	-	0.769	0.134
8	November	1.459	0.012	1.470	0.019	1.490	0.171	1.220	0.010	1.229	0.001	1.231	0.143	0.763	0.006	0.769	-	0.769	0.134
9	December	1.565	0.013	1.578	0.024	1.602	0.177	1.320	0.011	1.330	0.011	1.341	0.149	0.763	0.006	0.769	-	0.769	0.134
10	January	1.708	0.014	1.722	0.030	1.752	0.185	1.450	0.012	1.461	0.015	1.477	0.156	0.763	0.006	0.769	-	0.769	0.134
11	February	1.654	0.013	1.668	0.027	1.695	0.182	1.404	0.011	1.416	0.012	1.428	0.153	0.763	0.006	0.769	-	0.769	0.134
12	March	1.593	0.013	1.606	0.018	1.624	0.178	1.337	0.011	1.347	(0.003)	1.344	0.149	0.763	0.006	0.769	-	0.769	0.134
		M12-X Easterly Kirkwall to Parkway (TCPL)						M12-X Easterly Kirkwall to Lisgar, Parkway (Consumers)						M12-X Westerly Parkway to Kirkwall, Dawn					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
13	April	1.036	0.008	1.044	0.040	1.084	0.071	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
14	May	0.974	0.008	0.981	0.028	1.009	0.067	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
15	June	0.969	0.008	0.977	0.027	1.004	0.067	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
16	July	0.969	0.008	0.977	0.026	1.003	0.067	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
17	August	0.967	0.008	0.975	0.028	1.002	0.067	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
18	September	0.964	0.008	0.971	0.027	0.998	0.066	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
19	October	1.000	0.008	1.008	0.035	1.043	0.069	0.763	0.006	0.769	-	0.769	0.055	0.880	0.007	0.887	0.018	0.904	0.141
20	November	1.002	0.008	1.010	0.018	1.028	0.068	0.763	0.006	0.769	-	0.769	0.055	0.763	0.006	0.769	-	0.769	0.134
21	December	1.009	0.008	1.017	0.013	1.030	0.068	0.763	0.006	0.769	-	0.769	0.055	0.763	0.006	0.769	-	0.769	0.134
22	January	1.021	0.008	1.030	0.015	1.044	0.069	0.763	0.006	0.769	-	0.769	0.055	0.763	0.006	0.769	-	0.769	0.134
23	February	1.013	0.008	1.021	0.015	1.037	0.068	0.763	0.006	0.769	-	0.769	0.055	0.763	0.006	0.769	-	0.769	0.134
24	March	1.020	0.008	1.028	0.021	1.049	0.069	0.763	0.006	0.769	-	0.769	0.055	0.763	0.006	0.769	-	0.769	0.134

UNION GAS LIMITED

Continuity of M13,M16, Monthly Transportation Fuel Ratios and Rates including Parkway Delivery Obligation (PDO) Pass-through  
Firm or Interruptible Transportation Commodity

Effective January 1, 2016

		M13						M13					
		Delivery Commodity Charge						Authorized overrun - Delivery Commodity Charge					
Line		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
No.	Particulars	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(\$/GJ)	(%)	(%)	(%)	(%)	(%)	(\$/GJ)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)
1		0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.079
		M16						M16					
		Fuel Charges to Dawn						Fuel Charges to Pool					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)
2	East	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	0.035	0.192	0.010
3	West	0.155	0.001	0.156	-	0.156	0.008	0.441	0.004	0.444	-	0.444	0.023
		M16						M16					
		Authorized overrun - Fuel Charges to Dawn						Authorized Overrun - Fuel Charges to Pool					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)
4	East	0.155	0.001	0.156	-	0.156	0.068	0.155	0.001	0.156	0.035	0.192	0.036
5	West	0.155	0.001	0.156	-	0.156	0.079	0.441	0.004	0.444	-	0.444	0.060

UNION GAS LIMITED

Continuity of C1 Monthly Transportation Fuel Ratios and Rates including Parkway Delivery Obligation (PDO) Pass-through  
Firm or Interruptible Transportation Commodity  
Effective January 1, 2016

Line No.	Particulars	C1 St. Clair/Dawn						C1 Ojibway/Dawn						C1 Bluewater/Dawn					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
1	Summer	0.204	0.002	0.205	-	0.205	0.011	0.441	0.004	0.444	-	0.444	0.023	0.204	0.002	0.205	-	0.205	0.011
2	Winter	0.262	0.002	0.264	-	0.264	0.014	0.299	0.002	0.301	-	0.301	0.015	0.262	0.002	0.264	-	0.264	0.014
3	Summer	C1 Dawn to Dawn TCPL						C1 Dawn to Dawn Vector											
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016						
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate						
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)						
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)						
3	Summer	0.155	0.001	0.156	-	0.156	0.008	0.335	0.003	0.337	-	0.337	0.017						
4	Winter	0.346	0.003	0.349	-	0.349	0.018	0.155	0.001	0.156	-	0.156	0.008						
5	Summer	C1 Parkway to Kirkwall						C1 Parkway to Dawn						C1 Kirkwall to Dawn					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
5	Summer	0.272	0.002	0.274	0.018	0.292	0.015	0.272	0.002	0.274	0.018	0.292	0.015	0.155	0.001	0.156	-	0.156	0.008
6	Winter	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008	0.155	0.001	0.156	-	0.156	0.008
7	Summer	C1 Dawn to Kirkwall						C1 Dawn to Parkway						C1 Kirkwall to Parkway					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
7	Summer	0.314	0.003	0.317	(0.001)	0.316	0.016	0.534	0.004	0.538	0.029	0.567	0.029	0.375	0.003	0.378	0.030	0.408	0.021
8	Winter	0.738	0.006	0.744	0.007	0.751	0.039	0.988	0.008	0.996	0.024	1.020	0.052	0.405	0.003	0.408	0.016	0.425	0.022

UNION GAS LIMITED

Continuity of C1 Monthly Transportation Authorized Overrun Fuel Ratios and Rates including Parkway Delivery Obligation (PDO) Pass-through  
Firm or Interruptible Transportation Commodity  
Effective January 1, 2016

Line No.	Particulars	C1 Authorized Overrun - St. Clair/Dawn						C1 Authorized Overrun - Ojibway/Dawn						C1 Authorized Overrun - Bluewater/Dawn					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
1	Summer	0.204	0.002	0.205	-	0.205	0.047	0.441	0.004	0.444	-	0.444	0.060	0.204	0.002	0.205	-	0.205	0.047
2	Winter	0.262	0.002	0.264	-	0.264	0.050	0.299	0.002	0.301	-	0.301	0.052	0.262	0.002	0.264	-	0.264	0.050
3	4	C1 Authorized Overrun - Dawn to Dawn TCPL						C1 Authorized Overrun - Dawn to Dawn Vector											
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016						
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate						
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)						
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)						
	Summer	0.155	0.001	0.156	-	0.156	0.008	0.335	0.003	0.337	-	0.337	0.017						
	Winter	0.346	0.003	0.349	-	0.349	0.018	0.155	0.001	0.156	-	0.156	0.008						
5	6	C1 Authorized Overrun - Parkway to Kirkwall						C1 Authorized Overrun - Parkway to Dawn						C1 Authorized Overrun - Kirkwall to Dawn					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
	Summer	0.880	0.007	0.887	0.018	0.904	0.123	0.880	0.007	0.887	0.018	0.904	0.123	0.155	0.001	0.156	-	0.156	0.040
	Winter	0.763	0.006	0.769	-	0.769	0.116	0.763	0.006	0.769	-	0.769	0.116	0.155	0.001	0.156	-	0.156	0.040
7	8	C1 Authorized Overrun - Dawn to Kirkwall						C1 Authorized Overrun - Dawn to Parkway						C1 Authorized Overrun - Kirkwall to Parkway					
		2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016	2015	PCI ADJ	2016	PDO ADJ	2016	2016
		Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate	Fuel Ratio	Fuel Ratio	Excluding PDO	Fuel Ratio	Fuel Ratio	Fuel Rate
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
		(a)	(b)	(c) = (a+b)	(d)	(e) = (c+d)	(f)	(g)	(h)	(i) = (g+h)	(j)	(k) = (i+j)	(l)	(m)	(n)	(o) = (m+n)	(p)	(q) = (o+p)	(r)
	Summer	0.922	0.007	0.929	(0.001)	0.929	0.113	1.142	0.009	1.151	0.029	1.180	0.138	0.983	0.008	0.990	0.030	1.020	0.067
	Winter	1.346	0.011	1.357	0.007	1.364	0.137	1.596	0.013	1.609	0.024	1.633	0.163	1.013	0.008	1.021	0.016	1.038	0.068

UNION GAS LIMITED  
Continuity of Rate T1, Rate T2, Rate T3 Transportation Fuel Ratios including the Parkway Delivery Obligation (PDO) Passthrough  
Firm and Interruptible Transportation Fuel Ratios  
Effective January 1, 2016

Line No.	Particulars	Application of PCI to 2015 Approved Fuel Ratios					Passthrough of Incremental 2016 Parkway Delivery Obligation Fuel				Total 2016 Transportation Fuel Ratio (%)
		2015 Fuel Ratio (1)	2015 PDO Adjustment (2)	2015 Adjusted (3)	PCI Adjustment (4)	2015 Excluding PDO (5)	Incremental Fuel Volume (4)	Incremental Fuel (5)	Annual Delivery Volume	Incremental PDO Fuel Ratio	
		(%)	(%)	(%)	(%)		(GJ)	(10 <sup>3</sup> m <sup>3</sup> )	(10 <sup>3</sup> m <sup>3</sup> )	(%)	
		(a)	(b)	(c) = (a + b)	(d)	(e) = (c + d)	(f)	(g)	(h)	(i) = (h / g)	(j) = (e + i)
1	Rate T1	0.301%	-0.048%	0.253%	0.002%	0.255%	9,786	259	536,730	0.048%	0.303%
2	Rate T2	0.279%	-0.029%	0.250%	0.002%	0.252%	46,626	1,235	4,129,518	0.030%	0.282%
3	Rate T3	0.375%	-0.086%	0.289%	0.002%	0.291%	9,001	238	272,712	0.087%	0.378%

Notes:

- (1) EB-2014-0271, Working Papers, Schedule 22, column (h).
- (2) EB-2014-0271, Working Papers, Schedule 22, column (g).
- (3) PCI of 0.80% shown at Working Papers, Schedule 1, column (c) applied to column (a) above.
- (4) Incremental Parkway Delivery Obligation Fuel shown at Working Papers, Schedule 20, column (j).
- (5) Used heat value of 37.75 from 2013 Cost of Service EB-2011-0210.

## TAB 2

1 **PARKWAY DELIVERY OBLIGATION REPORTING**

2 In 2014 Rates (EB-2013-0365), Union filed its Settlement Agreement proposing to  
3 permanently shift the Parkway Delivery Obligation (“PDO”) of its Union South direct  
4 purchase (“DP”) customers to Dawn over time. This Settlement Agreement was approved by  
5 the Board on June 16, 2014. As agreed to in the Settlement, Union is required to report on:

6 a. Capacity that could be made available in the 2 years commencing with the test  
7 year to further reduce the PDO at a lower cost than the Parkway Delivery  
8 Commitment Incentive (“PDCI”);

9 b. Forecast of PDO quantities for the 2 years commencing with the test year;

10 c. The measures used by Union to manage the initial Parkway shortfall; and,

11 d. The actual transmission compressor fuel on the Dawn to Parkway system in the  
12 prior year.

13  
14 a) Capacity Available for PDO Shift

15 In April 2014, Union offered DP customers 146 TJ/day of temporarily available excess Dawn to  
16 Parkway capacity to shift a portion of their PDO to Dawn. This temporary capacity is no longer  
17 available as of October 31, 2015. Union agreed to manage the Parkway shortfall to maintain the  
18 146 TJ/day of PDO shift beyond October 31, 2015 until sufficient Dawn to Kirkwall capacity  
19 was turned back by other M12 customers.

20  
21 In each year commencing November 2015 and November 2016, Union will continue to rely on  
22 Dawn to Kirkwall M12 turnback to replace the temporary capacity. As such, Union forecasts

1 that no additional PDO shift will be available to Union South DP customers until November 1,  
2 2017. As of November 1, 2017 Union forecasts additional PDO reduction of 23 TJ/d, of which  
3 16 TJ/d is for customers without M12 service and 7 TJ/d is for customers with M12 service  
4 (including TCE Halton Hills).

5  
6 Please see Tab 2, Attachment 1, for an updated table illustrating the capacity available for PDO  
7 shift, and the current and forecasted PDO reductions.

8  
9 Attachment 1, line 1 provides an updated forecast of the Dawn to Parkway equivalent of the M12  
10 Dawn to Kirkwall turnback used to facilitate PDO shift for customers that do not use M12  
11 service to meet their PDO. The quantities shown are the Dawn to Parkway equivalent of Dawn  
12 to Kirkwall turnback at an equivalency factor of approximately 88%<sup>1</sup>.

13  
14 A comparison of the forecast provided in the 2015 Rates Application (EB-2014-0271<sup>2</sup>) and the  
15 current forecast is provided in Table 1 below.

---

<sup>1</sup> Please see EB-2013-0365, Exhibit A, Tab 4, p. 24 for the explanation of the equivalency factor.

<sup>2</sup> Please see EB-2014-0271, Exhibit B.Union.BOMA.1, Attachment 1

Table 1

M12 Dawn to Kirkwall Turnback Forecast (Dawn to Parkway Equivalent)

<b>Particulars (TJ/d)</b>	<b>Nov 2015</b>	<b>Nov 2016</b>	<b>Nov 2017</b>
EB-2014-0271	123	11	n/a
EB-2015-0116	123	10	29

Union is forecasting 10 TJ/day of turnback for November 1, 2016 and 29 TJ/d of turnback for November 1, 2017.

The allocation of the updated capacity available through forecasted turnback is reflected in Attachment 1, lines 2 to 6. The quantities turned back are first allocated to replace the Parkway shortfall of 146 TJ/day that is associated with the PDO (Attachment 1, line 4). Once the temporary shortfall capacity has been replaced, any remaining quantity will be used to facilitate further PDO relief. Based on Union's current forecast, the temporary capacity will be replaced and further relief of 16 TJ/day (Attachment 1, line 6, column f) is forecasted to be available on November 1, 2017. This forecast is Union's current expectation, and will be confirmed by customers through contract elections by October, 31, 2015 (2 years before expiry).

b) Forecast PDO Quantities

Attachment 1, lines 7 to 9 summarize the total PDO for all Union South DP customers and Attachment 1, lines 10 to 23 provide detail for each DP customer grouping.

The forecast of M12 Dawn to Kirkwall turnback will result in an incremental 7% (16 TJ/day divided by 228 TJ/day) reduction to the PDO for DP customers in 2017. Based on the forecast, DP customers without M12 capacity can shift 16 TJ/day (Attachment 1, line 11, column f) of the PDO to Dawn. Customers with M12 capacity can shift an equal pro-rata share of 7%, or 7 TJ/day (Attachment 1, lines 17 and 21) of the PDO to Dawn for a total shift of 23 TJ/day. The PDO for sales service customers is shown at Attachment 1, line 24 and is unchanged from what was filed in EB-2014-0271.

c) Management of Shortfall

Union projects a shortfall at Parkway, as a result of the PDO shift, of 23 TJ/d between November 1, 2015 and October 31, 2016 and 13 TJ/d between November 1, 2016 and October 31, 2017 until sufficient M12 Dawn to Kirkwall capacity has been turned back. Union's foreseeable options to manage the shortfall are:

- Request early ex-franchise turnback of Dawn-Kirkwall contracts;
- Purchase a service from a third party; and,
- Allocate some portion of a future build that may not be completely sold out.

d) Dawn to Parkway Transmission Compressor Fuel

The Dawn to Parkway transmission compressor fuel will be included in Union's annual reporting requirements filed in the annual earnings sharing and deferral account disposition proceeding.

Please see Working Papers, Schedule 20 for details of PDO included in 2016 rates by rate class.

Parkway Delivery Obligation (PDO) for 2014 - 2017  
(TJ/day)

Line No.	Particulars	2015 Rates			2016 Rates		
		As Filed (EB-2014-0271) (1)			As Filed (EB-2015-0116)		
		Nov-14	Nov-15	Nov-16	Nov-15	Nov-16	Nov-17
		(a)	(b)	(c)	(d)	(e)	(f)
<b>CAPACITY AVAILABLE FOR PDO SHIFT</b>							
1	Ex-Franchise M12 Dawn to Kirkwall Turnback (2)	0	-123	-11	-123	-10	-29
	Allocation of Capacity Available (turnback):						
2	Opening Balance	-146	-146	-23	-146	-23	-13
3	Temporary Capacity Provided	0	0	0	0	0	0
4	Replacement of Temporary Capacity	0	123	11	123	10	13
5	Closing Balance	-146	-23	-12	-23	-13	0
6	Available for PDO Shift	0	0	0	0	0	-16
<b>TOTAL DIRECT PURCHASE PDO</b>							
7	Beginning PDO (3)	345	345	345	369	369	369
8	Annual PDO Shift line 11 + line 17 + line 21	0	0	0	0	0	-23
9	Remaining PDO	345	345	345	369	369	346
<b>DIRECT PURCHASE PDO DETAIL BY CUSTOMER GROUP</b>							
<b>PDO for Customers without M12 Service:</b>							
10	Beginning PDO	228	228	228	254	254	254
11	PDO Shift	0	0	0	0	0	-16
12	Remaining PDO	228	228	228	254	254	238
13	Annual PDO Shift	0	0	0	0	0	16
14	Allocation to those with PO < 100 GJ/day	0	0	0	0	0	0
15	Percentage Reduction for those with PO > 99 GJ/day	0%	0%	0%	0%	0%	6%
<b>PDO for Customers with M12 Service (except TCE):</b>							
16	Beginning PDO	33	33	33	31	31	31
17	In-Franchise M12 Dawn to Parkway Turnback line 15 * line 16	0	0	0	0	0	-2
18	Remaining PDO	33	33	33	31	31	29
19	Annual PDO Shift	0	0	0	0	0	2
<b>PDO for TCE Halton Hills:</b>							
20	Beginning PDO	84	84	84	84	84	84
21	In-Franchise M12 Dawn to Parkway turnback line 15 * line 20	0	0	0	0	0	-5
22	Remaining PDO	84	84	84	84	84	79
23	Annual PDO Shift	0	0	0	0	0	5
24	<b>PDO for Sales Service</b>	103	103	11	103	11	11

Notes:

(1) EB-2014-0271, Exhibit B.Union.BOMA.1

(2) Dawn to Parkway equivalent capacity  
The difference between column (c) and column (e) reflects changes in the Dawn to Parkway equivalency factor

(3) The difference between column (b) and column (d) reflects actual contract changes





## 2015/16 Gas Supply Plan Memorandum

September 2015

## Contents

<b>1.</b>	<b>Introduction.....</b>	<b>4</b>
<b>1.1</b>	<b><i>Overview of the Gas Supply Planning Process .....</i></b>	<b><i>4</i></b>
<b>1.2</b>	<b><i>Summary of Union North and Union South .....</i></b>	<b><i>4</i></b>
<b>2.</b>	<b>Market Context.....</b>	<b>7</b>
<b>2.1</b>	<b><i>Emerging Supply Sources.....</i></b>	<b><i>7</i></b>
<b>2.2</b>	<b><i>Western Canadian Supply .....</i></b>	<b><i>8</i></b>
<b>2.3</b>	<b><i>Natural Gas Price Signals .....</i></b>	<b><i>10</i></b>
<b>2.4</b>	<b><i>Transportation / Pipeline Changes.....</i></b>	<b><i>11</i></b>
<b>3</b>	<b>Gas Supply Planning Objectives and Principles .....</b>	<b>13</b>
<b>3.1</b>	<b><i>Ensure secure and reliable gas supply to Union’s service territory.....</i></b>	<b><i>13</i></b>
<b>3.2</b>	<b><i>Minimize risk by diversifying contract terms, supply basins and upstream pipelines.....</i></b>	<b><i>13</i></b>
<b>3.3</b>	<b><i>Encourage new sources of supply as well as new infrastructure to Union’s service territory .....</i></b>	<b><i>14</i></b>
<b>3.4</b>	<b><i>Meet planned peak day and seasonal gas delivery requirements.....</i></b>	<b><i>15</i></b>
<b>3.5</b>	<b><i>Deliver gas to various receipt points on Union’s system to maintain system integrity .....</i></b>	<b><i>15</i></b>
<b>4</b>	<b>Gas Supply Planning Process.....</b>	<b>16</b>
<b>5</b>	<b>Union’s 2015/16 Gas Supply Plan.....</b>	<b>17</b>
<b>5.1</b>	<b><i>Design Day Demand .....</i></b>	<b><i>17</i></b>
<b>5.1.1</b>	<b><i>Union South Design Day .....</i></b>	<b><i>19</i></b>
<b>5.1.2</b>	<b><i>Union North Design Day .....</i></b>	<b><i>20</i></b>
<b>5.2</b>	<b><i>Demand Forecast .....</i></b>	<b><i>22</i></b>
<b>5.3</b>	<b><i>Transportation Portfolio.....</i></b>	<b><i>24</i></b>
<b>5.4</b>	<b><i>UDC in the Gas Supply Plan .....</i></b>	<b><i>26</i></b>
<b>5.5</b>	<b><i>Changes in Upstream Transportation Portfolio.....</i></b>	<b><i>27</i></b>
<b>5.6</b>	<b><i>Cost of Gas .....</i></b>	<b><i>28</i></b>
<b>5.7</b>	<b><i>Bundled DP Customer Assumptions .....</i></b>	<b><i>28</i></b>
<b>5.8</b>	<b><i>Storage.....</i></b>	<b><i>29</i></b>
<b>5.9</b>	<b><i>Conclusion .....</i></b>	<b><i>29</i></b>
<b>6</b>	<b>Future Trends that may impact the Gas Supply Plan.....</b>	<b>30</b>
<b>6.1</b>	<b><i>Dawn Parkway System Expansion .....</i></b>	<b><i>30</i></b>
<b>6.2</b>	<b><i>Dawn Based Reference Price – EB-2015-0181.....</i></b>	<b><i>30</i></b>
<b>6.3</b>	<b><i>Access to Dawn for Union North – EB-2015-0181.....</i></b>	<b><i>32</i></b>
<b>6.4</b>	<b><i>2014 Natural Gas Market Review - EB-2014-0289.....</i></b>	<b><i>33</i></b>

<b>6.5</b>	<b><i>Burlington Oakville Pipeline Project –EB-2014-0182 .....</i></b>	<b>33</b>
<b>6.6</b>	<b><i>Pre-Approval of the Cost Consequences of the NEXUS Long-Term Contract - EB-2015-0166.....</i></b>	<b>34</b>
<b>6.7</b>	<b><i>TransCanada Energy East Project.....</i></b>	<b>35</b>
<b>7</b>	<b><i>Appendices .....</i></b>	<b>35</b>
	<i>Appendix A - Gas Supply Planning Process .....</i>	<i>35</i>
	<i>Appendix B - Sales Service Gas Supply Demand Balance.....</i>	<i>35</i>
	<i>Appendix C - Union North Detailed List of Transportation Contracts.....</i>	<i>35</i>
	<i>Appendix D - Union South Detailed List of Transportation Contracts.....</i>	<i>35</i>

## **1. INTRODUCTION**

This document provides an overview of the 2015/16 Gas Supply Plan (“GSP”) and includes the underpinning assumptions and the market context from which it was formed. This includes future trends that may impact the GSP going forward.

### **1.1 Overview of the Gas Supply Planning Process**

The objective of Union’s GSP is to create an efficient supply portfolio that will meet the demands of sales service and bundled direct purchase (“DP”) customers, while meeting the overall gas supply planning principles.

Union’s GSP provides the strategic direction guiding the Company’s long-term supply acquisition process. The GSP does not commit Union to the acquisition of a specific supply type or facility, nor does it preclude Union from pursuing a particular supply. Rather, the GSP identifies the transportation and supply volume requirements to meet annual, seasonal and design day demand for sales service and bundled DP customers. Union recognizes that the gas supply planning process is dynamic, reflecting changing market forces.

### **1.2 Summary of Union North and Union South**

In Ontario, natural gas is a significant and critical energy source relied on for providing heat and hot water to homes and institutions, fuelling manufacturing plants and generating electricity. Approximately 950 PJ of natural gas is consumed annually in Ontario in residential, commercial, industrial and power generation markets. Approximately 70% of homes in Ontario use natural gas for heating and producing hot water. These applications operate on demand, meaning that consumers expect the energy to be readily available to be used when needed.

Home owners in Ontario depend on a reliable supply of natural gas. The natural gas infrastructure supporting Ontario needs to be robust reflecting the critical role it plays in Ontario, and flexible to allow Ontario to position itself to secure long-term access to economic supply in light of the changing North American supply dynamics.

Union serves approximately 1.4 million customers in northern, eastern and southern Ontario through an integrated network of over 68,000 kilometres of natural gas transmission and distribution pipelines. Total consumption in Union’s franchise areas during 2014 was approximately 569 PJ.

Union operates storage and transmission assets that include 174 PJ of underground natural gas storage at the Dawn Hub and the Dawn Parkway transmission system. Union’s Dawn Parkway system is an integral part of the natural gas delivery system for Ontario, Québec and U.S. Northeast residents, businesses, power plants and industry. The Dawn Parkway system connects these consuming markets to most of North America’s major supply basins, the largest area of underground natural gas storage in North America, and the liquid Dawn Hub.

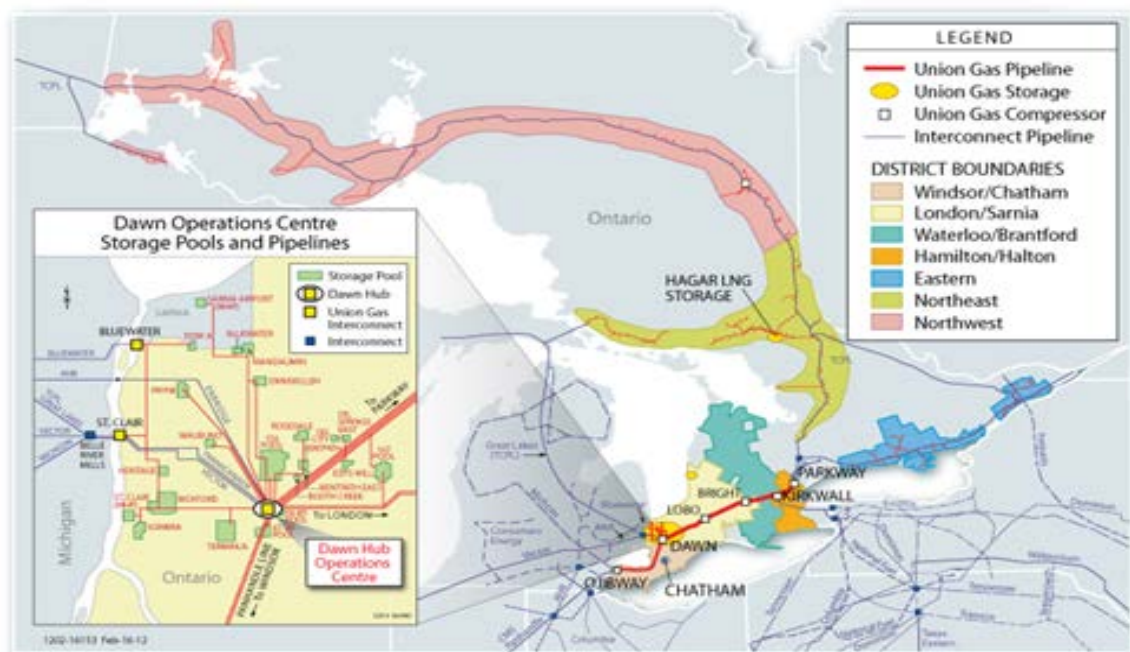
Union’s Dawn Hub has been recognized as a key market hub for the Province of Ontario and the entire Great Lakes region. The growth of Dawn as an energy hub and the availability of competitively and transparently priced natural gas supplies and services that come with an effective and efficient trading hub have benefitted all Ontarians. Dawn is one of the most physically traded, liquid hubs in North America. The liquidity of Dawn is the result of the combination of access to underground storage, interconnections with upstream pipelines, take

away capacity to growth markets, a large number of buyers and sellers of natural gas, and price transparency.

Of the 1.4 million customers that Union serves, approximately 1.3 million are sales service customers that rely on Union to provide their gas supply. These customers are primarily residential and small commercial customers. The remaining customers rely on DP arrangements with marketers and alternate suppliers to meet their gas supply needs. From a volume perspective, sales service customers consumed 189 PJ in 2014, while DP customers consumed 380 PJ.

For gas supply planning purposes, Union is divided into two separate operating areas: Union South and Union North. To serve Union South, Union contracts for transportation capacity on multiple upstream pipelines to access several supply basins or market hubs. These upstream pipelines provide access to supplies in Western Canada, Gulf of Mexico, Chicago, the U.S. mid-continent and the Appalachian shale basins. Union may also serve Union South by purchasing supply at Dawn. Union South includes four Districts; Windsor/Chatham, London/Sarnia, Waterloo/Brantford and Hamilton/Halton shown in Figure 1.

**Figure 1**



Union North is located throughout Northern and Eastern Ontario, from the Manitoba border in the west, to Cornwall in the east. Union North is depicted by the Eastern, Northeast and Northwest Districts shown in Figure 1 above. Union North is further divided into six delivery areas for gas supply planning purposes. Five of the six delivery areas align with delivery areas on the TransCanada Pipeline Limited ("TransCanada") Mainline. From West (Manitoba border) to East (Cornwall) these delivery areas are:

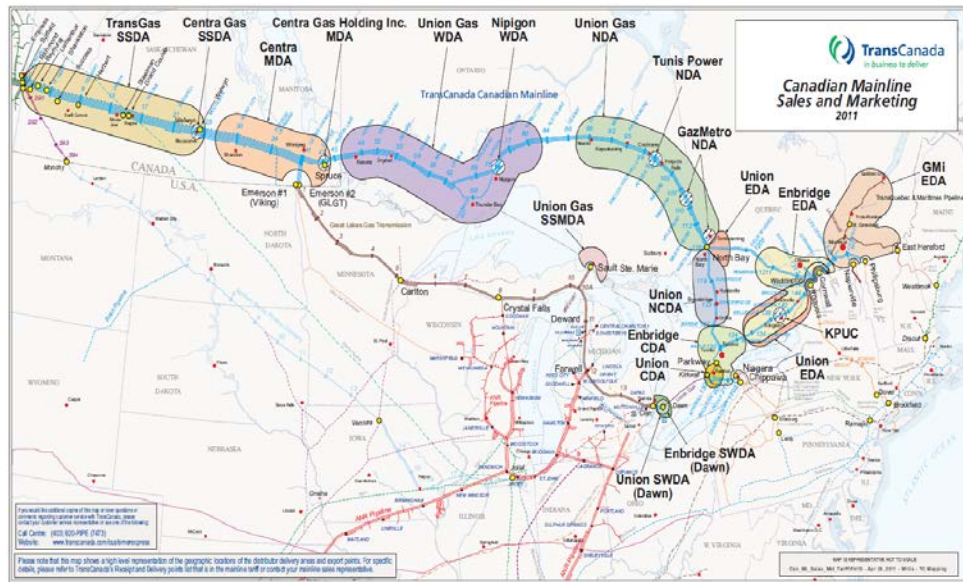
- Manitoba Delivery Area ("MDA")
- Union Western Delivery Area ("Union WDA")
- Union North Delivery Area ("Union NDA")
- Union Sault Ste. Marie Delivery Area ("Union SSMDA")

- Union North Central Delivery Area (“Union NCDA”)
- Union East Delivery Area (“Union EDA”)

The delivery area that does not align is Union’s Manitoba Delivery Area, which is connected to the TransCanada Mainline at the Spruce interconnect in the Centrat MDA by two additional pipelines (Centra Transmission Holdings and Centra Pipeline Minnesota)

A map of the Union North delivery areas is provided in Figure 2.

**Figure 2**



Today, all of the customers in Union North are served directly from TransCanada interconnects off of the TransCanada Mainline. Union uses a portfolio of contracted firm assets including TransCanada long-haul firm transportation, TransCanada short-haul firm transportation and TransCanada firm Storage Transportation Service (“STS”) to meet the needs of Union North. In the future, Union will be replacing a portion of the long-haul firm transportation from Empress with short-haul firm transportation from Dawn. Additional details are provided in Section 6.

Union provides distribution services to all customers, however customers continue to have the option to either purchase their supply from the utility or arrange supply through a DP arrangement. Union in-franchise customers fall into four distinct categories.

- **Sales Service:** Union acquires supply and transportation capacity for these customers in Union North and Union South. Sales service demand requirements are included in the GSP.
- **Bundled DP:** These customers acquire their own supply. In Union North, Union holds transportation capacity on behalf of bundled DP customers. In Union South, subsequent to the suspension of the vertical slice as of November 1, 2016, bundled DP customers acquire their own transportation. These customers are included in the GSP.
- **Unbundled DP:** These customers acquire their own supply and transportation from an energy marketer and are not considered within the GSP. This service is available to small residential, commercial and industrial customers in Union South.

- Transportation service (“T-Service”) DP: These customers acquire their own supply and transportation and are not considered within the GSP. This service is available to large contract commercial and industrial customers.

Union performs the role of system operator and supplier of last resort. As system operator, Union manages many operational factors. These include:

- seasonal balancing requirements for sales service customers;
- weather variances outside of checkpoint balancing for bundled DP customers;
- changes in supply and balancing requirements as customers move between sales service and DP;
- differences between daily receipts from TransCanada and the demands of all end users including transportation service customers in the Union North; and,
- unaccounted for gas and compressor fuel variances.

As supplier of last resort, Union is the default supplier to its in-franchise customers. A supplier of last resort must ensure it has the assets or can acquire the assets to serve customers that others choose not to serve or fail to serve (e.g. for reason of financial failure), or any customer who chooses to be a sales service customer and have Union provide gas supply services. DP customers can revert back to sales service on short notice.

## **2. MARKET CONTEXT**

### **2.1 Emerging Supply Sources**

North American natural gas markets have, and are expected to continue to, experience dramatic change. Production from conventional, mature North American natural gas basins is in decline while production from shale gas formations continues to exceed expectations. While natural gas reserves still exist in mature natural gas basins, the economics of natural gas production favour shale gas and tight gas formations. The Appalachian region of the U.S. Northeast, as shown in Figure 3, is home to the Utica and Marcellus shale formations in Ohio, Pennsylvania, and West Virginia which have emerged as the single largest and fastest growing producing region of natural gas in North America. Since January 2012, natural gas production in the Marcellus and Utica regions has accounted for 85% of the increase in natural gas production as reported in the United States Energy Information Administration Drilling Productivity Report and has driven recent growth in total U.S. natural gas production. This region is expected to continue to grow and produce almost 40 PJ/d by 2035. The Utica and Marcellus shale formations represent an additional economic supply source in close proximity to Union.

**Figure 3**  
The Appalachian Shale Region



Natural gas utilities frequently look to diversify their natural gas supply portfolio and seek secure, reliable and reasonably priced natural gas. The shift in portfolios by eastern Local Distribution Companies (“LDCs”) reflects the changes in the North American natural gas supply and transportation markets. Market participants (including the Eastern LDC’s) are re-balancing with new supply sources and replacing long-haul transportation contracts from Empress with short-haul transportation contracts from Dawn. For eastern customers that have a choice, these fundamental changes in supply economics will mean that natural gas supply will increasingly be sourced from cost competitive shale gas in closer proximity to the market and less from traditional sources.

Marcellus and Utica shale gas present Ontario consumers, including power, industrial, commercial and residential, with an opportunity to diversify their natural gas supply portfolio and replace declining Western Canadian Sedimentary Basin (“WCSB”) supply. Accessing this new supply will be essential to providing diversity of supply and affordable energy prices to fuel Ontario’s economic competitiveness. With new infrastructure, access to these new, proximate and abundant sources of supply can increase reliability and security for the Ontario natural gas supply portfolio.

## **2.2 Western Canadian Supply**

The majority of Ontario’s natural gas supply needs for the past five decades were met through the large resources of the WCSB. Natural gas from Alberta was supplied to Ontario on the

TransCanada Mainline either across northern Ontario or through the U.S. via Great Lakes Gas Transmission (“GLGT”). Starting in the 1980’s, other pipelines such as the Northern Border Pipeline, the Foothills pipeline and eventually the Vector pipeline (2000), were built to transport WCSB gas to markets east of Alberta, enhancing security of supply and reliability by providing diversity. Over the past ten years, two key trends have been occurring in Alberta: i) Alberta traditional production has matured and is in decline; and ii) domestic use of natural gas in Alberta has increased.

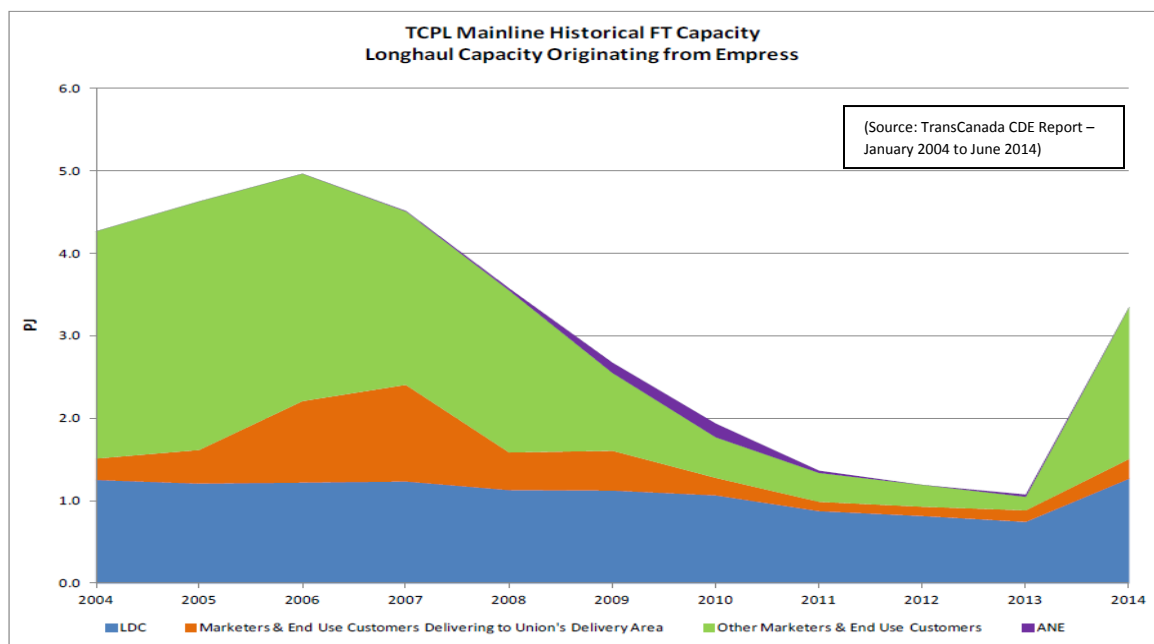
Although shale gas in Alberta and British Columbia is a promising resource with growing production, it is unclear whether these new supplies will be attracted to Eastern markets or LNG export markets.

Western Canadian natural gas has been, and continues to be, an important source of supply for Ontario. However, as a result of the dynamically changing market outlined above, Union, like other eastern LDCs, is proactively looking to diversify its supply portfolio with natural gas sourced from other production basins.

Figure 4 shows the long-haul firm transportation contracts held on TransCanada by customer category starting in 2004. Between 2005 and 2013, there was a continuous decline in the amount of long-haul firm transportation contracts on the TransCanada Mainline. Marketers and end use customers have de-contracted the greatest amount of long-haul firm transportation capacity at almost 4 PJ/d. As tolls from Empress to eastern markets increased above the difference in commodity price between Empress and trading points in eastern markets, marketers de-contracted to seek more economic alternatives.

Since the release of the National Energy Board’s RH-003-2011 Decision, firm long-haul contracts from Empress on the TransCanada Mainline have increased by approximately 2.3 PJ/d (over 2 Bcf/d). These firm long-haul transportation services have largely been secured by shippers on a short-term non-renewable basis as an alternative to contracting for discretionary services (IT and STFT) on the TransCanada Mainline until further short-haul capacity from Dawn to eastern markets is available.

**Figure 4**



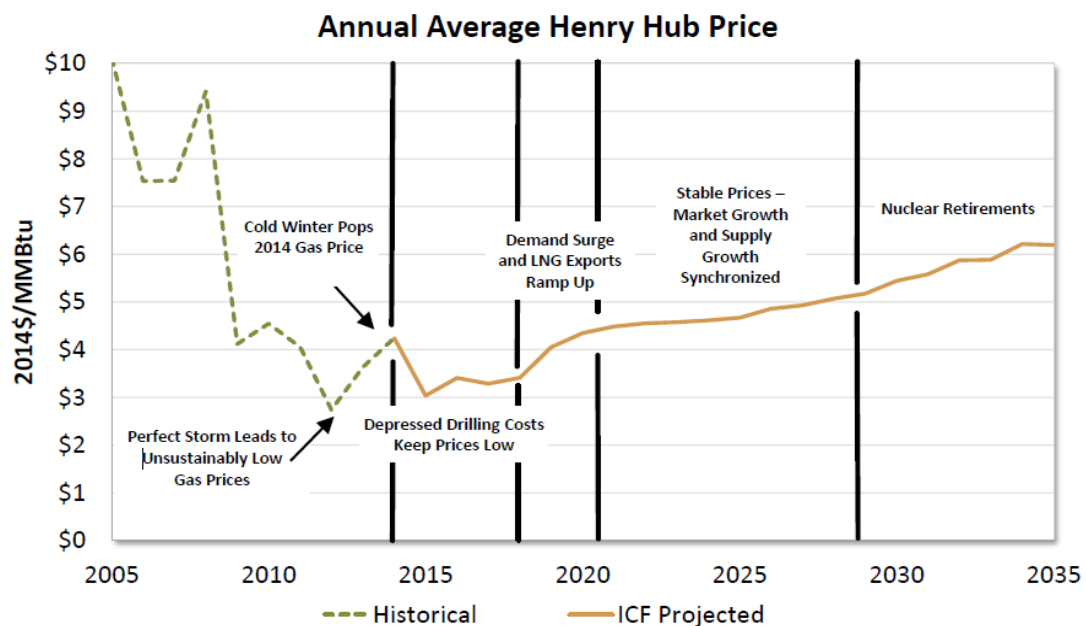
## 2.3 Natural Gas Price Signals

As the emergence of shale production has increased dramatically since 2007, the increase in available supply has put downward pressure on natural gas prices. As shown in Figure 5, the price of natural gas dropped from a high of nearly \$10 USD/mmbtu in 2005 to current levels under \$4 USD/mmbtu.

In the near term to 2016, prices of natural gas at Henry Hub are expected to continue to range between \$3.00-\$4.00 USD/mmbtu. In the long term, between 2020 and 2030, gas prices at Henry Hub are expected to range between \$4.50-\$6.00 USD/mmbtu. The prices are high enough to foster sufficient supply development, but not so high to reduce demand growth. Beyond 2030, prices are projected to continue a gradual increase, reflecting the increased demand for natural gas from electricity generators and replacement of nuclear facilities.

The projections in Figure 5 were provided by ICF International (“ICF”) in July 2015.

**Figure 5**



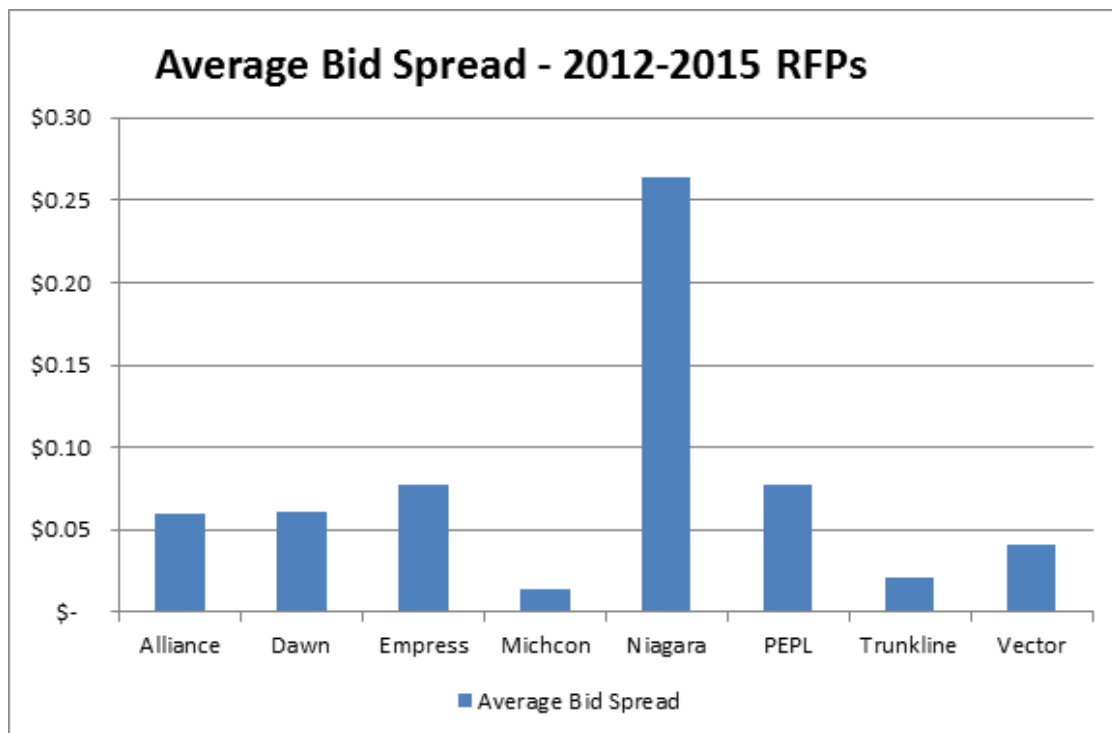
Natural gas supply costs are an important consideration in the GSP and when Union considers new supply basins. However, Union must balance the benefits of all the attributes of the guiding principles and the requirement to ensure customers receive secure, reliable, diverse supplies of natural gas at a prudently incurred cost.

To ensure that gas supplies are acquired at a prudently incurred and reasonable cost, Union follows specific gas procurement policies and procedures, as accepted by the Board<sup>1</sup>, to govern commodity purchases including a Request for Proposal (“RFP”) process. Union’s gas commodity purchases are impacted by the characteristics and traits of the specific supply points or basins where Union purchases supplies. Each of these points have different liquidity and supply characteristics. Certain points have a large number of active parties and volume

<sup>1</sup> EB-2011-0210, Exhibit D1, Tab 1, Appendix A.

trading activity and others do not. Having many suppliers being able to supply at a specific point, along with other buyers, creates an environment of higher liquidity and more efficient gas purchases. One measure of efficiency is price transparency. This means that if there is an efficient and competitive market, the variation in prices Union receives through its RFP process will be quite small. For example, you would expect to see a smaller variation between the various offers in a more liquid or effective market than one that isn't. Figure 6, summarizes the average spreads of all offers Union has received at the various basins/points Union purchases supply at, since 2012. The spread of bids is considered to be the price difference between the highest bid and the lowest bid offered in response to the same RFP. As indicated above, a smaller variation between the bid offers signify a more liquid or effective market.

**Figure 6**



These characteristics and traits can potentially change over time as infrastructure into and out of the various points/basins evolves. The amount of supply relied upon and purchased at each of these points needs to be evaluated from time to time.

## 2.4 Transportation / Pipeline Changes

As supply and transportation market options change, so does Union's gas supply mix and how gas is transported to Ontario. Unchanged, however, is Union's application of the gas supply planning principles and the requirement to ensure customers receive secure, reliable, diverse supplies of natural gas at a prudently incurred cost. When Union considers a new supply basin, new upstream transportation capacity or existing transportation capacity up for renewal, alternatives are considered. A landed-cost analysis is completed and filed when a new transportation path is contracted for, in accordance with the Board-approved EB-2005-0520 Settlement Agreement. The analysis for new transportation paths included in Union's 2015/16

GSP will be filed as part of Union's 2015 Disposition of Non-Commodity Deferral Account Balances and Earnings Sharing Amount evidence in the spring of 2016.

Until the 1950's, Union sourced its natural gas supplies through local Ontario production, manufactured gas, and imported U.S. supplies. In the late 1950's, the construction of the TransCanada Mainline connected western Canadian supplies to eastern Canadian consuming markets. By the 1990's, up to 90% of Union's system supply portfolio was sourced from western Canada, and was predominantly transported to Ontario via TransCanada. Through the 1990's, Union introduced more supply diversity into the Union South portfolio from U.S. locations (i.e. Panhandle, Vector) to increase security of supply.

North American natural gas markets are undergoing a dramatic change in supply dynamics recently. Production from conventional, mature North American natural gas basins is in decline while production from shale gas formations continues to exceed expectations. While natural gas reserves still exist in mature natural gas basins, the economics of natural gas production favour shale gas and tight gas formations.

Natural gas utilities, through their planning process, look to diversify their natural gas supply portfolio and seek secure, reliable and reasonably priced natural gas. The shift in natural gas supply portfolios by eastern LDCs reflects the changes in the North American natural gas supply and transportation markets. Market participants are re-balancing with new supply sources and replacing long-haul transportation contracts with short-haul transportation contracts.

Union has made considerable changes in its transportation portfolio since 2010 to react to these changing supply dynamics. For example:

- 1) Union committed to a long term short-haul transportation contract from Niagara to Kirkwall for 21,101 GJ/d to gain access to new emerging Marcellus supplies starting November, 2012.
- 2) In Late 2010, Union provided notice to Alliance Pipelines to terminate the transportation agreement that supplied WCSB supplies to Union South, to reduce the reliance on the declining WCSB supplies effective November 30, 2015.
- 3) Since 2012, Union made numerous elections on TransCanada to convert long-haul contracts from Empress to short-haul contracts from Parkway to enhance diversity and security of supply through access to Dawn for Union North. These have been delayed due to the need for the TransCanada Settlement Agreement but will now start to become effective in 2016. This is discussed further in Section 6.
- 4) Union anticipates increasing supply diversity and security of supply through a transportation contract with the NEXUS pipeline to be effective November 1, 2017. The NEXUS project is designed to transport supplies of Appalachian shale gas production to the Dawn Hub. This would create a direct connection of the single largest and fastest growing natural gas supply basin in North America to Ontario. The NEXUS pipeline project is described in more detail in Section 6.
- 5) As discussed in Section 3.3, in anticipation of sourcing supply from the Appalachian shale through the NEXUS contract, Union contracted for a market based transportation service between Dominion South Point (Marcellus) and Dawn for 20,000 Dth/d for one year effective November 1, 2015. This contract will allow Union to develop relationships with potential NEXUS suppliers in Appalachia and gain experience purchasing Marcellus/Utica supply.

### **3 GAS SUPPLY PLANNING OBJECTIVES AND PRINCIPLES**

The GSP defines the gas supply requirements and the necessary upstream transportation capacity and assets to meet customers' annual, seasonal and design day gas delivery. Union's Gas Supply portfolio is guided by a set of principles that are designed to ensure customers receive secure, diverse gas supply at a prudently incurred cost.

The principles are as follows:

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

These principles have been presented to and accepted by the Board<sup>2</sup> on a number of occasions. Most recently these principles were presented to the Board in Union's 2014/15 Gas Supply Memorandum filed as part of the 2014 Disposition of Deferral Account Balances and 2014 Earnings Sharing Amount (EB-2015-0010).

A description of each guiding principle and how this balance is achieved, is provided below.

#### **3.1 Ensure secure and reliable gas supply to Union's service territory**

Union has an obligation to ensure its firm sales service and bundled DP customers (i.e. residential and commercial customers) have access to secure and reliable gas supply sources. This includes firm upstream transportation contracts to deliver this supply to Union's franchise areas. Union also provides a load balancing function for all sales service and bundled DP customers to manage the seasonal differences between supply and demand. Union's obligation is to provide gas supply and transportation capacity for sales service customers and transportation capacity for bundled DP customers. To meet this obligation Union uses a combination of firm upstream transportation contracts, Dawn sourced supply and storage capacity. Union ensures adequate firm capacity is available on a sustained basis to meet firm design day and annual demands through transportation capacity contractual rights. This includes a combination of long-term transportation contracts with third parties, transportation contracts with guaranteed renewal rights, as well as dedicated Union storage, transmission and distribution assets.

#### **3.2 Minimize risk by diversifying contract terms, supply basins and upstream pipelines**

Union's current upstream transportation portfolio and related supply are diversified with respect to supply basin access, gas supply producers and marketers, contract term and transportation service provider. Union's approach to diversifying the portfolio of firm assets is analogous to a prudent investment portfolio where diversity of funds, risk and term are critical to a successful portfolio.

