

July 7, 2016

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-2016-0118 – Union Gas Limited – 2015 Disposition of Deferral Account Balances and 2015 Earnings Sharing Amount – Settlement Proposal and Draft Rate Order

Please find attached the Settlement Proposal for the above noted proceeding. The Settlement Proposal includes a draft Rate Order and supporting working papers for rates effective October 1, 2016. Appendix C includes the revised balances to reflect interest to September 30, 2016. The draft Rate Order represents the implementation in rates of the amounts settled in Union's attached Settlement Proposal.

If you have any questions concerning this application and evidence please contact me at 519-436-5476.

Yours truly,

[Original Signed by]

Chris Ripley Manager, Regulatory Applications

c.c.: Crawford Smith (Tory's) EB-2016-0118 Intervenors

### **ONTARIO ENERGY BOARD**

**IN THE MATTER OF** the *Ontario Energy Board Act 1998*, S.O.1998, c.15, (Schedule B);

**AND IN THE MATTER OF** an Application by Union Gas Limited, pursuant to section 36(1) of the *Ontario Energy Board Act*, 1998, for an order or orders approving or fixing just and reasonable rates and other charges for the sale, distribution, transmission and storage of gas as of January 1, 2016.

### SETTLEMENT PROPOSAL

July 7, 2016

This Settlement Proposal ("Proposal") is for the consideration of the Ontario Energy Board ("the Board") in its determination, under Docket No. EB-2016-0118, of an Application by Union Gas Limited ("Union") for an Order or Orders of the Board amending or varying the rate or rates charged to customers as of October 1, 2016 in connection with the final disposition of 2015 year-end deferral accounts and 2015 earnings sharing amount (the "Application"). This document is called a "Settlement Proposal" because it is a proposal by the Parties to the Board to settle the issues in this proceeding. It is termed a proposal as between the Parties and the Board. However, as between the Parties, and subject only to the Board's approval of this Settlement Proposal, this document is intended to be a legal agreement, creating mutual obligations, and binding and enforceable in accordance with its terms. As set forth later in this Preamble, this agreement is subject to a condition subsequent, that if it is not accepted by the Board in its entirety, then unless amended by the Parties it is null and void and of no further effect. In entering into this agreement, the Parties understand and agree that, pursuant to the Act, the Board has exclusive jurisdiction with respect to the interpretation and enforcement of the terms hereof.

By Procedural Order No. 1 dated May 16, 2016, the Board scheduled a Settlement Conference to commence on June 23 and 24, 2016 at 9:30 a.m. The Settlement Conference was duly convened, in accordance with the Procedural Order No. 1, with Ms. Gail Morrison as facilitator. The Settlement Conference commenced on June 23, 2016 at 11:30 a.m. and concluded on June 24, 2016.

The following parties participated in the Settlement Conference:

Building Owners and Managers Association Toronto ("BOMA")

Canadian Manufacturers & Exporters ("CME")

City of Kitchener ("Kitchener")

Consumers Council of Canada ("CCC")

Energy Probe Research Foundation ("Energy Probe")

Federation of Rental-housing Providers of Ontario ("FRPO")

Industrial Gas User's Association ("IGUA")

London Property Management Association ("LPMA")

Ontario Greenhouse Vegetable Growers ("OGVG")

School Energy Coalition ("SEC")

TransCanada PipeLines Limited ("TransCanada")

Vulnerable Energy Consumers Coalition ("VECC")

TransCanada takes no position on all issues.

Except as expressly noted below, for the purposes of settlement of the issues in this proceeding, the parties agree to the relief sought by Union in the Application and accept Union's position that the claimed relief is supported by Union's pre-filed evidence and its responses to interrogatories. References to the pre-filed evidence and the interrogatories are provided in relation to each of the agreed items contained in the Agreement.