<sup>2</sup> EB-2013-0109, Decision and Order, p. 8

In Union South, Union utilizes capacity on multiple upstream pipelines to access several supply basins or market hubs. These pipelines provide access to supplies in Western Canada, Gulf of Mexico, Chicago, the U.S. mid-continent and Marcellus through Niagara. The GSP also includes Dawn purchases as part of the Union South supply portfolio. Union purchases gas from suppliers under a North American Energy Standards Board (“NAESB”) contract. Union has NAESB contracts with approximately 90 suppliers. The portfolio of suppliers and upstream transportation contracts provides diversity and reduces the exposure to price volatility for Union South customers. It also provides Union the flexibility to manage to its seasonal inventory targets.

Union also manages risk to customers by diversifying the length of the contract terms to provide flexibility in managing the upstream transportation portfolio. In Union South, contract terms range from one to 15 years. Union holds renewal rights on the majority of these contracts at expiry date. In Union North, Union’s long-haul TransCanada firm contracts renew on a two-year rolling basis. Union is taking steps to introduce Dawn supplies into the Union North portfolio starting as early as November 1, 2015, however, due to delays in TransCanada’s Kings North Project, the November 1, 2015 in service of TransCanada’s short-haul contracts from Parkway will be delayed until later in 2016 when TransCanada facilities are expected to go into service.

For gas supply purchases, the sales service supply portfolio consists of annual and multi-year terms, seasonal, monthly, and in rare cases, daily purchases. In addition, Dawn delivered service in the Union South supply portfolio can be re-sized monthly and annually to manage changes in demand.

### **3.3 Encourage new sources of supply as well as new infrastructure to Union’s service territory**

Union continues to seek new sources of cost-effective supplies to serve its customer base either through accessing new supply sources with existing infrastructure or participating in longer-term projects to encourage the development of new infrastructure to and through Ontario. The development of new supply sources and the related infrastructure often require long-term commitments. In the Board’s EB-2010-0300 / EB-2010-0333 Decision (p. 7), the Board recognized the role that regulated utilities play in supporting new infrastructure development:

*“The Board recognized that the enrolment of regulated utilities for such long term arrangements would be a necessary and desirable element in new infrastructure development...”*

Union supports the development required to bring new supply sources to or through Ontario. For example, Union entered into a market based transportation contract providing a market based service between Dominion South Point (Marcellus) and Dawn. This contract will allow Union to develop relationships with potential NEXUS suppliers in Appalachia.

In addition, Union supports the infrastructure required to allow new supply sources to flow to eastern and northern Ontario. In order for all Ontario natural gas customers to access new emerging supply, new infrastructure at Parkway and between Parkway and Maple on the TransCanada Mainline is required. The required infrastructure on Union and Enbridge systems has been approved by the Board (EB-2012-0433 / EB-2013-0074 / EB-2012-0451). In its Decision, the Board stated:

*“The project is part of a group of projects, including Enbridge’s GTA Segment A pipeline and TransCanada’s proposed King’s North pipeline that will facilitate greater flows of mid-continent natural gas into Dawn for transportation to downstream markets. The projected benefits of these projects stem from an enhanced diversity of supply, gas costs savings, and enhanced liquidity at Dawn.”(p.22)*

This infrastructure will provide additional diversity to Union North starting in 2016 based on the best available expectation of when the TransCanada facilities will go into service. In addition, Union has committed to the NEXUS Transmission Project to provide support for significant infrastructure to bring new supplies and suppliers to Dawn to enhance the liquidity of the Dawn Hub. This is discussed further in Section 6.

### **3.4 Meet planned peak day and seasonal gas delivery requirements**

Inherent in the obligation to meet sales service and bundled DP customers’ gas supply needs is the requirement to construct a gas supply portfolio that will meet:

- Design day requirements – to provide service to sales service and bundled DP customers on the day of highest anticipated design day demand in each delivery area.
- Seasonal/annual requirements – to be able to meet the annual requirements of the markets while balancing the summer / winter load changes.

A further description of how Union meets these requirements is provided in Section 5.

### **3.5 Deliver gas to various receipt points on Union’s system to maintain system integrity**

The Union South transportation portfolio has delivery points at Dawn, Parkway, Kirkwall, St. Clair and Ojibway. In addition to the physical connections Union has with adjoining pipelines, it is also Union’s practice to contractually receive gas at multiple points. This practice provides two benefits.

First, it maintains system integrity as Union is not reliant on one receipt point for all of its gas supplies. A system interruption or upset at one receipt point would not cause a complete supply failure to Union’s system.

Second, delivery to multiple receipt points allows Union to minimize its pipeline facilities in the area. For example, the delivery of gas at Ojibway enables the Dawn Ojibway transmission system to be smaller than would otherwise be necessary to meet design day requirements. In this case, if Union receives gas at Ojibway, Union does not have to ship the equivalent volume from Dawn to Ojibway.

Union needs to balance the value of contracting and relying on 3<sup>rd</sup> party providers and the continued cost and reasonableness of doing so when compared to physical alternatives. For example, Union has reduced the reliance it had on upstream supplies serving the Sarnia area and replaced that reliance with the Sarnia Expansion Project in early 2015<sup>3</sup>.

In response to customer’s requests, Union is in the process of moving the Parkway Obligation for DP customers to Dawn<sup>4</sup>. Union is also reducing the reliance on deliveries at the east end of

<sup>3</sup> EB-2014-0333.

<sup>4</sup> EB-2013-0365.

its system on behalf of sales service customers due to the higher relative cost of TransCanada long-haul deliveries to Union into the Union CDA.

This trend is supported by the increased security and reliability and expansion of the Dawn to Parkway system, including Loss of Critical Unit (“LCU”) protection across the entire length of the Dawn to Parkway transmission system as discussed in Section 6.

#### **4 GAS SUPPLY PLANNING PROCESS**

Union’s GSP is a five-year rolling plan that is prepared annually, with the primary focus being the first two years. The annual gas supply planning process is summarized at Appendix A. The GSP is finalized and receives executive approval in the third quarter each year.

The GSP identifies the efficient combination of upstream transportation, supply purchases, and storage assets required to serve sales service and bundled DP customers’ annual, seasonal and design day gas delivery requirements, while adhering to the planning principles described earlier. Once the design day demands are calculated, the planning process continues with a monthly forecast by market of total consumption by each delivery area in Union North and Union South. The GSP is then used to generate a forecast of natural gas supplies, transportation and storage services required by Union’s in-franchise sales service and bundled DP customers. The upstream transportation contracts in the GSP, along with storage assets, are managed by Union to provide an integrated service to all sales service and bundled DP customers. The costs for both the supply and the transportation services identified in the GSP are recovered through commodity, transportation and storage charges.

Union’s integrated supply planning is a complex process that incorporates demand related items such as customer growth, normalized weather, design day requirements, customer consumption patterns and economic outlooks. Demands are analyzed relative to Union’s existing system design and gas supply portfolio (supply and transportation). The firm needs of these customers are analyzed to ensure the appropriate level of firm transportation and storage assets are held to meet design day, seasonal and annual demand. The GSP is appropriately sized and there are no assets in the GSP in excess of those necessary to meet firm customer requirements.

To complete the Plan, Union uses gas supply planning software known as SENDOUT. SENDOUT, supplied by ABB, is a widely recognized gas supply planning tool and is used by a number of LDC’s in North America. Union has used this software for 28 years and it has been presented in a number of rate applications since 1987.

Union uses SENDOUT to ensure that the assets incorporated in the GSP meet annual, seasonal, and design day demands. SENDOUT determines the amount of capacity, supply and associated costs required to meet customer demands. Union’s five-year GSP includes the following key inputs and assumptions:

- The design day demand forecast for each Union North delivery area;
- Union’s in-franchise monthly demand forecast based upon customer location, supply arrangement, storage requirement and service type (excludes Transportation Service and Unbundled service);
- A monthly commodity price forecast using the same pricing methodology as the Quarterly Rate Adjustment Mechanism (“QRAM”) process;
- Upstream transportation tolls in effect at the time the forecast was prepared;

- All upstream transportation contracts held by Union plus existing obligated Ontario deliveries for the bundled DP market;
- Sales service and bundled DP storage requirements that are cycled completely each year in the Plan with storage full on November 1 and empty by March 31 assuming normal weather;
- Applicable heating value;
- Sufficient inventory at February 28 to meet the design day requirements for sales service and bundled DP customers;
- No migration between sales service and bundled DP customers for the term of the Plan. Any migration is therefore a risk that needs to be managed by Union.
- 9.5 PJ of system integrity space. This storage space is used in a number of ways to maintain the operational integrity of Union's integrated storage, transmission and distribution systems. The GSP has 6.0 PJ of this space filled with system integrity supply while the remaining 3.5 PJ is left empty as contingency space.

The outcome of the annual planning process is a five-year plan that provides a monthly volumetric forecast of supplies (by transportation path) and demands and a monthly forecast of Union's costs to serve its sales service and bundled DP customers. The key inputs and outputs of the GSP are discussed in more detail below.

## **5 UNION'S 2015/16 GAS SUPPLY PLAN**

The GSP defines the gas supply requirements and the necessary upstream transportation capacity and assets needed to meet customers' annual, seasonal and design day demands. The key inputs and outputs, as well as the changes, are described in more detail below.

### **5.1 Design Day Demand**

Union ensures assets are available to provide firm service to customers on an extreme cold weather day called a design day. A design day is measured in heating degree days ("HDD"). A HDD is a measure of temperature that identifies the need for heating and occurs when the average daily temperature falls below 18 degrees Celsius. An average daily temperature of zero degrees Celsius equals 18 HDD. The main information required to develop the plan to serve design day demand includes weather, firm customer demand, forecast demand growth and required assets.

#### **Weather**

Union uses the coldest historically observed degree day for the South and each of the six delivery areas in the North.

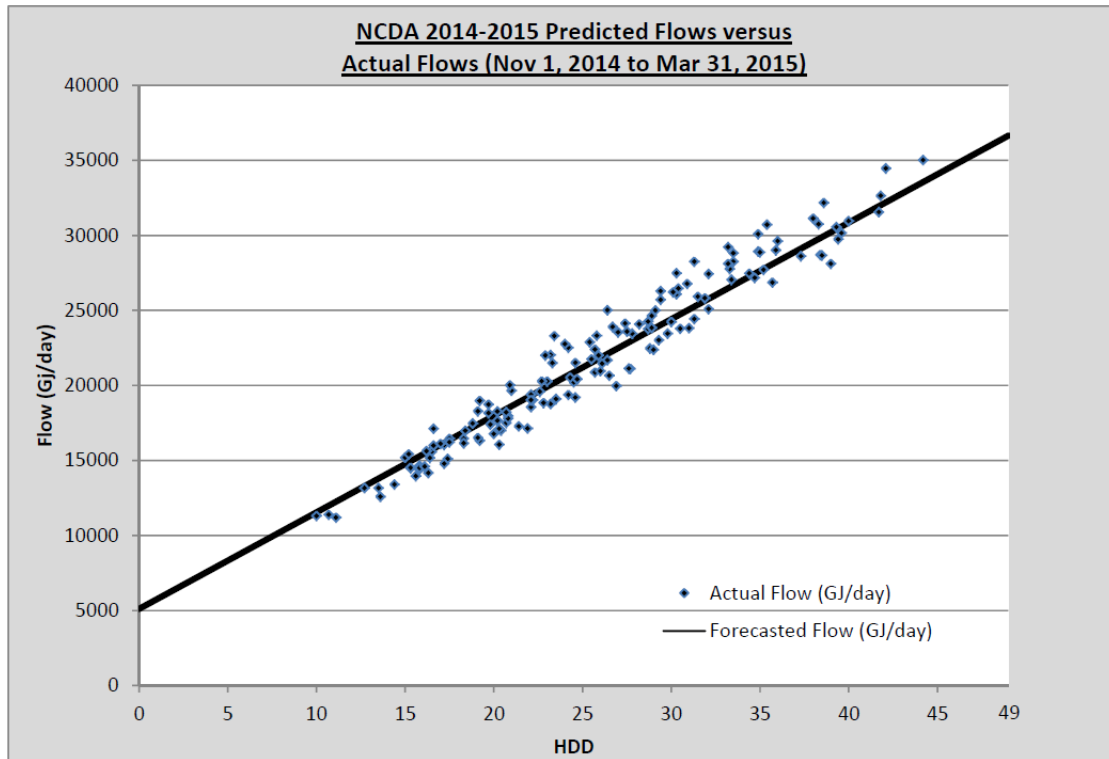
#### **Firm Customer Demand**

The firm customer design day demand is forecast by multiplying the firm use per degree day factor with the coldest observed degree day.

Union develops a trend line using the daily firm customer consumption from the prior winter and the associated daily degree day data. Union extrapolates the calculated trend line to the coldest observed degree day resulting in the estimated design day demand for

each delivery area. An illustrative example of the degree day data and the trend line calculation for the NCDA is provided in Figure 7.

**Figure 7**



### Forecast Demand Growth

The design day demand described above is adjusted by the winter season growth factor reflected in the demand forecast. This forward looking forecast growth factor is added to the firm customer demand noted above, to provide a total forecasted design day demand for each delivery area. For winter 2015/16, the growth factor for Union North is an increase of 1.6%.

### Required Assets

The design day requirements are met by holding storage and transportation capacity. Design day weather does not occur every year, however, the assets must be available should that design day occur given Union's role as the supplier of last resort for sales service and bundled DP customers.

In order to meet these design day requirements for Union South and Union North, Union uses a combination of contracted upstream transportation capacity, and Union's storage,

transmission, and distribution assets. The use of storage assets is more cost effective than contracting for full, all year firm upstream transportation capacity. Since Union's storage and transmission assets reside within its South franchise area, the role of the gas supply portfolio is different on a design day in Union South than in Union North. The North design day demand is a direct input into the GSP, while Union South design day demand is an input into the Storage and Transmission System Plans.

For March 31, Union assumes that the storage levels will be 0 plus 6 PJ of integrity gas remaining for Union North and Union South combined. Average winter demands are met through a combination of gas flowing on upstream transportation and storage withdrawals.

The differing methodologies are described below. These methodologies are consistent with what was reviewed in the Sussex report in EB-2013-0109 at Exhibit C, Tab 2 and Tab 3.

### ***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.

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

For Union South, the GSP 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 Storage and Transmission System Plans. The GSP 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 a sufficient volume of gas in storage for the seasonal and 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 design day demand from the systems supply points to its customers on design day. 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. Union's distribution systems are also designed to meet design day requirements. Design days do not occur every year, however, the assets must be available should the design day occur.

Although the design degree day of 43.1 has not changed in Union South, the customers' demands on a design day have increased. The design day requirements in the south have increased from 2,868 TJ/d to 2,900 TJ/d. The resources available to meet Union's design day in the South are shown in Figure 8.

**Figure 8**

**Winter 2015/2016 Design Day**  
**Union South Design Day Demand and Resources (TJ/day)**

<b>Demand</b>	
Union South*	2,900
<b>Supply</b>	
Storage at Dawn	1,483
Non-obligated (e.g. Power Plants)	210
TCPL Empress to Union CDA	67
Trunkline	21
Panhandle	39
Market Based Transport	21
TCPL Niagara	21
Ontario Parkway	334
Vector	111
MichCon	74
Ontario Dawn	467
Customer Supplied Fuel	52
<b>Total Supply</b>	<b>2,900</b>
* 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

For Union North, the firm design day demand is a direct input into the GSP. Union is required to purchase transportation services to move the firm design day demand from either Parkway, Dawn or Empress to the delivery areas where the gas is consumed.

Union's Northern delivery areas are connected to TransCanada's Mainline and are physically separated from Union's Dawn storage and transmission pipeline assets. Therefore, Union requires firm upstream transportation services to connect each of the six northern delivery areas to a supply source (currently at Empress). From Dawn, additional firm transportation services (primarily STS) are required to move gas from storage to the northern delivery areas.

The Union North gas supply portfolio ensures there is sufficient, but not excess, firm transportation services available to meet the firm design day demand requirements in each delivery area. The full suite of assets is only used in each delivery area when a design day occurs. Since Union is required to contract for transportation services to meet design day demand, there are days when the pipe is not fully utilized. Union currently uses a portfolio of firm services and assets including TransCanada firm transportation, TransCanada STS firm and other TransCanada services to meet its design day demand requirement.

Design day shortfalls in this GSP were identified in Union North (14,300 GJ for the winter of 2015/16). The design day demands for the 2015/16 GSP are based on a trend line using the daily firm customer consumption from the 2014/15 winter and the associated daily degree day data and the forecast anticipated in the 2015/16 demand forecast. The shortfall identified is largely due to actual demands for 2014/15 being higher than what was forecasted in the 2014/15 GSP and forecast growth from 2014/15 actual demands to 2015/16 forecast demands.

Figure 9 illustrates what services and assets are relied on in the GSP to meet design day demand. The design day requirements in the North have increased from 479 TJ/d to 493 TJ/d.

**Figure 9**

**Winter 2015/2016 Northern Firm Design Day Demand in TJ/day**

Design Day - Heating Degree Day (HDD)	Delivery Area						Total
	MDA	WDA	SSMDA	NDA	NCDA	EDA	
	54.7	51.6	48.2	51.9	49.0	47.1	
<b>Design Day Demand by Delivery Area</b>	<b>6</b>	<b>103</b>	<b>99</b>	<b>293</b>	<b>41</b>	<b>249</b>	<b>791</b>
Composed of:							
T-Service Firm Contract Demand	-	19	61	128	3	86	297
Union Responsible:							
Bundled Firm General Service Demand	6	84	38	152	39	162	480
T-Service Storage Redelivery Demand	-	-	-	13	-	-	13
Firm Demand - Union Responsible	6	84	38	165	39	162	493
<b>Capacity &amp; Supply to meet Firm Demand - Union Responsible</b>							
<b>Upstream Transportation - Capacity</b>							
TCPL Long Haul from Empress	6	48	8	50	9	59	180
<b>Supply - Upstream Transportation</b>							
Union	5	42	5	40	5	43	141
Direct Purchase	1	6	3	11	4	16	40
	6	48	8	50	9	59	180
<b>Redelivery from Storage</b>							
TCPL STS Withdrawals - contracted	-	31	35	48	14	69	197
TCPL STS Withdrawals - pooled in/(out)	-	-	(5)	(11)	16	(1)	-
TCPL STS Withdrawals - flowed	-	31	30	37	30	68	197
TCPL S/H from Parkway	-	-	-	-	-	35	35
	-	-	-	-	-	35	35
<b>Supply from Upstream Transport &amp; Storage</b>	<b>6</b>	<b>80</b>	<b>38</b>	<b>88</b>	<b>39</b>	<b>162</b>	<b>412</b>
<b>Firm Demand - Union Responsible</b>	<b>6</b>	<b>84</b>	<b>38</b>	<b>165</b>	<b>39</b>	<b>162</b>	<b>493</b>
<b>Supply from Upstream Transport &amp; Storage</b>	<b>6</b>	<b>80</b>	<b>38</b>	<b>88</b>	<b>39</b>	<b>162</b>	<b>412</b>
<b>Excess/(shortfall) by Delivery Area</b>	<b>0</b>	<b>(4)</b>	<b>0</b>	<b>(77)</b>	<b>0</b>		<b>(81)</b>
<b>Excess/(shortfall) by delivery area</b>	<b>0</b>	<b>(4)</b>	<b>0</b>	<b>(77)</b>	<b>0</b>		<b>(81)</b>
<b>Supply from Other Sources</b>							
<b>Diversions - from Union South transport portfolio</b>							
TCPL Empress - Union CDA		4	-	62	-	-	67
<b>Excess/(shortfall) by Delivery Area</b>			<b>0</b>	<b>(14)</b>	<b>0</b>		<b>(14)</b>

Gas supply flows on the TransCanada long-haul firm transportation to meet Union North customers' seasonal and annual average weather normalized demand requirements. As in Union South, the target is to fill Union North in-franchise storage at November 1 and provide sufficient inventory at February 28 to meet the design day withdrawal requirement.

## 5.2 Demand Forecast

The GSP for 2015/16 is based upon the 2016-18 weather normalized demand forecast for general service customers and contract rate classes as prepared by Union's demand forecasting team. Total bundled customer forecast volumes, including general service unbundled customers, have increased by 12.8 PJ or 4.9% in Union's 2015/16 GSP from what was reflected in Union's 2014/15 GSP.

The general service forecast has increased by 7.0 PJ in Union South and 3.4 PJ in Union North for a total increase of 10.4 PJ. This is primarily due to:

- Customer growth of approximately 21,000 customers;
- Higher consumption fostered by price elasticity; and,
- Increased use as a result of changes in the weather normalized volumes due to adding the weather from winter 2014/15.

The total contract market has increased by 2.4 PJ consisting of a 0.9 PJ increase in Union South due to expansion projects and a 1.5 PJ increase in Union North due to increased sales service consumption. A comparison of the demand forecast included in the 2015/16 GSP relative to the 2014/15 GSP is provided in Figure 10.

**Figure 10**

<u>Union Bundled Customer Forecast Demand</u>					
Line No.	Particulars (TJ)	2014/15 Gas Supply Plan (a)	2015/16 Gas Supply Plan (b)	Variance (c) = (b-a)	% change (d) = (c/a)
	<u>UNION SOUTH</u>				
1	General Service - Sales Service	122,984	128,466	5,481	
2	General Service -BT	10,224	10,644	421	
3	General Service - unbundled	2,586	1,741	-845	
4	General Service -ABC	21,339	23,226	1,887	
5	Sub-total	157,132	164,076	6,944	4.4%
6	Contract - Sales Service	3,554	2,614	-940	
7	Contract - BT & ABC	45,328	47,163	1,835	
8	Sub-total	48,882	49,777	895	1.8%
9	Total Union South (line 5 + line 8)	206,014	213,853	7,839	3.8%
	<u>UNION NORTH</u>				
10	General Service - Sales Service	37,340	40,907	3,567	
11	General Service -BT	3,982	3,851	-131	
12	General Service -ABC	7,002	6,986	-15	
13	Sub-total	48,323	51,744	3,421	7.1%
14	Contract - Sales Service	1,344	3,506	2,162	
15	Contract - BT	3,939	3,318	-620	
16	Sub-total	5,283	6,824	1,541	29.2%
17	Total Union North (line 13 + line 16)	53,606	58,568	4,962	9.3%
18	Total Union Forecast Demand (line 9 +line 17)	259,620	272,421	12,801	4.9%

As noted above on lines 1 and 10, sales service demands for the general service market have increased by 5.5 PJ in Union South and 3.6 PJ in Union North. This is driven by customer growth of 14,000 and 7,000 in Union South and Union North, respectively, and an additional 17,000 bundled DP customers that returned to sales service in Union South. A comparison of the number of sales service and DP customers in the 2015/16 GSP relative to the 2014/15 GSP is provided in Figure 11.

**Figure 11**

**Number of Customers by Service classification - Union South**

	<b>2014/15 Forecast</b>	<b>2015/16 Forecast</b>	<b>Variance</b>
Sales Service	962,627	993,495	30,868
Bundled DP	95,227	87,160	(8,067)
Unbundled DP	25,543	16,615	(8,928)
<b>Total</b>	<b>1,083,397</b>	<b>1,097,270</b>	<b>13,873</b>

For the sales service forecast (the group that Union purchases supply for), the increase in demand due to return to sales service impacts the total supply that Union must purchase for both Union North and Union South. For Union North, Union plans for upstream pipeline transportation capacity for sales service and bundled DP customers so there is no impact to Union's contracted capacity in the north as a result of return to sales service.

For Union South, Union requires additional supply and transportation capacity to meet increased demand as a result of return to sales service supply. The incremental supply requirement is reflected in Union's 2015/16 GSP.

The gas supply/demand balance for sales service customers for the 2015/16 GSP is provided at Appendix B.

### **5.3 Transportation Portfolio**

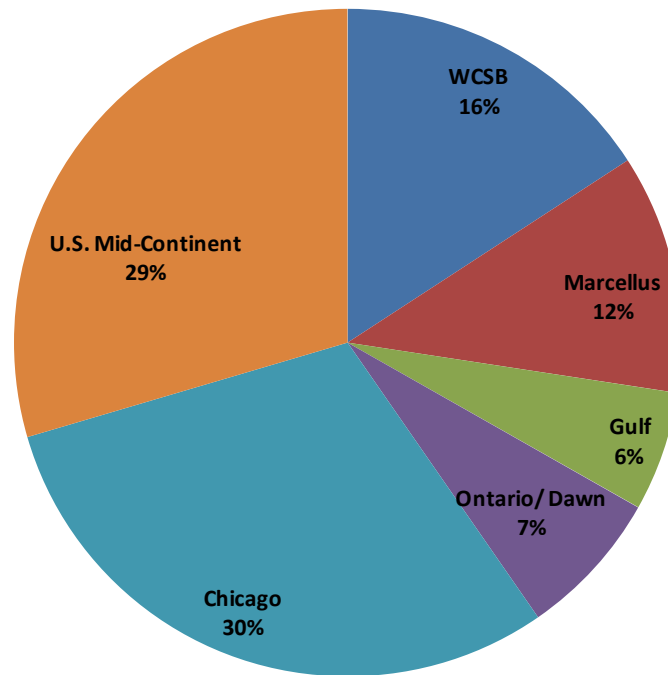
Union holds a combination of firm transportation contracts, Dawn sourced supply and storage capacity to meet the full forecasted annual demand. Firm transportation services provide direct and secure access to a diverse group of supply basins and market hubs in North America.

#### **i) Union South**

For Union South, Union holds firm transportation contracts and sources supply at Dawn to meet average annual demand requirements. Union utilizes capacity on multiple upstream pipelines to access several supply basins or market hubs. These pipelines provide access to supplies in Western Canada, Gulf of Mexico, Chicago, the U.S. mid-continent and Marcellus. The GSP also includes Dawn purchases as part of the Union South supply portfolio. Figure 12 demonstrates the sources of supply underpinned by Union's transportation portfolio for Union South sales service customers. (A complete list of the upstream transportation contracts is included as Appendix D).

**Figure 12**

**South System Supply Portfolio**  
for the period November 2015 to October 2016



**ii) Union North**

In Union North, Union's plan uses various transportation services to meet sales service and bundled DP customer annual and design day demands. The transportation capacity necessary to meet design day demands on a firm basis exceeds that required to meet the annual demand requirements.

A detailed listing of the contracts in place to serve Union North annual, seasonal and design day demands for the 2015/16 gas year are provided in Appendix C.

The GSP reflects the effective management of TransCanada capacity by:

- Using TransCanada STS injections, which allow Union to transport excess supply away from Union North to Parkway to be injected into Dawn storage in the summer;
- Using TransCanada STS withdrawals in the winter months to serve weather-driven demands. Gas is withdrawn from Dawn storage throughout the winter and is transported back to Union North via STS withdrawals without the need for contracting additional TransCanada FT capacity to that delivery area; and,
- Using contractual STS pooling rights to group all of Union's STS rights serving the various Union North delivery areas. This provides Union with the flexibility to serve the individual delivery areas in Union North with gas service in excess of that delivery area's specific STS rights.

In addition, Union completes the GSP on an integrated basis in order to manage costs for all ratepayers. For example, today Union uses the Union South TransCanada Empress to Union CDA contract to serve two purposes. In addition to meeting average day (annual) requirements for Union South as described above, the Empress to Union CDA contract is also used to meet Union North design day requirements. Historically, Union planned for and utilized diversions of the Union South TransCanada Empress to Union CDA contract to Union North delivery areas for many years without issue. In 2013, TransCanada system operations changed such that upstream diversions were no longer as reliable. Union experienced interruptions of these upstream diversions in December 2013. Union was able to work with TransCanada for a temporary solution that allowed for a delivery point shift to delivery areas in Union North. However, this solution is at the sole discretion of TransCanada and is not guaranteed to be available on an annual basis. As discussed in EB-2014-0261, Exhibit A, Tab 7, in order to ensure a reliable, sustainable, and secure source of supply to Union North markets on design day, Union has committed to 67,000 GJ/d of firm, renewable TransCanada Parkway Belt to Union NDA capacity to meet this requirement, effective November 1, 2016.

#### **5.4 UDC in the Gas Supply Plan**

In Union North, the upstream transportation capacity (long-haul, short-haul and STS) is first sized to meet the design day demand requirement. The long-haul capacity is also used to deliver, on each day, the average annual volume to each delivery area. The amount of supply transported on the upstream long-haul capacity needed to meet average annual demand requirements is less than the capacity to meet design day requirements, and therefore, a portion of Union's contract capacity is planned to be unutilized during the year. The difference between total contracted capacity and total demand for both Union North sales service and bundled DP customers results in unutilized capacity or UDC. Subject to finalizing and contracting the transportation capacity required to meet the design day shortfall, the total forecast UDC is 11 PJ in the 2015/16 GSP. If weather is colder than normal and annual consumption is greater, and if it is economical to do so, Union will use this capacity to meet incremental supply requirements in either Union North or Union South subject to TransCanada's authorization of downstream diversions.

Figure 13 shows the total contracted capacity sourcing supply at Empress relative to the annual demand and the resulting UDC in the 2015/16 GSP.

**Figure 13**  
**North Transportation Capacity vs Demand**  
2015/16 Gas Supply Plan

	<b><u>PJ</u></b>
Total Contracted Capacity (179.8 TJ/d)	65.6
Withdrawal from Storage	3.9
less:	
Total Annual System Sales Demand	44.4
Total Annual Bundled DP Demand	14.2
<b>Total UDC</b>	<b><u><u>11.0</u></u></b>

In Union South, capacity on multiple different upstream pipelines is utilized to provide service to meet sales service average and seasonal demands. The GSP reflects the effective management of these capacities as there is no unutilized transportation capacity forecast for the 2015/16 gas year as the Plan forecasts a 100% load factor on all the Union South upstream transportation.

### 5.5 Changes in Upstream Transportation Portfolio

The GSP assumes that all capacity currently contracted with renewal rights will continue to be available in the future. For Union South, the plan excludes the 15-year Alliance/Vector contracts for 80,000 Dth/d (84,405 GJ/d) that will expire November 30, 2015. To replace this capacity, Union contracted for the following:

<b>Capacity</b>	<b>GJ/d</b>
DTE Energy (Michcon)	63,304
Market Based Transport	<u>21,101</u>
<b>Total</b>	<b><u><u>84,405</u></u></b>

For Union South, the following contracts which would have expired October 31, 2015 have been renewed for the 2015/16 gas year:

<b>Capacity</b>	<b>GJ/d</b>
Panhandle Eastern	
Pipeline	10,551
DTE Energy (Michcon)	<u>10,551</u>
<b>Total</b>	<b><u><u>21,102</u></u></b>

The GSP has identified approximately 24,500 GJ/d of “uncommitted” supply requirements for Union South. Union will utilize Dawn delivered supplies to meet this supply requirement for the November 1, 2015 to October 31, 2016 period.

The GSP has identified an additional 14,300 GJ/d requirement in Union North to meet design day requirements. Union is currently securing transportation capacity to meet this additional requirement.

A complete listing of the transportation capacity currently contracted for Union North and Union South for the 2015/16 gas year is provided at Appendix C and D.

In addition to the portfolio changes noted above, Union has reflected the Parkway Obligation proposal as filed and approved in EB-2013-0365 and the Vertical Slice changes as contemplated in EB-2014-0145 in the 2015/16 GSP.

## **5.6 Cost of Gas**

The GSP for gas year 2015/16 was finalized in the third quarter of 2015. The transportation tolls and gas prices utilized in the development of the GSP are consistent with those used to set the April 2015 QRAM commodity price. Union then established specific prices for each supply location taking into account the various basis differentials and the foreign exchange rate.

As part of Union’s Incentive Rate Mechanism (“IRM”) Settlement Agreement (EB-2013-0202), Union indicated in Section 4.7.1, that the cost of gas supply, upstream transportation and gas supply balancing would continue to be passed through to customers through the QRAM. Union reflects updated transportation tolls and forecast gas commodity in rates through the QRAM process. Variances in actual gas supply costs and transportation tolls relative to forecast gas supply costs and transportation tolls reflected in rates are captured in Union’s gas supply deferral accounts. Union includes the prospective disposition of gas supply related deferral accounts in the QRAM process.

## **5.7 Bundled DP Customer Assumptions**

The GSP includes all bundled DP demand and contracted Daily Contract Quantities (“DCQ”), and assumes that the number of bundled DP customers remains constant as of January 1, 2015. Union is unable to predict customer migration between sales service and bundled DP. Therefore, for the term of the GSP, customers are assumed to remain with the service they had received effective January 1, 2015.

On an ongoing basis throughout the year, Union continues to monitor the migration between bundled DP and sales service supply. As customers return to sales service supply, Union proactively manages the expected supply requirements by filling any pipe that is returned to Union when the customer returns to sales service supply. In addition, each month, Union purchases incremental supply for demand that is returned without underlying pipe based on forecast activity for the balance of the gas year.

Conversely, for customers that migrate to bundled DP, Union facilitates this movement by displacing planned commodity purchases and allocating upstream transportation capacity, as per the vertical slice allocation methodology approved in the RP-1999-0017 proceeding. As per

EB-2014-0145, the vertical slice program will be suspended through a phased approach, beginning in November 1, 2014 and concluding by November 1, 2016.

## 5.8 Storage

Union owns 174 PJ of storage. Consistent with the Natural Gas Electricity Interface Review (“NGEIR”) Decision, the allotment of storage space to in-franchise customers is 100 PJ. For the 2015/16 GSP, the in-franchise space requirement is 95 PJ. This leaves 5 PJ of excess in-franchise space which is available for S&T short term sales. This is an increase of 1.4 PJ in the space required for in-franchise needs when compared to 93.6 PJ in the 2014/15 GSP. The increase in in-franchise storage is due primarily to increased demand for Union’s bundled customers.

The in-franchise space of 95 PJ is provided to in-franchise customers to meet the storage requirements of sales service, bundled DP, unbundled and T-service customers. The amount available to in-franchise customers is based on the storage allocation methodologies approved by the Board as part of the Natural Gas Storage Allocation Policies Decision (EB-2007-0724/0725).

The storage space available to sales service and bundled DP customers in Union South and Union North is determined using the Board-approved aggregate excess methodology. This method is defined as the calculation of the difference between total winter demand (November 1 through March 31) and the average annual demand for a 151 day period. This method determines the allocation of storage space based on the following formula:

$$\text{Aggregate Excess} = \text{Total Winter Consumption} - [(151/365) * (\text{Total Annual Consumption})]$$

## 5.9 Conclusion

Adhering to the gas supply guiding principles, Union continues to establish a GSP that is right sized to meet firm sales service and bundled customer demands with a diverse, flexible, secure, reliable and cost effective portfolio of firm services and assets. Union’s integrated supply planning process incorporates demand related items such as customer growth, normalized weather, design day requirements, customer consumption patterns and economic outlooks. Union plans and contracts for services and assets to provide an efficient combination of upstream transportation, supply purchases, and storage assets to serve sales service and bundled DP customers’ annual, seasonal and design day gas delivery requirements.

As supply and transportation market options change, so does Union’s supply mix and how it is transported to Ontario. Union continues to proactively evaluate new supply and transportation options for Union North and Union South customers. Unchanged, however, is Union’s application of the gas supply planning principles and the requirement to ensure secure, reliable supplies to serve its customers at prudently incurred costs.

## **6 FUTURE TRENDS THAT MAY IMPACT THE GAS SUPPLY PLAN**

Union monitors the North American natural gas industry and identifies how trends may impact Union's future gas supply portfolio. The market context which Union operates is described above and includes the emergence of shale gas, the reduction in available WCSB supplies flowing eastward, and the trend to move from long-haul transportation to short-haul. In addition to these trends, Union also considers recent industry experience particularly that of the extraordinary winter of 2013/14.

### **6.1 Dawn Parkway System Expansion**

Eastern markets, including Union, are seeking to source more supplies from Dawn. This growth at Dawn will need to be supported by increased capacity on the Dawn Parkway System, as well as east of Parkway. In order to identify and serve this requirement, Union held an open season in May, 2012 to solicit customer interest in this path commencing November, 2015. This expansion is part of the Parkway Projects that were approved by the Board in January, 2015 as part of EB-2012-0433 and EB-2013-0074.

Union held a second open season in December 2013/January 2014 for incremental interest on the Dawn Parkway System commencing November, 2016. Union's application for these facilities was filed with the Board on September 30, 2014 under docket EB-2014-0261.

On behalf of the Union sales service, bundled DP customers and T-service, Union has reserved incremental Dawn Parkway System capacity in both the 2015 and 2016 open seasons; the amount of capacity reserved was approximately 70 TJ/d and 169 TJ/d respectively. These transportation capacities, in combination with the incremental TransCanada capacity from Parkway to Union EDA, Union NDA, and Union NCDA will allow Union's northern customers to shift supplies previously sourced from the WCSB to Dawn. Union has executed Precedent Agreements with TransCanada for the 2015 and 2016 TransCanada Parkway to delivery area capacity requirements.

A summary of the transportation portfolio for Union North for 2014-2017, as contemplated in the current GSP, was filed in EB-2015-0181, Tab 1, Section 3.

### **6.2 Dawn Based Reference Price – EB-2015-0181**

Natural gas consumers who do not choose to buy their natural gas supply from a gas marketer are supplied by Union. Sales service customers pay a price for gas set by the Board through the QRAM process. Union applies for a QRAM adjustment quarterly, and the proposed gas supply price is based on the forward market price for natural gas. The existing QRAM process was established in the Board's proceeding on Methodologies for Commodity Pricing, Load Balancing and Cost Allocation for Natural Gas Distributors (EB-2008-0106).

Currently, Union's gas supply reference price represents an average cost for gas at Empress (the Alberta Border Reference Price) for the next 12 months. Union determines this price by applying a forward Empress basis differential to the future 12-month NYMEX market prices, applying a foreign exchange rate and weighting these monthly prices by the volume Union plans to buy in each of the 12 months. The result is an average cost per gigajoule ("GJ") in Canadian dollars that represents the 12-month forward market price at Empress.

The Ontario Landed Reference Price is based on the Alberta Border Reference Price (Empress supply) plus transportation tolls and fuel required to ship the supply on TransCanada from Empress to Union CDA.

Union will convert TransCanada long-haul transportation contracts to short-haul transportation contracts, and thereby create access to Dawn for Union North (Union EDA and Union NDA in 2015 and 2016). In addition, Union bid into the 2017 TransCanada open season for 2,000 GJ/day short-haul FT capacity on TransCanada from Union Parkway Belt to the Union NCDA to meet anticipated increases in the design day requirements of the Union NCDA. With these anticipated changes to how Union serves these three Union North delivery areas, supply will predominantly be sourced from Dawn. Union proposes using a Dawn Reference Price to set commodity rates for customers in the new Union North East Zone (Union NDA, Union NCDA and Union EDA) (where approximately 242,000 or 72% of Union North sales service and bundled DP customers reside). The Dawn Reference Price will be a more accurate market price indication of the forecast cost of supply for the Union North East Zone.

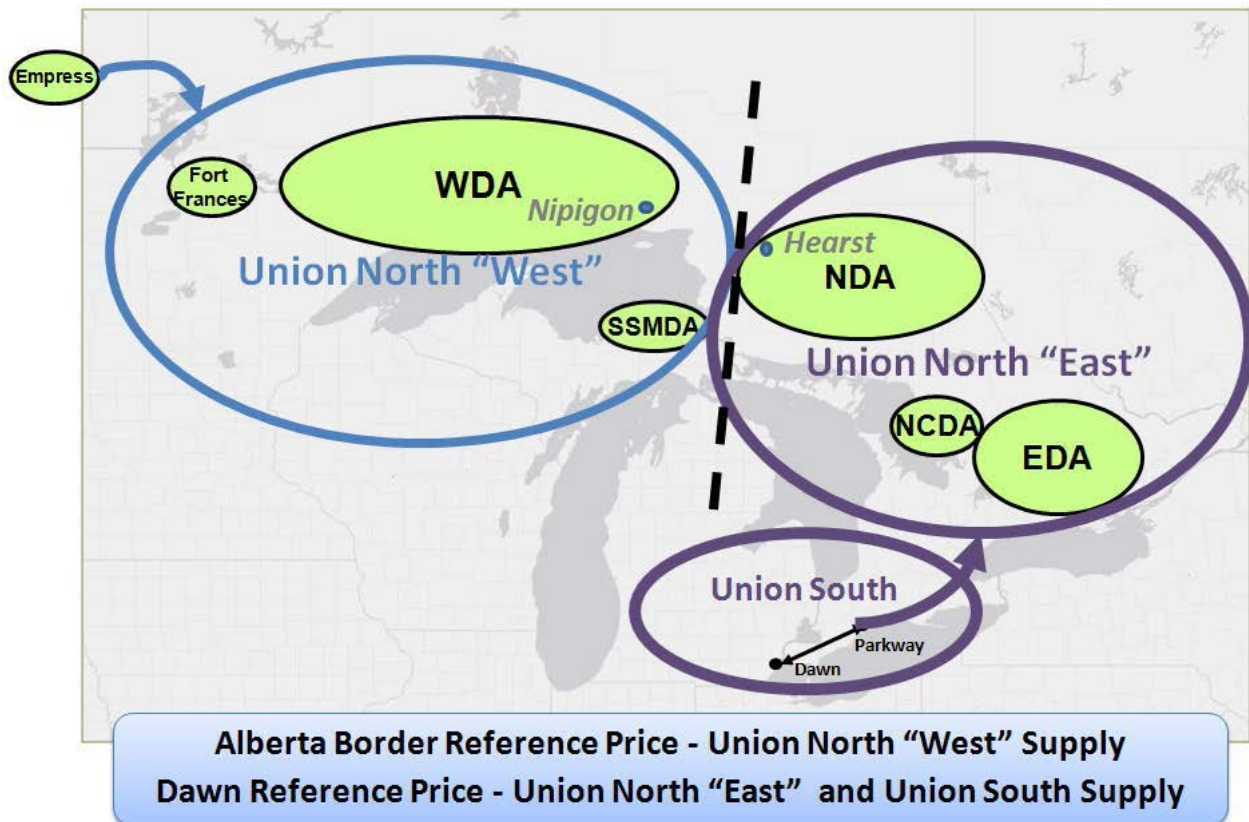
Gas commodity and transportation rates for Union South sales service customers are set based on the Alberta Border Reference Price and the Ontario Landed Reference Price. With less gas being sourced from Alberta for Union South in the future (i.e. the portion of WCSB supply in the Union South portfolio will decrease from 40% today, to approximately 3% by November 1, 2016), the difference between the Ontario Landed Reference Price and the costs of the Union South portfolio will continue to increase. Because more supply is sourced from Dawn or upstream of Dawn, a Dawn Reference Price is a more appropriate market price indicator for Union South customers.

Union proposes to use the same methodology to set the Dawn Reference Price as is used today to set the Alberta Border Reference Price. Union will determine the Dawn Reference Price by applying a forward Dawn basis differential to the future 12-month NYMEX market prices, applying a foreign exchange rate and weighting these monthly prices by the volume Union plans to buy in each of the 12 months. The result will be an average cost per GJ in Canadian dollars that represents the forward market price at Dawn. The reference price will be a rolling 12-month price that is updated quarterly, similar to the process used today to set the Alberta Border Reference Price.

Customers in the new Union North West Zone (Fort Frances, Union WDA and Union SSMDA) (where approximately 92,000 or 28% of Union North sales service and bundled DP customers reside) will continue to be served using Empress-sourced supply. Using the Alberta Border Reference Price to set commodity rates for sales service customers continues to be an accurate reflection of the anticipated cost of gas for Union North West. Union proposes to continue to use the Alberta Border Reference Price to set gas commodity rates for the Union North West Zone.

The Union North West Zone, the Union North East Zone and the Union South Zone are illustrated in Figure 14. Of the 1.3 million Union South sales service customers and Union North sales service and bundled DP customers, approximately 93% of the customers will be served predominately from Dawn in the future.

**Figure 14**



Union has requested approval for changes in the reference price and associated commodity rates for Union South and Union North in EB-2015-0181. In addition, Union requested approval for changes to Union North transportation and storage rates for the North East and North West Zones to reflect the changes in the gas supply portfolio.

### **6.3 Access to Dawn for Union North – EB-2015-0181**

Union contracts and manages upstream transportation to provide capacity to all Union North bundled customers, both sales service and bundled DP customers. The Settlement Agreement between TransCanada and Enbridge, Gaz Métro and Union results in access to Dawn for shippers downstream of Union's system. Currently, Union North bundled DP customers deliver their supply to Union at Empress and Union uses TransCanada services to deliver the supply to the respective delivery area. As Union converts long-haul transportation contracts from Empress on TransCanada to short-haul transportation contracts from Parkway on TransCanada, Union North bundled DP customers in the Union North East Zone will also gain access to Dawn.

Union will change the obligated DCQ allocation methodology for Union North bundled DP customers to reflect Union's transportation portfolio for each respective zone. As indicated in EB-2015-0181, Exhibit A, Tab 1, Section 2.4, the three delivery areas in the Union North East Zone will be served from both Empress and Dawn. Consequently, Union North bundled DP customers in Union North East Zone will have a portion of their obligated DCQ at the Western receipt point (Empress) and a portion of their obligated DCQ at Dawn. The percentage of the

obligated DCQ to be delivered at each receipt point will reflect the percentage of Union's underpinning firm transportation portfolio at Empress and Dawn used to serve the Union North East Zone as of each November 1. By November 1, 2017, 85% of the supply for the North East Zone will be sourced from Dawn.

The three delivery areas in the Union North West Zone will continue to be served 100% from Empress for the foreseeable future. Consequently, Union North bundled DP customers in the Union North West Zone will have their obligated DCQ remain at the Western receipt point (Empress).

A summary of the DCQ allocation based on Union's transportation portfolio is provided at EB-2015-0181, Exhibit A, Tab 1, p. 21, Table 1.

#### **6.4 2014 Natural Gas Market Review - EB-2014-0289**

The 2014 Natural Gas Market Review (EB-2014-0289) was conducted by the Board during the last quarter of 2014 and early 2015. The review provided a broad perspective of the North America natural gas markets and the impacts to Ontario gas markets.

#### **6.5 Burlington Oakville Pipeline Project –EB-2014-0182**

On the TransCanada Mainline, the Union CDA is a TransCanada domestic delivery area located at the eastern end of Union's Dawn Parkway System. The Union CDA is located entirely within Union South and is comprised of four city gate stations: Bronte, Burlington, Hamilton Gate, and Nanticoke.

Physically, the distribution systems serving the Town of Oakville and the City of Burlington and South Milton 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. 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.

Additionally, growth in the communities of Oakville and Burlington and the southern portion of Milton is forecast to increase design day demand on the Burlington Oakville System. This increase in design day demand will exceed the capacity to supply the Burlington Oakville System as of November 1, 2016. Growth in Burlington Oakville System demand requires Union to add incremental pipeline capacity. Contracting for incremental third party transportation from TransCanada or the secondary market is not feasible.

Union proposes to meet this 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 estimated cost of capital is approximately \$119.5 million. The facilities application for Burlington Oakville Pipeline Project was filed with the Board on December 12, 2014 under docket EB-2014-0182.

As a result of this project, Union will no longer require certain TransCanada and secondary market contracts that it currently holds to serve the Union CDA.

The TransCanada Settlement Agreement defines how the Union CDA gate stations will be served once the proposed Burlington Oakville Pipeline is placed into service. Coincident with the in-service date of the Burlington Oakville Pipeline Project, Union will contract with TransCanada to provide service from Kirkwall to Hamilton and Nanticoke (collectively referred to as the Amended Union CDA in the Settlement Agreement) Gate Stations. Union was awarded this capacity (135 TJ/d) in TransCanada's 2016 open season.

## **6.6 Pre-Approval of the Cost Consequences of the NEXUS Long-Term Contract - EB-2015-0166**

Union has entered into an agreement to contract, subject to certain conditions precedent, for long-term transportation capacity for 15 years with the NEXUS Gas Transmission ("NEXUS") Pipeline commencing November 1, 2017. The total volume of the contract is 150,000 Dth/day (158,258 GJ/d), which qualifies Union as an anchor shipper. Union has requested pre-approval of the cost consequences of the NEXUS contract in EB-2015-0166.

The NEXUS project is designed to transport supplies of Appalachian shale gas production, including Marcellus and Utica shale gas production, from the single largest and fastest growing supply basin in North America to customers in Ohio, Michigan, and ultimately the Dawn Hub in Ontario, Canada; creating a direct connection from the largest source of natural gas on the continent to Ontario.

To facilitate and take advantage of Union North having access to Dawn, Union recognized the importance of supporting the NEXUS project to introduce growing Appalachian supplies into Dawn and ultimately into the northern portfolio. Approximately 50,000 Dth/day of supply transported on NEXUS will be used to serve a portion of the Union North sales service customers' requirements from Dawn.

The balance of the supply transported on NEXUS (100,000 Dth/day) will allow the Union South portfolio to further diversify and introduce additional security and exposure to more stable pricing in the Appalachian shale region. In addition to 100,000 Dth/d of transportation on NEXUS for Union South, Union anticipates in excess of 100,000 GJ/day of "uncommitted" pipe in 2016 and 2017. Union will evaluate and analyze potential pipeline paths and supply sources in the context of its Gas Supply Planning Principles. These principles ensure customers consistently receive secure, diverse natural gas supply at a prudently incurred cost and minimal risk.

As a major natural gas utility in Ontario, Union must encourage and support new infrastructure projects such as NEXUS to connect and bring new supplies to Ontario. The Board has recognized the role that an LDC plays in encouraging these new, large-scale infrastructure projects<sup>5</sup>. The NEXUS Project, and Union's commitment as an anchor shipper, will increase security of supply through diversification, enhance liquidity at Dawn, ensure competitive energy prices for customers and create supply competition and opportunities that benefit all Ontario consumers.

Attracting more supplies to Dawn is critical to maintain and grow Dawn's liquidity and overall competitiveness in the surrounding market. Given declining Vector volumes and the decrease in natural gas flowing from the WCSB to the Ontario market as well as the increasing take

<sup>5</sup> EB-2010-0300/EB-2010-0333 Decision and Order, page 7

away capacity from Dawn, Ontario needs supply projects from the growing Appalachian Basin, such as NEXUS, to maintain and increase supply and liquidity.

The NEXUS project offers approximately 0.8 PJ/d of transportation capacity contracted to Dawn. Niagara is anticipated to grow to between 1 to 1.4 PJ/d by the end of 2016. The implementation of both of these projects provides Ontario with balanced access to the Utica and Marcellus basins from two distinct points. This type of balance provides diversity and security of supply to the benefit of all Ontario consumers.

### **6.7 TransCanada Energy East Project**

As part of the Energy East project, TransCanada proposes to convert an existing natural gas line to oil service between Alberta and Ottawa. Union Gas supports the project in principle, but was initially concerned that there may be negative impacts on natural gas consumers in Eastern Ontario and Quebec (based on the conversion of a portion of the Natural Gas Mainline between North Bay and Ottawa, being converted to oil service).

On August 24, 2015, TransCanada, Union Gas, Enbridge Gas Distribution and Gaz Métro announced that an agreement in principle was reached that resolves the concerns about the potential negative impacts the proposed Energy East project may have had on natural gas consumers in Ontario and Québec.

The agreement includes a commitment that:

- that there will be sufficient capacity to meet the firm natural gas transportation requirements of Ontario and Quebec (includes all firm known demands out to 2017) plus additional capacity for future growth;
- that natural gas shippers are not required to financially backstop the development of the Eastern Mainline Project in the event it is terminated by TransCanada;
- that gas consumers will not assume the risk of capital cost overruns for the Eastern Mainline Project; and
- natural gas consumers will have a net toll benefit of \$100 M over the project life to 2050.