The parties acknowledge that this Settlement Conference is confidential in accordance with the Board's Practice Direction on Settlement Conferences (the "Practice Direction"). The parties understand that confidentiality in that context does not have the same meaning as confidentiality in the Board's Practice Direction on Confidential Filings, and the rules of that latter document do not apply. Instead, in this Settlement Conference, and in this Settlement Proposal, the parties have interpreted "confidential" to mean that the documents and other information provided during the course of the Settlement Conference, the discussion of each issue, the offers and counter-offers, and the negotiations leading to the settlement of each issue during the Settlement Conference are strictly privileged and without prejudice. None of the foregoing is admissible as evidence in this proceeding, or otherwise, with one exception; the need to resolve a subsequent dispute over the interpretation of any provision of this Settlement Proposal. Further, the parties shall not disclose those documents or other information to persons who were not attendees at the Settlement Conference. However, the parties agree that "attendees" is deemed to include, in this context, persons who were not physically in attendance at the Settlement Conference but were; a) any persons or entities that the parties engage to assist them with the Settlement Conference; or b) any persons or entities from whom they seek instructions with respect to the negotiations; in each case provided that any such persons or entities have agreed to be bound by the same confidentiality provisions.

The role adopted by Board Staff in Settlement Conferences is set out on pp. 5-6 of the Board's April 24, 2014 Practice Direction on Settlement Conferences. Although Board Staff are not a party to this Agreement as noted in the Guidelines, "Board Staff who participate in the settlement conference in any way are bound by the same confidentiality standards that apply to the parties to

the proceeding". The evidence supporting the agreement on each issue is cited in each section of the Agreement. Abbreviations will be used when identifying exhibit references. For example, Exhibit A, Tab 4, Schedule 1, Page 1 will be referred to as A/T4/S1/p.1. The structure and presentation of the settled issues is consistent with settlement proposals which have been accepted by the Board in prior cases. The parties agree that this Agreement forms part of the record in this proceeding. The identification and listing of the evidence that relates to each issue is provided to assist the Board. The identification and listing of the evidence that relates to each settled issue is not intended to limit any party who wishes to assert, either in any other proceeding, or in a hearing in this proceeding, that other evidence is relevant to a particular settled issue, or that evidence listed is not relevant to the issue, or that the concise description of the issue prepared by Union is incorrect or incomplete.

According to the Practice Direction (p. 4), the parties must consider whether a Settlement Proposal should include an appropriate adjustment mechanism for any settled issue that may be affected by external factors. The parties who participated in the settlement discussions agree that no settled issue requires an adjustment mechanism other than as may be expressly set forth herein.

All of the issues contained in this proposal have been settled by the parties as a package and none of the provisions of this settlement is severable. If the Board does not accept this package in its entirety, then there is no settlement (unless the parties agree that any portion of the package that the Board does accept may continue as part of a valid settlement agreement).

In the event the Board directs the parties to make reasonable efforts to revise the Settlement Proposal, the parties agree to use reasonable efforts to discuss any potential revisions, but no party will be obligated to accept any proposed revision. The parties agree that all of the parties

who took a position on a particular issue must agree with any revised Settlement Proposal as it relates to that issue prior to its re-submission to the Board.

None of the parties can withdraw from this Settlement Proposal except in accordance with Rule 30.05 of the Rules. Moreover, the settlement of any particular issue in this proceeding and the positions of the parties in this Settlement Proposal are without prejudice to the rights of the parties to raise the same issue and/or to take any position thereon in any other proceeding, whether or not Union is a party to such proceeding.

### 1. Spot Gas Variance Account (No. 179-107)

Union South Bundled Direct Purchase Load Balancing Costs

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the Spot Gas Variance Account (No. 179-107), i.e. that there was no Spot Gas purchased in excess of planned Spot Gas purchases.

**Evidence References:** 

- 1. A/T1/p.2
- 2. Exhibit B.VECC.1

### 2. Unabsorbed Demand Cost Variance Account (No. 179-108)

(Complete Settlement)

The parties accept Union's evidence that the balance to be disposed of in the Unabsorbed Demand Cost ("UDC") Variance Account (No. 179-108) is a debit of \$0.388 million which represents the difference between the actual net UDC costs of \$6.027 incurred by Union and the amount of UDC collected in rates of \$5.629 million, less interest of \$0.010 million.

**Evidence References:** 

- 1. A/T1/pp.2-7
- 2. Exhibit B.Staff.1, Exhibit B.BOMA.1, Exhibit B.CCC.1, Exhibit B.FRPO.1

### 3. Gas Supply Review Consultant Cost (No. 179-128)

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the Gas Supply Review Consultant Cost Deferral Account (No. 179-128). Union will request closure of this account as part of its 2017 Rates application.