## **7 APPENDICES**

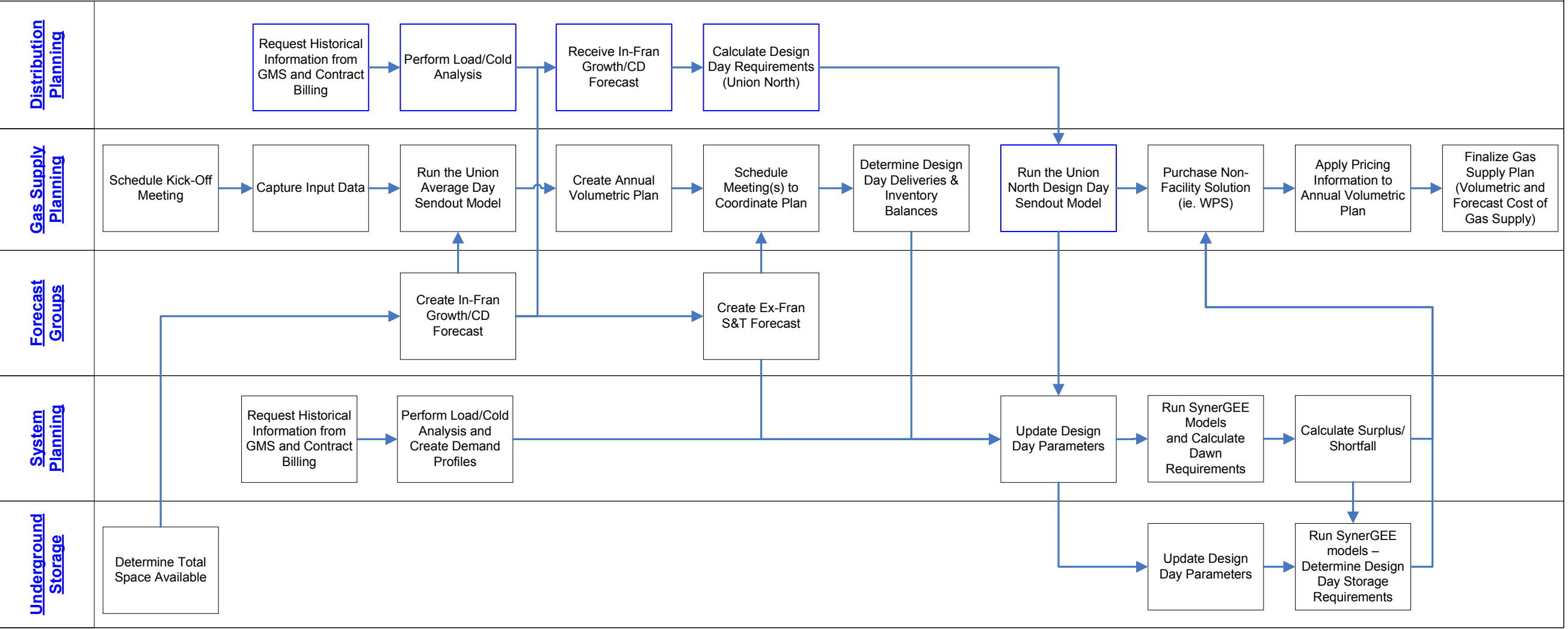
Appendix A - Gas Supply Planning Process

Appendix B - Sales Service Gas Supply Demand Balance

Appendix C - Union North Detailed List of Transportation Contracts

Appendix D - Union South Detailed List of Transportation Contracts

Annual Gas Supply Planning Process



**2015/16 Gas Supply Plan Memorandum**  
**Appendix B**  
**Union Gas Limited - System Sales Supply Demand Balance - November 2015 to October 2016**

Particulars (TJ)	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Total
<b>South</b>													
Demands													
System Sales	13,010	19,341	22,219	20,568	17,372	10,956	6,132	3,004	3,171	3,073	4,347	7,886	<b>131,079</b>
South Co. Use, UFG, Comp. Fuel	874	1,017	1,416	1,587	1,010	646	330	357	472	488	696	651	<b>9,543</b>
Less: Customer Supplied Fuel	(795)	(691)	(1,041)	(735)	(647)	(429)	(216)	(341)	(334)	(278)	(477)	(788)	<b>(6,770)</b>
Total Demands	13,089	19,667	22,594	21,419	17,735	11,174	6,246	3,021	3,309	3,282	4,566	7,749	<b>133,853</b>
Supplies													
TCPL Empress-Union CDA	1,506	1,556	1,556	1,455	1,555	1,509	1,560	1,509	1,560	1,560	1,509	1,560	<b>18,394</b>
Alliance/Vector	2,242	-	-	-	-	-	-	-	-	-	-	-	<b>2,242</b>
Vector	3,346	3,434	3,434	3,213	3,434	3,323	3,434	3,323	3,434	3,434	3,323	3,434	<b>40,568</b>
TCPL Niagara-Kirkwall	633	654	654	612	654	633	654	633	654	654	633	654	<b>7,723</b>
Trunkline	633	654	654	612	654	633	654	633	654	654	633	654	<b>7,723</b>
Panhandle	1,171	1,210	1,210	1,132	1,210	1,171	1,210	1,171	1,210	1,210	1,171	1,210	<b>14,288</b>
Local Production	44	45	45	42	45	44	45	44	45	45	44	45	<b>533</b>
DTE	317	2,289	2,289	2,142	2,289	2,216	2,289	2,216	2,289	2,289	2,216	2,289	<b>25,131</b>
Market Based Transport	633	654	654	612	654	633	654	633	654	654	633	654	<b>7,723</b>
Dawn	671	693	693	649	693	781	807	781	807	807	781	807	<b>8,972</b>
Total Supplies	11,195	11,190	11,190	10,468	11,190	10,943	11,308	10,943	11,308	11,308	10,943	11,308	<b>133,297</b>
Change in Inventory - wd/(inj)	1,895	8,476	11,404	10,951	6,545	231	(5,062)	(7,922)	(7,999)	(8,026)	(6,377)	(3,559)	<b>555</b>
Total Supplies + Inventory Change	13,089	19,667	22,594	21,419	17,735	11,174	6,246	3,021	3,309	3,282	4,566	7,749	<b>133,853</b>
<b>North</b>													
Demands													
System Sales													
Union NCDA	361	505	634	529	442	284	173	78	77	73	120	219	<b>3,494</b>
Union EDA	1,263	1,751	2,172	1,819	1,550	1,013	612	276	278	268	424	762	<b>12,189</b>
Union MDA	52	75	93	79	66	42	24	11	10	10	15	31	<b>508</b>
Union NDA	1,468	2,084	2,720	2,152	1,817	1,162	699	360	323	300	482	944	<b>14,511</b>
Union SSMDA	644	668	887	615	571	360	229	169	427	153	283	380	<b>5,389</b>
Union WDA	838	1,177	1,546	1,249	1,030	680	421	217	208	186	279	491	<b>8,322</b>
North Comp Fuel	9	2	7	5	3	14	32	30	31	31	30	31	<b>225</b>
	4,636	6,262	8,059	6,448	5,479	3,556	2,190	1,141	1,354	1,022	1,634	2,858	<b>44,639</b>
Supplies													
TCPL Empress-Union NCDA	159	164	163	152	-	65	67	65	67	67	65	67	<b>1,100</b>
TCPL Empress-Union EDA	1,298	1,342	1,342	1,256	-	30	31	30	31	31	30	31	<b>5,452</b>
TCPL Empress-Union MDA	55	82	103	85	70	43	21	5	3	3	9	28	<b>508</b>
TCPL Empress-Union NDA	1,194	1,233	1,237	1,156	1,216	1,084	1,120	1,084	1,120	1,120	1,084	1,120	<b>13,770</b>
TCPL Empress-Union SSMDA	151	156	156	146	-	152	157	109	157	81	152	157	<b>1,572</b>
TCPL Empress-Union WDA	980	1,304	1,304	1,220	126	784	470	211	190	171	284	552	<b>7,593</b>
TCPL Parkway-Union EDA	-	-	-	-	-	1,402	1,448	1,402	1,448	1,448	1,402	1,448	<b>9,998</b>
TCPL Parkway-Union NDA	-	-	-	-	-	108	112	108	112	112	108	112	<b>772</b>
Dawn North	-	-	-	-	-	514	531	514	531	531	514	531	<b>3,666</b>
Total Supplies	3,837	4,281	4,305	4,015	1,412	4,181	3,957	3,528	3,660	3,564	3,647	4,046	<b>44,432</b>
Change in Inventory - wd/(inj)	799	1,981	3,754	2,433	4,067	(626)	(1,766)	(2,387)	(2,306)	(2,542)	(2,013)	(1,188)	<b>206</b>
Total Supplies + Inventory Change	4,636	6,262	8,059	6,448	5,479	3,556	2,190	1,141	1,354	1,022	1,634	2,858	<b>44,639</b>
<b>Total Demands</b>													
South	13,089	19,667	22,594	21,419	17,735	11,174	6,246	3,021	3,309	3,282	4,566	7,749	<b>133,853</b>
North	4,636	6,262	8,059	6,448	5,479	3,556	2,190	1,141	1,354	1,022	1,634	2,858	<b>44,639</b>
	<b>17,725</b>	<b>25,928</b>	<b>30,653</b>	<b>27,868</b>	<b>23,214</b>	<b>14,730</b>	<b>8,437</b>	<b>4,162</b>	<b>4,663</b>	<b>4,304</b>	<b>6,200</b>	<b>10,607</b>	<b>178,491</b>
<b>Total Supplies</b>													
South	11,195	11,190	11,190	10,468	11,190	10,943	11,308	10,943	11,308	11,308	10,943	11,308	<b>133,297</b>
North	3,837	4,281	4,305	4,015	1,412	4,181	3,957	3,528	3,660	3,564	3,647	4,046	<b>44,432</b>
	15,032	15,471	15,495	14,483	12,602	15,125	15,265	14,471	14,968	14,872	14,591	15,354	<b>177,729</b>
<b>Change in Inventory - wd/(inj)</b>													
South	1,895	8,476	11,404	10,951	6,545	231	(5,062)	(7,922)	(7,999)	(8,026)	(6,377)	(3,559)	<b>555</b>
North	799	1,981	3,754	2,433	4,067	(626)	(1,766)	(2,387)	(2,306)	(2,542)	(2,013)	(1,188)	<b>206</b>
	2,694	10,457	15,157	13,384	10,611	(395)	(6,828)	(10,310)	(10,305)	(10,567)	(8,390)	(4,747)	<b>762</b>
<b>Total Supplies + Inventory Change</b>	<b>17,725</b>	<b>25,928</b>	<b>30,653</b>	<b>27,868</b>	<b>23,214</b>	<b>14,730</b>	<b>8,437</b>	<b>4,162</b>	<b>4,663</b>	<b>4,304</b>	<b>6,200</b>	<b>10,607</b>	<b>178,491</b>

**Gas Supply Plan Memorandum  
Appendix C**

UNION GAS LIMITED

Summary of November 1, 2015 Upstream Transportation Contracts  
as at September 2015

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)	Rate Type
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h=f+g)	
<b>TransCanada Pipeline</b>										
1	Empress to Union NCDA FT	Empress	Union NCDA	10,756	GJ	31-Oct-2017	1.882		1.882	Tariff
2	Empress to Union EDA FT	Empress	Union EDA	59,101	GJ	31-Oct-2022	2.078		2.078	Tariff
3	Empress to Union NDA FT	Empress	Union NDA	63,445	GJ	31-Oct-2017	1.551		1.551	Tariff
4	Empress to Union WDA FT	Empress	Union WDA	51,407	GJ	31-Oct-2017	1.006		1.006	Tariff
5	Empress to Union SSMDA FT	Empress	Union SSMDA	8,843	GJ	31-Oct-2017	1.406		1.406	Tariff
6	Empress to Union MDA FT	Empress	Union MDA	5,565	GJ	31-Oct-2017	0.700		0.700	Tariff
7	Parkway to Union EDA FT	Parkway	Union EDA	35,000	GJ	31-Oct-2022	0.407		0.407	Tariff
8	Parkway to Union CDA FT	Parkway	Union CDA	16,000	GJ	31-Oct-2017	0.159		0.159	Tariff
9	Parkway to Union CDA FT	Parkway	Union CDA	61,888	GJ	31-Oct-2016	0.159		0.159	Tariff
10	Dawn to Union CDA FT	Dawn	Union CDA	8,000	GJ	31-Oct-2017	0.330		0.330	Tariff
11	TCPL FT - Total			320,005	GJ					
<b>TransCanada Storage Transportation Service Firm Withdrawal</b>										
12	NCDA	Parkway	Union NCDA	13,704	GJ	31-Oct-2022				
13	WDA	Parkway	Union WDA	31,420	GJ	31-Oct-2022				
14	SSMDA	Dawn	Union SSMDA	35,022	GJ	31-Oct-2022				
15	NDA	Parkway	Union NDA	48,375	GJ	31-Oct-2022				
16	EDA	Parkway	Union EDA	68,520	GJ	31-Oct-2022	0.407		0.407	Tariff
17	TCPL Firm STS Withdrawal - Total			197,041	GJ					
<b>TransCanada Storage Transportation Service Firm Injection</b>										
18	WDA	Union WDA	Parkway	3,150	GJ	31-Oct-2022	1.381		1.381	Tariff
19	EDA	Union EDA	Parkway	47,571	GJ	31-Oct-2022				
20	NDA	Union NDA	Parkway	49,100	GJ	31-Oct-2022	0.584		0.584	Tariff
21	TCPL Firm STS Injection - Total			99,821	GJ					
<b>Centra Transmission Holdings Inc.</b>										
22	Centra Transmission Holdings Inc.	Spruce	Union MDA	149.6	10 <sup>3</sup> m <sup>3</sup>	31-Oct-2016	0.479		0.479	Tariff
23	Centra Pipelines Minnesota Inc.	Sprague	Baudette	5,281	MCF	31-Oct-2016	0.131		0.131	Tariff
24	CTHI FT - Total			5,680	GJ		0.610		0.610	

Exchange Rate 1 US = 1.3157 CAD  
Conversion Factor 1.055056  
Heat Content (as of April 1/15) 37.97

Bank of Canada USD Close August 31, 2015

**Gas Supply Plan Memorandum  
Appendix D**

UNION GAS LIMITED

Summary of November 1, 2015 Upstream Transportation Contracts  
as at September 2015

**Southern 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)	Rate Type
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h=f+g)	
<b>TransCanada Pipeline</b>										
1	Dawn to Union CDA FT	Dawn	Union CDA	60,000	GJ	31-Oct-2017	0.330		0.330	Tariff
2	Empress to Union CDA FT	Empress	Union CDA	46,682	GJ	31-Oct-2017	1.939		1.939	Tariff
3	Empress to Union CDA FT	Empress	Union CDA	20,645	GJ	31-Dec-2017	1.939		1.939	Tariff
4	Niagara to Kirkwall	Niagara	Kirkwall	21,101	GJ	31-Oct-2022	0.228		0.228	Tariff
5	TCPL FT - Total			148,428	GJ					
<b>Alliance Pipelines/Vector Pipelines</b>										
6	Alliance	Northern Alberta	Cdn/US Interconnect	2,266.2	103M3	30-Nov-2015	0.939		0.939	Tariff
7	Alliance (L.P.)	Cdn/US Interconnect	Vector	80,000	MCF	30-Nov-2015	0.692		0.692	Tariff
8	Vector (L.P.) FT1	Chicago	Cdn/US Interconnect	80,000	DTH	30-Nov-2018	0.287	0.002	0.289	Fixed
9	Vector Canada FT1	Cdn/US Interconnect	Dawn (Union)	84,405	GJ	30-Nov-2018	0.019	0.000	0.019	Fixed
10	Alliance/Vector - Total			84,405	GJ		1.936	0.002	1.939	
<b>Panhandle Eastern Pipe Line Field Zone</b>										
11	PEPL FT	Panhandle Field Zone	Ojibway (Union)	25,000	DTH	31-Oct-2017	0.529	0.054	0.584	Tariff
12	PEPL EFT	Panhandle Field Zone	Ojibway (Union)	2,000	DTH	31-Oct-2017	0.399	0.054	0.454	Fixed
13	PEPL FT	Panhandle Field Zone	Ojibway (Union)	10,000	DTH	31-Oct-2016	0.529	0.054	0.584	Tariff
14	PEPL - Total			39,037	GJ					
<b>Trunkline Gas Company/Panhandle Eastern Pipe Line</b>										
15	Trunkline FT	East Louisiana	Bourbon	20,467	DTH	31-Oct-2017	0.144	0.018	0.161	Fixed
16	PEPL EFT	Bourbon	Ojibway (Union)	20,000	DTH	31-Oct-2017	0.093	0.015	0.108	Fixed
17	TGC/PEPL FT - Total			21,101	GJ		0.237	0.033	0.270	
<b>Vector Pipelines</b>										
18	Vector (L.P.) FT1	Chicago	Cdn/US Interconnect	81,000	DTH	30-Nov-2015	0.312	0.002	0.314	Fixed
19	Vector Canada FT1	Cdn/US Interconnect	Dawn (Union)	85,460	GJ	30-Nov-2015	0.000	0.000	0.000	Fixed
20	Vector - Total			85,460	GJ		0.312	0.002	0.314	
21	Vector (L.P.) FT1	Chicago	Cdn/US Interconnect	25,000	DTH	31-Oct-2017	0.225	0.002	0.227	Fixed
22	Vector Canada FT1	Cdn/US Interconnect	Dawn (Union)	26,376	GJ	31-Oct-2017	0.010	0.000	0.010	Fixed
23	Vector - Total			26,376	GJ		0.235	0.002	0.237	
<b>Michigan Consolidated Gas Company (MichCon)</b>										
24	MichCon	MichCon Generic	St. Clair (Union)	10,000	DTH	31-Oct-2016	0.004		0.004	Fixed
25	MichCon	MichCon Generic	St. Clair (Union)	60,000 *	DTH	31-Oct-2018	0.006		0.006	Fixed
26	MichCon - Total			73,854	GJ					
27	Market Based Transportation	Dominion South Point	Union Dawn	20,000	DTH	31-Oct-2016	1.568		1.568	Fixed
28	Market Based Transportation - Total			21,101	GJ					
<b>Other:</b>										
29	St.Clair Pipelines L.P. (St.Clair Pipeline)	St. Clair/Intl Border	St. Clair/Intl Border	214,000	GJ	31-Oct-2023	0.004		0.004	Fixed
30	St.Clair Pipelines L.P. (Bluewater Pipeline)	Bluewater/Intl Border	Bluewater/Intl Border	127,000	GJ	31-Oct-2023	0.022		0.022	Fixed

\* Contract start date is December 1, 2015

Exchange Rate 1 US = 1.3157 CAD  
Conversion Factor 1.055056  
Heat Content (as of April 1/15) 38.55

Bank of Canada USD Close August 31, 2015



**VOLUME BREAK POINT**

**Background**

In Union's 2013 Cost of Service (EB-2011-0210), Union proposed to reduce the annual volume breakpoint between the Union South Rate M1/Rate M2 and Union North Rate 01/Rate 10 general service rate classes from 50,000 m<sup>3</sup> to 5,000 m<sup>3</sup> and harmonize the Rate 01 and Rate 10 blocking structures with Rate M1 and Rate M2. Union proposed these rate design changes to improve the rate class homogeneity in the small volume rate classes (Rate M1 and Rate 01) and improve the rate class size in the large volume rate classes (Rate M2 and Rate 10).

In its Decision, the Board stated that Union's proposal to reduce the annual volume breakpoint had merit, but agreed with the submissions of Board staff and intervenors that Union's methodology to allocate costs was flawed and resulted in an inequitable allocation of costs between Rate M1 and Rate M2, and Rate 01 and Rate 10. Accordingly, the Board did not approve Union's rate design proposal and directed Union to complete a comprehensive cost allocation study.

In response to the Board's directive, Union completed a comprehensive update of its 2013 Board-approved cost allocation study to include the 5,000 m<sup>3</sup> annual volume breakpoint, and formed a working group with interested stakeholders to review the results of Union's updated cost allocation study. Union filed its directive response in Union's 2014 Rates proceeding (EB-2013-0365).

1 Based on Union's updated 2013 Board-approved cost allocation study and the resulting rate and  
2 bill impacts, Union did not propose to implement the 5,000 m<sup>3</sup> annual volume breakpoint or the  
3 harmonization of the blocking structures as part of its 2014-2018 IR term. The delivery bill  
4 increases for Rate M1 customers that would transition to Rate M2 based on the 5,000 m<sup>3</sup> annual  
5 volume breakpoint were greater than 40%. As a result, Union did not implement the annual  
6 volume breakpoint reduction proposal given the magnitude of the cost allocation impacts and the  
7 bill increases for these customers.

8  
9 In the EB-2013-0365 Settlement Agreement, at Section 10.8, it states:

10 *"In its EB-2011-0210 Decision, the Board directed Union to file a comprehensive cost*  
11 *allocation study to support Union's annual volume breakpoint reduction and rate block*  
12 *harmonization proposals for the Rate 01/Rate 10 and Rate M1/Rate M2 general service*  
13 *rate classes. The parties agree that they will jointly retain an independent consultant to*  
14 *conduct a study of the cost allocation and rate design associated with the Rate 01/Rate*  
15 *10 and Rate M1/Rate M2 general service rate classes. The cost of the study will be borne*  
16 *by Union, but the independent consultant will be instructed and supervised by a joint*  
17 *committee of Union and representatives of the other parties. The study will be filed not*  
18 *later than Union's 2016 rate application. The parties reserve the right to take any*  
19 *position in relation to any of the recommendations made by the independent consultant.*  
20 *The parties further agree that any recommendation by the consultant to decrease the*  
21 *monthly customer charge attributable to any of the above rate classes would, in any*  
22 *event, not be implemented by Union prior to 2019."*

The parties jointly retained energytools, llc. (“energytools”) to:

1. Examine the appropriateness of Union’s current distribution customer and distribution demand cost allocation methodologies for the General Service rate classes;
2. Examine the existing General Service rate design and rate structure, including a review of the volumetric breakpoint between the small volume and large volume General Service customers;
3. Review Union’s annual volume breakpoint reduction and rate block harmonization evidence, as filed in EB-2011-0210 and EB-2013-0365;
4. Review the cost allocation for Distribution Maintenance – Meter and Regulator Repairs O&M, if volume breakpoint changes are recommended;
5. Consider the implications on Union’s other rate classes, if changes are recommended to the General Service rate classes;
6. Provide a written report that details the consultant’s findings and presents recommendations with respect to Union’s cost allocation methodologies and rate design for the General Service rate classes by April 30, 2015; and,
7. Provide expert evidence and/or expert witness testimony before the Board in Union’s 2016 Rates proceeding, as required.

#### Process

Union extended an invitation to all EB-2013-0365 intervenors to participate in the volume breakpoint working group with Union and energytools. The intervenors that participated

1 included the Building Owners and Managers Association, Consumers Council of Canada,  
2 Canadian Manufacturers & Exporters, Energy Probe, the Federation of Rental-housing Providers  
3 of Ontario, the City of Kitchener, Nova Chemicals and the School Energy Coalition.

4  
5 energytools used the following approach to complete their review:

- 6 1. Develop a complete understanding of the Parties' positions with respect to Union's  
7 volume breakpoint reduction and rate block harmonization proposal;
- 8 2. Develop a complete understanding of Union's cost of service methodology and the basis  
9 for the allocation factors that are in dispute;
- 10 3. Develop a reasonable range of cost of service estimates when reasonable alternatives to  
11 the disputed allocation factors are employed;
- 12 4. Develop alternative rate structures consistent with the range of cost of service estimates  
13 developed above; and,
- 14 5. Determine if the basic proposal can be implemented with changes that are acceptable to  
15 all parties and that satisfy basic rate design principles.

16  
17 energytools held three meetings with the working group (December 17, 2014, February 11, 2015  
18 and March 25, 2015). The presentations can be found at Tab 4, Attachment 1. energytools  
19 presented their findings at the March 25, 2015 meeting and sought comments from the working  
20 group.

energytools emailed a draft report to the working group seeking comments before issuing their final report on May 22, 2015. The Final Report can be found at Tab 4, Attachment 2.

energytools Conclusions and Recommendations

energytools' Findings, Conclusions and Recommendations can be found at Section IV – 1 of Appendix B. energytools concluded that:

1. Union's general approach to cost of service is consistent with standard industry practices;
2. While it is certainly possible that the load characteristics of the customers in the South operating area will follow the load factor patterns observed in Exhibit II-1, it is exactly the opposite of the pattern exhibited by similar customers in the North operating area, does not seem logical and bears further evaluation;
3. The costs that have been summarized in Exhibits II-2 through II-5 above will serve as a reasonable benchmark of the cost to serve that will be applied to the rate design alternatives in the remainder of this evaluation;
4. It is not clear that the appropriate measure of rate class homogeneity is average usage by type of customer;
5. If the concern with respect to rate class homogeneity is matching the cost to serve the three types of customers (Residential, Commercial and Industrial), then a better rate design to accomplish this may be one that serves these major customer types under their own rate;
6. The calculated load factor of Union South customers declines as average annual consumption increases. This implies that the unit cost to serve these customers will

1 increase when expressed on a per unit of volume basis as average annual consumption  
2 increases and a declining block rate for these customers is not appropriate. As a result,  
3 Union's rate harmonization proposal moves away from cost based rates;

- 4 7. The rate impacts are too large to implement the volume breakpoint and rate  
5 harmonization proposals as presented by the Company in Case No. 2011-0210;
- 6 8. The rate continuity problem observed in Union's rate proposals can be traced to four  
7 factors: (i) the observed load factor of different rate classes; (ii) the monthly delivery  
8 charge for larger General Service customers relative to the monthly delivery charge that  
9 many of these customers face under the Board-approved rate designs; (iii) the merging of  
10 three types of customers (Residential, Commercial and Industrial) with significantly  
11 different costs of service into a single rate; and (iv) declining block rate structures that are  
12 not consistent with the underlying cost structures;
- 13 9. Because the rates resulting from the Company's volume breakpoint and rate  
14 harmonization proposals do not markedly outperform the approved rate structure under  
15 any of the rate design criteria chosen, there do not appear to be strong arguments in  
16 support of the Company's volume breakpoint and rate harmonization proposals; and,
- 17 10. There does not appear to be an alternative volume breakpoint proposal for the General  
18 Service rate classes that would better satisfy the rate design criteria established at the  
19 outset of the engagement, although an RCI-based rate design may have merit.

1 Energytools had three recommendations:

- 2 1. The primary recommendation that results from this review of the Company's class cost of  
3 service analysis is that Union should perform a full review of the load factor by rate class  
4 and segment of the rate class. Because the load factor is calculated using estimates of  
5 peak or design day by rate class and segment of the rate class as well as estimates of  
6 annual volumes for the same breakdowns, the recommendation also encompasses a  
7 review of these components as well.

8  
9 In response to this recommendation, on April 30, 2015, Union provided the results of a  
10 study to the parties that examined how it determines General Service load factors. Two  
11 critical findings of this study are:

- 12 • The actual 2013 Rate M2 load factor is higher than the 2013 Board-approved Rate  
13 M2 load factor (27.7% vs. 29.9%). The higher load factor is driven by the higher  
14 actual weather normalized Rate M2 volumes; and,  
15 • The increase in the Rate M2 weather normalized volumes increases the Rate M2  
16 billing units. Assuming the increase in distribution-demands costs allocated to Rate  
17 M2 is more than offset by the increase in the Rate M2 billing units, the Rate M2  
18 distribution-demand cost per unit of volume would decrease below Rate M1 levels.

19  
20 In other words, the study supports a conclusion that (1) the load factor results used in the  
21 Case No. EB-2011-0210 cost of service study were anomalous; and, (2) when peak  
22 demand and annual volume values are used that are consistent with a more intuitive load

1 factor result, the cost per unit volume will exhibit a monotonic decline as consumption  
2 increases, as expected. However, it must be cautioned that, depending on the level of  
3 monthly fixed charges associated with the different rates, the rate continuity problem may  
4 or may not be resolved. Certainly, with the current level of monthly fixed charges  
5 associated with the M1 and M2 rates, it will not be resolved.

6  
7 2. As discussed throughout this report, based on the evidence reviewed in the course of this  
8 engagement, no changes to the volume breakpoint between larger and smaller General  
9 Service customers are recommended. The primary problems with Union's proposals are  
10 that their implementation is accompanied by significant rate impacts and rate continuity  
11 problems, although the rates resulting from the Company's volume breakpoint and rate  
12 harmonization proposals do not markedly outperform the approved rate structure under  
13 any of the rate design criteria chosen.

14  
15 3. Also, as discussed throughout this report, an RCI-based rate design may have merit.  
16 Accordingly, it is recommended that Union consider and, if appropriate, evaluate the  
17 implementation of such a rate. However, in making this recommendation, it is fully  
18 recognized that such a rate design may not accomplish Union's original goal of achieving  
19 greater rate class homogeneity. It is also possible that implementation of such a proposal  
20 will be accompanied by significant rate impacts that would prevent its implementation.

1    Union Comments

2    Union agrees with Recommendations 1 and 2 above. Based on the rate impacts and rate  
3    continuity issues with the original proposal, Union will not implement the volume breakpoint  
4    changes for the general service rate classes. Union will review the volume breakpoints and the  
5    load factor results as part of its 2019 cost of service proceeding.

# Volume Breakpoint Study

Kick Off Meeting  
December 17, 2014



# Meeting Objectives

- Make sure that the study scope and approach are sufficient to address the concerns of all Parties as they relate to the Volume Breakpoint change proposal
- Obtain a complete understanding of the Parties' positions as they relate to the issues raised in EB-2011-0210 and EB-2013-0365
- Develop a plan and schedule for going forward



# Agenda

- Introductions
- Outline of Proposed Scope and Approach
- Discussion of Cost of Service Issues
- Discussion of Rate Design Issues
- Proposed Evaluation Criteria
- Work Plan and Schedule
- Open Discussion



# Scope of the Study

- Evaluate the appropriateness of Union's current distribution customer and distribution demand cost allocation methodologies for the general service rate classes.
- Evaluate the existing general service rate design and rate structure, including the volumetric breakpoint between the small volume and large volume general service customers.
- Evaluate Union's annual volume breakpoint reduction and rate block harmonization evidence, as filed in EB-2011-0210 and EB-2013-0365.
- Evaluate the cost allocation for Distribution Maintenance – Meter and Regulator Repairs O&M, if volume breakpoint changes are recommended.
- Evaluate the implications for Union's other rate classes, if changes are recommended to the general service rate classes.



# Study Approach

- Develop a complete understanding of the Parties' positions with respect to Union's volume breakpoint reduction and rate block harmonization proposal.
- Develop a complete understanding of Union's Cost of Service methodology and the basis for the allocation factors that are in dispute.
- Develop a reasonable range of Cost of Service estimates when reasonable alternatives to the disputed allocation factors are employed.
- Develop alternative rate structures consistent with the range of Cost of Service estimates developed above.
- Determine if the basic proposal can be implemented with changes that are acceptable to all parties and that satisfy basic rate design principles.



# Cost of Service Issues

- Are Union's current distribution customer and distribution demand cost allocation methodologies for the general service rate classes appropriate?
- Does Union's allocation of Distribution Maintenance - Meter and Regulator Repairs still reflect cost-causative principles after implementation of the new Rate 01/10 and M1/M2 volume breakpoints?



# Current Allocation Methodologies

- Union Position: The Company's class cost of service study, which incorporates Union's current distribution customer and distribution demand cost allocation methodologies for the general service rate classes, is appropriate.
- Parties' Positions
  - LPMA
    - Union's customer-weighting factor to determine the amount of customer-related costs that are associated with the customers that will be moving rate classes is inappropriate.
    - Union's allocation of the delivery-related costs for the group of customers that would be changing rate classes under Union's proposal is not appropriate.



# Current Allocation Methodologies

- Parties' Positions (cont.)
  - SEC
    - Shares LPMA concern about Union's customer-weighting factors, and believes that it leads to rate continuity issues.
  - Board Staff
    - Shares LPMA concern about Union's customer-weighting factors.
- To examine:
  - Is there support for Union's current distribution customer and distribution demand cost allocation methodologies for the general service rate classes appropriate?
  - Do reasonable alternatives to this approach yield significantly different answers?



# Distribution Maintenance - Meter and Regulator Repair

- Union Position: The classification and allocation of Union North and Union South distribution maintenance costs for meter and regulator repair in proportion to the distribution meter and regulator gross plant cost allocation, excluding the M1 and Rate 01 rate classes, harmonizes the cost allocation methodology between Union's North and South operation areas and better reflects Union's operating practices and cost allocation principles.
- Parties' Positions
  - LPMA: Supports Union's proposal, but questions whether it will still reflect cost-causative principles after implementation of the new Rate 01/10 and M1/M2 volume breakpoints.
- To examine: Does Union's proposal with respect to Distribution Maintenance - Meter and Regulator Repairs still reflect cost-causative principles after implementation of the new Rate 01/10 and M1/M2 volume breakpoints?



# Rate Design Issues

- Do the proposed volume breakpoint and rate design changes better reflect the Cost of Service?
- Are there rate structure issues or rate design principles that prevent Union from implementing the volume breakpoint change?
  - Rate Continuity
  - Rate Stability



# Conformance With Cost of Service

- Union Position: The proposed rate design changes will improve the rate class composition of Rate 01 and M1, will achieve more homogeneous rate classes and will improve the rate class size in Rate 10 and Rate M2, which will ensure viable large volume general service rate classes and improve rate stability.
- Parties' Positions: Board Staff, LPMA and SEC support Union's proposal in principle. However, these parties question the validity of the cost of service study and whether it supports the proposal.
- To examine: The cost of service issues outlined above.



# Rate Continuity

- Union Position: Union acknowledges a rate continuity problem, but states that it is not a problem with cost allocation, but a rate design problem, caused by revenue-neutral changes to the rate over time.
- Parties' Positions
  - SEC: The proposed M1 and M2 rates exhibit a significant discontinuity, which SEC believes is caused by an over-allocation of costs to the M2 rate class.
- To examine:
  - Cost of service issues from above.
  - Conformance of the costs and revenues.



# Rate Stability

- Union Position: Union is concerned about the rate and bill impacts of its proposal and, as a consequence is not proposing to implement the 5,000 m<sup>3</sup> annual volume breakpoint or the harmonization of the blocking structures as part of its 2014-2018 IRM term.
- Parties' Positions:
  - Board Staff: Staff is concerned with the rate impacts caused by Union's volume breakpoint and rate harmonization proposal.
  - LPMA: Union's proposal violates the principle of rate stability, at least for Union south customers.
- To examine:
  - Do rate stability issues persist if modifications are made to the cost of service study?
  - Are there alternative ways to implement the proposal that will mitigate rate stability concerns.



# Proposed Evaluation Criteria

- Rates should reflect the costs that the LDC incurs to provide service to customers in total and in all of the following dimensions: (1) seasonally; (2) intra-class; and (3) by cost classification (customer-related costs, demand-related costs and commodity-related costs).
- If there is more than one definition of the cost(s) to serve customers, rates should reflect the likely range of costs that the LDC incurs to provide service to that customer.
- Rates should produce a level of revenues that adequately compensates the utility under all conditions, such as colder or normal weather, changes in customer consumption patterns, or in the face of large natural gas cost changes.
- Rates should be stable and rate changes should reflect gradualism to minimize rate shock.
- Rates should exhibit continuity to avoid shifts among rates by large numbers of customers.
- Rates should be as simple as practical and must be understandable.



# Work Plan and Schedule

- Review cost of service methodology and evaluate Union's support for the disputed cost allocation factors and develop alternative cost of service scenarios. (February 18, 2015)
- Develop and circulate alternative rate design proposals. (April 1, 2015)
- Meet with group to discuss proposals. (April 15, 2015)
- Submit draft final report. (April 30, 2015)



# Open Discussion/Contact Information

- Open Discussion
- Contact Information

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# Volume Breakpoint Study

First Progress Meeting

February 11, 2015



# Meeting Objectives

- Provide a progress report on work performed since the Kick Off meeting of December 17, 2014
- Obtain feedback from the Parties on work performed
- Discuss the scope and schedule for going forward



# Agenda

- Discussion of Work Performed
  - Cost of Service
  - Rate Design
- Input from the Parties
- Work Plan and Schedule
- Open Discussion



# Analysis of Cost of Service Model

- Model Structure – Union relies on a traditional class cost of service structure to develop revenue responsibility by class:
  - Functionalization
    - More detailed than most class cost of service models
    - Functions are not affected by the volume breakpoint
  - Classification
    - Also more detailed than most class cost of service models
    - Classifications are not affected by the volume breakpoint
  - Allocation
    - Generally appropriate for Union's rate classes
    - The development of external allocation factors is affected by the volume breakpoint



# Analysis of Cost of Service Model

- Factors:
  - Functionalization
    - All factors appear to be reasonable
    - No functionalization factor changes as a result of a change in the volume breakpoint
  - Classification
    - All factors appear to be reasonable
    - No classification factor changes as a result of a change in the volume breakpoint
  - Allocation
    - External
      - Reviewed workpapers that generate these factors
      - Calculations appear to be correct
      - In general, factors themselves appear to be reasonable
    - Internally generated
      - Was able to verify these by replicating in my cost of service model
      - Calculations appear to be correct
      - Factors themselves appear to be reasonable



# Analysis of Cost of Service Model

- There appear to be no mathematical errors, based on my duplication of the cost of service results.
- In general, the study appears to have Board and intervenor approval, based on my review of the case files from EB-2011-0210 and EB-2013-0365.





# Classification Results

Union Gas Limited						
Ontario Energy Board Case No. EB-2011-0210						
2013 Board-Approved, 50,000 m3 Breakpoint						
SUMMARY OF CLASSIFICATION						
						Purchase Production System Supply
Line No.		Test Year \$	Customer \$	Demand \$	Commodity \$	\$
1	Revenue Requirement	1,666,630	431,724	603,644	55,955	575,308
2						
3	Operating Expenses:					
4						
5	Operating & Maintenance	1,119,149	213,316	272,174	58,818	574,840
6	Depreciation & Amortization	196,091	86,388	108,866	547	290
7	Taxes Other Than Income	63,272	18,677	44,574	15	6
8						
9	Total Operating Expenses	1,378,512	318,380	425,615	59,380	575,137
10						
11	Income Taxes:					
12						
13	State Income Taxes	0	0	0	0	0
14	Federal Income Taxes	31,531	12,158	19,710	(355)	18
15	Total Deferred Income Taxes	0	0	0	0	0
16	Amortization of ITC	0	0	0	0	0
17						
18	Total Income Taxes	31,531	12,158	19,710	(355)	18
19						
20	ADT Drawdown	(15,169)	(3,597)	(11,557)	(9)	(5)
21						
22	Return on Rate Base	271,756	104,784	169,876	(3,061)	158
23						
24	Total Rate Base	3,712,759	1,431,563	2,320,860	(41,822)	2,158
25						
26	Rate of Return	7.32%	7.32%	7.32%	7.32%	7.32%



# Allocation Results (Total)

Union Gas Limited							
Ontario Energy Board Case No. EB-2011-0210							
2013 Board-Approved, 50,000 m3 Breakpoint							
SUMMARY OF RESULTS							
Line No.		<b>Total Company</b>	<b>General Service Small (M1)</b>	<b>General Service Large (M2)</b>	<b>General Service Small (R01)</b>	<b>General Service Large (R10)</b>	<b>All Other Classes</b>
		\$	\$	\$	\$	\$	\$
1	Revenue Requirement	1,666,630	821,400	120,839	326,759	66,706	330,926
2							
3	Operating Expenses:						
4							
5	Operating & Maintenance	1,119,149	606,493	89,932	224,232	51,149	147,343
6	Depreciation & Amortization	196,091	79,228	9,959	39,032	5,762	62,111
7	Taxes Other Than Income	63,272	23,926	4,119	10,075	1,614	23,539
8							
9	Total Operating Expenses	1,378,512	709,647	104,010	273,339	58,524	232,993
10							
11	Income Taxes:						
12							
13	State Income Taxes	0	0	0	0	0	0
14	Federal Income Taxes	31,531	12,240	1,853	5,604	864	10,970
15	Total Deferred Income Taxes	0	0	0	0	0	0
16	Amortization of ITC	0	0	0	0	0	0
17							
18	Total Income Taxes	31,531	12,240	1,853	5,604	864	10,970
19							
20	ADT Drawdown	(15,169)	(5,973)	(995)	(478)	(125)	(7,597)
21							
22	Return on Rate Base	271,756	105,487	15,971	48,295	7,443	94,561
23							
24	Total Rate Base	3,712,759	1,441,171	218,198	659,805	101,689	1,291,896
25							
26	Rate of Return	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%



# Allocation Results (Customer)

Union Gas Limited							
Ontario Energy Board Case No. EB-2011-0210							
2013 Board-Approved, 50,000 m3 Breakpoint							
SUMMARY OF CUSTOMER COSTS							
Line No.		Total Company \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Revenue Requirement	431,724	281,794	8,746	118,053	4,855	18,276
2							
3	Operating Expenses:						
4							
5	Operating & Maintenance	213,316	143,562	4,505	54,550	1,418	9,281
6	Depreciation & Amortization	86,388	54,781	1,759	24,785	1,393	3,669
7	Taxes Other Than Income	18,677	12,554	297	5,151	71	605
8							
9	Total Operating Expenses	318,380	210,897	6,561	84,486	2,882	13,555
10							
11	Income Taxes:						
12							
13	State Income Taxes	0	0	0	0	0	0
14	Federal Income Taxes	12,158	7,716	238	3,490	205	509
15	Total Deferred Income Taxes	0	0	0	0	0	0
16	Amortization of ITC	0	0	0	0	0	0
17							
18	Total Income Taxes	12,158	7,716	238	3,490	205	509
19							
20	ADT Drawdown	(3,597)	(3,322)	(102)	0	0	(173)
21							
22	Return on Rate Base	104,784	66,503	2,049	30,078	1,768	4,385
23							
24	Total Rate Base	1,431,563	908,573	27,995	410,927	24,159	59,910
25							
26	Rate of Return	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%



# Allocation Results (Demand)

Union Gas Limited							
Ontario Energy Board Case No. EB-2011-0210							
2013 Board-Approved, 50,000 m3 Breakpoint							
SUMMARY OF DEMAND COSTS							
Line No.		Total Company \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Revenue Requirement	603,644	118,641	40,489	139,173	44,352	260,990
2							
3	Operating Expenses:						
4							
5	Operating & Maintenance	272,174	39,795	13,920	99,408	32,260	86,792
6	Depreciation & Amortization	108,866	24,111	8,114	14,119	4,344	58,177
7	Taxes Other Than Income	44,574	11,365	3,820	4,922	1,543	22,926
8							
9	Total Operating Expenses	425,615	75,271	25,854	118,449	38,147	167,895
10							
11	Income Taxes:						
12							
13	State Income Taxes	0	0	0	0	0	0
14	Federal Income Taxes	19,710	4,784	1,614	2,205	658	10,449
15	Total Deferred Income Taxes	0	0	0	0	0	0
16	Amortization of ITC	0	0	0	0	0	0
17							
18	Total Income Taxes	19,710	4,784	1,614	2,205	658	10,449
19							
20	ADT Drawdown	(11,557)	(2,642)	(890)	(478)	(125)	(7,422)
21							
22	Return on Rate Base	169,876	41,227	13,911	18,997	5,672	90,069
23							
24	Total Rate Base	2,320,860	563,251	190,052	259,545	77,487	1,230,526
25							
26	Rate of Return	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%



# Allocation Results (Commodity)

Union Gas Limited							
Ontario Energy Board Case No. EB-2011-0210							
2013 Board-Approved, 50,000 m3 Breakpoint							
SUMMARY OF COMMODITY COSTS							
Line No.		Total Company \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Revenue Requirement	55,955	3,213	2,060	7,663	2,510	40,510
2							
3	Operating Expenses:						
4							
5	Operating & Maintenance	58,818	5,683	2,012	8,489	2,503	40,132
6	Depreciation & Amortization	547	149	55	75	11	258
7	Taxes Other Than Income	15	3	1	2	0	8
8							
9	Total Operating Expenses	59,380	5,835	2,068	8,566	2,514	40,397
10							
11	Income Taxes:						
12							
13	State Income Taxes	0	0	0	0	0	0
14	Federal Income Taxes	(355)	(272)	(1)	(94)	(0)	12
15	Total Deferred Income Taxes	0	0	0	0	0	0
16	Amortization of ITC	0	0	0	0	0	0
17							
18	Total Income Taxes	(355)	(272)	(1)	(94)	(0)	12
19							
20	ADT Drawdown	(9)	(5)	(2)	(0)	(0)	(3)
21							
22	Return on Rate Base	(3,061)	(2,345)	(6)	(810)	(4)	103
23							
24	Total Rate Base	(41,822)	(32,035)	(79)	(11,062)	(53)	1,407
25							
26	Rate of Return	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%



# Allocation Results (Other)

Union Gas Limited								
Ontario Energy Board Case No. EB-2011-0210								
2013 Board-Approved, 50,000 m3 Breakpoint								
SUMMARY OF OTHER COSTS								
Line			Total	General Service	General Service	General Service	General Service	All Other
No.			Company	Small (M1)	Large (M2)	Small (R01)	Large (R10)	Classes
			\$	\$	\$	\$	\$	\$
1	Revenue Requirement		575,308	417,752	69,545	61,870	14,989	11,151
2								
3	Operating Expenses:							
4								
5	Operating & Maintenance		574,840	417,453	69,495	61,784	14,968	11,139
6	Depreciation & Amortization		290	186	31	53	13	7
7	Taxes Other Than Income		6	4	1	1	0	0
8								
9	Total Operating Expenses		575,137	417,644	69,527	61,838	14,981	11,146
10								
11	Income Taxes:							
12								
13	State Income Taxes		0	0	0	0	0	0
14	Federal Income Taxes		18	12	2	3	1	0
15	Total Deferred Income Taxes		0	0	0	0	0	0
16	Amortization of ITC		0	0	0	0	0	0
17								
18	Total Income Taxes		18	12	2	3	1	0
19								
20	ADT Drawdown		(5)	(4)	(1)	0	0	(0)
21								
22	Return on Rate Base		158	101	17	29	7	4
23								
24	Total Rate Base		2,158	1,382	230	396	96	54
25								
26	Rate of Return		7.32%	7.32%	7.32%	7.32%	7.32%	7.32%



# Allocation Results (Unit Costs)

Union Gas Limited										
Ontario Energy Board Case No. EB-2011-0210										
2013 Board-Approved, 50,000 m3 Breakpoint										
SUMMARY OF REVENUE REQUIREMENT BY FUNCTION AND CLASSIFICATION										
Line No.		Test Year				General Service Small (M1)	General Service Large (M2)	General Service Small (R01)	General Service Large (R10)	All Other Classes
		\$				\$	\$	\$	\$	\$
1	Revenue Requirement by Function:									
2										
3	Purchase Production System Supply	575,308				417,752	69,545	61,870	14,989	11,151
4	Purchase Production Other Supply	24,899				1,248	1,402	5,665	1,881	14,704
5	Purchase Production Demand	99,116				0	0	66,399	22,834	9,883
6	Storage Dehydrator Demand	316				113	38	43	11	111
7	Storage Dehydrator Commodity	154				56	19	19	6	54
8	Storage Deliverability	42,370				8,185	2,779	17,570	4,600	9,235
9	Storage Commodity	7,044				1,482	492	1,707	537	2,825
10	Storage Space	26,717				11,823	4,038	4,223	1,105	5,528
11	Storage System Integrity	8,550				1,118	377	3,926	1,029	2,100
12	Dawn Station Demand	20,034				1,724	579	675	177	16,879
13	Dawn Station Commodity	7,448				183	65	138	44	7,019
14	Dawn-Trafalgar Easterly Demand	144,927				8,268	2,778	5,411	1,417	127,053
15	Dawn-Trafalgar Easterly Commodity	15,206				181	64	133	42	14,787
16	Dawn-Trafalgar Westerly Commodity	28				0	0	0	0	28
17	Other Transmission Demand	47,099				19,871	6,676	0	0	20,552
18	Ojibway/St. Clair Demand	7,089				1,550	521	0	0	5,017
19	Ojibway/St. Clair Commodity	1,176				64	19	0	0	1,093
20	Distribution Demand	207,427				65,988	22,702	40,926	13,179	64,631
21	Distribution Customer	431,724				281,794	8,746	118,053	4,855	18,276
22										
23	Total Revenue Requirement	1,666,632				821,400	120,839	326,759	66,706	330,926
24										
25	Revenue Requirement by Classification:									
26										
27	Customer Revenue Requirement by Class	431,724				281,794	8,746	118,053	4,855	18,276
28	Demand Revenue Requirement by Class	603,645				118,641	40,489	139,173	44,352	260,990
29	Commodity Revenue Requirement by Class	55,955				3,213	2,060	7,663	2,510	40,510
30	Other Revenue Requirement by Class	575,308				417,752	69,545	61,870	14,989	11,151
31										
32	Total Revenue Requirement									
33										
34	Billing Determinants:									
35										
36	Customers	1,388,185				1,058,900	6,788	319,978	2,052	467
37	Design Day Demand	140,166				28,724	9,650	8,921	2,584	90,288
38	Volumes	14,129,331				2,939,543	975,571	884,421	322,887	9,006,908
39	Load Factor	27.62%				28.04%	27.70%	27.16%	34.24%	27.33%



# Allocation Results (Unit Costs)

Union Gas Limited Ontario Energy Board Case No. EB-2011-0210 2013 Board-Approved, 50,000 m3 Breakpoint									
SUMMARY OF UNIT COSTS BY FUNCTION AND CLASSIFICATION									
Line No.		Test Year			General Service Small (M1)	General Service Large (M2)	General Service Small (R01)	General Service Large (R10)	All Other Classes
		\$			\$	\$	\$	\$	\$
1	Unit Costs by Function:								
2									
3	Purchase Production System Supply	\$ 40.7173			\$ 142.1147	\$ 71.2866	\$ 69.9556	\$ 46.4228	\$ 1.2380
4	Purchase Production Other Supply	\$ 1.7623			\$ 0.4245	\$ 1.4370	\$ 6.4057	\$ 5.8252	\$ 1.6325
5	Purchase Production Demand	\$ 0.71			\$ -	\$ -	\$ 7.44	\$ 8.84	\$ 0.11
6	Storage Dehydrator Demand	\$ 0.00			\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
7	Storage Dehydrator Commodity	\$ 0.0109			\$ 0.0191	\$ 0.0191	\$ 0.0215	\$ 0.0186	\$ 0.0060
8	Storage Deliverability	\$ 0.30			\$ 0.28	\$ 0.29	\$ 1.97	\$ 1.78	\$ 0.10
9	Storage Commodity	\$ 0.4985			\$ 0.5043	\$ 0.5043	\$ 1.9298	\$ 1.6638	\$ 0.3137
10	Storage Space	\$ 0.19			\$ 0.41	\$ 0.42	\$ 0.47	\$ 0.43	\$ 0.06
11	Storage System Integrity	\$ 0.06			\$ 0.04	\$ 0.04	\$ 0.44	\$ 0.40	\$ 0.02
12	Dawn Station Demand	\$ 0.14			\$ 0.06	\$ 0.06	\$ 0.08	\$ 0.07	\$ 0.19
13	Dawn Station Commodity	\$ 0.5271			\$ 0.0621	\$ 0.0662	\$ 0.1566	\$ 0.1350	\$ 0.7793
14	Dawn-Trafalgar Easterly Demand	\$ 1.03			\$ 0.29	\$ 0.29	\$ 0.61	\$ 0.55	\$ 1.41
15	Dawn-Trafalgar Easterly Commodity	\$ 1.0762			\$ 0.0614	\$ 0.0655	\$ 0.1503	\$ 0.1296	\$ 1.6417
16	Dawn-Trafalgar Westerly Commodity	\$ 0.0020			\$ -	\$ -	\$ -	\$ -	\$ 0.0031
17	Other Transmission Demand	\$ 0.34			\$ 0.69	\$ 0.69	\$ -	\$ -	\$ 0.23
18	Ojibway/St. Clair Demand	\$ 0.05			\$ 0.05	\$ 0.05	\$ -	\$ -	\$ 0.06
19	Ojibway/St. Clair Commodity	\$ 0.0832			\$ 0.0216	\$ 0.0193	\$ -	\$ -	\$ 0.1214
20	Distribution Demand	\$ 1.48			\$ 2.30	\$ 2.35	\$ 4.59	\$ 5.10	\$ 0.72
21	Distribution Customer	\$ 25.92			\$ 22.18	\$ 107.37	\$ 30.75	\$ 197.14	\$ 3,258.85
22									
23									
24					\$ 4.13	\$ 4.20	\$ 15.60	\$ 17.17	\$ 2.89
25	Revenue Requirement by Classification:								
26									
27	Customer Revenue Requirement by Class	\$ 25.92			\$ 22.18	\$ 107.37	\$ 30.75	\$ 197.14	\$ 3,258.85
28	Demand Revenue Requirement by Class	\$ 42.7228			\$ 40.3602	\$ 41.5025	\$ 157.3609	\$ 137.3605	\$ 28.9767
29	Commodity Revenue Requirement by Class	\$ 3.9602			\$ 1.0930	\$ 2.1113	\$ 8.6639	\$ 7.7721	\$ 4.4976
30	Other Revenue Requirement by Class	\$ 40.7173			\$ 142.1147	\$ 71.2866	\$ 69.9556	\$ 46.4228	\$ 1.2380
31									
32									
33	Cost Composition by Classification:	%			%	%	%	%	%
34									
35	Customer Revenue Requirement by Class	39.56%			69.81%	17.05%	44.57%	9.39%	5.72%
36	Demand Revenue Requirement by Class	55.31%			29.39%	78.93%	52.54%	85.76%	81.62%
37	Commodity Revenue Requirement by Class	5.13%			0.80%	4.02%	2.89%	4.85%	12.67%



# Analysis of Cost of Service Model

- In general, the results appear to be reasonable
  - Based on meter and service costs and the mix of residential, commercial and industrial customers in the rate classes, one would expect (and we observe) higher customer-related unit costs for M2 and R10 customers than for M1 and R01 customers, respectively.
  - Based on the load factors, one would expect (and we observe) higher demand-related unit costs for M2 customers than for M1 customers and lower demand-related unit costs for R10 customers than for R01 customers.
  - Based on the relationship between supply volumes and total system throughput, one would expect (and we observe) that unit Purchase Production System Supply Costs are lower for M2 and R10 customers than for M1 and R01 customers, respectively.