**Evidence References:** 

1. A/T1/p.8

### 4. Upstream Transportation Optimization (No. 179-131)

(Complete Settlement)

The parties accept Union's evidence that the balance to be disposed of in the Upstream Transportation Optimization Deferral Account (No. 179-131) is a debit of \$8.600 million, which is meant to capture the variance between 90% of the net revenues from optimization activities and the amount refunded to ratepayers in rates.

Union credited \$15.565 million in rates to ratepayers during 2015. The \$8.600 million debit represents the difference between the amount included in rates and 90% of 2015 net revenues (\$6.965 million less \$15.565 million).

Evidence References:

- 1. A/T1/pp.8-9, A/T1/App.A/S2
- 2. Exhibit B.Staff.2, Exhibit B.CME.1, Exhibit B.Energy Probe.1, Exhibit B.Energy Probe.6, Exhibit B.SEC.2, Exhibit B.VECC.2

### 5. Short-Term Storage and Other Balancing Services (No. 179-70)

(Complete Settlement)

The balance to be disposed of in the Short-Term Storage and Other Balancing Services account (No. 179-70) is a debit balance of \$0.508 million. The balance has been calculated by comparing \$4.043 million (90% of the actual 2015 Short-Term Storage and Other Balancing Services net revenue of \$4.492 million) to the net revenue included in rates of \$4.551 million in the EB-2011-0210 Rate Order.

**Evidence References:** 

- 1. A/T1/pp.9-14, A/T1/App.A/S3, A/T1/App.A/S4, A/T1/App.A/S5
- 2. Exhibit B.Staff.3, Exhibit B.BOMA.2, Exhibit B.BOMA.3, Exhibit B.BOMA.4, Exhibit B.FRPO.2, Exhibit B.SEC.1

### 6. Unbundled Services Unauthorized Storage Overrun (No. 179-103)

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the Unbundled Services Unauthorized Storage Overrun account (No. 179-103), i.e. that there were no unauthorized storage overrun charges incurred by customers electing unbundled service in 2015.

**Evidence References:** 

1. A/T1/p.14

### 7. Gas Distribution Access Rule Costs (No. 179-112)

(Complete Settlement)

The parties accept Union's evidence of the debit balance of \$0.760 million in the Gas Distribution Access Rule ("GDAR") Costs account (No. 179-112). The costs will be collected from ratepayers based on the annual revenue requirement related to the capital costs incurred in 2011, 2012 and 2013.

**Evidence References:** 

- 1. A/T1/pp.14-16
- 2. Exhibit B.CCC.2

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### 8. Carbon Dioxide Offset Credits (No. 179-117)

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the Carbon Dioxide Offset Credits account (No. 179-117) because there were no sales of or dealings in carbon dioxide credits relating to Union's DSM activities in 2015. Union will be reviewing the need to continue this account as part of its assessment of compliance obligations under the province's now formalized cap and trade regime.

**Evidence References:** 

1. A/T1/p.17

### 9. International Financial Reporting Standards Conversion Costs (No. 179-120)

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the International Financial Reporting Standards ("IFRS") Conversion Costs account (No. 179-120), i.e. there was no annual revenue requirement related to those capital costs.

**Evidence References:** 

1. A/T1/p.17

### 10. Conservation Demand Management (No. 179-123)

(Complete Settlement)

The parties accept Union's evidence that the amount to be disposed of in the Conservation Demand Management ("CDM") account (No. 179-123) is a credit of \$0.213 million which represents 50% of total net revenues of \$0.422 million, plus interest of \$0.002 million.

**Evidence References:** 

- 1. A/T1/pp.17-19
- 2. Exhibit B.CCC.3

### 11. Deferral Clearing Variance Account (No. 179-132)

(Complete Settlement)

The parties accept Union's evidence that the amount to be disposed of in the Deferral Clearing Variance Account (No. 179-132) is a debit of \$3.154 million (a balance of \$3.141 million plus interest of \$0.013 million), which represents an over-refund of \$2.317 million compared to the Board-approved deferral account balances in Union's 2013 Deferral Account Disposition (EB-2014-0145) and an under-recovery of \$0.824 million for the Board-approved deferral account balances in Union's 2013 Demand Side Management ("DSM") Deferral Account Disposition proceeding (EB-2014-0273). The account was approved by the Board in its EB-2014-0145 Decision. Its purpose is to eliminate the gains or losses to ratepayers and Union as a result of volume variances associated with the disposition of deferral account balances.

**Evidence References:** 

1. A/T1/pp.19-22, A/T1/S7

### 12. Normalized Average Consumption (No. 179-133)

(Complete Settlement)

The parties accept Union's evidence that the amount to be disposed of in the Normalized Average Consumption ("NAC") deferral account (No. 179-133). The balance in the NAC deferral is a debit from ratepayers of \$10.499 million plus interest of \$0.047 million.

In considering this account, the parties considered the evidence that at the end of 2014, the NAC deferral account (No.179-133) had a credit balance of \$1.554 million, whereas as at the end of 2015 the account has a debit balance of \$10.546 million. (Please see Exhibit B.VECC.3) The

parties discussed the extent to which Union's current methodology for forecasting NAC, which relies on historical consumption data, can be expected to reflect; i) the future impact of ongoing structural changes in customer gas consumption; and ii) the future impact of DSM savings.

The parties agree that, as part of its application for rebasing rates for the 2019 test year, Union will file a study assessing the continued appropriateness of its methodology for determining the NAC, including in particular the extent to which its current methodology properly reflects; i) the forecast impact of ongoing structural changes in general service customer gas consumption; and ii) the forecast impact of DSM savings. This study will facilitate consideration of appropriate changes to Union's NAC forecast methodology, if any, as part of Union's application to establish 2019 rates.

### Evidence References:

- 1. A/T1/pp.22-29, A/T1/S6
- 2. Exhibit B.Staff.4, Exhibit B.BOMA.5, Exhibit B.CCC.4, Exhibit B.Energy Probe.2, Exhibit B.FRPO.3, Exhibit B.FRPO.4, Exhibit B.FRPO.5, Exhibit B.OGVG.1, Exhibit B.VECC.3

### 13. Tax Variance Deferral Account (No. 179-134)

(Complete Settlement)

The parties accept Union's evidence that the amount to be disposed of in the Tax Variance account (No. 179-134) is a credit of \$0.060 million. The establishment of this account was approved through EB-2013-0202 Settlement Agreement. Its purpose is to record 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. The credit of \$0.060 million relates to ratepayers portion of Union's incremental savings from the reduction of the input tax credits on Harmonized Sales Tax.

Evidence References:

### 1. A/T1/pp.29-31

### 14. Unaccounted for Gas Volume (No. 179-135)

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the Unaccounted for Gas Volume ("UFG") account (No. 179-135). The account was approved through the EB-2013-0202 Settlement Agreement to capture the difference between Union's actual UFG costs and the Board-approved UFG costs included in Union's rates, related to UFG volume variances as a percentage of throughput volumes. The account is subject to a symmetrical \$5 million deadband, with amounts within the dead-band being to Union's account only. Union's actual experienced UFG expense has a UFG percent volume variance of \$3.6 million lower (favourable) than Board-approved.

**Evidence References:** 

- 1. A/T1/pp.31-32
- 2. Exhibit B.LPMA.1, Exhibit B.LPMA.4

### 15. Parkway West Project Costs (No. 179-136)

(Complete Settlement)

The parties accept Union's evidence that the balance in the Parkway West Project Costs account (No. 179-136) is a credit of \$0.334 million, which represents the difference between the \$6.373 million credit included in 2015 rates (EB-2014-0271) and the calculation of the actual revenue requirement of a \$6.054 million credit. The remaining \$0.015 million credit represents a true-up to the 2014 revenue requirement of a \$0.751 million credit included in the 2014 Deferral Disposition (EB-2015-0010) and the recalculated actual 2014 revenue requirement of a \$0.766

million credit to adjust the long-term debt rate from the estimate of 4.0% to the actual of 3.82%.

The Board approved the establishment of this account in its EB-2012-0433 Decision.

**Evidence References:** 

- 1. A/T1/pp.33-40
- 2. Exhibit B.BOMA.6, Exhibit B.BOMA.7, Exhibit B.LPMA.2, Exhibit B.LPMA.3, Exhibit B.LPMA.5

### 16. Brantford-Kirkwall/Parkway D Project Costs (No. 179-137)

(Complete Settlement)

The parties accept Union's evidence that the balance in the Brantford-Kirkwall/Parkway D Project Costs account (No. 179-137) is a debit of \$0.579 million, which represents the difference between the \$0.077 million credit included in 2015 rates (EB-2014-0271) and the calculation of the actual revenue requirement of a \$0.502 million debit. The Board approved the establishment of this account in its EB-2013-0074 Decision.