# Analysis of Cost of Service Model

- The results for Purchase Production Other Supply appear anomalous
  - The primary reason for this result is the negative rate base associated with this function, which obtains because of the impact of the working capital associated with Agency Billing and Collection receivables on rate base.
  - The Company's study subscribes to the philosophy that, because ABC customers produce the rate base offset, they should receive the benefit in the form of lower rates.
  - An alternative could be to interpret these receivables as a system benefit, and allocate these benefits to all customers. However, this reallocation is unlikely to have a significant impact on the results because Purchase Production Other Supply costs make up only about 1.5% of the total revenue requirement.



# Cost of Service Conclusions

- Have duplicated the Company's cost of service model and have a working copy to evaluate any alternative volume breakpoint scenarios.
- Overall conclusion at this point: Union's overall approach to class cost of service analysis as reflected in the 2013 study is sound. The structure is appropriate, the factors are reasonable, there are no mathematical errors and the study appears to have Board (and intervenor) approval.
- To move forward, planning to use the Cost Composition by Classification from this study (adjusted for other revenues) to complete the study.
- The work described here satisfies the first objective of the RFP, to evaluate the appropriateness of Union's current distribution customer and distribution demand cost allocation methodologies for the general service rate classes.



# Remaining Issues

- Evaluate the existing general service rate design and rate structure, including the volumetric breakpoint between the small volume and large volume general service customers.
- Evaluate the cost allocation for Distribution Maintenance – Meter and Regulator Repairs O&M, if volume breakpoint changes are recommended.
- Evaluate the implications for Union's other rate classes, if changes are recommended to the general service rate classes.



# Rate Design Issues

- Do the proposed volume breakpoint and rate design changes better reflect the Cost of Service?
  - Preliminary review indicates that the proposed volume breakpoint and rate design changes will better reflect the underlying Cost of Service and therefore better satisfy the evaluation criteria discussed previously.
- Are there rate structure issues or rate design principles that prevent Union from implementing the volume breakpoint change?
  - Preliminary review indicates that the rate continuity issue may be caused not by an over-allocation of costs to the M2 rate class, but by the underlying consumption characteristics of the current M2 class.



# Rate Design Issues

- Rate Stability
  - All parties recognize the rate and bill impacts of the Volume Breakpoint proposal and, therefore the proposal violates the principle of rate stability, at least for Union south customers.
  - One alternative might be to eliminate any breakpoint based on size, but distinguish between small and large customers on the basis of “Residential,” “Commercial” and “Industrial” (RCI) customers.
    - The most significant unit cost differences can be traced to Distribution Customer costs, which use the RCI customer distinction to quantify.
    - An RCI-based rate design could improve the Company’s overall ability to recover fixed costs with limited customer bill impacts, thereby better satisfying the initial rate design evaluation criteria.
    - Differences in demand-related costs are currently, and would continue to be, collected from volumetric rates. This ensures that larger customers pay higher total demand charges, even if per unit demand rates are the same across customers.
    - All customers would pay a constant commodity-related cost (within Rate area), which appears to be consistent with at least the alternative cost study.



# Work Plan and Schedule

- Meet with group to review any further cost of service conclusions and to discuss alternative rate design proposals. (March 25, 2015)
- Circulate draft of report to group to review and meet with group (if necessary) to discuss. (April 15, 2015)
- Submit draft final report. (April 30, 2015)



# Open Discussion



# Volume Breakpoint Study

Second Progress Meeting

March 25, 2015



# Meeting Objectives

- Provide a progress report on work performed since the previous progress meeting of February 11, 2015
- Obtain feedback from the Parties on work performed
- Discuss the scope and schedule for going forward



# Agenda

- Discussion of Work Performed
  - Cost of Service Conclusions
  - Company Rate Design Philosophy
  - Application of Rate Design Criteria
- Input from the Parties
- Work Plan and Schedule
- Open Discussion



# Cost of Service Conclusions

- Have duplicated the Company's cost of service model and circulated a working copy for all parties to review.
- No party has objected to the overall conclusion: Union's overall approach to class cost of service analysis as reflected in the 2013 approved study is sound. The structure is appropriate, the factors are reasonable, there are no mathematical errors and the study appears to have Board (and intervenor) approval.
- The determination of load factor by size of customer does not appear to be consistent. This has an impact on the cost of service results, but has an even greater impact on the rate designs and how they conform with the cost of service results.
- The work with respect to the class cost of service model satisfies the first objective of the RFP, to evaluate the appropriateness of Union's current distribution customer and distribution demand cost allocation methodologies for the general service rate classes.



# Load Factor by Class

Volumes and Customers							
at 2013 Approved and 2014 Proposed Breakpoints							
Line No.	Particulars	Union North			Union South		
		Rate 01	Rate 10	Total	Rate M1	Rate M2	Total
		(a)	(b)	(c)=(a+b)	(d)	(e)	(f)=(d+e)
	2013 Approved at 50,000 m <sup>3</sup> breakpoint						
1	Customers	319,978	<b>2,052</b>	322,030	1,058,900	<b>6,788</b>	1,065,688
2	Annual Volume	884,421	322,887	1,207,308	2,939,543	975,571	3,915,114
3	Demand	8,921	2,584	11,505	28,724	9,650	38,374
4	Load Factor	27.2%	34.2%	28.8%	28.0%	27.7%	28.0%
	2014 Proposed at 5,000 m <sup>3</sup> breakpoint						
5	Customers	300,669	<b>21,361</b>	322,030	1,004,661	<b>61,027</b>	1,065,688
6	Annual Volume	643,947	563,361	1,207,308	2,134,461	1,780,653	3,915,114
7	Demand	6,426	5,081	11,507	21,444	16,930	38,374
8	Load Factor	27.5%	30.4%	28.7%	27.3%	28.8%	28.0%
	Transition to 5,000 m <sup>3</sup>						
9	Customers	(19,309)	<b>19,309</b>		(54,239)	<b>54,239</b>	
10	Annual Volume	(240,474)	240,474		(805,082)	805,082	
11	Demand	(2,495)	2,497		(7,279)	7,280	
12	Load Factor	26.4%	26.4%		30.3%	30.3%	
Load Factor by Consumption Level							
		Union North			Union South		
		< 5,000 m <sup>3</sup>	5,000 - 50,000 m <sup>3</sup>	> 50,000 m <sup>3</sup>	< 5,000 m <sup>3</sup>	5,000 - 50,000 m <sup>3</sup>	> 50,000 m <sup>3</sup>
13	Load Factor	27.5%	26.4%	34.2%	27.3%	30.3%	27.7%



# Allocation Results (Unit Costs)

Union Gas Limited Ontario Energy Board Case No. EB-2011-0210 2013 Board-Approved, 50,000 m3 Breakpoint						
SUMMARY OF REVENUE REQUIREMENT BY FUNCTION AND CLASSIFICATION						
Line No.	Test Year	General Service Small (M1)	General Service Large (M2)	General Service Small (R01)	General Service Large (R10)	All Other Classes
	\$	\$	\$	\$	\$	\$
1	Revenue Requirement by Function:					
2						
3	Purchase Production System Supply	575,308	417,752	69,545	61,870	14,989
4	Purchase Production Other Supply	24,899	1,248	1,401	5,665	1,881
5	Purchase Production Demand	99,115	0	0	66,398	22,834
6	Storage Dehydrator Demand	316	113	38	43	11
7	Storage Dehydrator Commodity	154	56	19	19	6
8	Storage Deliverability	42,370	8,185	2,779	17,570	4,600
9	Storage Commodity	7,044	1,482	492	1,707	537
10	Storage Space	26,717	11,823	4,038	4,223	1,105
11	Storage System Integrity	8,550	1,118	377	3,926	1,029
12	Dawn Station Demand	20,034	1,724	579	675	177
13	Dawn Station Commodity	7,448	183	65	138	44
14	Dawn-Trafalgar Easterly Demand	144,927	8,268	2,778	5,411	1,417
15	Dawn-Trafalgar Easterly Commodity	15,206	181	64	133	42
16	Dawn-Trafalgar Westerly Commodity	28	0	0	0	0
17	Other Transmission Demand	47,099	19,871	6,676	0	0
18	Ojibway/St. Clair Demand	7,089	1,550	521	0	0
19	Ojibway/St. Clair Commodity	1,176	64	19	0	0
20	Distribution Demand	207,427	65,988	22,702	40,926	13,179
21	Distribution Customer	431,724	281,794	8,746	118,053	4,855
22						
23	Total Revenue Requirement	1,666,630	821,400	120,839	326,759	66,706
24						
25	Other Revenue by Classification:					
26						
27	Customer Related Other Revenue	16,745	12,699	81	3,934	25
28	Demand Related Other Revenue	0	0	0	0	0
29	Commodity Related Other Revenue	3,453	2,525	34	883	10
30	Other Revenue	0	0	0	0	0
31						
32	Total Other Revenue	20,198	15,224	116	4,817	36
33						
34	Required Rate Revenue by Classification:					
35						
36	Customer Required Rate Revenue by Class	414,980	269,096	8,664	114,119	4,830
37	Demand Required Rate Revenue by Class	603,644	118,641	40,489	139,172	44,352
38	Commodity Required Rate Revenue by Class	52,502	688	2,025	6,779	2,499
39	Other Required Rate Revenue by Class	575,308	417,752	69,545	61,870	14,989
40						
41	Total Required Rate Revenue	1,646,432	806,177	120,723	321,941	66,670
42						
43	Billing Determinants:					
44						
45	Customers	1,388,185	1,058,900	6,788	319,978	2,052
46	Design Day Demand	140,166	28,724	9,650	8,921	2,584
47	Volumes	14,129,331	2,939,543	975,571	884,421	322,887
48	Load Factor	27.62%	28.04%	27.70%	27.16%	34.24%



Attachment 1



# Allocation Results (Unit Costs)

Union Gas Limited Ontario Energy Board Case No. EB-2011-0210 2013 Proposed, 5,000 m3 Breakpoint							
SUMMARY OF REVENUE REQUIREMENT BY FUNCTION AND CLASSIFICATION							
Line No.		Test Year \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Revenue Requirement by Function:						
2							
3	Purchase Production System Supply	575,308	303,428	183,869	46,190	30,669	11,151
4	Purchase Production Other Supply	24,899	657	1,992	4,215	3,331	14,704
5	Purchase Production Demand	99,115	0	0	48,204	41,027	9,883
6	Storage Dehydrator Demand	316	86	65	31	23	111
7	Storage Dehydrator Commodity	154	41	34	14	11	54
8	Storage Deliverability	42,370	6,256	4,708	12,606	9,564	9,235
9	Storage Commodity	7,044	1,076	898	1,242	1,002	2,825
10	Storage Space	26,717	9,157	6,704	3,030	2,298	5,528
11	Storage System Integrity	8,550	843	652	2,817	2,138	2,100
12	Dawn Station Demand	20,034	1,287	1,016	484	368	16,879
13	Dawn Station Commodity	7,448	133	114	101	81	7,019
14	Dawn-Trafalgar Easterly Demand	144,927	6,173	4,873	3,883	2,945	127,053
15	Dawn-Trafalgar Easterly Commodity	15,206	131	113	97	78	14,787
16	Dawn-Trafalgar Westerly Commodity	28	0	0	0	0	28
17	Other Transmission Demand	47,099	14,835	11,712	0	0	20,552
18	Ojibway/St. Clair Demand	7,089	1,157	914	0	0	5,017
19	Ojibway/St. Clair Commodity	1,176	46	36	0	0	1,093
20	Distribution Demand	207,427	49,291	39,399	29,513	24,592	64,631
21	Distribution Customer	431,724	252,164	38,376	110,098	12,811	18,276
22							
23	Total Revenue Requirement	1,666,630	646,763	295,477	262,525	130,939	330,927
24							
25	Other Revenue by Classification:						
26							
27	Customer Related Other Revenue	16,745	12,048	732	3,697	263	6
28	Demand Related Other Revenue	0	0	0	0	0	0
29	Commodity Related Other Revenue	3,453	2,424	136	844	50	0
30	Other Revenue	0	0	0	0	0	0
31							
32	Total Other Revenue	20,198	14,472	868	4,540	313	6
33							
34	Required Rate Revenue by Classification:						
35							
36	Customer Required Rate Revenue by Class	414,980	240,116	37,645	106,401	12,548	18,270
37	Demand Required Rate Revenue by Class	603,644	89,087	70,043	100,569	82,955	260,990
38	Commodity Required Rate Revenue by Class	52,502	(340)	3,053	4,825	4,454	40,510
39	Other Required Rate Revenue by Class	575,308	303,428	183,869	46,190	30,669	11,151
40							
41	Total Required Rate Revenue	1,646,432	632,291	294,609	257,985	130,626	330,921
42							
43	Billing Determinants:						
44							
45	Customers	1,388,185	1,004,661	61,027	300,669	21,361	467
46	Design Day Demand	140,166	21,444	16,930	6,426	5,078	90,288
47	Volumes	14,129,331	2,134,461	1,780,653	643,947	563,361	9,006,908
48	Load Factor	27.62%	27.27%	28.82%	27.45%	30.39%	27.33%



## Attachment 1

Page 48 of 76

# Company Rate Design Philosophy

- The General Service rate designs are two-part rates, where monthly customer charges collect identified customer-related costs from the class cost of service analysis and volumetric charges collect the identified demand- and commodity-related costs from the class cost of service analysis.
- M1/M2 base rates collect all costs from the class cost of service analysis except Purchase Production System costs and storage costs not related to System Integrity.
- 01/10 base rates collect all distribution costs, an allocated share of system integrity-related storage and transmission costs, and an allocated share of Purchase Production Other costs from the class cost of service analysis.
- Separate charges for Natural Gas Commodity, Upstream Transportation to Union and Storage except system integrity are also developed, but are not a part of this analysis.



# Review of Rate Design Criteria

- Rates should reflect the costs that the LDC incurs to provide service to customers in total and in all of the following dimensions: (1) seasonally; (2) intra-class; and (3) by cost classification (customer-related costs, demand-related costs and commodity-related costs).
- Rates should produce a level of revenues that adequately compensates the utility under all conditions, such as weather conditions that differ from “normal,” changes in customer consumption patterns, or in the face of large natural gas cost changes.
- Rates should be stable and rate changes should reflect gradualism to minimize rate shock.
- Rates should exhibit continuity to avoid shifts among rates by large numbers of customers.
- Rates should be as simple as practical and must be understandable.



# Application of Rate Design Criteria

- Minimize Subsidies
  - Seasonal
  - Intra-class
- Ability to produce revenues consistent with costs under a variety of conditions (Fixed Cost Recovery).
- Minimize rate shock.
- Achieve rate continuity.



# Seasonal Subsidies – Approved M1/M2

Calculation of Seasonal Subsidies - Modified Analysis									
Union South									
50,000 m³ Breakpoint									
2013 Approved - M1									
	Costs 1/		Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:	\$	269,096	12,706,802	\$	21.18	\$	21.00	per month	
Demand Related:	\$	97,402	28,724	\$	3.39				
Commodity Related:	\$	267	2,939,543	\$	0.0001		3.7795	First 100 m³	
							3.5730	Next 150 m³	
							3.0845	All Over 250 m³	
Average Annual Volume:			2,313.36						
Average Demand:			22.61						
Load Factor:			28.04%		0.98%				
Volumes 3/									
Month	Block 1	Block 2	Block 3	Block 4	Cost (\$)	Revenues (\$)	Difference (\$)		
January	100.0	150.0	154.8	-	\$ 34.63	\$ 34.91	\$ 0.29		0.83%
February	100.0	150.0	173.3	-	\$ 35.24	\$ 35.49	\$ 0.24		0.69%
March	100.0	150.0	99.3	-	\$ 32.78	\$ 33.20	\$ 0.42		1.28%
April	100.0	110.5	-	-	\$ 28.17	\$ 28.73	\$ 0.56		1.97%
May	100.0	20.3	-	-	\$ 25.17	\$ 25.50	\$ 0.33		1.31%
June	67.1	-	-	-	\$ 23.41	\$ 23.54	\$ 0.13		0.55%
July	50.9	-	-	-	\$ 22.87	\$ 22.92	\$ 0.06		0.24%
August	48.6	-	-	-	\$ 22.79	\$ 22.84	\$ 0.04		0.20%
September	50.9	-	-	-	\$ 22.87	\$ 22.92	\$ 0.06		0.24%
October	100.0	11.0	-	-	\$ 24.87	\$ 25.17	\$ 0.31		1.24%
November	100.0	66.6	-	-	\$ 26.71	\$ 27.16	\$ 0.45		1.67%
December	100.0	150.0	60.0	-	\$ 31.48	\$ 31.99	\$ 0.51		1.63%
Total	1,017.5	808.4	487.5	-	\$ 330.99	\$ 334.38	\$ 3.38		1.02%
						Mean Absolute Error, M1:	\$	0.28	1%
2013 Approved - M2									
	Costs 1/		Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:	\$	8,664	81,451	\$	106.37	\$	70.00	per month	
Demand Related:	\$	33,256	9,650	\$	3.45				
Commodity Related:	\$	1,892	975,571	\$	0.0019		4.1416	First 1,000 m³	
							4.0653	Next 6,000 m³	
							3.8379	Next 13,000 m³	
							3.5650	All Over 20,000 m³	
Average Annual Volume:			119,774						
Average Demand:			1,184.78						
Load Factor:			27.70%		0.99%				
Volumes 3/									
Month	Block 1	Block 2	Block 3	Block 4	Cost (\$)	Revenues (\$)	Difference (\$)		
January	1,000.0	6,000.0	13,000.0	840.7	\$ 857.22	\$ 884.24	\$ 27.01		3.15%
February	1,000.0	6,000.0	13,000.0	1,439.5	\$ 878.80	\$ 905.59	\$ 26.79		3.05%
March	1,000.0	6,000.0	10,247.5	-	\$ 727.77	\$ 748.63	\$ 20.86		2.87%
April	1,000.0	6,000.0	4,139.0	-	\$ 507.69	\$ 514.19	\$ 6.50		1.28%
May	1,000.0	5,348.0	-	-	\$ 335.08	\$ 328.83	\$ (6.25)		-1.87%
June	1,000.0	2,593.2	-	-	\$ 235.83	\$ 216.84	\$ (18.99)		-8.09%
July	1,000.0	1,155.9	-	-	\$ 184.05	\$ 158.41	\$ (25.64)		-13.93%
August	1,000.0	1,395.5	-	-	\$ 192.68	\$ 168.15	\$ (24.53)		-12.73%
September	1,000.0	1,635.0	-	-	\$ 201.31	\$ 177.89	\$ (23.42)		-11.64%
October	1,000.0	5,587.6	-	-	\$ 343.71	\$ 338.57	\$ (5.14)		-1.50%
November	1,000.0	6,000.0	2,581.9	-	\$ 451.59	\$ 454.43	\$ 2.84		0.63%
December	1,000.0	6,000.0	8,810.2	-	\$ 675.99	\$ 693.46	\$ 17.48		2.59%
Total	12,000.0	53,715.3	51,778.5	2,280.2	\$ 5,591.73	\$ 5,589.21	\$ (2.51)		-0.04%
						Mean Absolute Error, M2:	\$	17.12	5%
						South Mean Absolute Error, 2013 Approved:	\$	8.70	3%

Notes:

1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Notes:

1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"



# Seasonal Subsidies – Proposed M1/M2

Calculation of Seasonal Subsidies									
Union South									
5,000 m³ Breakpoint									
2013 Proposed - M1									
		Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:		\$ 240,116	12,055,926	\$ 19.92	\$ 21.00	per month			
Demand Related:		\$ 72,744	21,444	\$ 3.39	-				
Commodity Related:		\$ (614)	2,134,461	\$ (0.0003)	3.1389	First 100 m³			
					2.7839	Next 150 m³			
Average Annual Volume:			1,770		2.2862	All Over 250 m³			
Average Demand:			17.79						
Load Factor:			27.27%	1.00%					
Volumes 3/									
Month	Block 1	Block 2	Block 3	Block 4	Cost (\$)	Revenues (\$)	Difference (\$)	Difference (%)	
January	100.0	150.0	59.8	-	\$ 30.39	\$ 29.68	\$ (0.70)	-2.32%	
February	100.0	150.0	74.0	-	\$ 30.87	\$ 30.01	\$ (0.86)	-2.78%	
March	100.0	150.0	17.3	-	\$ 28.95	\$ 28.71	\$ (0.24)	-0.83%	
April	100.0	61.1	-	-	\$ 25.36	\$ 25.94	\$ 0.48	1.89%	
May	92.1	-	-	-	\$ 23.03	\$ 23.89	\$ 0.86	3.74%	
June	51.3	-	-	-	\$ 21.65	\$ 22.61	\$ 0.96	4.43%	
July	39.0	-	-	-	\$ 21.23	\$ 22.22	\$ 0.99	4.66%	
August	37.2	-	-	-	\$ 21.17	\$ 22.17	\$ 0.99	4.69%	
September	39.0	-	-	-	\$ 21.23	\$ 22.22	\$ 0.99	4.66%	
October	85.0	-	-	-	\$ 22.79	\$ 23.67	\$ 0.88	3.86%	
November	100.0	27.5	-	-	\$ 24.22	\$ 24.90	\$ 0.68	2.80%	
December	100.0	137.2	-	-	\$ 27.93	\$ 27.96	\$ 0.03	0.09%	
Total	943.5	675.8	151.2	-	\$ 298.83	\$ 303.88	\$ 5.05	1.69%	
						Mean Absolute Error, M1:		\$ 0.72	3%
2013 Proposed - M2									
		Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:		\$ 37,645	732,327	\$ 51.40	\$ 32.00	per month			
Demand Related:		\$ 57,914	16,930	\$ 3.42					
Commodity Related:		\$ 2,773	1,780,653	\$ 0.0016	4.4256	First 1,000 m³			
					4.2756	Next 6,000 m³			
					4.0756	Next 13,000 m³			
					3.7698	All Over 20,000 m³			
Average Annual Volume:			24,315						
Average Demand:			231.18						
Load Factor:			28.82%	0.95%					
Volumes 3/									
Month	Block 1	Block 2	Block 3	Block 4	Cost (\$)	Revenues (\$)	Difference (\$)	Difference (%)	
January	1,000.0	3,230.8	-	-	\$ 195.59	\$ 214.39	\$ 18.80	9.61%	
February	1,000.0	3,352.4	-	-	\$ 199.74	\$ 219.59	\$ 19.85	9.94%	
March	1,000.0	2,501.4	-	-	\$ 170.73	\$ 183.20	\$ 12.47	7.30%	
April	1,000.0	1,261.3	-	-	\$ 128.47	\$ 130.18	\$ 1.71	1.33%	
May	1,000.0	288.7	-	-	\$ 95.32	\$ 88.60	\$ (6.72)	-7.05%	
June	729.5	-	-	-	\$ 76.26	\$ 64.28	\$ (11.98)	-15.71%	
July	437.7	-	-	-	\$ 66.32	\$ 51.37	\$ (14.95)	-22.54%	
August	486.3	-	-	-	\$ 67.98	\$ 53.52	\$ (14.46)	-21.27%	
September	534.9	-	-	-	\$ 69.64	\$ 55.67	\$ (13.96)	-20.05%	
October	1,000.0	337.3	-	-	\$ 96.98	\$ 90.68	\$ (6.30)	-6.50%	
November	1,000.0	945.2	-	-	\$ 117.70	\$ 116.67	\$ (1.03)	-0.87%	
December	1,000.0	2,209.6	-	-	\$ 160.79	\$ 170.73	\$ 9.94	6.18%	
Total	10,188.4	14,126.7	-	-	\$ 1,445.53	\$ 1,438.89	\$ (6.63)	-0.46%	
						Mean Absolute Error, M2:		\$ 11.01	11%
						South Mean Absolute Error, 2013 Proposed:		\$ 5.87	7%
Notes:									
1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"									
2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"									
3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"									



# Seasonal Subsidies – Approved 01/10

Calculation of Seasonal Subsidies										
Union North										
50,000 m³ Breakpoint										
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 114,119	3,839,732	\$ 29.72	\$ 21.00 per month				
Demand Related:			\$ 46,610	8,921	\$ 5.22					
Commodity Related:			\$ (86)	884,421	\$ (0.0001)	9.7347 First 100 m³				
						9.2102 Next 200 m³				
Average Annual Volume:				2,303		8.8375 Next 200 m³				
Average Demand:				23.23		8.4955 Next 500 m³				
Load Factor:				27.16%	1.01%	8.2130 Over 1,000 m³				
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 10										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711 Next 70,000 m³				
Average Annual Volume:				131,100		3.0159 Over 100,000 m³				
Average Demand:				1,049.17						
Load Factor:				34.23%	0.80%					
2013 Approved - 01										
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/				
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month				
Demand Related:			\$ 14,668	2,584	\$ 5.68					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m³				
						6.2934 Next 9,000 m³				
						5.4872 Next 20,000 m³				
						4.9711				

Notes:

1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"



# Seasonal Subsidies – Proposed 01/10

Calculation of Seasonal Subsidies											
Union North											
5,000 m³ Breakpoint											
2013 Proposed - 01											
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/					
Customer Related:			\$ 106,401	3,608,090	\$ 29.49	\$ 21.00	per month				
Demand Related:			\$ 33,592	6,430	\$ 5.22	-					
Commodity Related:			\$ (210)	643,947	\$ (0.0003)	10.1347	First 100 m³				
						9.9979	Next 150 m³				
Average Annual Volume:				1,785		9.7489	All Over 250 m³				
Average Demand:				17.82							
Load Factor:				27.44%	1.00%						
Volumes 3/											
Month	Block 1	Block 2	Block 3	Block 4	Block 5	Cost (\$)	Revenues (\$)	Difference (\$)	Difference (%)		
January	100.0	150.0	70.7	-	-	-	46.12	53.02	6.91	14.98%	
February	100.0	150.0	26.6	-	-	\$ 43.83	48.73	4.90	11.17%		
March	100.0	137.6	-	-	-	\$ 41.81	44.89	3.08	7.38%		
April	100.0	37.2	-	-	-	\$ 36.60	34.85	(1.75)	-4.78%		
May	77.5	-	-	-	-	\$ 33.51	28.86	(4.65)	-13.88%		
June	39.6	-	-	-	-	\$ 31.54	25.01	(6.53)	-20.70%		
July	32.3	-	-	-	-	\$ 31.17	24.28	(6.89)	-22.10%		
August	37.4	-	-	-	-	\$ 31.43	24.79	(6.64)	-21.13%		
September	55.2	-	-	-	-	\$ 32.35	26.60	(5.76)	-17.79%		
October	100.0	2.6	-	-	-	\$ 34.81	31.40	(3.41)	-9.80%		
November	100.0	80.7	-	-	-	\$ 38.86	39.20	0.35	0.89%		
December	100.0	150.0	37.2	-	-	\$ 44.38	49.76	5.38	12.13%		
Total	942.1	708.1	134.6	-	-	\$ 446.40	431.39	(15.01)	-3.36%		
						Mean Absolute Error, 01: \$ 4.69					13%
2013 Proposed - 10											
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/					
Customer Related:			\$ 12,548	256,331	\$ 48.95	\$ 32.00	per month				
Demand Related:			\$ 27,686	5,081	\$ 5.45	-					
Commodity Related:			\$ 369	563,361	\$ 0.0007	6.4117	First 1,000 m³				
						5.9605	Next 6,000 m³				
						5.4605	Next 13,000 m³				
						4.9035	All Over 20,000 m³				
Average Annual Volume:				21,978							
Average Demand:				198.22							
Load Factor:				30.38%	0.90%						
Volumes 3/											
Month	Block 1	Block 2	Block 3	Block 4	Block 5	Cost (\$)	Revenues (\$)	Difference (\$)	Difference (%)		
January	1,000.0	2,233.5	-	-	-	\$ 209.98	229.25	19.27	9.18%		
February	1,000.0	1,910.9	-	-	-	\$ 193.91	210.01	16.10	8.30%		
March	1,000.0	1,745.2	-	-	-	\$ 185.66	200.14	14.48	7.80%		
April	1,000.0	729.5	-	-	-	\$ 135.08	139.60	4.52	3.34%		
May	1,000.0	276.7	-	-	-	\$ 112.53	112.61	0.08	0.07%		
June	905.0	-	-	-	-	\$ 94.02	90.03	(4.00)	-4.25%		
July	534.5	-	-	-	-	\$ 75.57	66.27	(9.30)	-12.31%		
August	780.0	-	-	-	-	\$ 87.79	82.01	(5.79)	-6.59%		
September	928.1	-	-	-	-	\$ 95.17	91.50	(3.67)	-3.85%		
October	1,000.0	536.9	-	-	-	\$ 125.49	128.12	2.63	2.10%		
November	1,000.0	1,294.8	-	-	-	\$ 163.23	173.29	10.06	6.16%		
December	1,000.0	2,103.0	-	-	-	\$ 203.48	221.47	17.99	8.84%		
Total	11,147.5	10,830.4	-	-	-	\$ 1,681.92	1,744.29	62.37	3.71%		
						Mean Absolute Error, 10: \$ 8.99					6%
						North Mean Absolute Error, 2013 Proposed: \$ 6.84					10%
Notes:											
1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"											
2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"											
3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"											



# Seasonal Subsidies

- The performance of any rate structure on the basis of its ability to minimize seasonal subsidies is determined by assumptions related to demand charges.
  - If demand charges are assumed to vary directly with volumes of natural gas consumed, then rates that collect such charges in the volumetric portion of the rate will fare well under a seasonal subsidy criterion.
  - If demand charges are assumed to reflect fixed charges that are established through the planning process as those needed to meet the design day demand, then rates that collect such charges in the volumetric portion of the rate will fare poorly under a seasonal subsidy criterion.
    - Summer rates collect far less than the cost to serve customers in the summer, based on the approved Class Cost of Service Study.
    - Winter rates collect far more than the cost to serve customers in the winter, based on the approved Class Cost of Service Study.
- This evaluation adopts the first assumption, consistent with the Union rate design philosophy.
- Under this assumption and using Mean Absolute Error (MAE) and Mean Absolute Percentage Error (MAPE) criteria, there is a modest improvement in the reduction of seasonal subsidies under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint.



# Intraclass Subsidies – Approved

## M1/M2

Calculation of Intraclass Subsidies							
Union South							
50,000 m³ Breakpoint							
2013 Approved - M1							
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/		
Customer Related:	\$ 269,096	12,706,802	\$ 21.18	\$	21.00	per month	
Demand Related:	\$ 97,402	28,724	\$ 3.39		-		
Commodity Related:	\$ 267	2,939,543	\$ 0.0001		3.7795	First 100 m³	
					3.5730	Next 150 m³	
					3.0845	All Over 250 m³	
2013 Approved - M2							
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/		
Customer Related:	\$ 8,664	81,451	\$ 106.37	\$	70.00	per month	
Demand Related:	\$ 33,256	9,650	\$ 3.45		-		
Commodity Related:	\$ 1,892	975,571	\$ 0.0019		4.1416	First 1,000 m³	
					4.0653	Next 6,000 m³	
					3.8379	Next 13,000 m³	
					3.5650	All Over 20,000 m³	
Annual Volume	Load Factor	Demand	Cost	Revenues 3/	Difference		
(m³/year)	(%)	(m³)	(\$)	(\$)	(\$)		(%)
1,800	28.0%	17.59	\$ 313.93	\$ 317.46	\$ 3.53		1.12%
2,200	28.0%	21.50	\$ 327.22	\$ 330.66	\$ 3.44		1.05%
2,600	28.0%	25.41	\$ 340.52	\$ 343.77	\$ 3.26		0.96%
3,000	28.0%	29.31	\$ 353.81	\$ 356.77	\$ 2.97		0.84%
5,000	28.0%	48.86	\$ 420.26	\$ 420.72	\$ 0.46		0.11%
6,000	28.0%	58.63	\$ 453.48	\$ 452.08	\$ (1.41)		-0.31%
7,000	28.0%	68.40	\$ 486.71	\$ 483.38	\$ (3.33)		-0.68%
10,000	28.0%	97.72	\$ 586.39	\$ 577.10	\$ (9.29)		-1.58%
20,000	28.0%	195.43	\$ 918.65	\$ 886.04	\$ (32.60)		-3.55%
30,000	28.0%	293.15	\$ 1,250.90	\$ 1,194.49	\$ (56.41)		-4.51%
50,000	28.0%	488.58	\$ 1,915.42	\$ 1,811.40	\$ (104.02)		-5.43%
60,000	27.7%	593.51	\$ 3,438.18	\$ 3,266.21	\$ (171.98)		-5.00%
70,000	27.7%	692.42	\$ 3,798.46	\$ 3,658.44	\$ (140.03)		-3.69%
80,000	27.7%	791.34	\$ 4,158.74	\$ 4,049.67	\$ (109.08)		-2.62%
100,000	27.7%	989.18	\$ 4,879.31	\$ 4,827.62	\$ (51.69)		-1.06%
200,000	27.7%	1,978.36	\$ 8,482.12	\$ 8,568.31	\$ 86.19		1.02%
300,000	27.7%	2,967.53	\$ 12,084.93	\$ 12,218.03	\$ 133.10		1.10%
500,000	27.7%	4,945.89	\$ 19,290.56	\$ 19,424.78	\$ 134.22		0.70%
South Mean Absolute Error, Approved:					\$ 58.17		1.96%
Notes:							
1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							
2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							
3/ From Table 5 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							



# Intraclass Subsidies – Proposed M1/M2

Calculation of Intraclass Subsidies							
Union South							
5,000 m³ Breakpoint							
2013 Proposed - M1							
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/		
Customer Related:	\$ 240,116	12,055,926	\$ 19.92	\$	21.00	per month	
Demand Related:	\$ 72,744	21,444	\$ 3.39		-		
Commodity Related:	\$ (614)	2,134,461	\$ (0.0003)		3.1389	First 100 m³	
					2.7839	Next 150 m³	
					2.2862	All Over 250 m³	
2013 Proposed - M2							
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/		
Customer Related:	\$ 37,645	732,327	\$ 51.40	\$	32.00	per month	
Demand Related:	\$ 57,914	16,930	\$ 3.42		-		
Commodity Related:	\$ 2,773	1,780,653	\$ 0.0016		4.4256	First 1,000 m³	
					4.2756	Next 6,000 m³	
					4.0756	Next 13,000 m³	
					3.7698	All Over 20,000 m³	
Annual Volume	Load Factor	Demand	Cost	Revenues 3/	Difference		
(m³/year)	(%)	(m³)	(\$)	(\$)	(\$)	(%)	
1,800	27.3%	18.08	\$ 299.83	\$ 304.65	\$ 4.82	1.61%	
2,200	27.3%	22.10	\$ 313.35	\$ 314.76	\$ 1.41	0.45%	
2,600	27.3%	26.12	\$ 326.86	\$ 324.75	\$ (2.12)	-0.65%	
3,000	27.3%	30.14	\$ 340.38	\$ 334.62	\$ (5.76)	-1.69%	
5,000	27.3%	50.23	\$ 407.97	\$ 382.81	\$ (25.15)	-6.17%	
6,000	28.8%	57.05	\$ 821.33	\$ 649.36	\$ (171.98)	-20.94%	
7,000	28.8%	66.55	\$ 855.42	\$ 693.07	\$ (162.34)	-18.98%	
10,000	28.8%	95.08	\$ 957.66	\$ 823.12	\$ (134.53)	-14.05%	
20,000	28.8%	190.15	\$ 1,298.47	\$ 1,253.82	\$ (44.65)	-3.44%	
30,000	28.8%	285.23	\$ 1,639.28	\$ 1,682.73	\$ 43.45	2.65%	
50,000	28.8%	475.38	\$ 2,320.90	\$ 2,531.95	\$ 211.05	9.09%	
60,000	28.8%	570.45	\$ 2,661.71	\$ 2,947.88	\$ 286.17	10.75%	
70,000	28.8%	665.53	\$ 3,002.52	\$ 3,362.86	\$ 360.34	12.00%	
80,000	28.8%	760.60	\$ 3,343.33	\$ 3,776.96	\$ 433.63	12.97%	
100,000	28.8%	950.75	\$ 4,024.95	\$ 4,601.20	\$ 576.25	14.32%	
200,000	28.8%	1,901.51	\$ 7,433.05	\$ 8,561.13	\$ 1,128.09	15.18%	
300,000	28.8%	2,852.26	\$ 10,841.14	\$ 12,421.99	\$ 1,580.85	14.58%	
500,000	28.8%	4,753.77	\$ 17,657.34	\$ 20,045.86	\$ 2,388.52	13.53%	
South Mean Absolute Error, Proposed:					\$ 420.06	9.61%	
Notes:							
1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							
2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							
3/ From Table 5 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							



# Intraclass Subsidies – Approved 01/10

Calculation of Intraclass Subsidies							
Union North							
50,000 m³ Breakpoint							
2013 Approved - 01							
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/		
Customer Related:	\$ 114,119	3,839,732	\$ 29.72	\$	21.00	per month	
Demand Related:	\$ 46,610	8,921	\$ 5.22		-		
Commodity Related:	\$ (86)	884,421	\$ (0.0001)		9.7347	First 100 m³	
					9.2102	Next 200 m³	
					8.8375	Next 200 m³	
					8.4955	Next 500 m³	
					8.2130	Over 1,000 m³	
2013 Approved - 10							
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/		
Customer Related:	\$ 4,830	24,629	\$ 196.11	\$	70.00	per month	
Demand Related:	\$ 14,668	2,584	\$ 5.68		-		
Commodity Related:	\$ 245	322,887	\$ 0.0008		7.7070	First 1,000 m³	
					6.2934	Next 9,000 m³	
					5.4872	Next 20,000 m³	
					4.9711	Next 70,000 m³	
					3.0159	Over 100,000 m³	
Annual Volume	Load Factor	Demand	Cost	Revenues 3/	Difference		
(m³/year)	(%)	(m³)	(\$)	(\$)	(\$)		(%)
1,800	27.2%	18.16	\$ 451.33	\$ 422.65	\$ (28.68)		-6.36%
2,200	27.2%	22.19	\$ 472.38	\$ 459.15	\$ (13.23)		-2.80%
2,600	27.2%	26.23	\$ 493.42	\$ 495.30	\$ 1.88		0.38%
3,000	27.2%	30.26	\$ 514.46	\$ 531.25	\$ 16.79		3.26%
5,000	27.2%	50.43	\$ 619.67	\$ 706.50	\$ 86.83		14.01%
6,000	27.2%	60.52	\$ 672.27	\$ 792.76	\$ 120.49		17.92%
7,000	27.2%	70.61	\$ 724.87	\$ 877.89	\$ 153.01		21.11%
10,000	27.2%	100.87	\$ 882.68	\$ 1,130.30	\$ 247.62		28.05%
20,000	27.2%	201.74	\$ 1,408.72	\$ 1,961.33	\$ 552.60		39.23%
30,000	27.2%	302.60	\$ 1,934.76	\$ 2,786.54	\$ 851.78		44.03%
50,000	27.2%	504.34	\$ 2,986.83	\$ 4,432.36	\$ 1,445.53		48.40%
60,000	34.2%	480.17	\$ 5,124.59	\$ 4,785.64	\$ (338.95)		-6.61%
70,000	34.2%	560.20	\$ 5,586.46	\$ 5,412.57	\$ (173.90)		-3.11%
80,000	34.2%	640.22	\$ 6,048.34	\$ 6,014.80	\$ (33.53)		-0.55%
100,000	34.2%	800.28	\$ 6,972.08	\$ 7,181.99	\$ 209.91		3.01%
200,000	34.2%	1,600.56	\$ 11,590.78	\$ 12,859.81	\$ 1,269.03		10.95%
300,000	34.2%	2,400.84	\$ 16,209.48	\$ 18,184.35	\$ 1,974.87		12.18%
500,000	34.2%	4,001.40	\$ 25,446.89	\$ 28,435.60	\$ 2,988.70		11.74%
North Mean Absolute Error, Approved:					\$ 583.74		15.21%
Notes:							
1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							
2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							
3/ From Table 6 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"							



# Intraclass Subsidies – Proposed 01/10

Calculation of Intraclass Subsidies						
Union North						
5,000 m³ Breakpoint						
2013 Proposed - 01						
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/	
Customer Related:	\$ 106,401	3,608,030	\$ 29.49	\$	21.00	per month
Demand Related:	\$ 33,592	6,430	\$ 5.22		-	
Commodity Related:	\$ (210)	643,947	\$ (0.0003)		10.1347	First 100 m³
					9.9979	Next 150 m³
					9.7489	All Over 250 m³
2013 Proposed - 10						
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/	
Customer Related:	\$ 12,548	256,331	\$ 48.95	\$	32.00	per month
Demand Related:	\$ 27,686	5,081	\$ 5.45		-	
Commodity Related:	\$ 369	563,361	\$ 0.0007		6.4117	First 1,000 m³
					5.9605	Next 6,000 m³
					5.4605	Next 13,000 m³
					4.9035	All Over 20,000 m³
Annual Volume (m³/year)	Load Factor (%)	Demand (m³)	Cost (\$)	Revenues 3/ (\$)	Difference (\$)	
1,800	27.4%	17.97	\$ 447.19	\$ 432.90	\$ (14.29)	-3.20%
2,200	27.4%	21.97	\$ 467.93	\$ 472.36	\$ 4.44	0.95%
2,600	27.4%	25.96	\$ 488.66	\$ 511.75	\$ 23.09	4.72%
3,000	27.4%	29.96	\$ 509.40	\$ 551.07	\$ 41.67	8.18%
5,000	27.4%	49.93	\$ 613.08	\$ 747.12	\$ 134.04	21.86%
6,000	30.4%	54.11	\$ 886.23	\$ 768.70	\$ (117.53)	-13.26%
7,000	30.4%	63.13	\$ 936.03	\$ 832.68	\$ (103.35)	-11.04%
10,000	30.4%	90.19	\$ 1,085.43	\$ 1,018.40	\$ (67.03)	-6.18%
20,000	30.4%	180.38	\$ 1,583.42	\$ 1,625.12	\$ 41.70	2.63%
30,000	30.4%	270.57	\$ 2,081.41	\$ 2,225.08	\$ 143.67	6.90%
50,000	30.4%	450.95	\$ 3,077.39	\$ 3,416.33	\$ 338.93	11.01%
60,000	30.4%	541.14	\$ 3,575.38	\$ 3,990.75	\$ 415.37	11.62%
70,000	30.4%	631.34	\$ 4,073.37	\$ 4,557.98	\$ 484.61	11.90%
80,000	30.4%	721.53	\$ 4,571.36	\$ 5,121.53	\$ 550.17	12.04%
100,000	30.4%	901.91	\$ 5,567.34	\$ 6,244.28	\$ 676.94	12.16%
200,000	30.4%	1,803.82	\$ 10,547.24	\$ 11,601.33	\$ 1,054.08	9.99%
300,000	30.4%	2,705.72	\$ 15,527.15	\$ 16,684.91	\$ 1,157.76	7.46%
500,000	30.4%	4,509.54	\$ 25,486.95	\$ 26,656.38	\$ 1,169.43	4.59%
North Mean Absolute Error, Proposed:				\$	363.23	8.87%
Notes:						
1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"						
2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"						
3/ From Table 6 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"						

Notes:

1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

3/ From Table 6 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"



# Intraclass Subsidies

- The proposed M1/M2 rate performs worse than the approved M1/M2 rate when evaluated on the basis of intraclass subsidies.
- The proposed 01/10 rate performs better than the approved 01/10 rate when evaluated on the basis of intraclass subsidies.
- Overall, intraclass subsidies are greater under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint when evaluated using the MAE and MAPE criteria.



# Fixed Cost Recovery

Calculation of Fixed Cost Recovery									
Union South									
50,000 m <sup>3</sup> Breakpoint									
Volume Range	M1 Volumes	M2 Volumes	Total	Fixed M1	Variable M1	Fixed M2	Variable M2	% Demand Cost Recovery	
0-100	885,353	5,702	891,054	\$ 33,382	\$ 81	\$ 225	\$ 11	25%	
101-250	786,168	8,552	794,720	\$ 28,019	\$ 72	\$ 338	\$ 17	21%	
251-1,000	1,268,023	38,793	1,306,816	\$ 38,997	\$ 115	\$ 1,531	\$ 75	30%	
1,001-7,000	-	258,156	258,156	\$ -	\$ -	\$ 9,994	\$ 501	7%	
7,001-20,000	-	291,703	291,703	\$ -	\$ -	\$ 10,630	\$ 566	8%	
>20,000	-	372,665	372,665	\$ -	\$ -	\$ 12,563	\$ 723	9%	
Total	2,939,543	975,571	3,915,114	\$ 100,398	\$ 267	\$ 35,281	\$ 1,892	100%	
5,000 m <sup>3</sup> Breakpoint									
Volume Range	M1 Volumes	M2 Volumes	Total	Fixed M1	Variable M1	Fixed M2	Variable M2	% Demand Cost Recovery	Difference in Demand Cost Recovery
0-100	824,336	23,434	847,771	\$ 26,112	\$ (237)	\$ 1,001	\$ 36	21%	-4%
101-250	722,101	35,152	757,253	\$ 20,310	\$ (208)	\$ 1,501	\$ 55	17%	-8%
251-1,000	588,024	403,781	991,805	\$ 13,612	\$ (169)	\$ 17,241	\$ 629	23%	-15%
1,001-7,000	-	650,995	650,995	\$ -	\$ -	\$ 26,820	\$ 1,014	20%	-2%
7,001-20,000	-	294,626	294,626	\$ -	\$ -	\$ 11,549	\$ 459	9%	-1%
>20,000	-	372,665	372,665	\$ -	\$ -	\$ 13,468	\$ 580	10%	0%
Total	2,134,461	1,780,653	3,915,114	\$ 60,034	\$ (614)	\$ 71,580	\$ 2,773	100%	



# Fixed Cost Recovery

## Calculation of Fixed Cost Recovery

### Union North

#### 50,000 m<sup>3</sup> Breakpoint

Volume Range	01 Volumes	10 Volumes	Total	Fixed 01	Variable 01	Fixed 10	Variable 10	% Demand Cost Recovery
0-100	260,791	1,724	262,515	\$ 25,175	\$ 211.98	\$ 131.64	\$ 1.23	26%
101-250	222,091	2,586	224,677	\$ 20,274	\$ 180.52	\$ 197.45	\$ 1.85	21%
251-1,000	291,442	19,372	310,813	\$ 25,493	\$ 236.89	\$ 1,479.09	\$ 13.87	28%
1,001-7,000	110,097	85,236	195,333	\$ 8,953	\$ 89.49	\$ 5,303.14	\$ 61.05	15%
7,001-20,000	-	83,281	83,281	\$ -	\$ -	\$ 4,853.68	\$ 59.65	5%
>20,000	-	130,689	130,689	\$ -	\$ -	\$ 6,058.32	\$ 93.60	6%
Total	884,421	322,887	1,207,308	\$ 79,896	\$ 718.89	\$ 18,023.31	\$ 231.26	100%

#### 5,000 m<sup>3</sup> Breakpoint

Volume Range	01 Volumes	10 Volumes	Total	Fixed 01	Variable 01	Fixed 10	Variable 10	% Demand Cost Recovery	Difference in Demand Cost Recovery
0-100	238,995	8,203	247,198	\$ 24,007	\$ 214	\$ 520	\$ 5	25%	0%
101-250	273,645	12,304	285,949	\$ 27,113	\$ 245	\$ 781	\$ 8	29%	8%
251-1,000	131,307	168,133	299,439	\$ 12,683	\$ 118	\$ 10,669	\$ 111	24%	4%
1,001-7,000	-	186,596	186,596	\$ -	\$ -	\$ 10,999	\$ 123	11%	1%
7,001-20,000	-	77,769	77,769	\$ -	\$ -	\$ 4,195	\$ 51	4%	1%
>20,000	-	110,357	110,357	\$ -	\$ -	\$ 5,338	\$ 73	6%	0%
Total	643,947	563,361	1,207,308	\$ 63,804	\$ 577	\$ 32,502	\$ 373	100%	



# Fixed Cost Recovery

## Calculation of Fixed Cost Recovery

### Total Company

#### 50,000 m<sup>3</sup> Breakpoint

Volume Range	M1/01 Volumes	M2/10 Volumes	Total	Fixed M1/01	Variable M1/01	Fixed M2/10	Variable M2/10	% Demand Cost Recovery
0-100	1,146,144	7,426	1,153,569	\$ 58,557	\$ 293	\$ 357	\$ 12	25%
101-250	1,008,259	11,138	1,019,398	\$ 48,293	\$ 252	\$ 535	\$ 18	21%
251-1,000	1,559,465	58,165	1,617,629	\$ 64,491	\$ 352	\$ 3,011	\$ 89	30%
1,001-7,000	110,097	343,392	453,489	\$ 8,953	\$ 89	\$ 15,297	\$ 562	7%
7,001-20,000	-	374,984	374,984	\$ -	\$ -	\$ 15,483	\$ 625	8%
>20,000	-	503,353	503,353	\$ -	\$ -	\$ 18,621	\$ 816	9%
Total	3,823,965	1,298,458	5,122,423	\$ 180,293	\$ 986	\$ 53,304	\$ 2,123	100%

#### 5,000 m<sup>3</sup> Breakpoint

Volume Range	M1/01 Volumes	M2/10 Volumes	Total	Fixed M1/01	Variable M1/01	Fixed M2/10	Variable M2/10	% Demand Cost Recovery	Difference in Demand Cost Recovery
0-100	1,063,332	31,637	1,094,969	\$ 50,119	\$ (23)	\$ 1,521	\$ 42	23%	-3%
101-250	995,746	47,456	1,043,201	\$ 47,423	\$ 38	\$ 2,282	\$ 63	22%	-2%
251-1,000	719,331	571,914	1,291,245	\$ 26,296	\$ (51)	\$ 27,910	\$ 740	24%	-7%
1,001-7,000	-	837,591	837,591	\$ -	\$ -	\$ 37,819	\$ 1,137	17%	-1%
7,001-20,000	-	372,395	372,395	\$ -	\$ -	\$ 15,744	\$ 510	7%	0%
>20,000	-	483,022	483,022	\$ -	\$ -	\$ 18,807	\$ 653	8%	0%
Total	2,778,408	2,344,014	5,122,423	\$ 123,838	\$ (36)	\$ 104,083	\$ 3,145	100%	



# Fixed Cost Recovery

- Under both the approved breakpoint and the proposed breakpoint, Union collects the customer-related distribution costs in monthly fixed charges. Thus, the ability to recover fixed customer-related charges is the same under both approved and proposed rates.
- There is a different cost structure and different blocking under the proposed breakpoint for North rates. Because the volumetric charges of both rates collect demand-related distribution charges, and because demand-related distribution charges are largely fixed charges, this aspect of the Company's proposal will have an impact on Union's ability to recover its fixed costs.
- The proposed rate structure performs worse from a total Company perspective when evaluated on the basis of its ability to collect fixed charges.