**Evidence References:** 

- 1. A/T1/pp.40-45
- 2. Exhibit B.BOMA.7, Exhibit B.BOMA.8, Exhibit B.LPMA.5, Exhibit B.VECC.4

### 17. Parkway Obligation Rate Variance (No. 179-138)

(Complete Settlement)

The parties accept Union's evidence that there is no balance in the Parkway Obligation Rate

Variance account (No. 179-138). The purpose of the account is to record rate variances

associated with timing differences between the effective date of the Union South DP Parkway

Delivery Obligation changes and the inclusion of the cost impacts in approved rates (January 1 of the following year).

**Evidence References:** 

1. A/T1/pp.45-46

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### 18. Energy East Pipeline Consultation Costs (No. 179-139)

(Complete Settlement)

The parties accept Union's evidence that the balance in the Energy East Pipeline Consultation Costs account (No. 179-139) is a debit of \$0.137. The account was created to record the consultation costs related to the Energy East Pipeline Project allocated by the Board in accordance with the Board's Decision in EB-2014-0271.

**Evidence References:** 

1. A/T1/p.46

### 19. Unaccounted for Gas Price Variance (No. 179-141)

(Complete Settlement)

The parties accept Union's evidence that the balance in the Unaccounted for Gas ("UFG") Price Variance Account (No. 179-137) is a credit of \$0.581 plus interest of \$0.004. The purpose of the account is to capture the variance between the average monthly price of Union's purchases and the applicable Board-approved reference price, applied to Union's actual UFG volumes, as approved by the Board in its EB-2015-0010 Decision.

**Evidence References:** 

- 1. A/T1/pp.46-48
- 2. Exhibit B.Staff.5, Exhibit B.LPMA.4

### 20. Lobo C Compressor/Hamilton-Milton Pipeline Project Costs (No. 179-142)

(Complete Settlement)

The parties accept Union's evidence that the balance in the Lobo C Compressor/Hamilton-Milton Pipeline Project Costs account (No. 179-142) is a credit of \$0.334 million plus interest of \$0.001

million, which represents the calculation of the actual revenue requirement for 2015 of a \$0.334 million credit. There was no revenue requirement included in 2015 rates (EB-2014-0271). The Board approved the establishment of this account in its EB-2014-0261 Decision.

**Evidence References:** 

- 1. A/T1/pp.48-53
- 2. Exhibit B.BOMA.7, Exhibit B.BOMA.9, Exhibit B.LPMA.5

### 21. 2015 Earnings Sharing

(Complete Settlement)

The parties accept Union's earnings sharing calculation and all adjustments to that calculation.

There is no balance in the customer portion of earnings sharing above the 2013 Board-approved Return on Equity.

Union agrees to refund \$0.227 million, which represents 50% of a \$0.454 adjustment to prior period earnings sharing calculation. The adjustment relates to Affiliate revenue and expense cross charges for IT services which were incurred in 2013 and were recorded in 2014. In 2014, Union was in a 50/50 earnings sharing position, as such, the adjustment results in additional Earnings Sharing to ratepayers. At Appendix A, Union has provided i) the recalculated Exhibit B.Energy Probe.4, Attachment 1, pp. 1-2, please see Attachment 1; ii) the recalculated 2014 Earnings Sharing calculation (EB-2015-0010, Exhibit A, Tab 2, Appendix B, Schedule 1), please see Attachment 2; and iii) the recalculated Allocation of 2015 Deferral Account Balances (Exhibit A, Tab 3, Appendix A, Schedule 1), please see Attachment 3.

One of the affiliate services changes recently engaged in by Union was the consolidation of data centre services with Spectra Energy Corp. ("SE") and its other affiliates. Attached at Appendix B

are two documents provided by Union during the settlement conference, and two documents requested during the settlement conference and subsequently provided by Union, all of which the parties have agreed are appropriately included with this Settlement Agreement in order to provide context to the Board regarding this aspect of the agreement. The documents provided during the settlement conference are; i) Data Centre Consolidation Business Case (Attachment 1); and ii)

Affiliate Services Business Case – IT/Data Centre Services (Attachment 2). The documents requested during the settlement conference and subsequently provided are the following Service Agreements (Attachment 3);

- Information Technology Data Centre Services SLA I; and,
- Information Technology Infrastructure Services Capitalized Labour.

The two service agreements between Union and SE documenting the data centre arrangements were not considered by the parties in reaching agreement on this issue, as they were provided subsequent to adjournment of the settlement conference.

In 2015, the earnings impact of the net of charges from Spectra related to data centre co-location (equal to \$2.1 million) and charges to Spectra related to implementation of the data centre co-location initiative (equal to \$1.4 million), is a \$0.7 million payment by Union to SE. This utility expense does not materially impact earnings sharing results for 2015.

However, Union anticipates that the full year earnings impact of the data centre consolidation decision will be in the range of USD\$6 million in 2016, less savings of \$3 million in O&M expenses. These are preliminary expectations and actual costs and savings could be materially different. All parties anticipate, however, a more material utility cost/savings impact from this

initiative in 2016.

Accordingly, Union agrees to file evidence as part of its 2016 non-commodity and earnings sharing application to more completely explain the data centre co-location decision, its rationale and implementation, including the costs and benefit impacts to Union and its ratepayers. That evidence will include the following:

- Detail of any data centre services being provided by, or charges from, SE or any other
   Union affiliate that involve or relate to anything more than external data centre cost sharing;
- Demonstration of why the co-location of data centre services with SE is appropriate for Union;
- Demonstration that the specific data centre services obtained by SE, and shared in by Union, is appropriate for Union ratepayers;
- Demonstration of the appropriateness of the allocation of data centre co-location costs to Union by SE, which demonstration will include details of both the enterprise data centre services costs incurred by SE and the specific allocations from those costs to Union;
- Demonstration that the value of data centre services acquired by Union justifies the increase in data centre costs incurred.

### Evidence Referenced:

- 1. A/T2
- 2. Exhibit B.Staff.6, Exhibit B.BOMA.10, Exhibit B.CME.2, Exhibit B.Energy Probe.3, Exhibit B.Energy Probe.4, Exhibit B.Energy Probe.5, Exhibit B.Energy Probe.8, Exhibit B.Energy Probe.9, Exhibit B.LPMA.6, Exhibit B.LPMA.8, Exhibit B.VECC.5

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### 22. Allocation of 2015 Deferral Account Balances and 2015 Earnings Sharing

(Complete Settlement)

The parties accept Union's proposal for allocation of 2015 Deferral Account Balances and 2015 Earnings Sharing.

**Evidence References:** 

- 1. A/T3
- 2. Exhibit B.Staff.7, Exhibit B.Staff.8, Exhibit B.BOMA.11, Exhibit B.IGUA.1, Exhibit B.VECC.6

### 23. Disposition of 2015 Deferral Account Balances and 2015 Earnings Sharing Amount

(Complete Settlement)

The parties accept Union's proposal to dispose of balances prospectively over six months, over the October 1, 2016 to March 31, 2017 time period, for the general service rate classes. For infranchise contract and ex-franchise rate classes, parties agree to dispose of the net 2015 delivery-related deferral account balances as a one-time adjustment with October 2016 bills customers receive in November 2016. Please see Appendix C for a draft Rate Order.

**Evidence References:** 

1. A/T3

### 24. Incremental Transportation Contracting

(Complete Settlement)

Union has filed transportation evidence in this proceeding at Exhibit A, Tab 4.

**Evidence References:** 

- 1. A/T4
- 2. Exhibit B.BOMA.12, Exhibit B.BOMA.13, Exhibit B.BOMA.14, Exhibit B.BOMA.15, Exhibit B.BOMA.16, Exhibit B.CCC.5, Exhibit B.FRPO.7, Exhibit B.FRPO.8, Exhibit B.FRPO.9, Exhibit B.IGUA.2, Exhibit B.TransCanada.1, Exhibit B.TransCanada.2

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### Union Gas Limited Affiliate Revenue (\$000's)