# Gradualism

Calculation of Rate Impacts					Calculation of Rate Impacts				
Union South					Union North				
	2013 Approved Rates - M1		2013 Proposed Rates - M1			2013 Approved Rates - 01		2013 Proposed Rates - 01	
	\$	21.00 per month	\$	21.00 per month		\$	21.00 per month	\$	21.00 per month
		3.7795 First 100 m <sup>3</sup>		3.1389 First 100 m <sup>3</sup>			9.7347 First 100 m <sup>3</sup>		10.1347 First 100 m <sup>3</sup>
		3.5730 Next 150 m <sup>3</sup>		2.7839 Next 150 m <sup>3</sup>			9.2102 Next 200 m <sup>3</sup>		9.9979 Next 150 m <sup>3</sup>
		3.0845 All Over 250 m <sup>3</sup>		2.2862 All Over 250 m <sup>3</sup>			8.8375 Next 200 m <sup>3</sup>		9.7489 All Over 250 m <sup>3</sup>
							8.4955 Next 500 m <sup>3</sup>		
							8.2130 Over 1,000 m <sup>3</sup>		
	2013 Approved Rates - M2		2013 Proposed Rates - M2			2013 Approved Rates - 10		2013 Proposed Rates - 10	
	\$	70.00 per month	\$	32.00 per month		\$	70.00 per month	\$	32.00 per month
		4.1416 First 1,000 m <sup>3</sup>		4.4256 First 1,000 m <sup>3</sup>			7.7070 First 1,000 m <sup>3</sup>		6.4117 First 1,000 m <sup>3</sup>
		4.0653 Next 6,000 m <sup>3</sup>		4.2756 Next 6,000 m <sup>3</sup>			6.2934 Next 9,000 m <sup>3</sup>		5.9605 Next 6,000 m <sup>3</sup>
		3.8379 Next 13,000 m <sup>3</sup>		4.0756 Next 13,000 m <sup>3</sup>			5.4872 Next 20,000 m <sup>3</sup>		5.4605 Next 13,000 m <sup>3</sup>
		3.5650 All Over 20,000 m <sup>3</sup>		3.7698 All Over 20,000 m <sup>3</sup>			4.9711 Next 70,000 m <sup>3</sup>		4.9035 All Over 20,000 m <sup>3</sup>
							3.0159 Over 100,000 m <sup>3</sup>		
Annual Volume	Approved Revenues	Proposed Revenues	Difference		Annual Volume	Approved Revenues	Proposed Revenues	Difference	
(m <sup>3</sup> /year)	(\$)	(\$)	(\$)	(%)	(m <sup>3</sup> /year)	(\$)	(\$)	(\$)	(%)
1,800	\$ 317.46	\$ 304.65	\$ (12.81)	-4.04%	1,800	\$ 422.65	\$ 432.90	\$ 10.25	2.42%
2,200	\$ 330.66	\$ 314.76	\$ (15.90)	-4.81%	2,200	\$ 459.15	\$ 472.36	\$ 13.21	2.88%
2,600	\$ 343.77	\$ 324.75	\$ (19.03)	-5.54%	2,600	\$ 495.30	\$ 511.75	\$ 16.45	3.32%
3,000	\$ 356.77	\$ 334.62	\$ (22.16)	-6.21%	3,000	\$ 531.25	\$ 551.07	\$ 19.82	3.73%
5,000	\$ 420.72	\$ 382.81	\$ (37.91)	-9.01%	5,000	\$ 706.50	\$ 747.12	\$ 40.62	5.75%
6,000	\$ 452.08	\$ 649.36	\$ 197.28	43.64%	6,000	\$ 792.76	\$ 768.70	\$ (24.05)	-3.03%
7,000	\$ 483.38	\$ 693.07	\$ 209.69	43.38%	7,000	\$ 877.89	\$ 832.68	\$ (45.20)	-5.15%
10,000	\$ 577.10	\$ 823.12	\$ 246.03	42.63%	10,000	\$ 1,130.30	\$ 1,018.40	\$ (111.90)	-9.90%
20,000	\$ 886.04	\$ 1,253.82	\$ 367.78	41.51%	20,000	\$ 1,961.33	\$ 1,625.12	\$ (336.20)	-17.14%
30,000	\$ 1,194.49	\$ 1,682.73	\$ 488.23	40.87%	30,000	\$ 2,786.54	\$ 2,225.08	\$ (561.46)	-20.15%
50,000	\$ 1,811.40	\$ 2,531.95	\$ 720.55	39.78%	50,000	\$ 4,432.36	\$ 3,416.33	\$ (1,016.04)	-22.92%
60,000	\$ 3,266.21	\$ 2,947.88	\$ (318.33)	-9.75%	60,000	\$ 4,785.64	\$ 3,990.75	\$ (794.89)	-16.61%
70,000	\$ 3,658.44	\$ 3,362.86	\$ (295.58)	-8.08%	70,000	\$ 5,412.57	\$ 4,557.98	\$ (854.59)	-15.79%
80,000	\$ 4,049.67	\$ 3,776.96	\$ (272.71)	-6.73%	80,000	\$ 6,014.80	\$ 5,121.53	\$ (893.27)	-14.85%
100,000	\$ 4,827.62	\$ 4,601.20	\$ (226.43)	-4.69%	100,000	\$ 7,181.99	\$ 6,244.28	\$ (937.71)	-13.06%
200,000	\$ 8,568.31	\$ 8,561.13	\$ (7.17)	-0.08%	200,000	\$ 12,859.81	\$ 11,601.33	\$ (1,258.48)	-9.79%
300,000	\$ 12,218.03	\$ 12,421.99	\$ 203.96	1.67%	300,000	\$ 18,184.35	\$ 16,684.91	\$ (1,499.44)	-8.25%
500,000	\$ 19,424.78	\$ 20,045.86	\$ 621.08	3.20%	500,000	\$ 28,435.60	\$ 26,656.38	\$ (1,779.22)	-6.26%



# Gradualism

- As the Company has found, there are significant rate impacts associated with the Company's proposed M1/M2 rates.
- The fixed monthly charge increase for M1/M2 customers who consume from 5,000-50,000 m<sup>3</sup>/year is unlikely to ever be overcome by reductions in volumetric rates of sufficient magnitude to limit the increases to these customers to less than 10%.
- Rate impacts associated with the Company's proposed 01/10 rates would be minimal and, from the standpoint of gradualism, these rates could be implemented.



# Continuity

Rate Continuity Union South					Rate Continuity Union North				
	2013 Approved Rates - M1		2013 Proposed Rates - M1			2013 Approved Rates - 01		2013 Proposed Rates - 01	
	\$ 21.00	per month	\$ 21.00	per month		\$ 21.00	per month	\$ 21.00	per month
	3.7795	First 100 m <sup>3</sup>	3.1389	First 100 m <sup>3</sup>		9.7347	First 100 m <sup>3</sup>	10.1347	First 100 m <sup>3</sup>
	3.5730	Next 150 m <sup>3</sup>	2.7839	Next 150 m <sup>3</sup>		9.2102	Next 200 m <sup>3</sup>	9.9979	Next 150 m <sup>3</sup>
	3.0845	All Over 250 m <sup>3</sup>	2.2862	All Over 250 m <sup>3</sup>		8.8375	Next 200 m <sup>3</sup>	9.7489	All Over 250 m <sup>3</sup>
						8.4955	Next 500 m <sup>3</sup>		
						8.2130	Over 1,000 m <sup>3</sup>		
	2013 Approved Rates - M2		2013 Proposed Rates - M2			2013 Approved Rates - 10		2013 Proposed Rates - 10	
	\$ 70.00	per month	\$ 32.00	per month		\$ 70.00	per month	\$ 32.00	per month
	4.1416	First 1,000 m <sup>3</sup>	4.4256	First 1,000 m <sup>3</sup>		7.7070	First 1,000 m <sup>3</sup>	6.4117	First 1,000 m <sup>3</sup>
	4.0653	Next 6,000 m <sup>3</sup>	4.2756	Next 6,000 m <sup>3</sup>		6.2934	Next 9,000 m <sup>3</sup>	5.9605	Next 6,000 m <sup>3</sup>
	3.8379	Next 13,000 m <sup>3</sup>	4.0756	Next 13,000 m <sup>3</sup>		5.4872	Next 20,000 m <sup>3</sup>	5.4605	Next 13,000 m <sup>3</sup>
	3.5650	All Over 20,000 m <sup>3</sup>	3.7698	All Over 20,000 m <sup>3</sup>		4.9711	Next 70,000 m <sup>3</sup>	4.9035	All Over 20,000 m <sup>3</sup>
						3.0159	Over 100,000 m <sup>3</sup>		
Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Approved Unit Cost (\$)	Proposed Unit Cost (\$)	Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Approved Unit Cost (\$)	Proposed Unit Cost (\$)
1,800	\$ 317.46	\$ 304.65	\$ 0.1764	\$ 0.1693	1,800	\$ 422.65	\$ 432.90	\$ 0.2348	\$ 0.2405
2,200	\$ 330.66	\$ 314.76	\$ 0.1503	\$ 0.1431	2,200	\$ 459.15	\$ 472.36	\$ 0.2087	\$ 0.2147
2,600	\$ 343.77	\$ 324.75	\$ 0.1322	\$ 0.1249	2,600	\$ 495.30	\$ 511.75	\$ 0.1905	\$ 0.1968
3,000	\$ 356.77	\$ 334.62	\$ 0.1189	\$ 0.1115	3,000	\$ 531.25	\$ 551.07	\$ 0.1771	\$ 0.1837
5,000	\$ 420.72	\$ 382.81	\$ 0.0841	\$ 0.0766	5,000	\$ 706.50	\$ 747.12	\$ 0.1413	\$ 0.1494
6,000	\$ 452.08	\$ 649.36	\$ 0.0753	\$ 0.1082	6,000	\$ 792.76	\$ 768.70	\$ 0.1321	\$ 0.1281
7,000	\$ 483.38	\$ 693.07	\$ 0.0691	\$ 0.0990	7,000	\$ 877.89	\$ 832.68	\$ 0.1254	\$ 0.1190
10,000	\$ 577.10	\$ 823.12	\$ 0.0577	\$ 0.0823	10,000	\$ 1,130.30	\$ 1,018.40	\$ 0.1130	\$ 0.1018
20,000	\$ 886.04	\$ 1,253.82	\$ 0.0443	\$ 0.0627	20,000	\$ 1,961.33	\$ 1,625.12	\$ 0.0981	\$ 0.0813
30,000	\$ 1,194.49	\$ 1,682.73	\$ 0.0398	\$ 0.0561	30,000	\$ 2,786.54	\$ 2,225.08	\$ 0.0929	\$ 0.0742
50,000	\$ 1,811.40	\$ 2,531.95	\$ 0.0362	\$ 0.0506	50,000	\$ 4,432.36	\$ 3,416.33	\$ 0.0886	\$ 0.0683
60,000	\$ 3,266.21	\$ 2,947.88	\$ 0.0544	\$ 0.0491	60,000	\$ 4,785.64	\$ 3,990.75	\$ 0.0798	\$ 0.0665
70,000	\$ 3,658.44	\$ 3,362.86	\$ 0.0523	\$ 0.0480	70,000	\$ 5,412.57	\$ 4,557.98	\$ 0.0773	\$ 0.0651
80,000	\$ 4,049.67	\$ 3,776.96	\$ 0.0506	\$ 0.0472	80,000	\$ 6,014.80	\$ 5,121.53	\$ 0.0752	\$ 0.0640
100,000	\$ 4,827.62	\$ 4,601.20	\$ 0.0483	\$ 0.0460	100,000	\$ 7,181.99	\$ 6,244.28	\$ 0.0718	\$ 0.0624
200,000	\$ 8,568.31	\$ 8,561.13	\$ 0.0428	\$ 0.0428	200,000	\$ 12,859.81	\$ 11,601.33	\$ 0.0643	\$ 0.0580
300,000	\$ 12,218.03	\$ 12,421.99	\$ 0.0407	\$ 0.0414	300,000	\$ 18,184.35	\$ 16,684.91	\$ 0.0606	\$ 0.0556
500,000	\$ 19,424.78	\$ 20,045.86	\$ 0.0388	\$ 0.0401	500,000	\$ 28,435.60	\$ 26,656.38	\$ 0.0569	\$ 0.0533



# Continuity

- As the parties have identified, there are rate continuity problems with M1/M2 rate proposal.
  - With the approved rate, the continuity occurs at the current 50,000 m<sup>3</sup>/year breakpoint.
  - With the proposed rate, the continuity occurs at the proposed 5,000 m<sup>3</sup>/year breakpoint.
- This result can be directly tied to the calculated/assumed load factor of these customers. Under the approved rates, the load factor declines from 28.0% to 27.7% at the 50,000 m<sup>3</sup>/year breakpoint. Thus, customers who consume more than 50,000 m<sup>3</sup>/year are responsible for more demand related costs on a per unit volume basis, as well as higher monthly fixed charges. Furthermore, this problem is exacerbated by a declining block rate design for these customers: the load factor/cost of service would indicate an inverted rate is more appropriate.
- Under the proposed rates, the load factor increases slightly and demand costs on a per unit basis decline, but not enough to overcome the increase in fixed monthly charges until consumption exceeds approximately 11,725 m<sup>3</sup>/year.



# Conclusions Regarding the Company's Proposed Alternative

- There do not appear to be strong arguments in support of the Company's 5,000 m<sup>3</sup>/year breakpoint as it does not markedly outperform the approved rate structure under any of the rate design criteria chosen.
  - There is a modest reduction of seasonal subsidies under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint.
  - Intraclass subsidies are greater under the proposed 5,000 m<sup>3</sup>/year breakpoint than the approved 50,000 m<sup>3</sup>/year breakpoint.
  - The proposed rate structure performs worse on the basis of its ability to collect fixed charges.
  - There are significant rate impacts associated with the Company's proposed M1/M2 rates.
  - There are rate continuity problems with M1/M2 rate proposal.



# Alternatives

- Potential alternatives that might better satisfy these criteria.
  - Phase in the breakpoint reduction in successive rate cases until the desired breakpoint is achieved.
  - Eliminate any breakpoint based on size, but distinguish between small and large customers either on the basis of “Residential,” “Commercial” and “Industrial” (RCI) customers or meter size.



# Phase-in Alternative

- The primary problem with the modified breakpoint proposal is that the rate impacts for the transitional customers in the South (those whose annual consumption is between the proposed 5,000 m<sup>3</sup>/year breakpoint and the approved 50,000 m<sup>3</sup>/year breakpoint) are significant (>10%).
- Based on a simplified rate analysis of alternative breakpoints, there does not appear to be an alternative that would lessen the impact of the rate change to acceptable levels.
- There do not appear to be sufficient economies of scale as consumption increases to reduce the cost to serve and the corresponding rates of higher volume customers to levels that would reduce the rate impact to acceptable levels.



# Meter Size Alternative

- The most significant unit cost differences can be traced to Distribution Customer costs, which already use the RCI customer distinction to quantify. Based on the 2013 approved class cost of service study, it is possible to derive the following distribution customer costs for South customers:
  - Residential - \$19.28/customer/month
  - Commercial - \$43.60/customer/month
  - Industrial - \$138.39/customer/month
- Under this alternative, all customers would pay a constant commodity-related cost (within Rate area), which appears to be consistent with the cost studies.
- Differences in demand-related costs are currently, and would continue to be, collected from volumetric rates. This ensures that larger customers pay higher total demand charges, even if per unit demand rates are the same across customers.
- This type of rate design would minimize the impact of the load factor on specific sub-groups of customers (<5,000; >5,000,<50,000; >50,000), so long as the average annual consumption of each of the new customer classes is sufficient to overcome any increase in the new monthly customer charges.
- Further analysis of this rate structure would be needed to ensure that it meets the Company's rate class homogeneity and rate class size goals.



# Remaining Issues

- There does not appear to be an alternative volume breakpoint proposal for the general service rate classes that would better satisfy the rate design criteria established at the outset of the engagement. Therefore, no change to the cost allocation for Distribution Maintenance – Meter and Regulator Repairs O&M, that was approved by the board in 2013 is recommended.
- There does not appear to be an alternative rate proposal for the general service rate classes that would better satisfy the rate design criteria established at the outset of the engagement. Therefore, no changes are recommended and there are no implications for Union's other rate classes.



# Work Plan and Schedule

- Circulate draft of report to group to review and meet with group (if necessary) to discuss. (April 15, 2015)
- Submit draft final report. (April 30, 2015)



# Open Discussion



# An Evaluation of Volume Breakpoint and Rate Harmonization Proposals

## Union Gas Limited

May 22, 2015



## Table of Contents

I. Introduction .....	I - 1
Background.....	I - 1
Outline of this Report.....	I - 6
II. Cost of Service.....	II - 1
Introduction.....	II - 1
Analysis of the Cost of Service Model .....	II - 5
Model Structure.....	II - 7
Functionalization, Classification and Allocation Factors .....	II - 11
Mathematical Correctness of the Model .....	II - 17
Results .....	II - 18
Reasonableness of the Overall Results.....	II - 22
Other Cost of Service Issues .....	II - 23
III. Rate Design .....	III - 1
Introduction.....	III - 1
Case No. EB-2011-0210 Evidence .....	III - 2
Rate Class Homogeneity.....	III - 3
Rate Class Size and Composition .....	III - 6
Harmonization of the Block Structures .....	III - 10
Mitigation of Rate Impacts for Smaller General Service Customers.....	III - 14
Rate Continuity .....	III - 17
Additional Evaluation Criteria.....	III - 20
Company Rate Design .....	III - 21
Application of Rate Design Criteria .....	III - 27
Seasonal Subsidies.....	III - 27
Intra-Class Subsidies .....	III - 34
Fixed Cost Recovery.....	III - 41
Rate Shock .....	III - 44
Rate Continuity .....	III - 48

Conclusions Regarding the Company's Proposed Alternative Rate Proposal .....	III - 52
Rate Design Alternatives .....	III - 52
Multiple Breakpoint Alternative.....	III - 53
Phase-in Alternative .....	III - 59
Meter Size Alternative .....	III - 64
Remaining Issues .....	III - 66
IV. Findings, Conclusions and Recommendations .....	IV - 1
Introduction.....	IV - 1
Findings .....	IV - 1
Cost of Service .....	IV - 1
Rate Design .....	IV - 2
Conclusions.....	IV - 4
Cost of Service .....	IV - 4
Rate Design .....	IV - 4
Recommendations .....	IV - 5
Cost of Service .....	IV - 5
Rate Design .....	IV - 6

## I. Introduction

### Background

In its 2013 Cost of Service Proceeding (EB-2011-0210), Union Gas Limited (“Union” or “the Company”) proposed to reduce the annual volume breakpoint between the Union South Rate M1/Rate M2 and Union North Rate 01/Rate 10 General Service rate classes from an annual consumption level of 50,000 m<sup>3</sup> to an annual consumption level of 5,000 m<sup>3</sup> and to harmonize the Rate 01 and Rate 10 blocking structures with Rate M1 and Rate M2. Union proposed these rate design changes to improve the rate class homogeneity in the small volume rate classes (Rate M1 and Rate 01) and increase the rate class size in the large volume rate classes (Rate M2 and Rate 10).

In its Decision in that proceeding, the Ontario Energy Board (“OEB” or “the Board”) stated that Union’s proposal to reduce the annual volume breakpoint had merit, but agreed with the submissions of Board staff and intervenors that Union’s methodology to allocate costs was flawed and resulted in an inequitable allocation of costs between Rate M1 and Rate M2 and Rate 01 and Rate 10. Accordingly, the Board did not approve Union’s rate design proposal and directed Union to complete a comprehensive cost allocation study.

In Union’s 2014 Rates Application (EB-2013-0365), Union responded to the Board’s directive and completed a comprehensive update of its 2013 Board-approved cost allocation study to include the 5,000 m<sup>3</sup> annual volume breakpoint, and formed a working group with interested stakeholders to review the results of Union’s updated cost allocation study. Based

on the resulting rate and bill impacts, Union did not proceed with the implementation of the 5,000 m<sup>3</sup> annual volume breakpoint or the harmonization of the blocking structures as part of its 2014-2018 Incentive Regulation term. However, in the EB-2013-0365 Settlement Agreement, Section 10.8, the parties agreed that they would jointly retain an independent consultant to conduct a study of the cost allocation and rate design associated with the Rate 01/Rate 10 and Rate M1/Rate M2 General Service rate classes, to be filed no later than Union's 2016 Rate Application.

It is with this background in mind that energytools, llc submits this report of its study of the cost allocation and rate design associated with the Rate 01/Rate 10 and Rate M1/Rate M2 General Service rate classes. Consistent with the Project Specifications of the RFP, this project includes the following seven items:

1. Examine the appropriateness of Union's current distribution customer and distribution demand cost allocation methodologies for the General Service rate classes;
2. Examine the existing General Service rate design and rate structure, including a review of the volumetric breakpoint between the small volume and large volume General Service customers;
3. Review Union's annual volume breakpoint reduction and rate block harmonization evidence, as filed in EB-2011-0210 and EB-2013-0365;
4. Review the cost allocation for Distribution Maintenance – Meter and Regulator Repairs O&M, if volume breakpoint changes are recommended;
5. Consider the implications on Union's other rate classes, if changes are recommended to the General Service rate classes;
6. Provide a written report that details the consultant's findings and presents recommendations with respect to Union's cost allocation methodologies and rate design for the General Service rate classes by April 30, 2015; and

7. Provide expert evidence and/or expert witness testimony before the OEB in Union's 2016 Rates Proceeding, as required.

Of these seven items, two are related to the cost of service analysis that Union filed in its 2013 Cost of Service Proceeding (items 1 and 4); two relate to rate design (items 2 and 5); and the remaining items are administrative.

At first blush, this would appear to be a fairly straight-forward investigation to be completed by addressing two fundamental issues. First, is there an identifiable cost difference between higher volume and lower volume users within and between the General Service classes identified above? Second, if such a cost difference can be identified, can this cost difference be reflected in rates without significant rate shock to customers and without compromising the Company's ability to collect the level of revenues that it has been authorized to collect?

Unfortunately, there are a number of ancillary and contradictory factors that complicate this effort. The first ancillary factor is that the cost of serving any particular customer or customer group is not unambiguously defined. As Bonbright has written:

No writer whose views on public utility rates command respect purports to find a single yardstick by sole reference to which rates may be judged reasonable or socially desirable as distinguished from rates that are unreasonable or adverse to the public interest. Principles of Public Utility Rates at 118.

This suggests that there is no "absolute" cost of service standard that can be relied on in this case to guide the allocation of costs, and that whatever cost allocation methodologies are chosen should be used as a "guide" rather than as an absolute prescription for rate design. Alternative studies can utilize traditional and accepted classification and allocation methods and yet produce different results of the costs to serve by class.

Given this circumstance, the first task of this effort was to identify a cost classification and allocation scheme that is generally agreed upon by all of the parties. The value of this exercise is not that it produces an unambiguous and definite calculation of the cost to serve different customer classes, but that it provides a reasonable benchmark of the cost to serve that is generally consistent with the positions of all parties.

The second ancillary factor is that the very nature of utility ratemaking ensures that there will be a divergence of the cost of service and the prices that customers pay for that service for many customers on the system. While the Company clearly believes that there is a level of divergence that warrants a change in rate design, other parties obviously disagree. Thus, it was also critical in this engagement to identify any level of divergence between the cost of service and the prices that customers pay for that service.

The third ancillary factor is that the type of changes in rates that the Company initially proposed lead to significant price changes for particular customers. If, as a result of these changes, prices increase by a “significant” amount, rate shock is said to have occurred. Thus, it was important at the outset to identify the level of rate shock that the parties believe is unacceptable. Furthermore, because rate shock can often be mitigated through other rate design changes (e.g., reduction in customer charges for smaller customers), it was important to identify how much the Company would be willing to tradeoff its ability to collect the revenue requirement for an ability to mitigate rate shock.

In order to address these issues, energytools employed the following study approach:

- Develop a complete understanding of the Parties’ positions with respect to Union’s volume breakpoint reduction and rate block harmonization proposal;

- Develop a complete understanding of Union’s cost of service methodology and the basis for the allocation factors that are in dispute;
- Develop a reasonable range of cost of service estimates when reasonable alternatives to the disputed allocation factors are employed;
- Develop alternative rate structures consistent with the range of cost of service estimates developed above; and
- Determine if the basic proposal can be implemented with changes that are acceptable to all parties and that satisfy basic rate design principles.

The approach was also characterized by a need to obtain the input of the stakeholder parties as the engagement proceeded. To do so, three meetings were held in Toronto, during which a number of topics were discussed and input solicited. The first of these (the “Kick Off Meeting”) was held on December 17, 2014 in the Board’s West Hearing Room. The purpose of this meeting was to summarize the key issues that were to be examined during the course of the engagement and to obtain a better understanding of the various Parties’ positions with respect to these issues. During this meeting, it was also decided that the time and effort expended before the next meeting was to focus largely on cost of service issues and, in order to explore these issues fully and independently, energytools would apply its own cost of service model to Union data.

The second meeting (the “First Progress Meeting”) was held on February 11, 2015, in the Union Gas offices in Toronto. Its purpose was to focus on the Union cost of service model, analysis and results. In the course of completing the analysis for this meeting, the energytools cost of service model was implemented for Union Gas, based on the inputs that Union developed for its cost of service submissions in the 2013 Cost of Service Proceeding, EB-2011-0210. This model was provided to all of the parties for their further review. A third meeting

(the “Second Progress Meeting”) was also scheduled at that time, the purpose of which was to review any further cost of service conclusions and to discuss alternative rate design proposals. The Second Progress Meeting took place in the Board’s West Hearing Room on March 25, 2015 and its primary focus was rate design and how the Company designs rates from the cost of service results that it develops. In addition, three possible alternatives to the Company’s 5,000 m<sup>3</sup> breakpoint were discussed:

- A phase-in of a lower breakpoint between larger General Service customers and smaller General Service customers in which the breakpoint is gradually reduced in an effort to minimize customer rate impacts;
- The use of meter size or end use (Residential, Commercial, or Industrial customers) to differentiate customer-related costs, with no differentiation of per-unit demand and commodity costs;
- Implementation of more than one breakpoint between larger and smaller General Service customers.

These alternatives are discussed more fully below.

## **Outline of this Report**

The above topics are the subject of the remainder of this report, which is organized into three additional chapters. Chapter II is devoted to an analysis of the Company’s cost of service methodology as discussed and filed in Union’s evidence submitted in Case No. EB-2011-0210 and Case No. EB-2013-0365. It includes a discussion and analysis of Union’s cost of service model and a discussion of the results of applying Union’s model. These results are integral to an evaluation of the Company’s rate designs proposals, which is the subject of Chapter III of this report. Chapter III discusses and analyzes the rate design evidence that Union filed in the

above cases, discusses how the cost of service results are used to support the rate design proposals, analyzes those proposals using a set of objective rate design criteria, and presents and analyzes some alternative rate design proposals to the Company's proposals.

Finally, this report concludes with Chapter IV, which summarizes the findings, conclusions and recommendations of this evaluation.

## **II. Cost of Service**

### **Introduction**

Union initially filed its proposal to reduce the volume breakpoint between smaller and larger General Service customers and to harmonize the rate structures in Case No. EB-2011-0210. This proposal was not accompanied by a class cost of service analysis at the new breakpoint. Instead, Union relied on what it referred to as a “proxy” approach to develop the cost of service for customers at different levels of consumption.

As a result, the Board denied Union’s request to implement the new rate design and ordered as follows:

The Board directs Union to undertake a comprehensive cost allocation study which includes the volume breakpoint reduction proposal. The Board is not satisfied that the allocation has been done correctly at this time and therefore the Board will not accept Union’s proposal. Order in EB-2011-0210 at 94.

There appears to be no dispute about this. Union acknowledged that it relied on a proxy approach in its 2011 filing, and referred to it as the 2013 Cost Proxy Approach in working group meetings that were established by Union in response to the Board’s directive on cost of service.

In the working group, Union discussed the cost allocation methodology for distribution customer-related and demand-related costs between the Union South and Union North operating areas. It also acknowledged that the cost allocation methodology for distribution customer-related and demand-related costs is different between the Union South and Union

North operating areas, reflecting the different configurations of the delivery systems in each operating area<sup>1</sup>.

In the Union South operating area, Union South distribution customer-related costs are primarily allocated to rate classes based on:

- Service Replacement Costs – Distribution mains and services;
- Station Replacement Costs – Meters, regulators and customer stations;
- Service and Meter Call Time – Distribution O&M; and
- Average Number of Customers – Customer accounting (i.e. billing and meter reading).

All of the allocators, except average number of customers, include a “weighting” or calculation of costs based on the type of customer (Residential, Commercial and Industrial).

Union South distribution demand-related costs are primarily allocated to rate classes based on estimated distribution design day demand, which is determined in total and split between Rate M1 and Rate M2 based on winter volumes.

In the North operating area, distribution customer-related costs are primarily allocated based on (1) the average number of customers by class; (2) a North services factor; and (3) Service and Meter Call Time for O&M Expenses, which is developed based on the number of calls by customer type and the average time spent on the call. The average number of customers allocator is applied to the following cost categories with the following modifications:

- Mains (Grid) – Includes Rate 01 and Rate 10 customers only;
- Regulators – Includes a direct assignment to Rate 01 based on an estimated cost to replace residential regulators;
- Meters – Uses a historic/fixed allocation to Rate 01 and Rate 10; and
- Customer Stations – Excludes customers that do not meet an hourly design threshold of 320 m<sup>3</sup>/hour.

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<sup>1</sup> Union indicated in the working group meetings that it reviewed harmonization opportunities in the EB-2005-0520 cost of service proceeding and did not propose changes to the different approaches at that time.

Union North distribution demand-related costs are primarily allocated based on the definition of grid, joint and sole-use. Grid costs are allocated to Rate 01 and Rate 10 customers based on peak day and average day demands. Peak day demands are also used to allocate demand-related regulator costs. Joint costs are allocated using peak day and average day demands excluding all sole-use customers, which are connected directly to the TCPL mainline. Sole use costs are not allocated to Rate 01 or Rate 10 customers, but rather are directly assigned to Rate 20, Rate 100 and Rate 25 customers.

In these working group meetings, Union also explored in greater detail, the cost allocation methodologies for:

- DSM Program Costs;
- Bad Debt Expenses;
- Distribution Station Replacement Costs; and
- Distribution Demand and Design Day Demands.

With respect to alternative DSM cost allocation methods, Union found that there was no material change for Rate 01 and Rate 10 and the costs allocated to Rate M1 at the 5,000 m<sup>3</sup> volume breakpoint would decrease by \$99,000, less than 1% of total DSM costs. With respect to bad debt expenses, Union did not propose a change in the method it uses to develop allocation factors for bad debt expenses. Rather, Union developed a new bad debt expense allocation factor using the proposed 5,000 m<sup>3</sup>/year volume breakpoint between smaller and larger General Service customers.

With respect to distribution Station Replacement Costs, Union developed a new allocation factor for the proposed breakpoint using the Board approved methodology for meters, regulators, and stations in Union South, which is based on station replacement costs by type of customer (Residential, Commercial and Industrial). Union also investigated an alternate

approach to calculate the station replacement costs that used the number of installed meters by type at the volume breakpoints (less than or greater than 5,000 m<sup>3</sup> annual volume) applied to the estimated station replacement costs to estimate the replacement cost, although this latter approach is not consistent with the current Board-approved methodology, has an impact on (increases) the estimated cost of service of rate classes other than the General Service rate classes, and has a small impact on the allocation of distribution Station Replacement Costs to the General Service classes (about 1% of total Distribution Station Replacement Costs).

Finally, the Company also examined the derivation of distribution design day demands by operating area and class. The Union South allocation of distribution demand-related costs is in proportion to the distribution design day demands, split between Rate M1 and Rate M2 customers based on winter volumes. The Union North allocation of distribution demand-related costs is based on various factors based on the classification of grid, joint and sole-use customers, although the allocation to Union North rate classes is primarily based on annual volumes and peak day demands.

As an alternate approach, Union used the General Service peak hour demands used for load modelling the Union North and Union South distribution systems. This alternate approach resulted in an increase of \$0.1 million to Rate M1 at the 5,000 m<sup>3</sup> volume breakpoint and a \$3.8 million decrease to Rate 01. It is interesting to note here that alternatives to this assumption have a larger impact on the Union North results than the Union South results. As will be documented more fully below, the results in the South, and not the North, appear to be anomalous. Unfortunately, the results of this alternative study undertaken by the Company

indicate that reasonable changes to the estimated peak demand in the South will not have a material impact on the results.

In Case No. EB-2013-0365, Union further complied with the Board Order, and filed two class cost of service studies: one that was based on factors consistent with a definition of small General Service customers as those that consume less than 50,000 m<sup>3</sup>/year (the current Board-approved distinction) and one that was based on factors consistent with a definition of small General Service customers as those that consume less than 5,000 m<sup>3</sup>/year.

These two studies, and not the “proxy” study filed in Case No. EB-2011-0210, are the focus of the analysis in this investigation. As stated above, the cost of service issues that the Board and the parties expressed an interest in exploring in greater detail in this investigation are:

- Are Union’s current distribution customer and distribution demand cost allocation methodologies for the General Service rate classes appropriate?
- Does Union’s allocation of Distribution Maintenance - Meter and Regulator Repairs still reflect cost-causative principles after implementation of the new Rate 01/10 and M1/M2 volume breakpoints?

This chapter of the Report addresses these two issues.

### **Analysis of the Cost of Service Model**

As indicated above, the primary difficulty in evaluating any class cost of service model is that the cost of serving any particular customer or customer group is not unambiguously defined. Thus, there is no “absolute” cost of service standard that can be relied on in this case to guide the allocation of costs, and no checklist that can be developed that will determine

whether the allocated class costs that are derived from the model are “right” or “wrong.” About the best evaluation criteria that one can apply is whether the results are generally “reasonable” or not.

Furthermore, in the course of the engagement, the participants suggested that it is appropriate to evaluate the Company’s cost of service study using both a “Bottom-Up” approach (i.e., are the inputs correct and does the model produce results that are consistent with the inputs and operations intended for those inputs?) and a “Top-Down” approach (i.e., do the results themselves generally appear to be reasonable?).

In order to apply the Bottom-Up approach, the follow three evaluations were performed:

- Model Structure – Does the Union class cost of service analysis rely on a traditional class cost of service structure to develop revenue responsibility by class?
- Functionalization, Classification and Allocation Factors – As there are no “correct” factors, the review evaluates these factors based on: (a) consistency with prior Board decisions; (2) reasonableness; (3) general agreement among the parties that the factors applied are appropriate; and (4) sensitivity of results to these factors.
- Mathematical Correctness of the Model – Is the model producing answers that are consistent with the inputs and operations intended for those inputs?

As indicated above, the Top Down approach attempts to determine whether the results themselves appear to be reasonable. Of necessity, “reasonableness” is judgmentally defined.

In addition to these evaluations, it is also important in this first task of this effort to identify a cost classification and allocation scheme that is generally agreed upon by all of the parties. The value of this exercise is not that it produces an unambiguous and definite calculation of the cost to serve different customer classes, but that it provides a reasonable

benchmark of the cost to serve that is generally consistent with the positions of all parties and that can be applied to the rate design alternatives of the next chapter.

### Model Structure

The Union class cost of service model is a traditional historic or embedded cost of service model, which the National Association of Regulatory Utility Commissioners (“NARUC”) in its Gas Distribution Rate Design Manual describes as “an attempt to apportion total costs to the various customer classes in a manner consistent with the incurrence of those costs.”<sup>2</sup> The manual expands on that definition as follows:

Embedded cost of service studies are generally conducted in the following steps: (1) functionalization of costs as either production, storage, transmission or distribution; (2) classification of costs into three basic categories – customer, energy or commodity, and demand or capacity costs; and (3) the allocation of these costs to customer classes or to types of load. All items that can be directly attributed to a particular service (such as revenues from a specific service or the cost of a high pressure main constructed for a particular customer or group of customers) should be segregated and directly assigned to the appropriate customers. There is no scientifically correct method of making necessary allocations. A certain amount of judgment must be used in any cost of service study. Consequently, cost allocation studies should only be utilized as a general guide or as a starting point for rate design.<sup>3</sup>

Functionalization is the process whereby the capital and operating costs incurred by the utility to provide service are categorized by function. The typical functions of a natural gas utility are transmission, distribution, customer service and facilities, and administrative and general. The transmission function includes those assets and expenses associated with the delivery of natural gas from the field to the distribution system. The assets and expenses involved in the delivery of natural gas to ultimate customers, except those that can be directly

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<sup>2</sup> National Association of Regulatory Utility Commissioners, NARUC Staff Subcommittee on Gas, Gas Distribution Rate Design Manual, June 1989, page 20.

<sup>3</sup> Ibid, page 20.

assigned to a particular customer, are included in the distribution function. Those distribution costs that can be directly assigned to a particular customer (e.g., service drops and meters) plus the meter reading and other customer service functions such as billing and collections are included in the customer service and facilities function. The administrative and general function includes management costs that cannot be directly assigned to the other major cost functions.

Consistent with this description, Union's cost of service model functionalizes costs by the following nine functions:

- Purchase Production
- Storage Dehydrator
- Storage Excluding Dehydrator
- Transmission – Dawn Station
- Transmission – Dawn-Trafalgar Easterly
- Transmission – Dawn-Trafalgar Westerly
- Transmission – Other Transmission
- Transmission – Ojibway/St. Clair
- Distribution.

Two things are clear when this list of functions is compared to the list of functions from the NARUC Manual. First, Union generally relies on the same functions as are enumerated in that Manual (production, storage, transmission, distribution). Second, Union employs a more detailed functionalization than many traditional cost of service models, although this functionalization is fully consistent with NARUC's admonition that "[t]his apportionment must be based on the fashion in which the utility's system facilities and personnel operate to provide the service."<sup>4</sup> Thus, it seems reasonable to conclude that Union's general approach to cost of service is consistent with standard industry practices.

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<sup>4</sup> Ibid, page 20.

Costs are functionalized so that they can be more easily classified, which is the next step in the cost of service analysis or, as described in the NARUC Manual, “this functional categorization of costs helps to facilitate a determination of which customer groups are jointly responsible for such costs.”<sup>5</sup> The classification process recognizes that the utility’s costs are incurred for a number of purposes: to meet customers’ peak demands (demand-related costs), to provide energy (energy- or commodity-related costs), and because there are customers on the system (customer-related costs). The classification process groups the utility’s costs by the purpose for which they were incurred. The cost of odorant is the best example of a cost that is incurred in direct proportion to the amount of natural gas that flows through the system and is therefore classified as an energy-related cost. On the other hand, metering costs are primarily driven by the number of customers on the system and would be classified as customer-related costs.

Union’s cost of service approach is fully consistent with this description. It develops the following classifications of costs:

- Purchase Production
  - System Supply Commodity
  - Other Supply Commodity
  - Demand
- Storage Dehydrator
  - Demand
  - Commodity
- Storage Excluding Dehydrator
  - Deliverability
  - Commodity
  - Space
  - System Integrity
- Transmission – Dawn Station
  - Demand

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<sup>5</sup> Ibid, page 20.

- Commodity
- Transmission – Dawn-Trafalgar Easterly
  - Demand
  - Commodity
- Transmission – Dawn-Trafalgar Westerly
  - Commodity
- Transmission – Other Transmission
  - Demand
- Transmission – Ojibway/St. Clair
  - Demand
  - Commodity
- Distribution
  - Demand
  - Customer.

Based on this list, it again appears that Union's cost classification is fully consistent with NARUC's suggested classifications and that Union's general approach to cost of service is consistent with standard industry practices.

Finally, the allocation process is one in which the functionalized and classified costs from above are assigned to specific customer classes. It is assumed that the load characteristics of the customers within each of the major customer classes are relatively homogeneous with respect to their usage characteristics. Thus, costs can be allocated to customer classes based on these characteristics. Those costs that have been classified as demand-related costs in the classification process above are allocated among the customer classes on the basis of demands imposed on the system during the peak day. Commodity- or energy-related costs are allocated on the basis of the energy that the system must supply to meet the needs of these customers. Customer-related costs are allocated to the different customer classes based on the number of customers.

Allocation of costs among customer classes establishes the basis to measure existing revenue levels from such classes against the costs incurred by the Company to serve them. It

also provides a basis for establishing actual tariff prices that will equitably recover the costs associated with providing service while minimizing inter-class subsidies that may otherwise occur. In brief, using the class cost of service analysis, the analyst allocates costs to cost causers. The costs that a utility incurs to serve customers are the transmission facilities to transmit the natural gas to the distribution system, distribution facilities to distribute the natural gas to homes and businesses, general facilities that provide support to the first two functional groups and the related costs of operation.

Based on the results of its allocation process, it again appears to be a reasonable conclusion that Union's general approach to cost of service is consistent with standard industry practices. While this conclusion is based on an assumption of homogeneous load characteristics of customers within each of the major customer classes, that assumption is a critical part of the analysis of this engagement, and is assumed to be a given for purposes of evaluating Union's class cost of service approach.

#### Functionalization, Classification and Allocation Factors

Having concluded that Union's cost of service approach, which relies on standard industry functionalization, classification and allocation practices, is correctly structured, the next issue to be explored is whether the factors that Union employs to functionalize, classify and allocate costs are reasonable. In order to do so, this evaluation relies on four evaluation criteria. First, are the factors themselves "reasonable," in the sense that they apportion costs in ways that are consistent with the fashion in which the utility's system facilities and personnel operate to provide specific services? Second, are the factors consistent with prior Board decisions? Third, is there general agreement among the parties that the factors applied are

appropriate? And finally, if there are disagreements over which factors to apply to categorize or allocate costs, are the overall cost of service results sensitive to these factors?

With respect to the functionalization factors, the Company presents and discusses the factors that it uses in Case No. EB-2011-0210. In that case, the functionalization factors are presented and defined in Exhibit G3, Tab 1, Schedule 1, Appendix A. The classification factors are presented and defined in Exhibit G3, Tab 1, Schedule 1, Appendix B. While all of these factors appear to be consistent with prior Board decisions and reasonable, and there appears to be general agreement among the parties that the factors applied are appropriate, the important point for purposes of this evaluation is that no functionalization or classification changes as a result of a change in the volume breakpoint. Therefore, the remainder of this chapter focuses on an evaluation of the allocation factors used by Union in its class cost of service analysis.

This review is summarized in the subsections below.

Reasonableness of the factors themselves. The Company presents and discusses the allocation factors that it uses in Case No. EB-2011-0210 in Exhibit G3, Tab 1, Schedule 1, Appendix C. These factors are composed of those that are externally generated and those that are generated as a by-product of calculations within the cost of service model itself (internal factors). In the case of the external factors, this evaluation reviewed the workpapers that generate these factors. This review identified no calculation errors, but did identify an important factor that has a significant impact on the cost of service results and whose values do not match expectations: the load factors by class.

Exhibit II-1 presents the load factors for all potential customer groupings evaluated in this review, as well as the component parts that make up those calculations. Considering first the 2013 Approved 50,000 m<sup>3</sup>/year volume breakpoint in the North operating area, the Exhibit shows that group of customers whose annual consumption level is less than 50,000 m<sup>3</sup>/year have a load factor of 27.2% (line 4, column a). The load factor of larger (>50,000 m<sup>3</sup>/year) customers in this operating area increases to 34.2% (line 4, column b). This is an anticipated result as the larger customers in this group are composed of a greater percentage of industrial customers who likely use gas for industrial processes rather than space heating and one would expect that they utilize the natural gas distribution system more efficiently, as reflected in the load factor.

Beyond this specific grouping, the anticipated pattern in the load factor does not prevail. For example, the load factor of larger (>5,000 m<sup>3</sup>/year) customers in the North operating area decreases to 30.4% (line 8, column b). This is an anticipated result as this group is now composed of a greater percentage of low load factor customers who consume between 5,000 and 50,000 m<sup>3</sup>/year. However, if this were the case, one would expect the Rate 01 load factor to decline, but it increases to 27.5% (line 8, column a). This implies the load factors shown on line 13 of Exhibit II-1. On that line, the load factor of customers whose annual consumption is less than 5,000 m<sup>3</sup>/year is calculated to be 27.5% (column a). As consumption rises, the load factor falls to 26.4% (column b) and rises again to 34.2% (column c). While it is certainly possible that the load characteristics of these customers will follow this pattern, it does not seem logical and bears further evaluation.

This is even more true of customers in the South operating area. Considering first that group of customers whose annual consumption level is less than 50,000 m<sup>3</sup>/year, the Exhibit shows that these customers have a load factor of 28.0% (line 4, column d). The load factor of larger (>50,000 m<sup>3</sup>/year) customers in this operating area decreases to 27.7% (line 4, column e), in contrast to expected results and results in the North operating area. While the load factors results under the proposed breakpoint of 5,000 m<sup>3</sup>/year now appear more reasonable for the South operating area (the load factor of smaller General Service customers on line 8, column d is less than the load factor of larger General Service customers on line 8, column e), the changes in load factor can only occur if the customer groupings in this analysis exhibit the load factors shown on line 13 of Exhibit II-1. On that line, the load factor of customers in the South operating area whose annual consumption is less than 5,000 m<sup>3</sup>/year is calculated to be 27.3% (column d). As consumption rises, the load factor increases to 30.3% (column e) and falls again to 27.7% (column f). While it is certainly possible that the load characteristics of these customers will follow this pattern, it is exactly the opposite of the pattern exhibited by similar customers in the North operating area, does not seem logical and bears further evaluation.

Exhibit II-1  
Volumes and Customers  
at 2013 Approved and 2014 Proposed Breakpoints

Line No.	Particulars	Union North			Union South		
		Rate 01	Rate 10	Total	Rate M1	Rate M2	Total
		(a)	(b)	(c)=(a+b)	(d)	(e)	(f)=(d+e)
	<u>2013 Approved at 50,000 m<sup>3</sup> breakpoint</u>						
1	Customers	319,978	2,052	322,030	1,058,900	6,788	1,065,688
2	Annual Volume	884,421	322,887	1,207,308	2,939,543	975,571	3,915,114
3	Demand	8,921	2,584	11,505	28,724	9,650	38,374
4	Load Factor	27.2%	34.2%	28.8%	28.0%	27.7%	28.0%
	<u>2014 Proposed at 5,000 m<sup>3</sup> breakpoint</u>						
5	Customers	300,669	21,361	322,030	1,004,661	61,027	1,065,688
6	Annual Volume	643,947	563,361	1,207,308	2,134,461	1,780,653	3,915,114
7	Demand	6,426	5,081	11,507	21,444	16,930	38,374
8	Load Factor	27.5%	30.4%	28.7%	27.3%	28.8%	28.0%
	<u>Transition to 5,000 m<sup>3</sup></u>						
9	Customers	(19,309)	19,309		(54,239)	54,239	
10	Annual Volume	(240,474)	240,474		(805,082)	805,082	
11	Demand	(2,495)	2,497		(7,279)	7,280	
12	Load Factor	26.4%	26.4%		30.3%	30.3%	

Load Factor by Consumption Level

		Union North			Union South		
		< 5,000 m <sup>3</sup>	5,000 - 50,000 m <sup>3</sup>	> 50,000 m <sup>3</sup>	< 5,000 m <sup>3</sup>	5,000 - 50,000 m <sup>3</sup>	> 50,000 m <sup>3</sup>
13	Load Factor	27.5%	26.4%	34.2%	27.3%	30.3%	27.7%

With respect to the internally generated allocation factors, as discussed in greater detail below, this evaluation replicated the Union cost of service model. In the course of replicating that model, all of the internally generated allocation factors were replicated as well. Based on that analysis, this review finds that the internal allocation factors appear to be calculated correctly and concludes that the factors themselves appear to be reasonable and generally appropriate for Union's rate classes.

Consistency with prior Board decisions. Based on a review of the case files from EB-2011-0210 and EB-2013-0365, the study appears to be consistent with prior Board directives and decisions. Specifically, in Appendix A attached to the Board's Decision and Order in Case No. EB-2011-0210, the Board highlights thirteen cost allocation issues. The Appendix indicates that the Board accepts Union's cost allocation study related to seven of these issues without qualification. For four of the issues, the Board ordered further study, and in only two cases did the Board require changes to the Company's cost of service methodology. These changes were related to the allocation of costs to the M12 F24-T service (which changes do not affect the current study) and in the allocation of Union North Distribution Customer Station Plant (which the Company implemented).

General agreement among the parties that the factors applied are appropriate. Based on a review of the case files from EB-2011-0210 and EB-2013-0365, the study appears to have approval of the parties. This finding is based on a review of the evidence filed by the parties in these cases, a review of Union's cost of service working group presentations, and feedback from the parties that was obtained during the course of this engagement.

Sensitivity of results to controversial allocation factors. As discussed above, in the cost of service working group meetings, Union also explored in greater detail, the cost allocation methodologies for DSM Program Costs, Bad Debt Expenses, Distribution Station Replacement Costs and Distribution Demand and Design Day Demands. In the course of that exploration, sensitivity analysis was conducted by changing these factors or their calculation method. In general, Union found that there was no material change in the estimated cost to serve General

Service customers in the North and South operating areas for DSM costs, bad debt expenses, and the new definition of Distribution Station Replacement Costs.

The Company also examined the derivation of distribution design day demands by operating area and class. The Union South allocation of distribution demand-related costs is in proportion to the distribution design day demands, split between Rate M1 and Rate M2 customers based on winter volumes. The Union North allocation of distribution demand-related costs is based on various factors based on the classification of grid, joint and sole-use customers, although the allocation to Union North rate classes is primarily based on annual volumes and peak day demands.

As an alternate approach, Union used the General Service peak hour demands used for load modelling the Union North and Union South distribution systems. This alternate approach resulted in an increase of \$0.1 million to Rate M1 at the 5,000 m<sup>3</sup> volume breakpoint and a \$3.8 million decrease to Rate O1. The results of this alternative study undertaken by the Company indicate that reasonable changes to the estimated peak demand will not have a material impact on the results.

Based on the above discussion, this evaluation finds that Union has exercised reasonable care in its choice of allocation factors by performing a sensitivity analysis on those factors that appear anomalous or do not have widespread support.

#### Mathematical Correctness of the Model

In order to evaluate the mathematical correctness of the Company's cost of service model, this evaluation replicated the Union model. Based on that analysis, this review finds that there appear to be no mathematical errors. In addition, a working copy of the Company's

cost of service model has been circulated to all parties to review. None of the parties has indicated a different finding.

## **Results**

The results of exercising the Union cost of service model are provided in the following four exhibits. Exhibit II-2 and II-3 duplicate the Company's 50,000 m<sup>3</sup>/year breakpoint study. Exhibit II-2 shows the allocation results by function and classification. Exhibit II-3 shows the unit costs that result from this allocation. Exhibits II-4 and II-5 show the revenue requirement and unit costs, respectively, for the Company's 5,000 m<sup>3</sup>/year breakpoint study.

Exhibit II-2  
Union Gas Limited  
Ontario Energy Board Case No. EB-2011-0210  
2013 Board-Approved, 50,000 m<sup>3</sup> Breakpoint

SUMMARY OF REVENUE REQUIREMENT BY FUNCTION AND CLASSIFICATION

Line No.		Test Year \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Revenue Requirement by Function:						
2							
3	Purchase Production System Supply	575,308	417,752	69,545	61,870	14,989	11,151
4	Purchase Production Other Supply	24,899	1,248	1,401	5,665	1,881	14,704
5	Purchase Production Demand	99,115	0	0	66,398	22,834	9,883
6	Storage Dehydrator Demand	316	113	38	43	11	111
7	Storage Dehydrator Commodity	154	56	19	19	6	54
8	Storage Deliverability	42,370	8,185	2,779	17,570	4,600	9,235
9	Storage Commodity	7,044	1,482	492	1,707	537	2,825
10	Storage Space	26,717	11,823	4,038	4,223	1,105	5,528
11	Storage System Integrity	8,550	1,118	377	3,926	1,029	2,100
12	Dawn Station Demand	20,034	1,724	579	675	177	16,879
13	Dawn Station Commodity	7,448	183	65	138	44	7,019
14	Dawn-Trafalgar Easterly Demand	144,927	8,268	2,778	5,411	1,417	127,053
15	Dawn-Trafalgar Easterly Commodity	15,206	181	64	133	42	14,787
16	Dawn-Trafalgar Westerly Commodity	28	0	0	0	0	28
17	Other Transmission Demand	47,099	19,871	6,676	0	0	20,552
18	Ojibway/St. Clair Demand	7,089	1,550	521	0	0	5,017
19	Ojibway/St. Clair Commodity	1,176	64	19	0	0	1,093
20	Distribution Demand	207,427	65,988	22,702	40,926	13,179	64,631
21	Distribution Customer	431,724	281,794	8,746	118,053	4,855	18,276
22							
23	Total Revenue Requirement	1,666,630	821,400	120,839	326,759	66,706	330,927
24							
25	Other Revenue by Classification:						
26							
27	Customer Related Other Revenue	16,745	12,699	81	3,934	25	6
28	Demand Related Other Revenue	0	0	0	0	0	0
29	Commodity Related Other Revenue	3,453	2,525	34	883	10	0
30	Other Revenue	0	0	0	0	0	0
31							
32	Total Other Revenue	20,198	15,224	116	4,817	36	6
33							
34	Required Rate Revenue by Classification:						
35							
36	Customer Required Rate Revenue by Class	414,980	269,096	8,664	114,119	4,830	18,270
37	Demand Required Rate Revenue by Class	603,644	118,641	40,489	139,172	44,352	260,990
38	Commodity Required Rate Revenue by Class	52,502	688	2,025	6,779	2,499	40,510
39	Other Required Rate Revenue by Class	575,308	417,752	69,545	61,870	14,989	11,151
40							
41	Total Required Rate Revenue	1,646,432	806,177	120,723	321,941	66,670	330,921
42							
43	Billing Determinants:						
44							
45	Customers	1,388,185	1,058,900	6,788	319,978	2,052	467
46	Design Day Demand	140,166	28,724	9,650	8,921	2,584	90,288
47	Volumes	14,129,331	2,939,543	975,571	884,421	322,887	9,006,908
48	Load Factor	27.62%	28.04%	27.70%	27.16%	34.24%	27.33%

Exhibit II-3  
Union Gas Limited  
Ontario Energy Board Case No. EB-2011-0210  
2013 Board-Approved, 50,000 m<sup>3</sup> Breakpoint

SUMMARY OF UNIT COSTS BY FUNCTION AND CLASSIFICATION

Line No.		Test Year \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Unit Costs by Function:						
2							
3	Purchase Production System Supply	\$ 40.7173	\$ 142.1147	\$ 71.2866	\$ 69.9556	\$ 46.4228	\$ 1.2380
4	Purchase Production Other Supply	\$ 1.7623	\$ 0.4244	\$ 1.4365	\$ 6.4058	\$ 5.8257	\$ 1.6325
5	Purchase Production Demand	\$ 0.71	\$ -	\$ -	\$ 7.44	\$ 8.84	\$ 0.11
6	Storage Dehydrator Demand	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
7	Storage Dehydrator Commodity	\$ 0.0109	\$ 0.0191	\$ 0.0191	\$ 0.0216	\$ 0.0186	\$ 0.0060
8	Storage Deliverability	\$ 0.30	\$ 0.28	\$ 0.29	\$ 1.97	\$ 1.78	\$ 0.10
9	Storage Commodity	\$ 0.4985	\$ 0.5043	\$ 0.5043	\$ 1.9298	\$ 1.6638	\$ 0.3137
10	Storage Space	\$ 0.19	\$ 0.41	\$ 0.42	\$ 0.47	\$ 0.43	\$ 0.06
11	Storage System Integrity	\$ 0.06	\$ 0.04	\$ 0.04	\$ 0.44	\$ 0.40	\$ 0.02
12	Dawn Station Demand	\$ 0.14	\$ 0.06	\$ 0.06	\$ 0.08	\$ 0.07	\$ 0.19
13	Dawn Station Commodity	\$ 0.5271	\$ 0.0621	\$ 0.0662	\$ 0.1566	\$ 0.1350	\$ 0.7793
14	Dawn-Trafalgar Easterly Demand	\$ 1.03	\$ 0.29	\$ 0.29	\$ 0.61	\$ 0.55	\$ 1.41
15	Dawn-Trafalgar Easterly Commodity	\$ 1.0762	\$ 0.0614	\$ 0.0655	\$ 0.1503	\$ 0.1296	\$ 1.6417
16	Dawn-Trafalgar Westerly Commodity	\$ 0.0020	\$ -	\$ -	\$ -	\$ -	\$ 0.0031
17	Other Transmission Demand	\$ 0.34	\$ 0.69	\$ 0.69	\$ -	\$ -	\$ 0.23
18	Ojibway/St. Clair Demand	\$ 0.05	\$ 0.05	\$ 0.05	\$ -	\$ -	\$ 0.06
19	Ojibway/St. Clair Commodity	\$ 0.0832	\$ 0.0216	\$ 0.0193	\$ -	\$ -	\$ 0.1214
20	Distribution Demand	\$ 1.48	\$ 2.30	\$ 2.35	\$ 4.59	\$ 5.10	\$ 0.72
21	Distribution Customer	\$ 25.92	\$ 22.18	\$ 107.37	\$ 30.75	\$ 197.14	\$ 3,258.85
22							
23	Required Unit Rate Revenue by Classification:						
24							
25	Customer Required Unit Rate Revenue by Cla	\$ 24.91	\$ 21.18	\$ 106.37	\$ 29.72	\$ 196.11	\$ 3,257.84
26	Demand Required Unit Rate Revenue by Clas	\$ 4.2723	\$ 4.0360	\$ 4.1503	\$ 15.7360	\$ 13.7359	\$ 2.8977
27	Commodity Required Unit Rate Revenue by C	\$ 0.3716	\$ 0.0234	\$ 0.2076	\$ 0.7665	\$ 0.7740	\$ 0.4498
28	Other Required Unit Rate Revenue by Class	\$ 4.0717	\$ 14.2115	\$ 7.1287	\$ 6.9956	\$ 4.6423	\$ 0.1238
29							
30							
31	Cost Composition by Classification:	%	%	%	%	%	%
32							
33	Customer Revenue Requirement by Class	38.7%	69.3%	16.9%	43.9%	9.3%	5.7%
34	Demand Revenue Requirement by Class	56.4%	30.5%	79.1%	53.5%	85.8%	81.6%
35	Commodity Revenue Requirement by Class	4.9%	0.2%	4.0%	2.6%	4.8%	12.7%

Exhibit II-4  
Union Gas Limited  
Ontario Energy Board Case No. EB-2011-0210  
2013 Proposed, 5,000 m3 Breakpoint

SUMMARY OF REVENUE REQUIREMENT BY FUNCTION AND CLASSIFICATION

		General Service	General Service	General Service	General Service	All Other	
Line	Test Year	Small (M1)	Large (M2)	Small (R01)	Large (R10)	Classes	
No.	\$	\$	\$	\$	\$	\$	
1	Revenue Requirement by Function:						
2							
3	Purchase Production System Supply	575,308	303,428	183,869	46,190	30,669	11,151
4	Purchase Production Other Supply	24,899	657	1,992	4,215	3,331	14,704
5	Purchase Production Demand	99,115	0	0	48,204	41,027	9,883
6	Storage Dehydrator Demand	316	86	65	31	23	111
7	Storage Dehydrator Commodity	154	41	34	14	11	54
8	Storage Deliverability	42,370	6,256	4,708	12,606	9,564	9,235
9	Storage Commodity	7,044	1,076	898	1,242	1,002	2,825
10	Storage Space	26,717	9,157	6,704	3,030	2,298	5,528
11	Storage System Integrity	8,550	843	652	2,817	2,138	2,100
12	Dawn Station Demand	20,034	1,287	1,016	484	368	16,879
13	Dawn Station Commodity	7,448	133	114	101	81	7,019
14	Dawn-Trafalgar Easterly Demand	144,927	6,173	4,873	3,883	2,945	127,053
15	Dawn-Trafalgar Easterly Commodity	15,206	131	113	97	78	14,787
16	Dawn-Trafalgar Westerly Commodity	28	0	0	0	0	28
17	Other Transmission Demand	47,099	14,835	11,712	0	0	20,552
18	Ojibway/St. Clair Demand	7,089	1,157	914	0	0	5,017
19	Ojibway/St. Clair Commodity	1,176	46	36	0	0	1,093
20	Distribution Demand	207,427	49,291	39,399	29,513	24,592	64,631
21	Distribution Customer	431,724	252,164	38,376	110,098	12,811	18,276
22							
23	Total Revenue Requirement	1,666,630	646,763	295,477	262,525	130,939	330,927
24							
25	Other Revenue by Classification:						
26							
27	Customer Related Other Revenue	16,745	12,048	732	3,697	263	6
28	Demand Related Other Revenue	0	0	0	0	0	0
29	Commodity Related Other Revenue	3,453	2,424	136	844	50	0
30	Other Revenue	0	0	0	0	0	0
31							
32	Total Other Revenue	20,198	14,472	868	4,540	313	6
33							
34	Required Rate Revenue by Classification:						
35							
36	Customer Required Rate Revenue by Class	414,980	240,116	37,645	106,401	12,548	18,270
37	Demand Required Rate Revenue by Class	603,644	89,087	70,043	100,569	82,955	260,990
38	Commodity Required Rate Revenue by Class	52,502	(340)	3,053	4,825	4,454	40,510
39	Other Required Rate Revenue by Class	575,308	303,428	183,869	46,190	30,669	11,151
40							
41	Total Required Rate Revenue	1,646,432	632,291	294,609	257,985	130,626	330,921
42							
43	Billing Determinants:						
44							
45	Customers	1,388,185	1,004,661	61,027	300,669	21,361	467
46	Design Day Demand	140,166	21,444	16,930	6,426	5,078	90,288
47	Volumes	14,129,331	2,134,461	1,780,653	643,947	563,361	9,006,908
48	Load Factor	27.62%	27.27%	28.82%	27.45%	30.39%	27.33%

Exhibit II-5  
Union Gas Limited  
Ontario Energy Board Case No. EB-2011-0210  
2013 Proposed, 5,000 m3 Breakpoint

SUMMARY OF UNIT COSTS BY FUNCTION AND CLASSIFICATION

Line No.		Test Year \$	General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$	All Other Classes \$
1	Unit Costs by Function:						
2							
3	Purchase Production System Supply	\$ 40.7173	\$ 142.1569	\$ 103.2594	\$ 71.7299	\$ 54.4397	\$ 1.2380
4	Purchase Production Other Supply	\$ 1.7623	\$ 0.3076	\$ 1.1189	\$ 6.5460	\$ 5.9131	\$ 1.6325
5	Purchase Production Demand	\$ 0.71	\$ -	\$ -	\$ 7.50	\$ 8.08	\$ 0.11
6	Storage Dehydrator Demand	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
7	Storage Dehydrator Commodity	\$ 0.0109	\$ 0.0191	\$ 0.0191	\$ 0.0216	\$ 0.0199	\$ 0.0060
8	Storage Deliverability	\$ 0.30	\$ 0.29	\$ 0.28	\$ 1.96	\$ 1.88	\$ 0.10
9	Storage Commodity	\$ 0.4985	\$ 0.5043	\$ 0.5043	\$ 1.9287	\$ 1.7786	\$ 0.3137
10	Storage Space	\$ 0.19	\$ 0.43	\$ 0.40	\$ 0.47	\$ 0.45	\$ 0.06
11	Storage System Integrity	\$ 0.06	\$ 0.04	\$ 0.04	\$ 0.44	\$ 0.42	\$ 0.02
12	Dawn Station Demand	\$ 0.14	\$ 0.06	\$ 0.06	\$ 0.08	\$ 0.07	\$ 0.19
13	Dawn Station Commodity	\$ 0.5271	\$ 0.0622	\$ 0.0643	\$ 0.1565	\$ 0.1443	\$ 0.7793
14	Dawn-Trafalgar Easterly Demand	\$ 1.03	\$ 0.29	\$ 0.29	\$ 0.60	\$ 0.58	\$ 1.41
15	Dawn-Trafalgar Easterly Commodity	\$ 1.0762	\$ 0.0615	\$ 0.0636	\$ 0.1502	\$ 0.1385	\$ 1.6417
16	Dawn-Trafalgar Westerly Commodity	\$ 0.0020	\$ -	\$ -	\$ -	\$ -	\$ 0.0031
17	Other Transmission Demand	\$ 0.34	\$ 0.69	\$ 0.69	\$ -	\$ -	\$ 0.23
18	Ojibway/St. Clair Demand	\$ 0.05	\$ 0.05	\$ 0.05	\$ -	\$ -	\$ 0.06
19	Ojibway/St. Clair Commodity	\$ 0.0832	\$ 0.0216	\$ 0.0204	\$ -	\$ -	\$ 0.1214
20	Distribution Demand	\$ 1.48	\$ 2.30	\$ 2.33	\$ 4.59	\$ 4.84	\$ 0.72
21	Distribution Customer	\$ 25.92	\$ 20.92	\$ 52.40	\$ 30.51	\$ 49.98	\$ 3,258.85
22							
23	Required Unit Rate Revenue by Classification:						
24							
25	Customer Required Unit Rate Revenue by Class	\$ 24.91	\$ 19.92	\$ 51.40	\$ 29.49	\$ 48.95	\$ 3,257.84
26	Demand Required Unit Rate Revenue by Class	\$ 4.2723	\$ 4.1737	\$ 3.9335	\$ 15.6176	\$ 14.7250	\$ 2.8977
27	Commodity Required Unit Rate Revenue by Class	\$ 0.3716	\$ (0.0159)	\$ 0.1714	\$ 0.7492	\$ 0.7906	\$ 0.4498
28	Other Required Unit Rate Revenue by Class	\$ 4.0717	\$ 14.2157	\$ 10.3259	\$ 7.1730	\$ 5.4440	\$ 0.1238
29							
30							
31	Cost Composition by Classification:	%	%	%	%	%	%
32							
33	Customer Revenue Requirement by Class	38.03%	69.94%	33.73%	49.18%	12.51%	5.71%
34	Demand Revenue Requirement by Class	55.31%	25.95%	62.76%	46.49%	82.73%	81.62%
35	Commodity Revenue Requirement by Class	4.81%	-0.10%	2.74%	2.23%	4.44%	12.67%

## Reasonableness of the Overall Results

Consistent with the evaluation criteria discussed above, this evaluation also applies a Top Down approach to the cost of service results of Exhibit II-2 to II-5 to determine whether the results themselves appear to be reasonable. This review of reasonableness finds the following:

1. The customer-related unit costs appear reasonable on a relative basis. Based on meter and service costs and the mix of Residential, Commercial and Industrial customers in the rate classes, one would expect (and we observe) higher customer-related unit costs for M2 and R10 customers than for M1 and R01 customers, respectively, in both studies. One would also expect that the customer-related costs of larger General Service

customers would decline in the larger General Service classes in the 5,000 m<sup>3</sup>/year breakpoint study. This is also the case.

2. Based on the class load factors discussed above, one would expect (and we observe) higher demand-related unit costs for M2 customers than for M1 customers and lower demand-related unit costs for R10 customers than for R01 customers in the 50,000 m<sup>3</sup>/year breakpoint study. For the 5,000 m<sup>3</sup>/year breakpoint study, one would expect (and we observe) lower demand-related unit costs for M2 customers than for M1 customers and lower demand-related unit costs for R10 customers than for R01 customers, reflecting the better load factor of the larger General Service customers in both operating areas under the m<sup>3</sup>/year breakpoint assumption.
3. Based on the relationship between supply volumes and total system throughput, one would expect (and we observe) that unit Purchase Production System Supply Costs are lower for M2 and R10 customers than for M1 and R01 customers, respectively in both operating areas.

#### Other Cost of Service Issues

In addition to these evaluations, it is also important in this first task of this effort to identify a cost classification and allocation scheme that is generally agreed upon by all of the parties. The value of this exercise is not that it produces an unambiguous and definite calculation of the cost to serve different customer classes, but that it provides a reasonable benchmark of the cost to serve that is generally consistent with the positions of all parties and that can be applied to the rate design alternatives of the next chapter.

The Company's cost classification and allocation scheme satisfies this requirement. As detailed above, the Union class cost of service analysis relies on a traditional class cost of service structure to develop revenue responsibility by class. The functionalization, classification and allocation factors relied upon by the Company are consistent with prior Board decisions, are reasonable and the Company has performed sensitivity analysis on those factors that may not have universal acceptance. The model itself appears to be producing answers that are consistent with the inputs and operations intended for those inputs. And finally, the results of

the class cost of service exercise appear to be reasonable. Thus, the costs that have been summarized in Exhibits II-2 through II-5 above will serve as a reasonable benchmark of the cost to serve that will be applied to the rate design alternatives in the remainder of this evaluation.

### **III. Rate Design**

#### **Introduction**

As support for its volume breakpoint and rate harmonization proposals in Docket Nos. EB-2011-0210 and EB-2013-0365, Union stated that the proposed changes will improve the rate class composition of Rate 01 and M1, will achieve more homogeneous rate classes and will improve the rate class size in Rate 10 and Rate M2, which will ensure viable large volume General Service rate classes and improve rate stability<sup>6</sup>. Board Staff, the London Property Management Association (“LPMA”) and the School Energy Coalition (“SEC”) supported Union’s proposal in principle. However, these parties question the validity of the cost of service study that Union offers in support of the proposed rate design changes and whether it, in fact, supports the proposal. Furthermore, the parties highlighted problems with rate continuity and rate stability.

These issues are explored more fully in this chapter of the report. The following section reviews the evidence filed by Union in Docket No. EB-2011-0210 to support its proposals as well as the evidence filed by the parties in response to Union’s proposals. Next, an independent evaluation of these proposals is presented. Because this independent evaluation requires a set of evaluation criteria, these criteria, which have been presented to all parties, are discussed first. This is followed by a discussion of Union’s rate design philosophy and a discussion of how Union translates the cost of service results from above to a set of tariffs consistent with its

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<sup>6</sup> Case No. EB-2011-0210, Exhibit H1, Tab 1, Page 18 of 60.

proposals. The criteria are applied to Union's current rates and the rates resulting from its alternative breakpoint and rate harmonization proposals in a following section. Finally, three alternative proposals are presented and evaluated to determine whether an alternative might exist that would better meet the rate evaluation criteria presented above and be more acceptable to the parties.

### **Case No. EB-2011-0210 Evidence**

In its evidence filed in Case No. EB-2011-0210, Union offered four arguments in support of its rate design proposals:

- Rate Class Homogeneity is improved by moving the volume breakpoint between the smaller and larger General Service customers from 50,000 m<sup>3</sup>/year to 5,000 m<sup>3</sup>/year.
- Rate Class Size and Composition is improved by moving the volume breakpoint between the smaller and larger General Service customers from 50,000 m<sup>3</sup>/year to 5,000 m<sup>3</sup>/year.
- Harmonization of the block structures will be achieved by the proposal.
- Mitigation of Rate Impacts for smaller General Service customers now served under large General Service rates (Rate 10 and Rate M2) will be accomplished by a reduction of customer charges for the larger General Service rate classes.

A number of parties to this case also presented evidence with respect to Union's proposals: the LPMA, the SEC and the Board Staff. Although LPMA supported the volume breakpoint change in concept, it objected to Union's specific proposal in Case No. EB-2011-0210 for the following reasons:

- Union did not file a cost of service study to support its rate change as a result of the volume breakpoint change.

- There will be significant rate impacts for some of the customers whose annual consumption level is in the range of 5,000 and 50,000 m<sup>3</sup>/year.
- The fixed costs developed by Union are not the same between the North and the South, and therefore the monthly fixed charges of the rates should not be the same between the North and the South rate designs.

While also generally supportive of efforts to reduce the volume breakpoint between smaller volume General Service customers and larger volume General Service customers, SEC opposed Union's volume breakpoint and rate harmonization proposals in Case No. EB-2011-0210, primarily because the Company did not support the proposals with a full and current cost of service study. In addition, SEC provided the following additional evidence in opposition to the proposals:

- The proposed M1 and M2 rates exhibit a significant discontinuity, which SEC believes is caused by an over-allocation of costs to the M2 rate class.

Finally, while also expressing general support for more homogeneous General Service rate classes and to increase the size of the larger volume General Service rate classes, Board Staff recommended that the Board not approve Union's specific proposals, citing the lack of a supporting cost study, the rate continuity issue highlighted by SEC, and the rate impacts discussed by both LPMA and SEC in their presentations.

These arguments are discussed more fully in the subsections below.

#### Rate Class Homogeneity

Evidence. Union argues that its small volume General Service rate classes (Rate 01 and Rate M1) lack homogeneity at the current 50,000 m<sup>3</sup>/year breakpoint and that rate

homogeneity is improved by lowering the annual volume breakpoint to 5,000 m<sup>3</sup>/year<sup>7</sup>. In support of its argument, Union provides the volume information describing average use by class in Union South under different assumed breakpoints. In addition to the information provided by Union in Table 7 of Exhibit H1, Tab 1, page 19, the following Exhibit provides a calculation of the standard deviation of average usage across customer type within each rate considered:

Exhibit III-1  
Union South General Service Rate Class Profiles  
(2010 Actual Data)

	Rate M1			Rate M2		
	Annual Volumes (m <sup>3</sup> )	Number of Meters	Average Use per Customer (m <sup>3</sup> )	Annual Volumes (m <sup>3</sup> )	Number of Meters	Average Use per Customer (m <sup>3</sup> )
<u>50,000 m<sup>3</sup> Breakpoint</u>						
Residential	2,066,157,260	915,184	2,258	4,623,316	41	112,764
Commercial	561,651,565	73,418	7,650	706,677,068	5,078	139,164
Industrial	51,749,801	3,982	12,996	260,062,298	1,109	234,502
Total	2,679,558,626	992,584	2,700	971,362,682	6,228	155,967
Standard Deviation			5,369			64,039
<u>5,000 m<sup>3</sup> Breakpoint</u>						
Residential	1,949,672,659	898,064	2,171	121,107,917	17,161	7,057
Commercial	90,773,709	42,241	2,149	1,177,554,925	36,255	32,480
Industrial	3,437,553	1,432	2,401	308,374,546	3,659	84,278
Total	2,043,883,921	941,737	2,170	1,607,037,388	57,075	28,157
Standard Deviation			139			39,354

These numbers demonstrate the significant differences in average use per Residential (2,258 m<sup>3</sup>/year), Commercial (7,650 m<sup>3</sup>/year) and Industrial (12,996 m<sup>3</sup>/year) customers within Rate M1 with an assumed 50,000 m<sup>3</sup>/year breakpoint and how the average use per Residential, Commercial and Industrial customer within Rate M1 converges (2,171; 2,149; and 2,401 m<sup>3</sup>/year, respectively) when the breakpoint is defined at 5,000 m<sup>3</sup>/year. This is also confirmed by the calculated standard deviation, which declines from 5,369 to 139 under Union's proposed 5,000 m<sup>3</sup>/year breakpoint. The standard deviation calculation also shows that homogeneity has been improved in Rate M2, dropping from 64,039 to 39,354.

<sup>7</sup> Case No. EB-2011-0210, Exhibit H1, Tab 1, Pages 18 to 22.

A similar, but not quite as marked, improvement in rate homogeneity is observed for customers served under Rate 01 in the North:

Exhibit III-2  
Union North General Service Rate Class Profiles  
(2010 Actual Data)

	Annual Volumes (m <sup>3</sup> )	Rate 01 Number of Meters	Average Use per Customer (m <sup>3</sup> )	Annual Volumes (m <sup>3</sup> )	Rate 10 Number of Meters	Average Use per Customer (m <sup>3</sup> )
<u>50,000 m<sup>3</sup> Breakpoint</u>						
Residential	614,276,579	272,963	2,250	221,100	4	55,275
Commercial	222,217,874	26,413	8,413	202,757,756	1,619	125,236
Industrial	901,507	33	27,318	41,976,551	112	374,791
Total	837,395,960	299,409	2,797	244,955,407	1,735	141,185
Standard Deviation			13,063			167,959
<u>5,000 m<sup>3</sup> Breakpoint</u>						
Residential	578,531,023	267,742	2,161	35,966,652	5,225	6,884
Commercial	30,835,838	13,498	2,284	394,139,792	14,534	27,118
Industrial	4,456	6	743	42,873,602	139	308,443
Total	609,371,317	281,246	2,167	472,980,046	19,898	23,770
Standard Deviation			857			168,568

While average Industrial customer consumption (743 m<sup>3</sup>/year) continues to exhibit a significant difference from the average consumption of all customers served under Rate 01 in the North, Union notes that there are only six Industrial customers classified as smaller customers in the North under the new breakpoint. Furthermore, the calculated standard deviations confirm the improvement in Rate 01 rate homogeneity under Union's proposed 5,000 m<sup>3</sup>/year breakpoint (decline from 13,063 to 857). While the standard deviation calculation also shows that homogeneity declines under this proposal in Rate 10 (168,568 under the 5,000 m<sup>3</sup>/year breakpoint as compared to 167,959 under the 50,000 m<sup>3</sup>/year breakpoint) the increase in standard deviation is quite small (less than 0.5%).

Analysis of Evidence. It is clear that the average usage by type of customer becomes more homogeneous as the volume breakpoint between larger and smaller General Service

customers is reduced. However, it is not clear that the appropriate measure of rate class homogeneity is average usage by type of customer. It would be, if only commodity-related costs are incurred to serve these customers (or if load factor across these customer types is constant) so that there is a one-to-one correspondence between the costs to serve these customers and average usage. However, this is not the case. Load factor changes as customer size changes, according to Company data. This means that demand-related costs have a different impact on larger customers than smaller customers, and the average cost per m<sup>3</sup> to serve these different customers varies. In this case, a better measure of rate homogeneity would be the cost to serve these customers at different consumption levels. (This is the intra-class subsidy analysis discussed below).

Furthermore, if the concern is matching the cost to serve the three types of customers (Residential, Commercial and Industrial), then a better rate design to accomplish this may be one that serves these major customer types under their own rate. This alternative is explored in greater detail below.

#### Rate Class Size and Composition

Evidence. Union argues that reducing the current 50,000 m<sup>3</sup>/year breakpoint in both the North and the South to 5,000 m<sup>3</sup>/year will improve the size and composition of the larger General Service rate classes (Rate M2 and Rate 10)<sup>8</sup>. The support for this position can also be seen on Exhibits III-1 and III-2, above. For example, using 2010 customer data, the number of customers considered to be larger General Service customers in the South and served under Rate M2 increases from 6,228 customers to 57,075 customers under Union's proposal to

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<sup>8</sup> Case No. EB-2011-0210, Exhibit H1, Tab 1, Pages 22 to 23.

reduce the volume breakpoint between smaller and larger General Service customers from 50,000 m<sup>3</sup>/year to 5,000 m<sup>3</sup>/year, as shown on Exhibit III-1. In the North, the number of customers considered to be larger General Service customers and served under Rate 10 increases from 1,735 customers to 18,898 customers as shown on Exhibit III-2. Union argues that “[t]he increase in rate class size will allow for more meaningful average pricing and rate stability in these classes.”<sup>9</sup>

In addition, Union defines rate class composition as the mix of Residential, Commercial and Industrial customers within each rate and argues that rate class composition will be improved under its proposal. To demonstrate this, Union calculates the percentage of each type of customer served (Residential, Commercial, and Industrial) under the current and proposed breakpoints. These percentages can be derived from Exhibits III-1 and III-2, and result in the following percentages of Residential, Commercial and Industrial customers served under the current and proposed breakpoints:

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<sup>9</sup> Case No. EB-2011-0210, Exhibit H1, Tab 1, Page 23, Lines 13-14.

Exhibit III-3  
Union South General Service Rate Class Composition  
(2010 Actual Data)

	Rate M1		Rate M2	
	Number of	% of Customer	Number of	% of Customer
	Meters	Type (R,C,I) Represented	Meters	Type (R,C,I) Represented
<u>50,000 m<sup>3</sup> Breakpoint</u>				
Residential	915,184	92%	41	1%
Commercial	73,418	7%	5,078	82%
Industrial	3,982	0%	1,109	18%
Total	992,584	100%	6,228	100%
<u>5,000 m<sup>3</sup> Breakpoint</u>				
Residential	898,064	95%	17,161	30%
Commercial	42,241	4%	36,255	64%
Industrial	1,432	0%	3,659	6%
Total	941,737	100%	57,075	100%

As can be seen from Exhibit III-3, under Union's proposal, the representation of Residential customers in Rate M2 increases dramatically, from 1% to 30%, with corresponding reductions in the percentages of Commercial and Industrial customers represented in the rate class.

A similar result can be observed in the North rate classes:

Exhibit III-4  
Union North General Service Rate Class Composition  
(2010 Actual Data)

	Rate 01		Rate 10	
	Number of	% of Customer	Number of	% of Customer
	Meters	Type (R,C,I) Represented	Meters	Type (R,C,I) Represented
<u>50,000 m<sup>3</sup> Breakpoint</u>				
Residential	272,963	91%	4	0%
Commercial	26,413	9%	1,619	93%
Industrial	33	0%	112	6%
Total	299,409	100%	1,735	100%
<u>5,000 m<sup>3</sup> Breakpoint</u>				
Residential	267,742	95%	5,225	26%
Commercial	13,498	5%	14,534	73%
Industrial	6	0%	139	1%
Total	281,246	100%	19,898	100%

Specifically, under Union's proposal, the representation of Residential customers in Rate 10 increases from 0% to 26%, with corresponding reductions in the percentages of Commercial and Industrial customers represented in the rate class.

Analysis of Evidence. It is a mathematical certainty that as the volume breakpoint that determines whether a customer is a larger or smaller General Service customer decreases, the number of larger General Service customers will increase. Furthermore, if there are significant cost differences between the customer types highlighted by Union (Residential, Commercial, and Industrial), then the movement of any individual customer between rates will have a minimal impact on the overall cost to serve that rate and the resulting average rates will tend to be more stable. However, consistent with the discussion above, if the concern is matching the cost to serve the three types of customers (Residential, Commercial and Industrial), then a

better rate design to accomplish this may be one that serves these major customer types under their own rate, which alternative is explored in greater detail below.

#### Harmonization of the Block Structures

Evidence. In Case No. EB-2011-0210, Union proposed to make the rate structures for General Service customers in the North consistent with those in the South<sup>10</sup>. Specifically, Union proposed to reduce the number of rate blocks from five to three for all Rate 01 customers. Rather than a block structure that provides for different rates at monthly consumption levels of 100 m<sup>3</sup>, 300 m<sup>3</sup>, 500 m<sup>3</sup> and 1,000 m<sup>3</sup>, Union proposed a blocking structure similar to the blocking structure of the M1 rate that provides for different rates at monthly consumption levels of 100 m<sup>3</sup> and 250 m<sup>3</sup>. For 2013 and 2014, Union proposed the following small General Service rates:

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<sup>10</sup> Case No. EB-2011-0210, Exhibit H1, Tab 1, Pages 23 to 28.

Exhibit III-5  
Small Volume General Service  
Rate Structure Harmonization and Proposed Pricing

Rate	2013 Rate Structure - Annual Volume Breakpoint of 50,000 m <sup>3</sup>	2013 Proposed Rates (cents/m <sup>3</sup> )	2014 Proposed Rate Structure - Annual Volume Breakpoint of 5,000 m <sup>3</sup>	2014 Proposed Rates (cents/m <sup>3</sup> )
Rate 01	Monthly Charge	\$ 21.00	Monthly Charge	\$ 21.00
	First 100 m <sup>3</sup>	10.2137	First 100 m <sup>3</sup>	10.2235
	Next 200 m <sup>3</sup>	9.6892	Next 150 m <sup>3</sup>	9.7504
	Next 200 m <sup>3</sup>	9.3165	Over 250 m <sup>3</sup>	9.0903
	Next 500 m <sup>3</sup>	8.9745		
	Over 1,000 m <sup>3</sup>	8.6920		
Rate M1	Monthly Charge	\$ 21.00	Monthly Charge	\$ 21.00
	First 100 m <sup>3</sup>	4.2312	First 100 m <sup>3</sup>	4.2712
	Next 150 m <sup>3</sup>	4.0247	Next 150 m <sup>3</sup>	3.9166
	Over 250 m <sup>3</sup>	3.5362	Over 250 m <sup>3</sup>	3.4649

Union made similar proposals with respect to the large General Service rates. In the North, Union proposed to reduce the number of rate blocks from five to four for all Rate 10 customers. Rather than a block structure that provides for different rates at monthly consumption levels of 1,000 m<sup>3</sup>, 10,000 m<sup>3</sup>, 30,000 m<sup>3</sup>, and 100,000 m<sup>3</sup>, Union proposed a blocking structure similar to the blocking structure of the M2 rate that provides for different rates at monthly consumption levels of 1,000 m<sup>3</sup>, 7,000 m<sup>3</sup>, and 20,000 m<sup>3</sup>. For 2013 and 2014, Union proposed the following large General Service rates:

Exhibit III-6  
Large Volume General Service  
Rate Structure Harmonization and Proposed Pricing

	2013 Rate Structure - Annual Volume Breakpoint of 50,000 m <sup>3</sup>	2013 Proposed Rates (cents/m <sup>3</sup> )	2014 Proposed Rate Structure - Annual Volume Breakpoint of 5,000 m <sup>3</sup>	2014 Proposed Rates (cents/m <sup>3</sup> )
Rate 10	Monthly Charge	\$ 70.00	Monthly Charge	\$ 35.00
	First 1,000 m <sup>3</sup>	7.6146	First 1,000 m <sup>3</sup>	7.0867
	Next 9,000 m <sup>3</sup>	6.2010	Next 6,000 m <sup>3</sup>	6.8890
	Next 20,000 m <sup>3</sup>	5.3948	Next 13,000 m <sup>3</sup>	6.2523
	Next 70,000 m <sup>3</sup>	4.8787	Over 20,000 m <sup>3</sup>	4.7901
	Over 100,000 m <sup>3</sup>	2.9235		
Rate M2	Monthly Charge	\$ 70.00	Monthly Charge	\$ 35.00
	First 1,000 m <sup>3</sup>	4.1814	First 1,000 m <sup>3</sup>	3.6513
	Next 6,000 m <sup>3</sup>	4.1051	Next 6,000 m <sup>3</sup>	3.5250
	Next 13,000 m <sup>3</sup>	3.8777	Next 13,000 m <sup>3</sup>	3.3500
	Over 20,000 m <sup>3</sup>	3.6048	Over 20,000 m <sup>3</sup>	3.1157

Analysis of Evidence. There is no question that the rates proposed at the 5,000 m<sup>3</sup>/year breakpoint are more consistent between the North and the South than the rates that were proposed at the 50,000 m<sup>3</sup>/year breakpoint. However, there are three additional issues raised by the rate structure harmonization proposals that have a significant bearing on whether the new rates are more appropriate than the old rates. First, in order to mitigate the rate impact of those customers who were previously served under a small General Service rate class and are now served under a large General Service rate class, Union reduced the large volume Monthly charge from \$70/month to \$35/month. This ensures that Union collects the same amount of customer costs in fixed monthly charges under its proposal and, since relatively more, lower

customer cost Residential and Commercial customers are served under the new large General Service rates, the average cost for this group of customers declines. However, because these customers previously faced monthly charges of \$21/month, it remains to be seen whether the rate impacts of the new rates will be determined to be acceptable, particularly to those customers with annual consumption levels around 5,000 m<sup>3</sup>/year.

Second, it remains to be seen whether the difference between this “average” monthly charge and the monthly customer costs incurred to serve each of the three identified customer types will be so great (and imply such a level of subsidy), that it will be unacceptable from the standpoint of reflecting the estimated cost to serve these customers.

Finally, as discussed above, the observed load factor of Union North customers increases as average annual consumption increases. This implies that the unit cost to serve these customers (composed of demand-related and commodity-related costs) will also decline when expressed on a per unit of volume basis as average annual consumption increases and a declining block rate for these customers is appropriate. In contrast, the observed load factor of Union South customers declines as average annual consumption increases. This implies that the unit cost to serve these customers will increase when expressed on a per unit of volume basis as average annual consumption increases and a declining block rate for these customers is not appropriate. As a result, Union’s rate harmonization proposal moves away from cost based rates although, in fairness, the current declining block rate structures in the South are also inconsistent with this cost causation principle.

### Mitigation of Rate Impacts for Smaller General Service Customers

Evidence. In its evidence filed in Case No. EB-2011-0210, Union calculated the rate impacts of its proposed volume breakpoint change but did not indicate these impacts to be a problem. In its evidence filed in Case No. EB-2013-0365, Union noted its concern about the rate and bill impacts of its proposal and, as a consequence, did not propose to implement the 5,000 m<sup>3</sup> annual volume breakpoint or the harmonization of the blocking structures as part of its 2014-2018 Incentive Rate Mechanism (“IRM”) term. The calculated rate impacts for Union South are as follows:

Exhibit III-7  
Calculation of Rate Impacts  
Union South

2013 Approved Rates - M1			2013 Proposed Rates - M1		
\$	21.00	per month	\$	21.00	per month
	3.7795	First 100 m <sup>3</sup>		3.1389	First 100 m <sup>3</sup>
	3.5730	Next 150 m <sup>3</sup>		2.7839	Next 150 m <sup>3</sup>
	3.0845	All Over 250 m <sup>3</sup>		2.2862	All Over 250 m <sup>3</sup>

2013 Approved Rates - M2			2013 Proposed Rates - M2		
\$	70.00	per month	\$	32.00	per month
	4.1416	First 1,000 m <sup>3</sup>		4.4256	First 1,000 m <sup>3</sup>
	4.0653	Next 6,000 m <sup>3</sup>		4.2756	Next 6,000 m <sup>3</sup>
	3.8379	Next 13,000 m <sup>3</sup>		4.0756	Next 13,000 m <sup>3</sup>
	3.5650	All Over 20,000 m <sup>3</sup>		3.7698	All Over 20,000 m <sup>3</sup>

Annual Volume (m <sup>3</sup> /year)	Approved Revenues		Proposed Revenues		Difference	
	(\$)		(\$)		(\$)	(%)
1,800	\$	317.46	\$	304.65	\$ (12.81)	-4.04%
2,200	\$	330.66	\$	314.76	\$ (15.90)	-4.81%
2,600	\$	343.77	\$	324.75	\$ (19.03)	-5.54%
3,000	\$	356.77	\$	334.62	\$ (22.16)	-6.21%
5,000	\$	420.72	\$	382.81	\$ (37.91)	-9.01%
6,000	\$	452.08	\$	649.36	\$ 197.28	43.64%
7,000	\$	483.38	\$	693.07	\$ 209.69	43.38%
10,000	\$	577.10	\$	823.12	\$ 246.03	42.63%
20,000	\$	886.04	\$	1,253.82	\$ 367.78	41.51%
30,000	\$	1,194.49	\$	1,682.73	\$ 488.23	40.87%
50,000	\$	1,811.40	\$	2,531.95	\$ 720.55	39.78%
60,000	\$	3,266.21	\$	2,947.88	\$ (318.33)	-9.75%
70,000	\$	3,658.44	\$	3,362.86	\$ (295.58)	-8.08%
80,000	\$	4,049.67	\$	3,776.96	\$ (272.71)	-6.73%
100,000	\$	4,827.62	\$	4,601.20	\$ (226.43)	-4.69%
200,000	\$	8,568.31	\$	8,561.13	\$ (7.17)	-0.08%
300,000	\$	12,218.03	\$	12,421.99	\$ 203.96	1.67%
500,000	\$	19,424.78	\$	20,045.86	\$ 621.08	3.20%

The calculated rate impacts for Union North are as follows:

Exhibit III-8  
Calculation of Rate Impacts  
Union North

2013 Approved Rates - 01		2013 Proposed Rates - 01	
\$	21.00 per month	\$	21.00 per month
	9.7347 First 100 m <sup>3</sup>		10.1347 First 100 m <sup>3</sup>
	9.2102 Next 200 m <sup>3</sup>		9.9979 Next 150 m <sup>3</sup>
	8.8375 Next 200 m <sup>3</sup>		9.7489 All Over 250 m <sup>3</sup>
	8.4955 Next 500 m <sup>3</sup>		
	8.2130 Over 1,000 m <sup>3</sup>		
2013 Approved Rates - 10		2013 Proposed Rates - 10	
\$	70.00 per month	\$	32.00 per month
	7.7070 First 1,000 m <sup>3</sup>		6.4117 First 1,000 m <sup>3</sup>
	6.2934 Next 9,000 m <sup>3</sup>		5.9605 Next 6,000 m <sup>3</sup>
	5.4872 Next 20,000 m <sup>3</sup>		5.4605 Next 13,000 m <sup>3</sup>
	4.9711 Next 70,000 m <sup>3</sup>		4.9035 All Over 20,000 m <sup>3</sup>
	3.0159 Over 100,000 m <sup>3</sup>		

Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Difference	
			(\$)	(%)
1,800	\$ 422.65	\$ 432.90	\$ 10.25	2.42%
2,200	\$ 459.15	\$ 472.36	\$ 13.21	2.88%
2,600	\$ 495.30	\$ 511.75	\$ 16.45	3.32%
3,000	\$ 531.25	\$ 551.07	\$ 19.82	3.73%
5,000	\$ 706.50	\$ 747.12	\$ 40.62	5.75%
6,000	\$ 792.76	\$ 768.70	\$ (24.05)	-3.03%
7,000	\$ 877.89	\$ 832.68	\$ (45.20)	-5.15%
10,000	\$ 1,130.30	\$ 1,018.40	\$ (111.90)	-9.90%
20,000	\$ 1,961.33	\$ 1,625.12	\$ (336.20)	-17.14%
30,000	\$ 2,786.54	\$ 2,225.08	\$ (561.46)	-20.15%
50,000	\$ 4,432.36	\$ 3,416.33	\$ (1,016.04)	-22.92%
60,000	\$ 4,785.64	\$ 3,990.75	\$ (794.89)	-16.61%
70,000	\$ 5,412.57	\$ 4,557.98	\$ (854.59)	-15.79%
80,000	\$ 6,014.80	\$ 5,121.53	\$ (893.27)	-14.85%
100,000	\$ 7,181.99	\$ 6,244.28	\$ (937.71)	-13.06%
200,000	\$ 12,859.81	\$ 11,601.33	\$ (1,258.48)	-9.79%
300,000	\$ 18,184.35	\$ 16,684.91	\$ (1,499.44)	-8.25%
500,000	\$ 28,435.60	\$ 26,656.38	\$ (1,779.22)	-6.26%

Analysis of Evidence. From these Exhibits, it is clear to see that there will be significant (greater than the 10% that the Board finds acceptable) rate impacts for Union South customers whose annual consumption level falls between 5,000 and 50,000 m<sup>3</sup>/year. The significant rate impacts are the result of increases in customer charges for these customers from \$21/month to \$35/month, or \$168/year that are not overcome by minor reductions in volumetric charges.

These rate impact concerns were identified by a number of parties to Case No. 2011-0210, as described in detail above, and there appears to be no dispute that the rate impacts are too large to implement the volume breakpoint and rate harmonization proposals as presented by the Company in Case No. 2011-0210. Thus, the focus of this investigation will be on whether there are alternative ways to implement the proposal that will mitigate rate stability concerns. These alternatives are discussed in greater detail below.

#### Rate Continuity

Evidence. A desirable feature of a sound rate design is that unit rates increase or decrease monotonically as consumption increases or decreases so that customers do not face abrupt cost changes as their usage changes. In rate design, a rate continuity problem is said to exist when unit rates do not behave in this way or the unit rate changes dramatically at specific levels of consumption. In order to demonstrate this problem, SEC filed exhibits that computed the unit cost of existing rates at various consumption levels and compared this to the unit cost of the rates that reflect Union's volume breakpoint and rate harmonization proposals. These exhibits are recreated here as Exhibit III-9 and Exhibit III-10.

Exhibit III-9  
Rate Continuity  
Union South

Annual Volume (m <sup>3</sup> /year)	2012 Approved Rate Revenues (\$)	2012 Approved Unit Rate (cents/m <sup>3</sup> )	2013 Proposed Rate Revenues (\$)	2013 Proposed Unit Rate (cents/m <sup>3</sup> )	2014 Proposed Rate Revenues (\$)	2014 Proposed Unit Rate (cents/m <sup>3</sup> )
5,000	\$ 410.12	\$ 8.20	\$ 436.44	\$ 8.73	\$ 439.21	\$ 8.78
7,000	\$ 468.81	\$ 6.70	\$ 505.38	\$ 7.22	\$ 651.36	\$ 9.31
10,000	\$ 556.60	\$ 5.57	\$ 608.53	\$ 6.09	\$ 749.11	\$ 7.49
20,000	\$ 845.99	\$ 4.23	\$ 948.89	\$ 4.74	\$ 1,073.28	\$ 5.37
30,000	\$ 1,134.90	\$ 3.78	\$ 1,288.78	\$ 4.30	\$ 1,396.41	\$ 4.65
50,000	\$ 1,712.75	\$ 3.43	\$ 1,968.51	\$ 3.94	\$ 2,038.38	\$ 4.08
80,000	\$ 3,730.75	\$ 4.66	\$ 4,031.07	\$ 5.04	\$ 2,987.00	\$ 3.73
100,000	\$ 4,428.16	\$ 4.43	\$ 4,804.38	\$ 4.80	\$ 3,616.58	\$ 3.62
200,000	\$ 7,761.05	\$ 3.88	\$ 8,521.82	\$ 4.26	\$ 6,720.25	\$ 3.36
300,000	\$ 10,999.89	\$ 3.67	\$ 12,148.30	\$ 4.05	\$ 9,797.39	\$ 3.27
500,000	\$ 17,381.76	\$ 3.48	\$ 19,308.57	\$ 3.86	\$ 15,922.58	\$ 3.18

Source: Exhibit J12.5, Attachment 2, Case No. EB-2011-0210

Exhibit III-10  
Rate Continuity  
Union North

Annual Volume (m <sup>3</sup> /year)	2012 Approved Rate Revenues (\$)	2012 Approved Unit Rate (cents/m <sup>3</sup> )	2013 Proposed Rate Revenues (\$)	2013 Proposed Unit Rate (cents/m <sup>3</sup> )	2014 Proposed Rate Revenues (\$)	2014 Proposed Unit Rate (cents/m <sup>3</sup> )
5,000	\$ 598.23	\$ 11.96	\$ 705.54	\$ 14.11	\$ 705.23	\$ 14.10
7,000	\$ 726.61	\$ 10.38	\$ 876.55	\$ 12.52	\$ 889.80	\$ 12.71
10,000	\$ 914.59	\$ 9.15	\$ 1,128.39	\$ 11.28	\$ 1,090.00	\$ 10.90
20,000	\$ 1,531.22	\$ 7.66	\$ 1,957.51	\$ 9.79	\$ 1,755.24	\$ 8.78
30,000	\$ 2,142.17	\$ 7.14	\$ 2,780.82	\$ 9.27	\$ 2,419.31	\$ 8.06
50,000	\$ 3,359.60	\$ 6.72	\$ 4,422.82	\$ 8.85	\$ 3,743.64	\$ 7.49
80,000	\$ 4,805.71	\$ 6.01	\$ 5,899.52	\$ 7.37	\$ 5,626.55	\$ 7.03
100,000	\$ 5,683.78	\$ 5.68	\$ 7,037.89	\$ 7.04	\$ 6,863.64	\$ 6.86
200,000	\$ 9,932.35	\$ 4.97	\$ 12,571.60	\$ 6.29	\$ 12,626.80	\$ 6.31
300,000	\$ 13,864.38	\$ 4.62	\$ 17,752.05	\$ 5.92	\$ 17,917.17	\$ 5.97
500,000	\$ 21,371.97	\$ 4.27	\$ 27,715.09	\$ 5.54	\$ 28,150.63	\$ 5.63

Source: Exhibit J12.5, Attachment 2, Case No. EB-2011-0210

As can be seen in Exhibit III-9, the 2012 Approved unit rates for South General Service customers exhibit significant discontinuities, as do the 2013 and 2014 Proposed unit rates in

Case No. EB-2011-0210. For the 2012 approved rates, this discontinuity begins at the 50,000 m<sup>3</sup>/year volume breakpoint and continues through at least an annual consumption level of 500,000 m<sup>3</sup>/year. The discontinuity was improved by both the 2013 and 2014 proposed rates. For the 2013 proposed rates, the discontinuity is eliminated at annual consumption volumes of between 300,000 and 500,000 m<sup>3</sup>/year. For the 2014 proposed rates, with the proposed volume breakpoint of 5,000 m<sup>3</sup>/year, the discontinuity is eliminated at annual consumption volumes greater than 7,000-10,000 m<sup>3</sup>/year.

No such discontinuities are evident in either the 2012 Approved or the 2013 and 2014 Proposed unit rates for North General Service customers in Case No. EB-2011-0210, as shown in Exhibit III-10.

Analysis of Evidence. From the evidence presented above, SEC concludes that there is a problem with Union's rate design proposal. Specifically, SEC posits that Union's proposed \$35/month fixed charge for larger volume General Service customers is actually more than cost.<sup>11</sup> This is not the case. Based on the fully allocated cost of service study that the Company filed in Case No. EB-2013-0365 and as duplicated above in Exhibits II-3 and II-5, the fixed costs associated with M2 customers are \$106.37/customer/month in the 50,000 m<sup>3</sup>/year volume breakpoint cost of service study and \$51.40/customer/month in the 5,000 m<sup>3</sup>/year volume breakpoint cost of service study. Thus, the opposite conclusion can be drawn: Union's proposed \$35/month fixed charge for larger volume General Service customers is actually less than cost.

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<sup>11</sup> Transcript, Volume 15, page 217, Case No. EB-2011-0210.

Then why does this rate discontinuity occur in the South and not in the North? While the increase in monthly fixed charges for customers whose annual consumption is between 5,000 and 50,000 m<sup>3</sup>/year is certainly a contributing factor, the assumed load factor by rate class also plays a role in the observed discontinuity, as shown in Exhibit II-1. This indicates that SEC's implicit assumption that there are economies of scale associated with greater levels of consumption is simply not true. Given the observed load factor, one would expect, and we observe, that the unit cost to serve these customers increases as volume increases. These diseconomies of scale are amplified by the fact that, in general, larger customers require larger, more expensive meters and more extensive service lines.

#### Additional Evaluation Criteria

The submissions of the Company in support of its volume breakpoint and rate homogeneity proposals in Case No. EB-2011-0210 and Case No. EB-2013-0365 and the evidence provided by the parties in those proceedings largely define a set of appropriate criteria by which any rate design can be objectively evaluated. However, there are three more criteria that enrich this evaluation and that are applied to the Union rate design proposals in this Report.

First, rates should reflect the costs that the LDC incurs to provide service to customers in total and in all of the following dimensions: (1) seasonally; (2) intra-class; and (3) by cost classification (customer-related costs, demand-related costs and commodity-related costs). Second, if there is more than one definition of the cost(s) to serve customers, rates should reflect the likely range of costs that the LDC incurs to provide service to those customers. In this proceeding, there appears to be general agreement that the cost of service analysis that

the Company developed for Case No. EB-2013-0365 generally reflects the cost of service. Finally, rates should produce a level of revenues that adequately compensates the utility under all conditions, such as colder or normal weather, changes in customer consumption patterns, or in the face of large natural gas cost changes.

### **Company Rate Design**

In order to fully evaluate the Company's rate design proposals and alternatives, which is done in the next section, it is helpful to describe how the Company translates the cost of service results, provided above in Exhibits II-2 through II-5, into rates. The first step in this process is to define the overall level of revenues that these rates are intended to collect from each class.

The General Service rate designs are two-part rates, where monthly customer charges collect most of the customer-related costs from the class cost of service analysis and volumetric charges collect the remaining customer costs and the demand- and commodity-related costs from the class cost of service analysis. In the case of the South operating area rate designs, the M1 and M2 base rates collect all costs from the class cost of service analysis except Purchase Production System costs and storage costs not related to System Integrity. The specific calculations involved in this process are summarized in Exhibit III-11.

Exhibit III-11  
Union Gas Limited - South Operations Area  
Ontario Energy Board Case No. EB-2011-0210

SUMMARY OF REVENUE REQUIREMENT BY FUNCTION AND CLASSIFICATION

Line No.		2013 Decision Cost Study Approved Breakpoint @ 50,000 m <sup>3</sup> / year		2013 Decision Cost Study Proposed Breakpoint @ 5,000 m <sup>3</sup> / year	
		General Service Small (M1)	General Service Large (M2)	General Service Small (M1)	General Service Large (M2)
		\$	\$	\$	\$
1	Required Rate Revenue to be Collected in Base Rates by Classification:				
2					
3	Customer Required Rate Revenue by Class	269,096	8,664	240,116	37,645
4					
5	Demand Required Rate Revenue by Class	118,641	40,489	89,087	70,043
6	Less:				
7	Storage Dehydrator Demand	113	38	86	65
8	Storage Deliverability	8,185	2,779	6,256	4,708
9	Storage System Integrity	1,118	377	843	652
10	Storage Space	11,823	4,038	9,157	6,704
11	Equals: Demand Required Rate Revenue to be Collected in Base Rates	97,402	33,256	72,744	57,914
12					
13	Commodity Required Rate Revenue by Class	688	2,025	(340)	3,053
16	Less:				
17	Storage Dehydrator Commodity	56	19	41	34
18	Storage Commodity	1,482	492	1,076	898
14	Plus:				
15	Storage System Integrity	1,118	377	843	652
19	Equals: Commodity Required Rate Revenue by Class	267	1,892	(614)	2,773
20					
21	Total Required Base Rate Revenue	366,765	43,812	312,246	98,331
22					
23	Billing Determinants:				
24					
25	Customers	1,058,900	6,788	1,004,661	61,027
26	Volumes	2,939,543	975,571	2,134,461	1,780,653

The process begins with customer-required rate revenues, shown on line 3 of Exhibit III-11, where these costs have been taken from line 36 of Exhibit II-2 for the 50,000 m<sup>3</sup>/year breakpoint cost study and from line 36 of Exhibit II-4 for the 5,000 m<sup>3</sup>/year breakpoint cost study. Demand-required rate revenues are calculated in lines 5 through 11 of Exhibit III-11. Similar to the derivation of customer-related required rate revenues, this calculation begins with the demand-related costs from the respective cost of service studies (line 37 of Exhibit II-2 for the 50,000 m<sup>3</sup>/year breakpoint cost study and line 37 of Exhibit II-4 for the 5,000 m<sup>3</sup>/year breakpoint cost study), but subtracts storage-related costs that are not collected in base rates (Storage Dehydrator Demand, Storage Deliverability, Storage System Integrity and Storage

Space from lines 6, 8, 10 and 11 of Exhibits II-2 and II-4). Finally, commodity-required rate revenues, calculated in lines 13 through 19 of Exhibit III-11, begin with the commodity -related costs from the respective cost of service studies (line 38 of Exhibit II-2 for the 50,000 m<sup>3</sup>/year breakpoint cost study and line 38 of Exhibit II-4 for the 5,000 m<sup>3</sup>/year breakpoint cost study), subtract storage-related costs that are not collected in base rates (Storage Dehydrator Commodity and Storage Commodity from lines 7 and 9 of Exhibits II-2 and II-4) and reclassify Storage System Integrity costs (from line 11 of Exhibits II-2 and II-4) as commodity-related delivery costs, although this has no impact on the result as both demand-related and commodity-related costs are collected through volumetric rates.

In the North operating area, the Rate 01 and Rate 10 base rates collect all distribution costs, an allocated share of system integrity-related storage and transmission costs, and an allocated share of Purchase Production Other costs from the class cost of service analysis. Separate charges for Natural Gas Commodity, Upstream Transportation to Union and Storage except system integrity are also developed, but are not a part of this analysis. While different components are collected in base rates in the North versus the South, the calculation logic is the same, i.e., subtract costs that are not calculated in base rates and add in reclassified costs. The details of these calculations for Rate 01 and Rate 10 for the 50,000 m<sup>3</sup>/year breakpoint cost study and for the 5,000 m<sup>3</sup>/year breakpoint cost study are shown in Exhibit II-12.

Exhibit II-12  
Union Gas Limited - North Operations Area  
Ontario Energy Board Case No. EB-2011-0210

SUMMARY OF UNIT COSTS BY FUNCTION AND CLASSIFICATION

Line No.		2013 Decision Cost Study Approved Breakpoint @ 50,000 m <sup>3</sup> / year		2013 Decision Cost Study Proposed Breakpoint @ 5,000 m <sup>3</sup> / year	
		General Service Small (R01)	General Service Large (R10)	General Service Small (R01)	General Service Large (R10)
		\$	\$	\$	\$
1	Required Rate Revenue to be Collected in Base Rates by Classification:				
2					
3	Customer Required Rate Revenue by Class	114,119	4,830	106,401	12,548
4					
5	Demand Required Rate Revenue by Class	139,172	44,352	100,569	82,955
6	Less:				
7	Purchase Production Demand	66,398	22,834	48,204	41,027
8	Storage Dehydrator Demand	43	11	31	23
9	Storage Deliverability	17,570	4,600	12,606	9,564
10	Storage System Integrity	4,223	1,105	3,030	2,298
11	Dawn Station Demand	675	177	484	368
12	Dawn-Trafalgar Easterly Demand	5,411	1,417	3,883	2,945
13	Plus:				
16	Dawn Station Demand Reclassified	195	51	140	106
17	Dawn-Trafalgar Easterly Demand Reclassified	1,562	409	1,121	850
18	Equals: Demand Required Rate Revenue to be Collected in Base Rates	46,610	14,668	33,592	27,686
14					
15	Commodity Required Rate Revenue by Class	6,779	2,499	4,825	4,454
19	Less:				
20	Purchase Production Other	5,665	1,881	4,215	3,331
21	Storage Dehydrator Commodity	19	6	14	11
22	Storage Excl. Dehy Commodity	1,707	537	1,242	1,002
23	Dawn Station Commodity	138	44	101	81
24	Dawn-Trafalgar Easterly Commodity	133	42	97	78
25	Plus:				
26	Purchase Production Other Reclassified	719	231	577	373
27	Dawn Station Commodity Reclassified	40	13	29	23
28	Dawn-Trafalgar Easterly Commodity Reclassified	38	12	28	23
29	Equals: Commodity Required Rate Revenue by Class	(86)	245	(210)	369
30					
31	Total Required Base Rate Revenue	160,643	19,743	139,783	40,603
32					
33	Billing Determinants:				
34					
35	Customers	319,978	2,052	300,669	21,361
36	Volumes	884,421	322,887	643,947	563,361

Tariff rates are then developed from these classified cost estimates by class. This process is described by the Company in Exhibit H1, Tab 1 of its evidence filed in Case No. EB-2011-0210 and the calculations are shown for the Union South operating area in Exhibit III-13.

Exhibit III-13  
Union Gas Limited - South Operations Area

RATE DESIGN CALCULATIONS

2013 Decision and Rate Order				2014 Proposed			
@ 50,000 m <sup>3</sup> / year Breakpoint				@ 5,000 m <sup>3</sup> / year Breakpoint			
Rate M1	2013 Billing Units	2013 Approved Revenue	2013 Approved Rates	Rate M1	2014 Billing Units	2014 Revenue	2014 Proposed Rates
Monthly Charge	12,706,802	266,843	\$21.00	Monthly Charge	12,055,926	253,174	\$21.00
Monthly Delivery Charge				Monthly Delivery Charge			
First 100 m <sup>3</sup>	885,353	33,462	3.7795	First 100 m <sup>3</sup>	824,336	25,875	3.1389
Next 150 m <sup>3</sup>	786,168	28,090	3.5730	Next 150 m <sup>3</sup>	722,101	20,102	2.7839
All Over 250 m <sup>3</sup>	1,268,023	39,113	3.0845	All Over 250 m <sup>3</sup>	588,024	13,443	2.2862
Delivery Commodity Charge	2,939,543	100,665	3.4245	Delivery Commodity Charge	2,134,461	59,421	2.7839
Total Delivery	2,939,543	367,508	12.5022	Total Delivery	2,134,461	312,595	14.6452
				2013 Decision IPW - Union South Re-Alloc			2013 Approved
				2,134,461			1,058
				1,780,653			882
				3,915,114			1,940
@ 50,000 m <sup>3</sup> / year Breakpoint				@ 5,000 m <sup>3</sup> / year Breakpoint			
Rate M2	2013 Billing Units	2013 Approved Revenue	2013 Approved Rates	Rate M2	2014 Billing Units	2014 Revenue	2014 Proposed Rates
Monthly Charge	81,451	5,702	\$70.00	Monthly Charge	732,327	23,434	\$32.00
Monthly Delivery Charge				Monthly Delivery Charge			
First 1,000 m <sup>3</sup>	53,047	2,197	4.1416	First 1,000 m <sup>3</sup>	462,367	20,463	4.4256
Next 6,000 m <sup>3</sup>	258,156	10,495	4.0653	Next 6,000 m <sup>3</sup>	650,995	27,834	4.2756
Next 13,000 m <sup>3</sup>	291,703	11,195	3.8379	Next 13,000 m <sup>3</sup>	294,626	12,008	4.0756
All Over 20,000 m <sup>3</sup>	372,665	13,286	3.5650	All Over 20,000 m <sup>3</sup>	372,665	14,049	3.7698
Delivery Commodity Charge	975,571	37,173	3.8104	Delivery Commodity Charge	1,780,653	74,353	4.1756
Total Delivery	975,571	42,874	4.3948	Total Delivery	1,780,653	97,787	5.4917
Total M1/M2 Revenue		\$ 410,382		Total M1/M2 Revenue		\$ 410,383	

The process begins by setting monthly charges. Monthly charges for M1 customers are set to the same level as that approved by the Board in its 2013 Decision and Rate Order in both the 50,000 m<sup>3</sup>/year breakpoint rate design and for the 5,000 m<sup>3</sup>/year breakpoint rate design. Monthly charges for M2 customers in the 5,000 m<sup>3</sup>/year breakpoint rate design are set so that the M1 and M2 rate design collects about the same level of customer-related costs in the 5,000 m<sup>3</sup>/year breakpoint rate design as in the 50,000 m<sup>3</sup>/year breakpoint rate design approved by

the Board in its 2013 Decision and Rate Order. The charges in each of the rate blocks are set so that the middle block or blocks are set at the average delivery commodity charge for each class' rate. Initial blocks are then set at a judgmentally higher level than the middle block or blocks and the tail block is adjusted to collect the required level of revenues.

The calculations are shown for the Union North operating area in Exhibit III-14.

Exhibit III-14  
Union Gas Limited - North Operations Area

RATE DESIGN CALCULATIONS

2013 Decision and Rate Order				2014 Proposed			
@ 50,000 m <sup>3</sup> / year Breakpoint				@ 5,000 m <sup>3</sup> / year Breakpoint			
Rate 01	2013 Billing Units	2013 Approved Revenue	2013 Approved Rates	Rate 01	2013 Billing Units	2013 Revenue Requirement	2014 Proposed Rates
Monthly Charge	3,839,732	80,634	\$21.00	Monthly Charge	3,608,030	75,769	\$21.00
Monthly Delivery Charge				Monthly Delivery Charge			
First 100 m <sup>3</sup>	260,791	25,387	9.7347	First 100 m <sup>3</sup>	238,995	24,221	10.1347
Next 200 m <sup>3</sup>	296,122	27,273	9.2102	Next 150 m <sup>3</sup>	273,645	27,359	9.9979
Next 200 m <sup>3</sup>	129,180	11,416	8.8375	All Over 250 m <sup>3</sup>	131,307	12,801	9.7489
Next 500 m <sup>3</sup>	88,231	7,496	8.4955	Delivery Commodity Charge	643,947	64,381	9.9979
Over 1,000 m <sup>3</sup>	110,097	9,042	8.2130	Total Delivery	643,947	140,150	21.7642
Delivery Commodity Charge	884,421	80,615	9.1150				
Total Delivery	884,421	161,249	18.2322				
				2013 Decision IPW - Union North Re-Alloc			
				643,947	542		782
				563,361	475		235
				1,207,308	1,017		1,017
@ 50,000 m <sup>3</sup> / year Breakpoint				@ 5,000 m <sup>3</sup> / year Breakpoint			
Rate M2	2013 Billing Units	2013 Approved Revenue	2013 Approved Rates	Rate M2	2014 Billing Units	2014 Revenue	2014 Proposed Rates
Monthly Charge	24,629	1,724	\$70.00	Monthly Charge	256,331	8,203	\$32.00
Monthly Delivery Charge				Monthly Delivery Charge			
First 1,000 m <sup>3</sup>	23,682	1,825	7.7070	First 1,000 m <sup>3</sup>	188,639	12,095	6.4117
Next 9,000 m <sup>3</sup>	127,854	8,046	6.2934	Next 6,000 m <sup>3</sup>	186,596	11,122	5.9605
Next 20,000 m <sup>3</sup>	81,326	4,462	5.4872	Next 13,000 m <sup>3</sup>	77,769	4,247	5.4605
Next 70,000 m <sup>3</sup>	61,664	3,065	4.9711	All Over 20,000 m <sup>3</sup>	110,357	5,411	4.9035
Over 100,000 m <sup>3</sup>	28,362	855	3.0159	Delivery Commodity Charge	563,361	32,875	5.8355
Delivery Commodity Charge	322,887	18,255	5.6536	Total Delivery	563,361	41,078	7.2915
Total R01/R10 Revenue		\$ 181,228		Total R01/R10 Revenue		\$ 181,227	

## **Application of Rate Design Criteria**

The next step in this evaluation of Union's volume breakpoint and rate block harmonization proposal is to apply the rate design criteria developed above in order to determine whether the proposed rates better satisfy the criteria for a sound rate design than existing rate structures. Briefly, these criteria are:

- Rates should reflect the costs that the LDC incurs to provide service to customers in total and in all of the following dimensions: (1) seasonally; (2) intra-class; and (3) by cost classification (customer-related costs, demand-related costs and commodity-related costs).
- Rates should produce a level of revenues that adequately compensates the utility under all conditions, such as weather conditions that differ from "normal," changes in customer consumption patterns, or in the face of large natural gas cost changes.
- Rates should be stable and rate changes should reflect gradualism to minimize rate shock.
- Rates should exhibit continuity to avoid shifts among rates by large numbers of customers.

These criteria are applied in the following subsections.

### **Seasonal Subsidies**

Seasonal subsidies embedded in any rate structure can be quantified by comparing the revenues collected from any customer in each season or month to the costs incurred by the utility to satisfy the demand that this customer places on the system. The performance of any rate structure on the basis of its ability to minimize seasonal subsidies is determined by assumptions related to demand costs. If demand costs are assumed to vary directly with

volumes of natural gas consumed, then rates that collect such costs in the volumetric portion of the rate will fare well under a seasonal subsidy criterion.

On the other hand, if demand costs are assumed to reflect fixed costs that are established through the planning process as those needed to meet the design day demand, then rates that collect such costs in the volumetric portion of the rate will fare poorly under a seasonal subsidy criterion: summer rates will collect far less than the cost to serve customers in the summer, based on the approved class cost of service study and winter rates will collect far more than the cost to serve customers in the winter, based on the approved class cost of service study.

This evaluation adopts the first assumption, consistent with the Union rate design philosophy. Under this assumption and using Mean Absolute Error (MAE) and Mean Absolute Percentage Error (MAPE) criteria, there is a modest improvement in the reduction of seasonal subsidies under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint. This can be seen for the Union South operating area by comparing the results of Exhibit III-15 with the results of Exhibit III-16.

Exhibit III-15 compares monthly costs and rates for customers served under the 2013 Board-Approved M1 and M2 rates to the estimated costs to provide service assuming annual volumes equal to the average of the class (2,313.36 m<sup>3</sup> for M1 and 119,774 m<sup>3</sup> for M2) and demands consistent with the load factor of these classes (22.61 m<sup>3</sup> for M1 and 1,184.78 m<sup>3</sup> for M2). The exhibit also shows that the MAE for the average customer served under rate class M1 to be \$0.28 and the MAPE for such a customer to be 1%. Corresponding error measures for the

average customer served under rate class M2 are an MAE of \$17.12 and an MAPE of 5%.

Overall, this rate structure exhibits an MAE of \$8.70 and an MAPE of 3%.

These results can be compared to the results of Exhibit III-16, which show an MAE for the average customer served under proposed ( $<5,000 \text{ m}^3/\text{year}$ ) rate class M1 to be \$0.72 and the MAPE for such a customer to be 3%, an MAE for the average customer served under rate class M2 of \$11.01 and an MAPE of 7%, and an overall MAE of \$5.87 and an MAPE of 7%.

Exhibit III-15  
Calculation of Seasonal Subsidies  
Union South  
50,000 m<sup>3</sup> Breakpoint

2013 Approved - M1					
	Costs 1/	Billing Units 2/	Unit Cost	Rates 2/	
Customer Related:	\$ 269,096	12,706,802	\$ 21.18	\$	21.00 per month
Demand Related:	\$ 97,402	28,724	\$ 3.39	-	
Commodity Related:	\$ 267	2,939,543	\$ 0.0001	3.7795	First 100 m <sup>3</sup>
				3.5730	Next 150 m <sup>3</sup>
				3.0845	All Over 250 m <sup>3</sup>
Average Annual Volume:		2,313.36			
Average Demand:		22.61			
Load Factor:		28.04%	0.98%		

Month	Volumes 3/			Block 4	Cost (\$)	Revenues (\$)	Difference (\$)	(%)
	Block 1	Block 2	Block 3					
January	100.0	150.0	154.8	-	\$ 34.63	\$ 34.91	\$ 0.29	0.83%
February	100.0	150.0	173.3	-	\$ 35.24	\$ 35.49	\$ 0.24	0.69%
March	100.0	150.0	99.3	-	\$ 32.78	\$ 33.20	\$ 0.42	1.28%
April	100.0	110.5	-	-	\$ 28.17	\$ 28.73	\$ 0.56	1.97%
May	100.0	20.3	-	-	\$ 25.17	\$ 25.50	\$ 0.33	1.31%
June	67.1	-	-	-	\$ 23.41	\$ 23.54	\$ 0.13	0.55%
July	50.9	-	-	-	\$ 22.87	\$ 22.92	\$ 0.06	0.24%
August	48.6	-	-	-	\$ 22.79	\$ 22.84	\$ 0.04	0.20%
September	50.9	-	-	-	\$ 22.87	\$ 22.92	\$ 0.06	0.24%
October	100.0	11.0	-	-	\$ 24.87	\$ 25.17	\$ 0.31	1.24%
November	100.0	66.6	-	-	\$ 26.71	\$ 27.16	\$ 0.45	1.67%
December	100.0	150.0	60.0	-	\$ 31.48	\$ 31.99	\$ 0.51	1.63%
Total	1,017.5	808.4	487.5	-	\$ 330.99	\$ 334.38	\$ 3.38	1.02%

Mean Absolute Error, M1: \$ 0.28 1%

2013 Approved - M2					
	Costs 1/	Billing Units 2/	Unit Cost	Rates 2/	
Customer Related:	\$ 8,664	81,451	\$ 106.37	\$	70.00 per month
Demand Related:	\$ 33,256	9,650	\$ 3.45	-	
Commodity Related:	\$ 1,892	975,571	\$ 0.0019	4.1416	First 1,000 m <sup>3</sup>
				4.0653	Next 6,000 m <sup>3</sup>
				3.8379	Next 13,000 m <sup>3</sup>
				3.5650	All Over 20,000 m <sup>3</sup>
Average Annual Volume:		119,774			
Average Demand:		1,184.78			
Load Factor:		27.70%	0.99%		

Month	Volumes 3/			Block 4	Cost (\$)	Revenues (\$)	Difference (\$)	(%)
	Block 1	Block 2	Block 3					
January	1,000.0	6,000.0	13,000.0	840.7	\$ 857.22	\$ 884.24	\$ 27.01	3.15%
February	1,000.0	6,000.0	13,000.0	1,439.5	\$ 878.80	\$ 905.59	\$ 26.79	3.05%
March	1,000.0	6,000.0	10,247.5	-	\$ 727.77	\$ 748.63	\$ 20.86	2.87%
April	1,000.0	6,000.0	4,139.0	-	\$ 507.69	\$ 514.19	\$ 6.50	1.28%
May	1,000.0	5,348.0	-	-	\$ 335.08	\$ 328.83	\$ (6.25)	-1.87%
June	1,000.0	2,593.2	-	-	\$ 235.83	\$ 216.84	\$ (18.99)	-8.05%
July	1,000.0	1,155.9	-	-	\$ 184.05	\$ 158.41	\$ (25.64)	-13.93%
August	1,000.0	1,395.5	-	-	\$ 192.68	\$ 168.15	\$ (24.53)	-12.73%
September	1,000.0	1,635.0	-	-	\$ 201.31	\$ 177.89	\$ (23.42)	-11.64%
October	1,000.0	5,587.6	-	-	\$ 343.71	\$ 338.57	\$ (5.14)	-1.50%
November	1,000.0	6,000.0	2,581.9	-	\$ 451.59	\$ 454.43	\$ 2.84	0.63%
December	1,000.0	6,000.0	8,810.2	-	\$ 675.99	\$ 693.46	\$ 17.48	2.59%
Total	12,000.0	53,715.3	51,778.5	2,280.2	\$ 5,591.73	\$ 5,589.21	\$ (2.51)	-0.04%

Mean Absolute Error, M2: \$ 17.12 5%  
South Mean Absolute Error, 2013 Approved: \$ 8.70 3%

Notes:

- 1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Exhibit III-16  
Calculation of Seasonal Subsidies  
Union South  
5,000 m<sup>3</sup> Breakpoint

2013 Proposed - M1									
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/				
Customer Related:	\$ 240,116	12,055,926	\$ 19.92	\$	21.00	per month			
Demand Related:	\$ 72,744	21,444	\$ 3.39		-				
Commodity Related:	\$ (614)	2,134,461	\$ (0.0003)		3.1389	First 100 m <sup>3</sup>			
					2.7839	Next 150 m <sup>3</sup>			
					2.2862	All Over 250 m <sup>3</sup>			
Average Annual Volume:		1,770							
Average Demand:		17.79							
Load Factor:		27.27%		1.00%					
Month	Block 1	Block 2	Block 3	Block 4	Cost (\$)	Revenues (\$)	Difference (\$)		(%)
January	100.0	150.0	59.8	-	\$ 30.39	\$ 29.68	\$ (0.70)		-2.32%
February	100.0	150.0	74.0	-	\$ 30.87	\$ 30.01	\$ (0.86)		-2.78%
March	100.0	150.0	17.3	-	\$ 28.95	\$ 28.71	\$ (0.24)		-0.83%
April	100.0	61.1	-	-	\$ 25.36	\$ 25.84	\$ 0.48		1.89%
May	92.1	-	-	-	\$ 23.03	\$ 23.89	\$ 0.86		3.74%
June	51.3	-	-	-	\$ 21.65	\$ 22.61	\$ 0.96		4.43%
July	39.0	-	-	-	\$ 21.23	\$ 22.22	\$ 0.99		4.66%
August	37.2	-	-	-	\$ 21.17	\$ 22.17	\$ 0.99		4.69%
September	39.0	-	-	-	\$ 21.23	\$ 22.22	\$ 0.99		4.66%
October	85.0	-	-	-	\$ 22.79	\$ 23.67	\$ 0.88		3.86%
November	100.0	27.5	-	-	\$ 24.22	\$ 24.90	\$ 0.68		2.80%
December	100.0	137.2	-	-	\$ 27.93	\$ 27.96	\$ 0.03		0.09%
Total	943.5	675.8	151.2	-	\$ 298.83	\$ 303.88	\$ 5.05		1.69%
Mean Absolute Error, M1:							\$ 0.72		3%

2013 Proposed - M2									
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/				
Customer Related:	\$ 37,645	732,327	\$ 51.40	\$	32.00	per month			
Demand Related:	\$ 57,914	16,930	\$ 3.42		-				
Commodity Related:	\$ 2,773	1,780,653	\$ 0.0016		4.4256	First 1,000 m <sup>3</sup>			
					4.2756	Next 6,000 m <sup>3</sup>			
					4.0756	Next 13,000 m <sup>3</sup>			
					3.7698	All Over 20,000 m <sup>3</sup>			
Average Annual Volume:		24,315							
Average Demand:		231.18							
Load Factor:		28.82%		0.95%					
Month	Block 1	Block 2	Block 3	Block 4	Cost (\$)	Revenues (\$)	Difference (\$)		(%)
January	1,000.0	3,230.8	-	-	\$ 195.59	\$ 214.39	\$ 18.80		9.61%
February	1,000.0	3,352.4	-	-	\$ 199.74	\$ 219.59	\$ 19.85		9.94%
March	1,000.0	2,501.4	-	-	\$ 170.73	\$ 183.20	\$ 12.47		7.30%
April	1,000.0	1,261.3	-	-	\$ 128.47	\$ 130.18	\$ 1.71		1.33%
May	1,000.0	288.7	-	-	\$ 95.32	\$ 88.60	\$ (6.72)		-7.05%
June	729.5	-	-	-	\$ 76.26	\$ 64.28	\$ (11.98)		-15.71%
July	437.7	-	-	-	\$ 66.32	\$ 51.37	\$ (14.95)		-22.54%
August	486.3	-	-	-	\$ 67.98	\$ 53.52	\$ (14.46)		-21.27%
September	534.9	-	-	-	\$ 69.64	\$ 55.67	\$ (13.96)		-20.05%
October	1,000.0	337.3	-	-	\$ 96.98	\$ 90.68	\$ (6.30)		-6.50%
November	1,000.0	945.2	-	-	\$ 117.70	\$ 116.67	\$ (1.03)		-0.87%
December	1,000.0	2,209.6	-	-	\$ 160.79	\$ 170.73	\$ 9.94		6.18%
Total	10,188.4	14,126.7	-	-	\$ 1,445.53	\$ 1,438.89	\$ (6.63)		-0.46%
Mean Absolute Error, M2:							\$ 11.01		11%
South Mean Absolute Error, 2013 Proposed:							\$ 5.87		7%

Notes:

- 1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Exhibit III-17 and III-18 provide a similar comparison for Approved and Proposed Rates

01 and 10.

Exhibit III-17 Calculation of Seasonal Subsidies Union North 50,000 m <sup>3</sup> Breakpoint											
2013 Approved - 01											
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/					
Customer Related:			\$ 114,119	3,839,732	\$ 29.72	\$ 21.00 per month					
Demand Related:			\$ 46,610	8,921	\$ 5.22	-					
Commodity Related:			\$ (86)	884,421	\$ (0.0001)	9.7347 First 100 m <sup>3</sup>					
						9.2102 Next 200 m <sup>3</sup>					
Average Annual Volume:				2,303		8.8375 Next 200 m <sup>3</sup>					
Average Demand:				23.23		8.4955 Next 500 m <sup>3</sup>					
Load Factor:				27.16%	1.01%	8.2130 Over 1,000 m <sup>3</sup>					
Month	Volumes 3/			Block 4	Block 5	Cost (\$)	Revenues (\$)		Difference (\$)		
	Block 1	Block 2	Block 3							(%)	
January	100.0	200.0	113.9	-	-	\$ 51.49	\$ 59.22	\$ 7.73		15.01%	
February	100.0	200.0	57.0	-	-	\$ 48.50	\$ 54.19	\$ 5.69		11.74%	
March	100.0	200.0	6.6	-	-	\$ 45.85	\$ 49.74	\$ 3.89		8.49%	
April	100.0	77.1	-	-	-	\$ 39.04	\$ 37.83	\$ (1.20)		-3.08%	
May	100.0	0.0	-	-	-	\$ 34.98	\$ 30.74	\$ (4.24)		-12.13%	
June	51.1	-	-	-	-	\$ 32.41	\$ 25.98	\$ (6.43)		-19.85%	
July	41.8	-	-	-	-	\$ 31.92	\$ 25.06	\$ (6.85)		-21.47%	
August	48.2	-	-	-	-	\$ 32.26	\$ 25.70	\$ (6.56)		-20.34%	
September	71.3	-	-	-	-	\$ 33.47	\$ 27.94	\$ (5.53)		-16.53%	
October	100.0	32.4	-	-	-	\$ 36.69	\$ 33.72	\$ (2.97)		-8.08%	
November	100.0	133.2	-	-	-	\$ 41.99	\$ 43.00	\$ 1.02		2.42%	
December	100.0	200.0	70.7	-	-	\$ 49.22	\$ 55.40	\$ 6.18		12.56%	
Total	1,012.4	1,042.8	248.2	-	-	\$ 477.81	\$ 468.53	\$ (9.29)		-1.94%	
Mean Absolute Error, 01: \$									4.86	13%	
2013 Approved - 10											
			Costs 1/	Billing Units 2/	Unit Cost	Rates 2/					
Customer Related:			\$ 4,830	24,629	\$ 196.11	\$ 70.00 per month					
Demand Related:			\$ 14,668	2,584	\$ 5.68	-					
Commodity Related:			\$ 245	322,887	\$ 0.0008	7.7070 First 1,000 m <sup>3</sup>					
						6.2934 Next 9,000 m <sup>3</sup>					
						5.4872 Next 20,000 m <sup>3</sup>					
						4.9711 Next 70,000 m <sup>3</sup>					
Average Annual Volume:				131,100		3.0159 Over 100,000 m <sup>3</sup>					
Average Demand:				1,049.17							
Load Factor:				34.23%	0.80%						
Month	Volumes 3/			Block 4	Block 5	Cost (\$)	Revenues (\$)		Difference (\$)		
	Block 1	Block 2	Block 3							(%)	
January	1,000.0	9,000.0	9,288.2	-	-	\$ 1,086.98	\$ 1,223.13	\$ 136.15		12.53%	
February	1,000.0	9,000.0	7,363.6	-	-	\$ 998.09	\$ 1,117.52	\$ 119.44		11.97%	
March	1,000.0	9,000.0	6,375.2	-	-	\$ 952.44	\$ 1,063.29	\$ 110.85		11.64%	
April	1,000.0	9,000.0	316.4	-	-	\$ 672.60	\$ 730.83	\$ 58.23		8.66%	
May	1,000.0	6,615.9	-	-	-	\$ 547.87	\$ 563.43	\$ 15.56		2.84%	
June	1,000.0	4,398.4	-	-	-	\$ 445.45	\$ 423.88	\$ (21.57)		-4.84%	
July	1,000.0	2,188.2	-	-	-	\$ 343.37	\$ 284.78	\$ (58.59)		-17.06%	
August	1,000.0	3,652.5	-	-	-	\$ 411.00	\$ 376.94	\$ (34.06)		-8.29%	
September	1,000.0	4,535.9	-	-	-	\$ 451.80	\$ 432.53	\$ (19.27)		-4.27%	
October	1,000.0	8,167.6	-	-	-	\$ 619.54	\$ 661.08	\$ 41.55		6.71%	
November	1,000.0	9,000.0	3,688.7	-	-	\$ 828.35	\$ 915.88	\$ 87.52		10.57%	
December	1,000.0	9,000.0	8,509.7	-	-	\$ 1,051.02	\$ 1,180.41	\$ 129.39		12.31%	
Total	12,000.0	83,558.5	35,541.8	-	-	\$ 8,408.51	\$ 8,973.70	\$ 565.19		6.72%	
Mean Absolute Error, 10: \$									69.35	9%	
North Mean Absolute Error, 2013 Approved: \$									37.10	11%	

Notes:

- 1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Exhibit III-18  
Calculation of Seasonal Subsidies  
Union North  
5,000 m<sup>3</sup> Breakpoint

	2013 Proposed - 01				
	Costs 1/	Billing Units 2/	Unit Cost	Rates 2/	
Customer Related:	\$ 106,401	3,608,030	\$ 29.49	\$ 21.00	per month
Demand Related:	\$ 33,592	6,430	\$ 5.22	-	
Commodity Related:	\$ (210)	643,947	\$ (0.0003)	10.1347	First 100 m <sup>3</sup>
				9.9979	Next 150 m <sup>3</sup>
				9.7489	All Over 250 m <sup>3</sup>
Average Annual Volume:		1,785			
Average Demand:		17.82			
Load Factor:		27.44%	1.00%		

Month	Volumes 3/					Cost (\$)	Revenues (\$)		Difference (\$)	
	Block 1	Block 2	Block 3	Block 4	Block 5					(%)
January	100.0	150.0	70.7	-	-	\$ 46.12	\$ 53.02	\$	6.91	14.98%
February	100.0	150.0	26.6	-	-	\$ 43.83	\$ 48.73	\$	4.90	11.17%
March	100.0	137.6	-	-	-	\$ 41.81	\$ 44.89	\$	3.08	7.38%
April	100.0	37.2	-	-	-	\$ 36.60	\$ 34.85	\$	(1.75)	-4.78%
May	77.5	-	-	-	-	\$ 33.51	\$ 28.86	\$	(4.65)	-13.88%
June	39.6	-	-	-	-	\$ 31.54	\$ 25.01	\$	(6.53)	-20.70%
July	32.3	-	-	-	-	\$ 31.17	\$ 24.28	\$	(6.89)	-22.10%
August	37.4	-	-	-	-	\$ 31.43	\$ 24.79	\$	(6.64)	-21.13%
September	55.2	-	-	-	-	\$ 32.35	\$ 26.60	\$	(5.76)	-17.79%
October	100.0	2.6	-	-	-	\$ 34.81	\$ 31.40	\$	(3.41)	-9.80%
November	100.0	80.7	-	-	-	\$ 38.86	\$ 39.20	\$	0.35	0.89%
December	100.0	150.0	37.2	-	-	\$ 44.38	\$ 49.76	\$	5.38	12.13%
Total	942.1	708.1	134.6	-	-	\$ 446.40	\$ 431.39	\$	(15.01)	-3.36%
Mean Absolute Error, 01:									\$ 4.69	13%

	2013 Proposed - 10				
	Costs 1/	Billing Units 2/	Unit Cost	Rates 2/	
Customer Related:	\$ 12,548	256,331	\$ 48.95	\$ 32.00	per month
Demand Related:	\$ 27,686	5,081	\$ 5.45	-	
Commodity Related:	\$ 369	563,361	\$ 0.0007	6.4117	First 1,000 m <sup>3</sup>
				5.9605	Next 6,000 m <sup>3</sup>
				5.4605	Next 13,000 m <sup>3</sup>
				4.9035	All Over 20,000 m <sup>3</sup>
Average Annual Volume:		21,978			
Average Demand:		198.22			
Load Factor:		30.38%	0.90%		

Month	Volumes 3/					Cost (\$)	Revenues (\$)		Difference (\$)	
	Block 1	Block 2	Block 3	Block 4	Block 5					(%)
January	1,000.0	2,233.5	-	-	-	\$ 209.98	\$ 229.25	\$	19.27	9.18%
February	1,000.0	1,910.9	-	-	-	\$ 193.91	\$ 210.01	\$	16.10	8.30%
March	1,000.0	1,745.2	-	-	-	\$ 185.66	\$ 200.14	\$	14.48	7.80%
April	1,000.0	729.5	-	-	-	\$ 135.08	\$ 139.60	\$	4.52	3.34%
May	1,000.0	276.7	-	-	-	\$ 112.53	\$ 112.61	\$	0.08	0.07%
June	905.0	-	-	-	-	\$ 94.02	\$ 90.03	\$	(4.00)	-4.25%
July	534.5	-	-	-	-	\$ 75.57	\$ 66.27	\$	(9.30)	-12.31%
August	780.0	-	-	-	-	\$ 87.79	\$ 82.01	\$	(5.79)	-6.59%
September	928.1	-	-	-	-	\$ 95.17	\$ 91.50	\$	(3.67)	-3.85%
October	1,000.0	536.9	-	-	-	\$ 125.49	\$ 128.12	\$	2.63	2.10%
November	1,000.0	1,294.8	-	-	-	\$ 163.23	\$ 173.29	\$	10.06	6.16%
December	1,000.0	2,103.0	-	-	-	\$ 203.48	\$ 221.47	\$	17.99	8.84%
Total	11,147.5	10,830.4	-	-	-	\$ 1,681.92	\$ 1,744.29	\$	62.37	3.71%
Mean Absolute Error, 10:									\$ 8.99	6%
North Mean Absolute Error, 2013 Proposed:									\$ 6.84	10%

Notes:

- 1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Delivery Block Volume Calcs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

These results show that the Company's revised breakpoint and rate harmonization proposals improve the performance of the rate structure in the North operating area, reducing the North MAE from \$37.10 to \$6.84 and the MAPE from 11% to 10%. Overall, under the assumption that demand charges are assumed to vary directly with volumes of natural gas consumed, there is a modest improvement in the reduction of seasonal subsidies under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint using MAE and MAPE criteria.

#### Intra-Class Subsidies

Intra-class subsidies occur when a customer or group of customers in a rate class provides a subsidy (pays more than cost of service) to another customer or group of customers in the class, or receives a subsidy (pays less than cost of service) from another customer or group of customers in the class. It is measured by comparing the revenues collected from customers at different consumption levels to the costs incurred by the utility to satisfy the demand that these customers place on the system.

Exhibit III-19 develops this calculation for the Approved M1 and M2 rates in the Union South operating area and shows that at no consumption level do the revenues deviate from the cost of service by more than 6%. Furthermore, given the assumed consumption levels of the first column, the rate structure exhibits an MAE of \$58.17 and an MAPE of 1.96%. The performance of the rate structure when evaluated from the perspective of intraclass subsidies declines under the 5,000 m<sup>3</sup>/year breakpoint, as shown in Exhibit III-20: many deviations of revenues from costs greater than 10%, an MAE of \$420.06 and an MAPE of 9.61%. This indicates that higher usage General Service customers in the South tend to provide subsidies to

lower usage General Service customers under the proposed rates, primarily because these rates do not reflect the full level of customer-related costs, and this shortfall is made up by commodity-related rates that are higher than cost based rates would be.

Exhibit III-19  
Calculation of Intraclass Subsidies  
Union South  
50,000 m<sup>3</sup> Breakpoint

2013 Approved - M1					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	269,096	12,706,802	\$ 21.18	\$	21.00 per month
Demand Related: \$	97,402	28,724	\$ 3.39		-
Commodity Related: \$	267	2,939,543	\$ 0.0001		3.7795 First 100 m <sup>3</sup> 3.5730 Next 150 m <sup>3</sup> 3.0845 All Over 250 m <sup>3</sup>

2013 Approved - M2					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	8,664	81,451	\$ 106.37	\$	70.00 per month
Demand Related: \$	33,256	9,650	\$ 3.45		-
Commodity Related: \$	1,892	975,571	\$ 0.0019		4.1416 First 1,000 m <sup>3</sup> 4.0653 Next 6,000 m <sup>3</sup> 3.8379 Next 13,000 m <sup>3</sup> 3.5650 All Over 20,000 m <sup>3</sup>

Annual Volume (m <sup>3</sup> /year)	Load Factor (%)	Demand (m <sup>3</sup> )	Cost (\$)	Revenues 3/ (\$)	Difference (\$)	(%)
1,800	28.0%	17.59	\$ 313.93	\$ 317.46	\$ 3.53	1.12%
2,200	28.0%	21.50	\$ 327.22	\$ 330.66	\$ 3.44	1.05%
2,600	28.0%	25.41	\$ 340.52	\$ 343.77	\$ 3.26	0.96%
3,000	28.0%	29.31	\$ 353.81	\$ 356.77	\$ 2.97	0.84%
5,000	28.0%	48.86	\$ 420.26	\$ 420.72	\$ 0.46	0.11%
6,000	28.0%	58.63	\$ 453.48	\$ 452.08	\$ (1.41)	-0.31%
7,000	28.0%	68.40	\$ 486.71	\$ 483.38	\$ (3.33)	-0.68%
10,000	28.0%	97.72	\$ 586.39	\$ 577.10	\$ (9.29)	-1.58%
20,000	28.0%	195.43	\$ 918.65	\$ 886.04	\$ (32.60)	-3.55%
30,000	28.0%	293.15	\$ 1,250.90	\$ 1,194.49	\$ (56.41)	-4.51%
50,000	28.0%	488.58	\$ 1,915.42	\$ 1,811.40	\$ (104.02)	-5.43%
60,000	27.7%	593.51	\$ 3,438.18	\$ 3,266.21	\$ (171.98)	-5.00%
70,000	27.7%	692.42	\$ 3,798.46	\$ 3,658.44	\$ (140.03)	-3.69%
80,000	27.7%	791.34	\$ 4,158.74	\$ 4,049.67	\$ (109.08)	-2.62%
100,000	27.7%	989.18	\$ 4,879.31	\$ 4,827.62	\$ (51.69)	-1.06%
200,000	27.7%	1,978.36	\$ 8,482.12	\$ 8,568.31	\$ 86.19	1.02%
300,000	27.7%	2,967.53	\$ 12,084.93	\$ 12,218.03	\$ 133.10	1.10%
500,000	27.7%	4,945.89	\$ 19,290.56	\$ 19,424.78	\$ 134.22	0.70%
South Mean Absolute Error, Approved: \$					58.17	1.96%

Notes:

- 1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Table 5 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Exhibit III-20  
Calculation of Intraclass Subsidies  
Union South  
5,000 m<sup>3</sup> Breakpoint

2013 Proposed - M1					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	240,116	12,055,926	\$ 19.92	\$	21.00 per month
Demand Related: \$	72,744	21,444	\$ 3.39		-
Commodity Related: \$	(614)	2,134,461	\$ (0.0003)		3.1389 First 100 m <sup>3</sup> 2.7839 Next 150 m <sup>3</sup> 2.2862 All Over 250 m <sup>3</sup>

2013 Proposed - M2					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	37,645	732,327	\$ 51.40	\$	32.00 per month
Demand Related: \$	57,914	16,930	\$ 3.42		-
Commodity Related: \$	2,773	1,780,653	\$ 0.0016		4.4256 First 1,000 m <sup>3</sup> 4.2756 Next 6,000 m <sup>3</sup> 4.0756 Next 13,000 m <sup>3</sup> 3.7698 All Over 20,000 m <sup>3</sup>

Annual Volume (m <sup>3</sup> /year)	Load Factor (%)	Demand (m <sup>3</sup> )	Cost (\$)	Revenues 3/ (\$)	Difference (\$)	(%)
1,800	27.3%	18.08	\$ 299.83	\$ 304.65	\$ 4.82	1.61%
2,200	27.3%	22.10	\$ 313.35	\$ 314.76	\$ 1.41	0.45%
2,600	27.3%	26.12	\$ 326.86	\$ 324.75	\$ (2.12)	-0.65%
3,000	27.3%	30.14	\$ 340.38	\$ 334.62	\$ (5.76)	-1.69%
5,000	27.3%	50.23	\$ 407.97	\$ 382.81	\$ (25.15)	-6.17%
6,000	28.8%	57.05	\$ 821.33	\$ 649.36	\$ (171.98)	-20.94%
7,000	28.8%	66.55	\$ 855.42	\$ 693.07	\$ (162.34)	-18.98%
10,000	28.8%	95.08	\$ 957.66	\$ 823.12	\$ (134.53)	-14.05%
20,000	28.8%	190.15	\$ 1,298.47	\$ 1,253.82	\$ (44.65)	-3.44%
30,000	28.8%	285.23	\$ 1,639.28	\$ 1,682.73	\$ 43.45	2.65%
50,000	28.8%	475.38	\$ 2,320.90	\$ 2,531.95	\$ 211.05	9.09%
60,000	28.8%	570.45	\$ 2,661.71	\$ 2,947.88	\$ 286.17	10.75%
70,000	28.8%	665.53	\$ 3,002.52	\$ 3,362.86	\$ 360.34	12.00%
80,000	28.8%	760.60	\$ 3,343.33	\$ 3,776.96	\$ 433.63	12.97%
100,000	28.8%	950.75	\$ 4,024.95	\$ 4,601.20	\$ 576.25	14.32%
200,000	28.8%	1,901.51	\$ 7,433.05	\$ 8,561.13	\$ 1,128.09	15.18%
300,000	28.8%	2,852.26	\$ 10,841.14	\$ 12,421.99	\$ 1,580.85	14.58%
500,000	28.8%	4,753.77	\$ 17,657.34	\$ 20,045.86	\$ 2,388.52	13.53%

South Mean Absolute Error, Proposed: \$ 420.06 9.61%

Notes:

- 1/ From South GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From South RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Table 5 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Exhibits III-21 and III-22 tell a different story regarding the Company's proposal in the North. Exhibit III-21 shows significant deviations of revenues from costs to serve across all consumption ranges. These deviations are reduced under the 5,000 m<sup>3</sup>/year breakpoint, as shown in Exhibit III-22. The MAE declines from \$583.74 under the 50,000 m<sup>3</sup>/year rate design to \$363.23 under the 5,000 m<sup>3</sup>/year rate design in the North, and the MAPE declines from 15.21% under the 50,000 m<sup>3</sup>/year rate design to 9.61% under the 5,000 m<sup>3</sup>/year rate design. Overall, the MAE increases from \$320.95 under the 50,000 m<sup>3</sup>/year rate design to \$391.64 under the 5,000 m<sup>3</sup>/year rate design, and the MAPE increases from 8.58% under the 50,000 m<sup>3</sup>/year rate design to 9.24% under the 5,000 m<sup>3</sup>/year rate design, leading to the conclusion that overall, intraclass subsidies are greater under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint when evaluated using the MAE and MAPE criteria.

Exhibit III-21  
Calculation of Intraclass Subsidies  
Union North  
50,000 m<sup>3</sup> Breakpoint

2013 Approved - 01					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	114,119	3,839,732	\$ 29.72	\$	21.00 per month
Demand Related: \$	46,610	8,921	\$ 5.22		-
Commodity Related: \$	(86)	884,421	\$ (0.0001)		9.7347 First 100 m <sup>3</sup>
					9.2102 Next 200 m <sup>3</sup>
					8.8375 Next 200 m <sup>3</sup>
					8.4955 Next 500 m <sup>3</sup>
					8.2130 Over 1,000 m <sup>3</sup>
2013 Approved - 10					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	4,830	24,629	\$ 196.11	\$	70.00 per month
Demand Related: \$	14,668	2,584	\$ 5.68		-
Commodity Related: \$	245	322,887	\$ 0.0008		7.7070 First 1,000 m <sup>3</sup>
					6.2934 Next 9,000 m <sup>3</sup>
					5.4872 Next 20,000 m <sup>3</sup>
					4.9711 Next 70,000 m <sup>3</sup>
					3.0159 Over 100,000 m <sup>3</sup>

Annual Volume (m <sup>3</sup> /year)	Load Factor (%)	Demand (m <sup>3</sup> )	Cost (\$)	Revenues 3/ (\$)	Difference (\$)	(%)
1,800	27.2%	18.16	\$ 451.33	\$ 422.65	\$ (28.68)	-6.36%
2,200	27.2%	22.19	\$ 472.38	\$ 459.15	\$ (13.23)	-2.80%
2,600	27.2%	26.23	\$ 493.42	\$ 495.30	\$ 1.88	0.38%
3,000	27.2%	30.26	\$ 514.46	\$ 531.25	\$ 16.79	3.26%
5,000	27.2%	50.43	\$ 619.67	\$ 706.50	\$ 86.83	14.01%
6,000	27.2%	60.52	\$ 672.27	\$ 792.76	\$ 120.49	17.92%
7,000	27.2%	70.61	\$ 724.87	\$ 877.89	\$ 153.01	21.11%
10,000	27.2%	100.87	\$ 882.68	\$ 1,130.30	\$ 247.62	28.05%
20,000	27.2%	201.74	\$ 1,408.72	\$ 1,961.33	\$ 552.60	39.23%
30,000	27.2%	302.60	\$ 1,934.76	\$ 2,786.54	\$ 851.78	44.03%
50,000	27.2%	504.34	\$ 2,986.83	\$ 4,432.36	\$ 1,445.53	48.40%
60,000	34.2%	480.17	\$ 5,124.59	\$ 4,785.64	\$ (338.95)	-6.61%
70,000	34.2%	560.20	\$ 5,586.46	\$ 5,412.57	\$ (173.90)	-3.11%
80,000	34.2%	640.22	\$ 6,048.34	\$ 6,014.80	\$ (33.53)	-0.55%
100,000	34.2%	800.28	\$ 6,972.08	\$ 7,181.99	\$ 209.91	3.01%
200,000	34.2%	1,600.56	\$ 11,590.78	\$ 12,859.81	\$ 1,269.03	10.95%
300,000	34.2%	2,400.84	\$ 16,209.48	\$ 18,184.35	\$ 1,974.87	12.18%
500,000	34.2%	4,001.40	\$ 25,446.89	\$ 28,435.60	\$ 2,988.70	11.74%
North Mean Absolute Error, Approved: \$					583.74	15.21%

Notes:

- 1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Table 6 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

Exhibit III-22  
Calculation of Intraclass Subsidies  
Union North  
5,000 m<sup>3</sup> Breakpoint

2013 Proposed - 01					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	106,401	3,608,030	\$ 29.49	\$	21.00 per month
Demand Related: \$	33,592	6,430	\$ 5.22		-
Commodity Related: \$	(210)	643,947	\$ (0.0003)		10.1347 First 100 m <sup>3</sup> 9.9979 Next 150 m <sup>3</sup> 9.7489 All Over 250 m <sup>3</sup>

2013 Proposed - 10					
	Costs 1/	Billing Units 2/	Unit Cost		Rates 2/
Customer Related: \$	12,548	256,331	\$ 48.95	\$	32.00 per month
Demand Related: \$	27,686	5,081	\$ 5.45		-
Commodity Related: \$	369	563,361	\$ 0.0007		6.4117 First 1,000 m3 5.9605 Next 6,000 m3 5.4605 Next 13,000 m3 4.9035 All Over 20,000 m3

Annual Volume (m <sup>3</sup> /year)	Load Factor (%)	Demand (m <sup>3</sup> )	Cost (\$)	Revenues 3/ (\$)	Difference (\$)	(%)
1,800	27.4%	17.97	\$ 447.19	\$ 432.90	\$ (14.29)	-3.20%
2,200	27.4%	21.97	\$ 467.93	\$ 472.36	\$ 4.44	0.95%
2,600	27.4%	25.96	\$ 488.66	\$ 511.75	\$ 23.09	4.72%
3,000	27.4%	29.96	\$ 509.40	\$ 551.07	\$ 41.67	8.18%
5,000	27.4%	49.93	\$ 613.08	\$ 747.12	\$ 134.04	21.86%
6,000	30.4%	54.11	\$ 886.23	\$ 768.70	\$ (117.53)	-13.26%
7,000	30.4%	63.13	\$ 936.03	\$ 832.68	\$ (103.35)	-11.04%
10,000	30.4%	90.19	\$ 1,085.43	\$ 1,018.40	\$ (67.03)	-6.18%
20,000	30.4%	180.38	\$ 1,583.42	\$ 1,625.12	\$ 41.70	2.63%
30,000	30.4%	270.57	\$ 2,081.41	\$ 2,225.08	\$ 143.67	6.90%
50,000	30.4%	450.95	\$ 3,077.39	\$ 3,416.33	\$ 338.93	11.01%
60,000	30.4%	541.14	\$ 3,575.38	\$ 3,990.75	\$ 415.37	11.62%
70,000	30.4%	631.34	\$ 4,073.37	\$ 4,557.98	\$ 484.61	11.90%
80,000	30.4%	721.53	\$ 4,571.36	\$ 5,121.53	\$ 550.17	12.04%
100,000	30.4%	901.91	\$ 5,567.34	\$ 6,244.28	\$ 676.94	12.16%
200,000	30.4%	1,803.82	\$ 10,547.24	\$ 11,601.33	\$ 1,054.08	9.99%
300,000	30.4%	2,705.72	\$ 15,527.15	\$ 16,684.91	\$ 1,157.76	7.46%
500,000	30.4%	4,509.54	\$ 25,486.95	\$ 26,656.38	\$ 1,169.43	4.59%

North Mean Absolute Error, Proposed: \$ 363.23 8.87%

Notes:

- 1/ From North GS Costs of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 2/ From North RD of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"
- 3/ From Table 6 of "GS Volume Breakpoint Analysis EB-2013-0365.xlsx"

### Fixed Cost Recovery

Fixed Cost Recovery refers to the ability of a rate to collect all of the fixed costs incurred by the utility to provide service under a variety of conditions. Because many of the conditions under which natural gas LDCs have been required to operate in recent years have put significant financial burdens on them, a rate structure's ability to recover fixed costs has become critical.

Under both the approved breakpoint and the proposed breakpoint, Union collects the same level of customer-related distribution costs in monthly fixed charges. Thus, the ability to recover fixed customer-related charges is the same under both approved and proposed rates. There is a different cost structure and different blocking under the proposed breakpoint for North rates. Because the volumetric charges of both rates collect demand-related distribution charges, and because demand-related distribution charges are largely fixed charges, this aspect of the Company's proposal will have an impact on Union's ability to recover its fixed costs. Exhibit III-23 demonstrates the fixed cost recovery of the Company's proposed rate relative to its approved rate.

Exhibit III-23  
Calculation of Fixed Cost Recovery  
Union South  
50,000 m<sup>3</sup> Breakpoint

Volume Range	M1 Volumes	M2 Volumes	Total	Fixed M1	Variable M1	Fixed M2	Variable M2	% Demand Cost Recovery
0-100	885,353	5,702	891,054	\$ 33,382	\$ 81	\$ 225	\$ 11	25%
101-250	786,168	8,552	794,720	\$ 28,019	\$ 72	\$ 338	\$ 17	21%
251-1,000	1,268,023	38,793	1,306,816	\$ 38,997	\$ 115	\$ 1,531	\$ 75	30%
1,001-7,000	-	258,156	258,156	\$ -	\$ -	\$ 9,994	\$ 501	7%
7,001-20,000	-	291,703	291,703	\$ -	\$ -	\$ 10,630	\$ 566	8%
>20,000	-	372,665	372,665	\$ -	\$ -	\$ 12,563	\$ 723	9%
Total	2,939,543	975,571	3,915,114	\$ 100,398	\$ 267	\$ 35,281	\$ 1,892	100%

5,000 m<sup>3</sup> Breakpoint

Volume Range	M1 Volumes	M2 Volumes	Total	Fixed M1	Variable M1	Fixed M2	Variable M2	% Demand Cost Recovery	Difference in Demand Cost Recovery
0-100	824,336	23,434	847,771	\$ 26,112	\$ (237)	\$ 1,001	\$ 36	21%	-4%
101-250	722,101	35,152	757,253	\$ 20,310	\$ (208)	\$ 1,501	\$ 55	17%	-8%
251-1,000	588,024	403,781	991,805	\$ 13,612	\$ (169)	\$ 17,241	\$ 629	23%	-15%
1,001-7,000	-	650,995	650,995	\$ -	\$ -	\$ 26,820	\$ 1,014	20%	-2%
7,001-20,000	-	294,626	294,626	\$ -	\$ -	\$ 11,549	\$ 459	9%	-1%
>20,000	-	372,665	372,665	\$ -	\$ -	\$ 13,468	\$ 580	10%	0%
Total	2,134,461	1,780,653	3,915,114	\$ 60,034	\$ (614)	\$ 71,580	\$ 2,773	100%	

This exhibit determines the fixed cost recovery of the General Service rates in the Union South operating area by calculating the amount and percentage of demand costs recovered in the volume ranges provided in the first column. For example, under the Company's currently-approved rate designs in the South operating area, the Company will recover ((\$33,382+\$225)/(\$100,398+\$35,281)=) 25% of its fixed costs within each customer's consumption between 0 and 100 m<sup>3</sup>/year. Between consumption levels of 101 and 250 m<sup>3</sup>/year, the Company will recover an additional 21% of its fixed costs. This continues until the Company recovers all of its fixed costs at levels of consumption consistent with the test year billing determinants, >20,000 m<sup>3</sup>/year.

Exhibit III-23 provides the same information for the Company's proposed 5,000 m<sup>3</sup>/year rate design and compares this to the fixed cost recovery under the Company's current 50,000 m<sup>3</sup>/year rate design. This comparison shows that, at the lowest consumption level, the Company will recover 4% less fixed costs under the proposed rate design than the currently

approved rate design. This pattern continues throughout all consumption ranges in the South operating area.

Exhibit III-24 demonstrates the fixed cost recovery of the Company's proposed rate relative to its approved rate in the North operating area. While this Exhibit shows that the Company will recover its fixed costs more quickly under the proposed rate design than the currently approved rate design, this improvement is not enough to offset the worse performance of the proposed South operating area rates, as shown in Exhibit III-25, and it can be concluded that the proposed rate structure performs worse from a total Company perspective when evaluated on the basis of its ability to collect fixed charges.

Exhibit III-24  
Calculation of Fixed Cost Recovery  
Union North  
50,000 m<sup>3</sup> Breakpoint

Volume Range	01 Volumes	10 Volumes	Total	Fixed 01	Variable 01	Fixed 10	Variable 10	% Demand Cost Recovery
0-100	260,791	1,724	262,515	\$ 25,175	\$ 211.98	\$ 131.64	\$ 1.23	26%
101-250	222,091	2,586	224,677	\$ 20,274	\$ 180.52	\$ 197.45	\$ 1.85	21%
251-1,000	291,442	19,372	310,813	\$ 25,493	\$ 236.89	\$ 1,479.09	\$ 13.87	28%
1,001-7,000	110,097	85,236	195,333	\$ 8,953	\$ 89.49	\$ 5,303.14	\$ 61.05	15%
7,001-20,000	-	83,281	83,281	\$ -	\$ -	\$ 4,853.68	\$ 59.65	5%
>20,000	-	130,689	130,689	\$ -	\$ -	\$ 6,058.32	\$ 93.60	6%
Total	884,421	322,887	1,207,308	\$ 79,896	\$ 718.89	\$ 18,023.31	\$ 231.26	100%

5,000 m<sup>3</sup> Breakpoint

Volume Range	01 Volumes	10 Volumes	Total	Fixed 01	Variable 01	Fixed 10	Variable 10	% Demand Cost Recovery	Difference in Demand Cost Recovery
0-100	238,995	8,203	247,198	\$ 24,007	\$ 214	\$ 520	\$ 5	25%	0%
101-250	273,645	12,304	285,949	\$ 27,113	\$ 245	\$ 781	\$ 8	29%	8%
251-1,000	131,307	168,133	299,439	\$ 12,683	\$ 118	\$ 10,669	\$ 111	24%	4%
1,001-7,000	-	186,596	186,596	\$ -	\$ -	\$ 10,999	\$ 123	11%	1%
7,001-20,000	-	77,769	77,769	\$ -	\$ -	\$ 4,195	\$ 51	4%	1%
>20,000	-	110,357	110,357	\$ -	\$ -	\$ 5,338	\$ 73	6%	0%
Total	643,947	563,361	1,207,308	\$ 63,804	\$ 577	\$ 32,502	\$ 373	100%	

Exhibit III-25  
Calculation of Fixed Cost Recovery  
Total Company  
50,000 m<sup>3</sup> Breakpoint

Volume Range	M1/01 Volumes	M2/10 Volumes	Total	Fixed M1/01	Variable M1/01	Fixed M2/10	Variable M2/10	% Demand Cost Recovery
0-100	1,146,144	7,426	1,153,569	\$ 58,557	\$ 293	\$ 357	\$ 12	25%
101-250	1,008,259	11,138	1,019,398	\$ 48,293	\$ 252	\$ 535	\$ 18	21%
251-1,000	1,559,465	58,165	1,617,629	\$ 64,491	\$ 352	\$ 3,011	\$ 89	30%
1,001-7,000	110,097	343,392	453,489	\$ 8,953	\$ 89	\$ 15,297	\$ 562	7%
7,001-20,000	-	374,984	374,984	\$ -	\$ -	\$ 15,483	\$ 625	8%
>20,000	-	503,353	503,353	\$ -	\$ -	\$ 18,621	\$ 816	9%
Total	3,823,965	1,298,458	5,122,423	\$ 180,293	\$ 986	\$ 53,304	\$ 2,123	100%

5,000 m<sup>3</sup> Breakpoint

Volume Range	M1/01 Volumes	M2/10 Volumes	Total	Fixed M1/01	Variable M1/01	Fixed M2/10	Variable M2/10	% Demand Cost Recovery	Difference in Demand Cost Recovery
0-100	1,063,332	31,637	1,094,969	\$ 50,119	\$ (23)	\$ 1,521	\$ 42	23%	-3%
101-250	995,746	47,456	1,043,201	\$ 47,423	\$ 38	\$ 2,282	\$ 63	22%	-2%
251-1,000	719,331	571,914	1,291,245	\$ 26,296	\$ (51)	\$ 27,910	\$ 740	24%	-7%
1,001-7,000	-	837,591	837,591	\$ -	\$ -	\$ 37,819	\$ 1,137	17%	-1%
7,001-20,000	-	372,395	372,395	\$ -	\$ -	\$ 15,744	\$ 510	7%	0%
>20,000	-	483,022	483,022	\$ -	\$ -	\$ 18,807	\$ 653	8%	0%
Total	2,778,408	2,344,014	5,122,423	\$ 123,838	\$ (36)	\$ 104,083	\$ 3,145	100%	

## Rate Shock

Rate Shock is measured by comparing customer bills at current (50,000 m<sup>3</sup>/year) rates to customer bills at proposed (5,000 m<sup>3</sup>/year) rates at various consumption levels. As the Company has found, and as this evaluation confirms, there are significant rate impacts associated with the Company's proposed M1/M2 rates. As shown on Exhibit III-26, these impacts are greatest for those General Service customers in the South operating area who consume from 5,000-50,000 m<sup>3</sup>/year.

The Board ruled in its January 17, 2013 Decision and Rate Order that:

The Board is of the view that the 10% threshold on the total bill is an appropriate threshold to apply for the consideration of rate mitigation measures.<sup>12</sup>

The rate impacts developed on Exhibit III-26 are so great that the fixed monthly charge increase for M1/M2 customers who consume from 5,000-50,000 m<sup>3</sup>/year is unlikely to ever be

<sup>12</sup> Ontario Energy Board Decision and Rate Order, Case No. EB-2011-0210, January 17, 2013, page 19.

overcome by reductions in volumetric rates of sufficient magnitude to limit the increases to these customers to less than 10%.

Rate impacts associated with the Company's proposed 01/10 rates would be minimal and, from the standpoint of gradualism, these rates could be implemented. These results are shown on Exhibit III-27 and are also consistent with the Company's findings.

Exhibit III-26  
Calculation of Rate Impacts  
Union South

2013 Approved Rates - M1			2013 Proposed Rates - M1		
\$	21.00	per month	\$	21.00	per month
	3.7795	First 100 m <sup>3</sup>		3.1389	First 100 m <sup>3</sup>
	3.5730	Next 150 m <sup>3</sup>		2.7839	Next 150 m <sup>3</sup>
	3.0845	All Over 250 m <sup>3</sup>		2.2862	All Over 250 m <sup>3</sup>

2013 Approved Rates - M2			2013 Proposed Rates - M2		
\$	70.00	per month	\$	32.00	per month
	4.1416	First 1,000 m <sup>3</sup>		4.4256	First 1,000 m <sup>3</sup>
	4.0653	Next 6,000 m <sup>3</sup>		4.2756	Next 6,000 m <sup>3</sup>
	3.8379	Next 13,000 m <sup>3</sup>		4.0756	Next 13,000 m <sup>3</sup>
	3.5650	All Over 20,000 m <sup>3</sup>		3.7698	All Over 20,000 m <sup>3</sup>

Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Difference	
			(\$)	(%)
1,800	\$ 317.46	\$ 304.65	\$ (12.81)	-4.04%
2,200	\$ 330.66	\$ 314.76	\$ (15.90)	-4.81%
2,600	\$ 343.77	\$ 324.75	\$ (19.03)	-5.54%
3,000	\$ 356.77	\$ 334.62	\$ (22.16)	-6.21%
5,000	\$ 420.72	\$ 382.81	\$ (37.91)	-9.01%
6,000	\$ 452.08	\$ 649.36	\$ 197.28	43.64%
7,000	\$ 483.38	\$ 693.07	\$ 209.69	43.38%
10,000	\$ 577.10	\$ 823.12	\$ 246.03	42.63%
20,000	\$ 886.04	\$ 1,253.82	\$ 367.78	41.51%
30,000	\$ 1,194.49	\$ 1,682.73	\$ 488.23	40.87%
50,000	\$ 1,811.40	\$ 2,531.95	\$ 720.55	39.78%
60,000	\$ 3,266.21	\$ 2,947.88	\$ (318.33)	-9.75%
70,000	\$ 3,658.44	\$ 3,362.86	\$ (295.58)	-8.08%
80,000	\$ 4,049.67	\$ 3,776.96	\$ (272.71)	-6.73%
100,000	\$ 4,827.62	\$ 4,601.20	\$ (226.43)	-4.69%
200,000	\$ 8,568.31	\$ 8,561.13	\$ (7.17)	-0.08%
300,000	\$ 12,218.03	\$ 12,421.99	\$ 203.96	1.67%
500,000	\$ 19,424.78	\$ 20,045.86	\$ 621.08	3.20%

Exhibit III-27  
Calculation of Rate Impacts  
Union North

2013 Approved Rates - 01			2013 Proposed Rates - 01		
\$	21.00	per month	\$	21.00	per month
	9.7347	First 100 m <sup>3</sup>		10.1347	First 100 m <sup>3</sup>
	9.2102	Next 200 m <sup>3</sup>		9.9979	Next 150 m <sup>3</sup>
	8.8375	Next 200 m <sup>3</sup>		9.7489	All Over 250 m <sup>3</sup>
	8.4955	Next 500 m <sup>3</sup>			
	8.2130	Over 1,000 m <sup>3</sup>			
2013 Approved Rates - 10			2013 Proposed Rates - 10		
\$	70.00	per month	\$	32.00	per month
	7.7070	First 1,000 m <sup>3</sup>		6.4117	First 1,000 m <sup>3</sup>
	6.2934	Next 9,000 m <sup>3</sup>		5.9605	Next 6,000 m <sup>3</sup>
	5.4872	Next 20,000 m <sup>3</sup>		5.4605	Next 13,000 m <sup>3</sup>
	4.9711	Next 70,000 m <sup>3</sup>		4.9035	All Over 20,000 m <sup>3</sup>
	3.0159	Over 100,000 m <sup>3</sup>			
Approved	Proposed		Difference		
Revenues	Revenues				
(\$)	(\$)		(\$)	(%)	
\$	422.65	\$ 432.90	\$	10.25	2.42%
\$	459.15	\$ 472.36	\$	13.21	2.88%
\$	495.30	\$ 511.75	\$	16.45	3.32%
\$	531.25	\$ 551.07	\$	19.82	3.73%
\$	706.50	\$ 747.12	\$	40.62	5.75%
\$	792.76	\$ 768.70	\$	(24.05)	-3.03%
\$	877.89	\$ 832.68	\$	(45.20)	-5.15%
\$	1,130.30	\$ 1,018.40	\$	(111.90)	-9.90%
\$	1,961.33	\$ 1,625.12	\$	(336.20)	-17.14%
\$	2,786.54	\$ 2,225.08	\$	(561.46)	-20.15%
\$	4,432.36	\$ 3,416.33	\$	(1,016.04)	-22.92%
\$	4,785.64	\$ 3,990.75	\$	(794.89)	-16.61%
\$	5,412.57	\$ 4,557.98	\$	(854.59)	-15.79%
\$	6,014.80	\$ 5,121.53	\$	(893.27)	-14.85%
\$	7,181.99	\$ 6,244.28	\$	(937.71)	-13.06%
\$	12,859.81	\$ 11,601.33	\$	(1,258.48)	-9.79%
\$	18,184.35	\$ 16,684.91	\$	(1,499.44)	-8.25%
\$	28,435.60	\$ 26,656.38	\$	(1,779.22)	-6.26%

### Rate Continuity

In their evidence filed in Case No. EB-2011-0210, the parties have identified rate continuity problems with the Company's M1/M2 rate proposal. As shown on Exhibit III-28, the discontinuity occurs at the current 50,000 m<sup>3</sup>/year breakpoint under the currently rate design. With the proposed rate, the discontinuity occurs at the proposed 5,000 m<sup>3</sup>/year breakpoint.

This result can be directly tied to three factors. First, there is a substantial increase in monthly fixed charges for customers whose annual consumption is between 5,000 and 50,000 m<sup>3</sup>/year. Second, under the approved rates, the load factor declines from 28.0% to 27.7% at the 50,000 m<sup>3</sup>/year breakpoint. Thus, customers who consume more than 50,000 m<sup>3</sup>/year are responsible for more demand related costs on a per unit volume basis, as well as higher monthly fixed charges. Third, this problem is exacerbated by a declining block rate design for these customers. Because unit cost of service increases as load increases, an inverted rate is more appropriate than the declining block rate that the Company currently has in place, although a movement to an inverted rate will clearly have fixed cost recovery implications.

Under the proposed rates, the load factor increases slightly and demand costs on a per unit basis decline, but not enough to overcome the increase in fixed monthly charges until consumption exceeds approximately 11,725 m<sup>3</sup>/year.

The Union North operating area rate designs for Rate 01 and Rate 10 customers do not exhibit this rate continuity, as shown on Exhibit III-29. In contrast to the approved and proposed rate designs in the South, the approved and proposed rate designs in the North are fully consistent with the consumption patterns observed in the North, i.e., load factor increases and per unit volumetric rates decline at all rate levels in the North enough to overcome the

increase in fixed monthly charges, the declining block structure is appropriate and no discontinuities are observed.

Exhibit III-28  
Rate Continuity  
Union South

2013 Approved Rates - M1			2013 Proposed Rates - M1		
\$	21.00	per month	\$	21.00	per month
	3.7795	First 100 m <sup>3</sup>		3.1389	First 100 m <sup>3</sup>
	3.5730	Next 150 m <sup>3</sup>		2.7839	Next 150 m <sup>3</sup>
	3.0845	All Over 250 m <sup>3</sup>		2.2862	All Over 250 m <sup>3</sup>

2013 Approved Rates - M2			2013 Proposed Rates - M2		
\$	70.00	per month	\$	32.00	per month
	4.1416	First 1,000 m <sup>3</sup>		4.4256	First 1,000 m <sup>3</sup>
	4.0653	Next 6,000 m <sup>3</sup>		4.2756	Next 6,000 m <sup>3</sup>
	3.8379	Next 13,000 m <sup>3</sup>		4.0756	Next 13,000 m <sup>3</sup>
	3.5650	All Over 20,000 m <sup>3</sup>		3.7698	All Over 20,000 m <sup>3</sup>

Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Approved Unit Cost (\$)	Proposed Unit Cost (\$)
1,800	\$ 317.46	\$ 304.65	\$ 0.1764	\$ 0.1693
2,200	\$ 330.66	\$ 314.76	\$ 0.1503	\$ 0.1431
2,600	\$ 343.77	\$ 324.75	\$ 0.1322	\$ 0.1249
3,000	\$ 356.77	\$ 334.62	\$ 0.1189	\$ 0.1115
5,000	\$ 420.72	\$ 382.81	\$ 0.0841	\$ 0.0766
6,000	\$ 452.08	\$ 649.36	\$ 0.0753	\$ 0.1082
7,000	\$ 483.38	\$ 693.07	\$ 0.0691	\$ 0.0990
10,000	\$ 577.10	\$ 823.12	\$ 0.0577	\$ 0.0823
20,000	\$ 886.04	\$ 1,253.82	\$ 0.0443	\$ 0.0627
30,000	\$ 1,194.49	\$ 1,682.73	\$ 0.0398	\$ 0.0561
50,000	\$ 1,811.40	\$ 2,531.95	\$ 0.0362	\$ 0.0506
60,000	\$ 3,266.21	\$ 2,947.88	\$ 0.0544	\$ 0.0491
70,000	\$ 3,658.44	\$ 3,362.86	\$ 0.0523	\$ 0.0480
80,000	\$ 4,049.67	\$ 3,776.96	\$ 0.0506	\$ 0.0472
100,000	\$ 4,827.62	\$ 4,601.20	\$ 0.0483	\$ 0.0460
200,000	\$ 8,568.31	\$ 8,561.13	\$ 0.0428	\$ 0.0428
300,000	\$ 12,218.03	\$ 12,421.99	\$ 0.0407	\$ 0.0414
500,000	\$ 19,424.78	\$ 20,045.86	\$ 0.0388	\$ 0.0401

Exhibit III-29  
Rate Continuity  
Union North

2013 Approved Rates - 01					2013 Proposed Rates - 01				
\$	21.00	per month		\$	21.00	per month			
	9.7347	First 100 m <sup>3</sup>			10.1347	First 100 m <sup>3</sup>			
	9.2102	Next 200 m <sup>3</sup>			9.9979	Next 150 m <sup>3</sup>			
	8.8375	Next 200 m <sup>3</sup>			9.7489	All Over 250 m <sup>3</sup>			
	8.4955	Next 500 m <sup>3</sup>							
	8.2130	Over 1,000 m <sup>3</sup>							
2013 Approved Rates - 10					2013 Proposed Rates - 10				
\$	70.00	per month		\$	32.00	per month			
	7.7070	First 1,000 m <sup>3</sup>			6.4117	First 1,000 m <sup>3</sup>			
	6.2934	Next 9,000 m <sup>3</sup>			5.9605	Next 6,000 m <sup>3</sup>			
	5.4872	Next 20,000 m <sup>3</sup>			5.4605	Next 13,000 m <sup>3</sup>			
	4.9711	Next 70,000 m <sup>3</sup>			4.9035	All Over 20,000 m <sup>3</sup>			
	3.0159	Over 100,000 m <sup>3</sup>							
Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)		Proposed Revenues (\$)		Approved Unit Cost (\$)		Proposed Unit Cost (\$)		
1,800	\$	422.65	\$	432.90	\$	0.2348	\$	0.2405	
2,200	\$	459.15	\$	472.36	\$	0.2087	\$	0.2147	
2,600	\$	495.30	\$	511.75	\$	0.1905	\$	0.1968	
3,000	\$	531.25	\$	551.07	\$	0.1771	\$	0.1837	
5,000	\$	706.50	\$	747.12	\$	0.1413	\$	0.1494	
6,000	\$	792.76	\$	768.70	\$	0.1321	\$	0.1281	
7,000	\$	877.89	\$	832.68	\$	0.1254	\$	0.1190	
10,000	\$	1,130.30	\$	1,018.40	\$	0.1130	\$	0.1018	
20,000	\$	1,961.33	\$	1,625.12	\$	0.0981	\$	0.0813	
30,000	\$	2,786.54	\$	2,225.08	\$	0.0929	\$	0.0742	
50,000	\$	4,432.36	\$	3,416.33	\$	0.0886	\$	0.0683	
60,000	\$	4,785.64	\$	3,990.75	\$	0.0798	\$	0.0665	
70,000	\$	5,412.57	\$	4,557.98	\$	0.0773	\$	0.0651	
80,000	\$	6,014.80	\$	5,121.53	\$	0.0752	\$	0.0640	
100,000	\$	7,181.99	\$	6,244.28	\$	0.0718	\$	0.0624	
200,000	\$	12,859.81	\$	11,601.33	\$	0.0643	\$	0.0580	
300,000	\$	18,184.35	\$	16,684.91	\$	0.0606	\$	0.0556	
500,000	\$	28,435.60	\$	26,656.38	\$	0.0569	\$	0.0533	

### Conclusions Regarding the Company's Proposed Alternative Rate Proposal

Based on the findings above, there do not appear to be strong arguments in support of the Company's volume breakpoint and rate harmonization proposals:

- The rates resulting from the Company's volume breakpoint and rate harmonization proposals do not markedly outperform the approved rate structure under any of the rate design criteria chosen.
- While there is a reduction of seasonal subsidies under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint, that reduction is modest.
- Intraclass subsidies are greater under the proposed 5,000 m<sup>3</sup>/year breakpoint than the approved 50,000 m<sup>3</sup>/year breakpoint.
- The proposed rate structure performs worse on the basis of its ability to collect fixed charges.
- There are significant rate impacts associated with the Company's proposed M1/M2 rates that are unlikely to be overcome without a modification of fixed monthly charges that will have a negative impact on the Company's ability to collect its fixed customer-related delivery charges.
- There are rate continuity problems with M1/M2 rate proposal.

### **Rate Design Alternatives**

As stated previously in this Report, there is general support for the goals of the Company's volume breakpoint and rate harmonization proposals from all parties and the Board. Therefore, this evaluation also attempted to determine if the objectives of these proposals could be achieved by implementing alternatives to the Company's specific rate designs. In the course of this engagement, three potential alternatives that might overcome

the deficiencies found in the Company's proposal and better satisfy the rate design criteria were discussed with the parties and evaluated. These alternatives are:

- Incorporate two breakpoints, so that there are three rate classes in each operating area: one for those customers who consume less than 5,000 m<sup>3</sup>/year; one for those customers who consume between 5,000 and 50,000 m<sup>3</sup>/year; and one for those customers who consume more than 50,000 m<sup>3</sup>/year.
- Phase in the breakpoint reduction in successive rate cases until the desired breakpoint is achieved.
- Eliminate any breakpoint based on size, but distinguish between small and large customers either on the basis of "Residential," "Commercial" and "Industrial" (RCI) customers or meter size.

These alternatives are discussed more fully in the subsections below.

#### Multiple Breakpoint Alternative

As is apparent from the discussion above, the primary impediment to implementing the Company's volume breakpoint and rate harmonization proposals is the significant rate impact on customers, particularly those customers who would transition from M1 to M2 under the Company's proposal. During the meetings with the parties that took place during the course of this engagement, it was suggested that perhaps an alternative way to implement the Company's proposal was to develop three tiers of customers in each operating area, thereby mitigating the impact of the rate change on those customers who consume annual volumes of between 5,000 and 50,000 m<sup>3</sup>/year.

To test this theory, customer-related, demand-related, and commodity-related costs for the three tiers in each operating area were developed from the two cost of service studies presented earlier, and a simplified rate design was developed from these costs. The rates developed as a result of this exercise are shown in Exhibit III-30.

Exhibit III-30  
Alternative Three-Tier Rates

	M1	M1a	M2
Monthly Charge	\$ 19.92	\$ 44.53	\$ 106.37
Monthly Delivery Charge	3.3793	3.1722	3.6028

	Rate 01	Rate 01a	Rate 10
Monthly Charge	\$ 29.49	\$ 33.31	\$ 196.11
Monthly Delivery Charge	5.1840	5.4649	4.6187

Under this proposal, customers who consume 5,000 m<sup>3</sup> or less annually would be served under rate M1 or 01, as geographically appropriate. In the South operating area, these customers would face a monthly charge of \$19.92 and a volumetric charge of 3.3793¢/m<sup>3</sup>. In the North operating area, the charges would be \$29.49/month and 5.1840¢/m<sup>3</sup>. Under this proposal, customers who consume between 5,000 and 50,000 m<sup>3</sup>/year, would not face the charges of the highest usage General Service customers, but would instead be billed under what are labelled Rates M1a and 01a, with associated charges as shown in the above Exhibit. As is currently the case, customers whose annual consumption is greater than 50,000 m<sup>3</sup>/year would be billed under Rate M2 or 10, with the charges shown in the above Exhibit.

Using these charges, the next step was to apply the rate impact and continuity criteria. Rate impacts are shown for the South operating area in Exhibit III-31 and rate impacts are shown for the North operating area in Exhibit III-32. The continuity criterion is applied in Exhibits III-33 and III-34, for the South and North operating areas, respectively.



Exhibit III-32  
Calculation of Rate Impacts  
Union North

2013 Approved Rates - 01			2013 Alternative Rates - 01		
\$	21.00	per month	\$	29.49	per month
	9.7347	First 100 m <sup>3</sup>		5.1840	all m <sup>3</sup>
	9.2102	Next 200 m <sup>3</sup>			
	8.8375	Next 200 m <sup>3</sup>			
	8.4955	Next 500 m <sup>3</sup>	\$	33.31	per month
	8.2130	Over 1,000 m <sup>3</sup>		5.4649	all m <sup>3</sup>
2013 Approved Rates - 10			2013 Alternative Rates - 10		
\$	70.00	per month	\$	196.11	per month
	7.7070	First 1,000 m <sup>3</sup>		4.6187	all m <sup>3</sup>
	6.2934	Next 9,000 m <sup>3</sup>			
	5.4872	Next 20,000 m <sup>3</sup>			
	4.9711	Next 70,000 m <sup>3</sup>			
	3.0159	Over 100,000 m <sup>3</sup>			

Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Difference	
			(\$)	(%)
1,800	\$ 422.65	\$ 447.19	\$ 24.54	5.81%
2,200	\$ 459.15	\$ 467.93	\$ 8.78	1.91%
2,600	\$ 495.30	\$ 488.66	\$ (6.64)	-1.34%
3,000	\$ 531.25	\$ 509.40	\$ (21.85)	-4.11%
5,000	\$ 706.50	\$ 613.08	\$ (93.42)	-13.22%
6,000	\$ 792.76	\$ 727.63	\$ (65.13)	-8.22%
7,000	\$ 877.89	\$ 782.28	\$ (95.61)	-10.89%
10,000	\$ 1,130.30	\$ 946.22	\$ (184.08)	-16.29%
20,000	\$ 1,961.33	\$ 1,492.72	\$ (468.61)	-23.89%
30,000	\$ 2,786.54	\$ 2,039.21	\$ (747.33)	-26.82%
50,000	\$ 4,432.36	\$ 3,132.20	\$ (1,300.16)	-29.33%
60,000	\$ 4,785.64	\$ 5,124.59	\$ 338.95	7.08%
70,000	\$ 5,412.57	\$ 5,586.46	\$ 173.90	3.21%
80,000	\$ 6,014.80	\$ 6,048.34	\$ 33.53	0.56%
100,000	\$ 7,181.99	\$ 6,972.08	\$ (209.91)	-2.92%
200,000	\$ 12,859.81	\$ 11,590.78	\$ (1,269.03)	-9.87%
300,000	\$ 18,184.35	\$ 16,209.48	\$ (1,974.87)	-10.86%
500,000	\$ 28,435.60	\$ 25,446.89	\$ (2,988.70)	-10.51%

Exhibit III-33  
Rate Continuity  
Union South

2013 Approved Rates - M1			2013 Alternative Rates - M1		
\$	21.00	per month	\$	19.92	per month
	3.7795	First 100 m <sup>3</sup>		3.3793	all m <sup>3</sup>
	3.5730	Next 150 m <sup>3</sup>			
	3.0845	All Over 250 m <sup>3</sup>			
			\$	44.53	per month
				3.1722	all m <sup>3</sup>
2013 Approved Rates - M2			2013 Alternative Rates - M2		
\$	70.00	per month	\$	106.37	per month
	4.1416	First 1,000 m <sup>3</sup>		3.6028	all m <sup>3</sup>
	4.0653	Next 6,000 m <sup>3</sup>			
	3.8379	Next 13,000 m <sup>3</sup>			
	3.5650	All Over 20,000 m <sup>3</sup>			

Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Approved Unit Cost (\$)	Proposed Unit Cost (\$)
1,800	\$ 317.46	\$ 299.83	\$ 0.1764	\$ 0.1666
2,200	\$ 330.66	\$ 313.35	\$ 0.1503	\$ 0.1424
2,600	\$ 343.77	\$ 326.86	\$ 0.1322	\$ 0.1257
3,000	\$ 356.77	\$ 340.38	\$ 0.1189	\$ 0.1135
5,000	\$ 420.72	\$ 407.97	\$ 0.0841	\$ 0.0816
6,000	\$ 452.08	\$ 724.63	\$ 0.0753	\$ 0.1208
7,000	\$ 483.38	\$ 756.35	\$ 0.0691	\$ 0.1081
10,000	\$ 577.10	\$ 851.52	\$ 0.0577	\$ 0.0852
20,000	\$ 886.04	\$ 1,168.74	\$ 0.0443	\$ 0.0584
30,000	\$ 1,194.49	\$ 1,485.96	\$ 0.0398	\$ 0.0495
50,000	\$ 1,811.40	\$ 2,120.40	\$ 0.0362	\$ 0.0424
60,000	\$ 3,266.21	\$ 3,438.18	\$ 0.0544	\$ 0.0573
70,000	\$ 3,658.44	\$ 3,798.46	\$ 0.0523	\$ 0.0543
80,000	\$ 4,049.67	\$ 4,158.74	\$ 0.0506	\$ 0.0520
100,000	\$ 4,827.62	\$ 4,879.31	\$ 0.0483	\$ 0.0488
200,000	\$ 8,568.31	\$ 8,482.12	\$ 0.0428	\$ 0.0424
300,000	\$ 12,218.03	\$ 12,084.93	\$ 0.0407	\$ 0.0403
500,000	\$ 19,424.78	\$ 19,290.56	\$ 0.0388	\$ 0.0386

Exhibit III-34  
Rate Continuity  
Union North

2013 Approved Rates - 01			2013 Alternative Rates - 01		
\$	21.00	per month	\$	29.49	per month
	9.7347	First 100 m <sup>3</sup>		5.1840	all m <sup>3</sup>
	9.2102	Next 200 m <sup>3</sup>			
	8.8375	Next 200 m <sup>3</sup>			
	8.4955	Next 500 m <sup>3</sup>	\$	33.31	per month
	8.2130	Over 1,000 m <sup>3</sup>		5.4649	all m <sup>3</sup>
2013 Approved Rates - 10			2013 Alternative Rates - 10		
\$	70.00	per month	\$	196.11	per month
	7.7070	First 1,000 m <sup>3</sup>		4.6187	all m <sup>3</sup>
	6.2934	Next 9,000 m <sup>3</sup>			
	5.4872	Next 20,000 m <sup>3</sup>			
	4.9711	Next 70,000 m <sup>3</sup>			
	3.0159	Over 100,000 m <sup>3</sup>			

Annual Volume (m <sup>3</sup> /year)	Approved Revenues (\$)	Proposed Revenues (\$)	Approved Unit Cost (\$)	Proposed Unit Cost (\$)
1,800	\$ 422.65	\$ 447.19	\$ 0.2348	\$ 0.2484
2,200	\$ 459.15	\$ 467.93	\$ 0.2087	\$ 0.2127
2,600	\$ 495.30	\$ 488.66	\$ 0.1905	\$ 0.1879
3,000	\$ 531.25	\$ 509.40	\$ 0.1771	\$ 0.1698
5,000	\$ 706.50	\$ 613.08	\$ 0.1413	\$ 0.1226
6,000	\$ 792.76	\$ 727.63	\$ 0.1321	\$ 0.1213
7,000	\$ 877.89	\$ 782.28	\$ 0.1254	\$ 0.1118
10,000	\$ 1,130.30	\$ 946.22	\$ 0.1130	\$ 0.0946
20,000	\$ 1,961.33	\$ 1,492.72	\$ 0.0981	\$ 0.0746
30,000	\$ 2,786.54	\$ 2,039.21	\$ 0.0929	\$ 0.0680
50,000	\$ 4,432.36	\$ 3,132.20	\$ 0.0886	\$ 0.0626
60,000	\$ 4,785.64	\$ 5,124.59	\$ 0.0798	\$ 0.0854
70,000	\$ 5,412.57	\$ 5,586.46	\$ 0.0773	\$ 0.0798
80,000	\$ 6,014.80	\$ 6,048.34	\$ 0.0752	\$ 0.0756
100,000	\$ 7,181.99	\$ 6,972.08	\$ 0.0718	\$ 0.0697
200,000	\$ 12,859.81	\$ 11,590.78	\$ 0.0643	\$ 0.0580
300,000	\$ 18,184.35	\$ 16,209.48	\$ 0.0606	\$ 0.0540
500,000	\$ 28,435.60	\$ 25,446.89	\$ 0.0569	\$ 0.0509

As these Exhibits make clear, the rate impact issues in the South are not resolved with this particular rate design alternative. Furthermore, the rate continuity issues in the South are

also not resolved with this proposal, and it also introduces rate continuity problems in the North. For these reasons, this evaluation concludes that the three tier rate proposal should not be implemented at this time.

### Phase-in Alternative

The primary problem with the modified breakpoint proposal is that the rate impacts for the transitional customers in the South (those whose annual consumption is between the proposed 5,000 m<sup>3</sup>/year breakpoint and the approved 50,000 m<sup>3</sup>/year breakpoint) are significant (>10%), and it seems logical that a higher breakpoint might exist (e.g., 40,000 m<sup>3</sup>/year) such that the bill impact on the transitional customers would be less than 10% (at the hypothetical breakpoint of 40,000 m<sup>3</sup>/year for example, those customers who consume between 40,000 and 50,000 m<sup>3</sup>/year).

In order to test this theory, simple M1/M2 rates were developed under the following assumptions:

- The monthly customer charge for smaller customers served under rate M1 is set at \$21/customer/month under all alternative rate designs, and all alternatives are designed to collect the same amount of revenues from monthly fixed charges. This means that the monthly customer charges for larger customers served under rate M2 are adjusted (increased) as the volume breakpoint increases.
- All alternatives will be revenue neutral, beginning from the three-tiered cost of service analysis discussed above. With the first assumption, this also requires that all alternatives will collect the same amount of revenues from delivery charges.
- All alternatives adjust billing determinants among the rate classes based on simple volume ratios. While admittedly imprecise, it is not anticipated that this will have a qualitative impact on the analysis.

Exhibit III-35 shows the billing determinants, revenues and hypothetical monthly fixed charges and delivery charges for the 0-5,000 m<sup>3</sup>/year customers, the 5,000-50,000 m<sup>3</sup>/year customers, and the greater than 50,000 m<sup>3</sup>/year customers. These values serve as the starting point for this evaluation.

Exhibit III-35  
Analysis of Breakpoint Phase-In  
Union South

Annual Consumption Range	Customer Billing Units	Monthly Fixed Charge		Volume Billing Units	Delivery Charge		Total Revenues
		Revenues			Revenues		
0-5,000	12,055,926	\$ 240,116		2,134,461	\$ 72,130		\$ 312,246
5,000-50,000	650,876	\$ 28,980		805,082	\$ 25,539		\$ 54,519
>50,000	81,451	\$ 8,664		975,571	\$ 35,148		\$ 43,812
Total	12,788,253	\$ 277,760		3,915,114	\$ 132,817		\$ 410,577

Consumption	Rate	Monthly Fixed Charge		Rate	Delivery Charge		Total
		Revenues			Revenues		
0-5,000	\$ 19.92	\$ 240,116		3.3793	\$ 72,130		\$ 312,246
5,000-50,000	\$ 44.53	\$ 28,980		3.1722	\$ 25,539		\$ 54,519
>50,000	\$ 106.37	\$ 8,664		3.6028	\$ 35,148		\$ 43,812
Total		\$ 277,760			\$ 132,817		\$ 410,577

Exhibit III-36 shows how the monthly fixed charges and average delivery charges will change as the volume breakpoint changes. This exhibit provides the hypothetical monthly fixed charges and delivery charges for assumed annual consumption breakpoints of 5,000; 10,000; 20,000; 30,000; 40,000; and 50,000 m<sup>3</sup>/year. As expected, monthly fixed charges for M2 customers will increase as the volume breakpoint increases, primarily because of the monthly fixed charge revenue neutrality assumption described above. Also as expected, the average delivery charge for M1 customers monotonically declines as the volume breakpoint increases and the average delivery charge for M2 customers monotonically increases. The M1 results are

explained by the addition of lower per unit delivery costs associated with the customers who consume between 5,000 and 50,000 m<sup>3</sup> annually as the breakpoint rises. The M2 results are explained by the subtraction of lower per unit delivery costs associated with the customers who consume between 5,000 and 50,000 m<sup>3</sup> annually as the breakpoint rises.

Exhibit III-36  
Analysis of Breakpoint Phase-In  
Union South

Hypothetical Charges With 5,000m<sup>3</sup>/year Breakpoint

Monthly Fixed

Consumption	Charge	Delivery Charge
0-5,000	\$ 21.00	\$ 3.3793
>5,000	\$ 33.57	\$ 3.4081

Hypothetical Charges With 10,000m<sup>3</sup>/year Breakpoint

Monthly Fixed

Consumption	Charge	Delivery Charge
0-10,000	\$ 21.00	\$ 3.3710
>10,000	\$ 34.95	\$ 3.4206

Hypothetical Charges With 20,000m<sup>3</sup>/year Breakpoint

Monthly Fixed

Consumption	Charge	Delivery Charge
0-20,000	\$ 21.00	\$ 3.3562
>20,000	\$ 38.86	\$ 3.4500

Hypothetical Charges With 30,000m<sup>3</sup>/year Breakpoint

Monthly Fixed

Consumption	Charge	Delivery Charge
0-30,000	\$ 21.00	\$ 3.3434
>30,000	\$ 45.83	\$ 3.4873

Hypothetical Charges With 40,000m<sup>3</sup>/year Breakpoint

Monthly Fixed

Consumption	Charge	Delivery Charge
0-40,000	\$ 21.00	\$ 3.3323
>40,000	\$ 61.72	\$ 3.5361

Hypothetical Charges With 50,000m<sup>3</sup>/year Breakpoint

Monthly Fixed

Consumption	Charge	Delivery Charge
0-50,000	\$ 21.00	\$ 3.3226
>50,000	\$ 134.03	\$ 3.6028

Finally, Exhibit III-37 calculates the rate impact for customers at the breakpoint for these hypothetical rates. As can be seen, while the rate impact appears to be minimized for a breakpoint at approximately 20,000 m<sup>3</sup>/year, the rate impacts are still significant (greater than 30%) and there does not appear to be a breakpoint that will make a change in the volume breakpoint acceptable from the standpoint of this rate design criterion, and this evaluation concludes that there do not appear to be sufficient economies of scale as consumption increases to reduce the cost to serve and the corresponding rates of higher volume customers to levels that would reduce the rate impact to acceptable levels.

Exhibit III-37  
Analysis of Breakpoint Phase-In  
Union South

Rate Impact of Hypothetical Charges With 5,000m<sup>3</sup>/year Breakpoint

Consumption	Existing	Proposed	Increase (\$)	Increase(%)
5,001	\$ 420.75	\$ 573.30	\$ 152.55	36.26%

Rate Impact of Hypothetical Charges With 10,000m<sup>3</sup>/year Breakpoint

Consumption	Existing	Proposed	Increase (\$)	Increase(%)
10,001	\$ 577.13	\$ 761.49	\$ 184.36	31.94%

Rate Impact of Hypothetical Charges With 20,000m<sup>3</sup>/year Breakpoint

Consumption	Existing	Proposed	Increase (\$)	Increase(%)
20,001	\$ 886.07	\$ 1,156.41	\$ 270.33	30.51%

Rate Impact of Hypothetical Charges With 30,000m<sup>3</sup>/year Breakpoint

Consumption	Existing	Proposed	Increase (\$)	Increase(%)
30,001	\$ 1,194.53	\$ 1,596.22	\$ 401.70	33.63%

Rate Impact of Hypothetical Charges With 40,000m<sup>3</sup>/year Breakpoint

Consumption	Existing	Proposed	Increase (\$)	Increase(%)
40,001	\$ 1,502.98	\$ 2,155.13	\$ 652.15	43.39%

Rate Impact of Hypothetical Charges With 50,000m<sup>3</sup>/year Breakpoint

Consumption	Existing	Proposed	Increase (\$)	Increase(%)
50,001	\$ 2,873.03	\$ 3,409.86	\$ 536.83	18.69%

### Meter Size Alternative

A final alternative that was discussed was to eliminate any breakpoint based on size, but distinguish between small and large General Service customers on the basis of “Residential,” “Commercial” and “Industrial” (RCI) customers. There are two factors that support such an approach. First, the most significant unit cost differences between larger and smaller General Service customers can be traced to Distribution Customer costs, and the Company already uses the RCI customer distinction to quantify these costs.

Based on the 2013 approved class cost of service study, it is possible to derive the following distribution customer costs for South customers:

- Residential - \$19.28/customer/month;
- Commercial - \$43.60/customer/month; and
- Industrial - \$138.39/customer/month.

The second source of support for this approach is the class cost of service results, presented above in Chapter II. Exhibit III-38 below extracts the demand and commodity unit rates from lines 26 and 27 of Exhibits II-3 and II-5. When combined, these costs are the basis for the delivery charges. As can be seen on lines 6 and 19 of Exhibit III-38, the average delivery cost difference between larger and smaller General Service customers within a given operating area varies by at most 13.73%. Furthermore, there is not a consistent pattern in the average delivery cost difference between larger and smaller General Service customers within a given operating area. For example, assuming a 50,000 m<sup>3</sup>/year distinction between larger and smaller General Service customers in the South operating area, the cost of service study indicates that it costs about 7% more on a unit cost basis to serve larger customers than to

serve smaller customers. However, when larger customers are defined to be those whose annual consumption is greater than 5,000 m<sup>3</sup>/year, the opposite result obtains, as shown on line 19 of Exhibit III-38.

Exhibit III-38					
Union Gas Limited					
Ontario Energy Board Case No. EB-2011-0210					
SUMMARY OF UNIT COSTS BY FUNCTION AND CLASSIFICATION					
2013 Proposed, 50,000 m <sup>3</sup> Breakpoint					
Line No.		General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$
1	Required Unit Rate Revenue by Classification:				
2					
3	Demand Required Unit Rate Revenue by Class	\$ 4.0360	\$ 4.1503	\$ 15.7360	\$ 13.7359
4	Commodity Required Unit Rate Revenue by Class	\$ 0.0234	\$ 0.2076	\$ 0.7665	\$ 0.7740
5	Total Delivery Costs	\$ 4.0594	\$ 4.3578	\$ 16.5025	\$ 14.5100
6	Difference Between Small and Large Customer Costs	-6.85%		13.73%	
7					
8	2013 Proposed, 5,000 m <sup>3</sup> Breakpoint				
9					
10		General Service Small (M1) \$	General Service Large (M2) \$	General Service Small (R01) \$	General Service Large (R10) \$
11					
12					
13					
14	Required Unit Rate Revenue by Classification:				
15					
16	Demand Required Unit Rate Revenue by Class	\$ 4.1737	\$ 3.9335	\$ 15.6176	\$ 14.7250
17	Commodity Required Unit Rate Revenue by Class	\$ (0.0159)	\$ 0.1714	\$ 0.7492	\$ 0.7906
18	Total Delivery Costs	\$ 4.1578	\$ 4.1050	\$ 16.3668	\$ 15.5156
19	Difference Between Small and Large Customer Costs	1.29%		5.49%	

An RCI-based rate design could also improve the Company's overall ability to recover fixed costs with limited customer bill impacts, thereby better satisfying the initial rate design evaluation criteria and could minimize the impact of the load factor on specific sub-groups of customers (<5,000; >5,000, <50,000; >50,000), so long as the average annual consumption of each of the new customer classes is sufficient to overcome any increase in the new monthly customer charges.

It is also possible that implementation of such a proposal will be accompanied by significant rate impacts that would prevent its implementation. And, it is fully recognized that such a rate design may not accomplish Union's original goal of achieving greater rate class homogeneity. Accordingly, further analysis of this rate structure is needed to ensure that it meets the Company's rate class homogeneity and rate class size goals.

### **Remaining Issues**

There are two remaining issues to be addressed. First, there does not appear to be an alternative volume breakpoint proposal for the General Service rate classes that would better satisfy the rate design criteria established at the outset of the engagement. Therefore, no change to the cost allocation for Distribution Maintenance – Meter and Regulator Repairs O&M that was approved by the Board in 2013 is recommended. Second, as there does not appear to be an alternative rate proposal for the General Service rate classes that would better satisfy the rate design criteria established at the outset of the engagement, no changes are recommended and there are no implications for Union's other rate classes.

## **IV. Findings, Conclusions and Recommendations**

### **Introduction**

This chapter summarizes the Findings and Conclusions related to the evaluation of the Company's cost of service analysis and its volume breakpoint and rate harmonization proposals of Case No. EB-2011-0210 and Case No. EB-2013-0365, and provides a set of Recommendations based on those Findings and Conclusions. A page number reference is provided for each finding that references where the finding has been developed in the report along with supporting evidence.

Findings, Conclusions and Recommendations are presented sequentially in the following three sections of this Chapter.

### **Findings**

#### **Cost of Service**

1. The Union class cost of service model is a traditional historic or embedded cost of service model. (II-6)
2. Union employs a more detailed functionalization than many traditional cost of service models, although this functionalization is fully consistent with NARUC's Gas Distribution Rate Design Manual. (II-7)
3. The classification process employed in Union's cost of service approach is fully consistent with the description of the classification process detailed in the NARUC Gas Distribution Rate Design Manual. (II-8)
4. Union's cost allocation is fully consistent with NARUC's suggested allocations. (II-9)

5. With respect to specific external allocation factors used in Union's class cost of service model, this review identified no calculation errors, but did identify an important factor that has a significant impact on the cost of service results and whose values do not match expectations: the load factors by class. This does not appear to make intuitive sense and does not reconcile with empirical experience from other utilities. (II-11, Exhibit II-1)
6. The allocation factors calculated within the Union cost of service model appear to be calculated correctly and the factors themselves appear to be reasonable and generally appropriate for Union's rate classes. (II-13)
7. The cost of service study itself appears to be consistent with prior Board directives and decisions. (II-13)
8. The cost of service study itself appears to have the approval of the parties. (II-14)
9. Union has exercised reasonable care in its choice of allocation factors by performing a sensitivity analysis on those factors that appear anomalous or do not have widespread support. (II-15)
10. There appear to be no mathematical errors in the Company's cost of service model. (II-15)
11. The customer-related unit costs that result from the Company's class cost of service analysis appear reasonable on a relative basis. (II-19)
12. The demand-related unit costs that result from the Company's class cost of service analysis appear to be consistent with the load factor assumptions upon which they are based. (II-20)
13. The commodity-related unit costs that result from the Company's class cost of service analysis appear to be reasonable on a relative basis, based on the relationship between supply volumes and total system throughput. (II-20)

#### Rate Design

1. Based on 2010 data provided by Union in Case No. EB-2011-0210, average usage by type of customer becomes more homogeneous under Union's proposal to decrease the volume breakpoint between small General Service customers and Large General Service customers from 50,000 m<sup>3</sup>/year to 5,000 m<sup>3</sup>/year. (III-5, Exhibits III-1 and III-2)
2. As the volume breakpoint that determines whether a customer is a larger or smaller General Service customer decreases, the number of larger General Service customers

will increase and, if there are significant cost differences between the customer types highlighted by Union (Residential, Commercial, and Industrial), then the movement of any individual customer between rates will have a minimal impact on the overall cost to serve that rate and the resulting average rates will tend to be more stable. (III-8, Exhibits III-3 and III-4)

3. The rates proposed at the 5,000 m<sup>3</sup>/year breakpoint are more consistent between the North and the South than the current rates at the 50,000 m<sup>3</sup>/year breakpoint. (III-10, Exhibits III-5 and III-6)
4. There will be significant (greater than the 10% that the Board finds acceptable) rate impacts for Union South customers whose annual consumption level falls between 5,000 and 50,000 m<sup>3</sup>/year under Union's proposal to decrease the volume breakpoint between small General Service customers and large General Service customers from 50,000 m<sup>3</sup>/year to 5,000 m<sup>3</sup>/year. (III-15, Exhibits III-7 and III-8)
5. Union's proposed rate designs suffer from a rate continuity problem, in that the unit rates change abruptly at specific levels of consumption, specifically in the South operating area. (III-15, Exhibits III-9 and III-10)
6. Under the assumption that demand charges vary directly with volumes of natural gas consumed and using Mean Absolute Error (MAE) and Mean Absolute Percentage Error (MAPE) criteria, there is a modest improvement in the reduction of seasonal subsidies under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint. (III-30, Exhibits III-15 , III-16, III-17 and III-18)
7. Overall, intraclass subsidies are greater under the proposed 5,000 m<sup>3</sup>/year breakpoint relative to the approved 50,000 m<sup>3</sup>/year breakpoint when evaluated using the MAE and MAPE criteria. (III-33, Exhibits III-19 , III-20, III-21 and III-22)
8. While the Company will recover its fixed costs more quickly under the proposed 01/10 rate design than the currently approved rate design in the North operating area, this improvement is not enough to offset the worse performance of the proposed South operating area rates. Thus, the proposed rate structure performs worse from a total Company perspective when evaluated on the basis of its ability to collect fixed charges. (III-37, Exhibits III-23, III-24 and III-25)
9. Although the rate impacts associated with the Company's proposed 01/10 rates would be minimal, there are significant rate impacts associated with the Company's proposed M1/M2 rates. (III-39, Exhibits III-26 and III-27)
10. An alternative to the Company's rate design proposals, under which there are three rate classes in each operating area does not resolve the rate continuity and rate shock issues that are inherent in the Company's proposals. (III-51, Exhibits III-39 , III-32, III-33 and III-34)

11. An alternative to the Company's rate design proposals, under which the breakpoint is reduced in successive rate cases until the desired breakpoint is achieved also does not resolve the rate shock issues that are inherent in the Company's proposals. (III-55, Exhibit III-37).
12. An alternative to the Company's rate design proposals, under which any breakpoint based on size is eliminated, but small and large customers are distinguished either on the basis of "Residential," "Commercial" and "Industrial" (RCI) customers or meter size may have merit, but further analysis of this rate structure would be needed to ensure that it meets the Company's rate class homogeneity and rate class size goals. (III-57)

## **Conclusions**

### Cost of Service

1. Union's general approach to cost of service is consistent with standard industry practices. (Findings 1-4, 6-9)
2. While it is certainly possible that the load characteristics of the customers in the South operating area will follow the load factor patterns observed in Exhibit II-1, it is exactly the opposite of the pattern exhibited by similar customers in the North operating area, does not seem logical and bears further evaluation. (Finding 5)
3. The costs that have been summarized in Exhibits II-2 through II-5 above will serve as a reasonable benchmark of the cost to serve that will be applied to the rate design alternatives in the remainder of this evaluation. (Findings 10-13)

### Rate Design

1. It is not clear that the appropriate measure of rate class homogeneity is average usage by type of customer. (Finding 1)
2. If the concern with respect to rate class homogeneity is matching the cost to serve the three types of customers (Residential, Commercial and Industrial), then a better rate design to accomplish this may be one that serves these major customer types under their own rate. (Finding 2)
3. The calculated load factor of Union South customers declines as average annual consumption increases. This implies that the unit cost to serve these customers will increase when expressed on a per unit of volume basis as average annual consumption increases and a declining block rate for these customers is not appropriate. As a result, Union's rate harmonization proposal moves away from cost based rates. (Finding 3)

4. The rate impacts are too large to implement the volume breakpoint and rate harmonization proposals as presented by the Company in Case No. 2011-0210. (Finding 4)
5. The rate continuity problem observed in Union's rate proposals can be traced to four factors: (i) the observed load factor of different rate classes; (ii) the monthly delivery charge for larger General Service customers relative to the monthly delivery charge that many of these customers face under the Board-approved rate designs; (iii) the merging of three types of customers (Residential, Commercial and Industrial) with significantly different costs of service into a single rate; and (iv) declining block rate structures that are not consistent with the underlying cost structures. (Finding 5)
6. Because the rates resulting from the Company's volume breakpoint and rate harmonization proposals do not markedly outperform the approved rate structure under any of the rate design criteria chosen, there do not appear to be strong arguments in support of the Company's volume breakpoint and rate harmonization proposals. (Findings 5-9)
7. There does not appear to be an alternative volume breakpoint proposal for the General Service rate classes that would better satisfy the rate design criteria established at the outset of the engagement, although an RCI-based rate design may have merit. (Findings 10-12)

## **Recommendations**

### Cost of Service

1. The primary recommendation that results from this review of the Company's class cost of service analysis is that Union should perform a full review of the load factor by rate class and segment of the rate class. Because the load factor is calculated using estimates of peak or design day by rate class and segment of the rate class as well as estimates of annual volumes for the same breakdowns, the recommendation also encompasses a review of these components as well.

In response to this recommendation, on April 30, 2015, Union provided the results of a study to the parties that examined how it determines General Service load factors. Two critical findings of this study are:

- The actual 2013 Rate M2 load factor is higher than the 2013 Board-approved Rate M2 load factor (27.7% vs. 29.9%). The higher load factor is driven by the higher actual weather normalized Rate M2 volumes.

- The increase in the Rate M2 weather normalized volumes increases the Rate M2 billing units. Assuming the increase in distribution-demands costs allocated to Rate M2 is more than offset by the increase in the Rate M2 billing units, the Rate M2 distribution-demand cost per unit of volume would decrease below Rate M1 levels.

In other words, the study supports a conclusion that (1) the load factor results used in the Case No. EB-2011-0210 cost of service study were anomalous and (2) when peak demand and annual volume values are used that are consistent with a more intuitive load factor result, the cost per unit volume will exhibit a monotonic decline as consumption increases, as expected. However, it must be cautioned that, depending on the level of monthly fixed charges associated with the different rates, the rate continuity problem may or may not be resolved. Certainly, with the current level of monthly fixed charges associated with the M1 and M2 rates, it will not be resolved.

### Rate Design

1. As discussed throughout this report, based on the evidence reviewed in the course of this engagement, no changes to the volume breakpoint between larger and smaller General Service customers are recommended. The primary problems with Union's proposals are that their implementation is accompanied by significant rate impacts and rate continuity problems, although the rates resulting from the Company's volume breakpoint and rate harmonization proposals do not markedly outperform the approved rate structure under any of the rate design criteria chosen.
2. Also as discussed throughout this report, an RCI-based rate design may have merit. Accordingly, it is recommended that Union consider and, if appropriate, evaluate the implementation of such a rate. However, in making this recommendation, it is fully recognized that such a rate design may not accomplish Union's original goal of achieving greater rate class homogeneity. It is also possible that implementation of such a proposal will be accompanied by significant rate impacts that would prevent its implementation.



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