		2013			
Line		Board-	2013	2014	2015
No.	Functional Service	approved	Actuals	Actuals	Actuals
		(a)	(b)	(c)	(d)
1	Bus Devel, S&T	728	506	383	550
2	Corp Services	-	-	-	-
3	Engineering & Contruction	485	178	229	40
4	EHS	821	702	912	523
5	Ethics	-	-	-	-
6	Finance	1,951	1,881	2,434	2,942
7	Gov Relations	701	627	379	404
8	HR	2,480	2,782	2,694	2,927
9	Insurance	150	118	80	68
10	IT	4,339	5,509	* 5,670	* 6,091
11	Legal	13	5	2	1
12	Other	14	8	4	10
13	Public Affairs	-	-	-	-
14	Supply Chain	801	772	764	906
15	Tax	1,224	1,166	1,068	992
16	•	13,706	14,254	14,619	15,454

<sup>\*</sup> \$1.832 Million in 2013 SAP Enterprise Support revenue initially booked in 2014 as a true-up / adjustment; reallocated back to 2013

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### Union Gas Limited Affiliate Expenses (\$000's)

Line No.	Functional Service	2013 Board- approved	2013 Actual	2014 Actual	2015 Actual
1	Bus Devel, S&T	206	(65)	-	-
2	Corp Services	68	109	109	81
3	Engineering & Contruction	437	56	-	-
4	EHS	1,097	831	922	701
5	Ethics	230	376	280	424
6	Finance	1,286	1,349	1,843	2,158
7	Gov Relations	-	-	-	-
8	HR	2,207	1,588	1,825	1,887
9	Insurance	505	97	127	310
10	IT	1,729	5,046	* 5,403	* 7,945
11	Legal	156	73	155	204
12	Other	315	-	-	-
13	Pub Affairs	5	3	3	20
14	Supply Chain	752	889	1,768	3,218
15	Tax	450	455	435	475
16	Sub Total	9,443	10,807	12,870	17,423
17	Depreciation	2,445	2,052	2,208	2,526
18	Total	11,888	12,859	15,078	19,949

 $<sup>\</sup>ast$  \$2.287Million in 2013 SAP Enterprise Support expenses initially booked in 2014 as a true-up / adjustment; reallocated back to 2013

### <u>UNION GAS LIMITED</u> Updated Earnings Sharing Calculation

Calendar Year Ending December 31, 2014

No.	Particulars (\$000s)	2014 (a)	Unregulated Storage (b)	Adjustments (c)	2014 Utility (d)=(a)-(b)+(c)
		(4)	(0)	(0)	(a) (a) (b) (c)
1	Operating Revenues	1 770 500		(17.010)	1.761.400
1	Gas Sales	1,778,509	(256)	(17,010) i	1,761,499
2 3	Transportation	183,393 82,329	(356) 74,546	(32,375) ii	151,373 7,783
4	Storage Other	21,201	-	(6,328) iii	·
5		2,065,433	74,190	(55,713)	1,935,529
6	Operating Expenses  Cost of gas	977,185	1,657	(17,010) i	958,517
7	Operating and maintenance expenses	396,932	14,020	(3,606) iv	379,305
8	Depreciation	210,640	10,272	-	200,368
9	Other financing	-	-	689 v	689
10	Property and other taxes	65,791	1,468	-	64,324
11	-	1,650,547	27,417	(19,928)	1,603,203
	Other				
12	Gain / (Loss) on sale of assets	(768)	(901)	-	133
13	Other / Huron Tipperary	(1,483)	(1,483)	_	-
14	Gain / (Loss) on foreign exchange	(1,814)	(43)	585 vi	(1,185
15		(4,065)	(2,428)	585	(1,052
16	Earnings before interest and taxes	410,820	44,346	(35,200)	331,274
10	=	410,020	71,310	(33,200)	331,274
17	Income taxes				24,127
18	Total utility income subject to earnings sharing				307,147
	Less debt and preference share return components				
19	Long-term debt				150,959
20	Unfunded short-term debt				(720
21	Preferred dividend requirements				2,825
22					153,064
	Less shareholder portions of:				
23	Net short-term storage revenue (after tax)				105
24	Net optimization activity (after tax)				582
25					687
26	Earnings subject to sharing				153,396
27	Common equity				1,431,510
21	Common equity				1,431,310
28	Return on common equity (line 26 / line 27)				10.72%
29	Benchmark return on common equity + 100 basis points				9.93%
30	50% earnings sharing % (line 28 - line 29, maximum 1%)				0.79%
31	90% earnings sharing % (if line 30=1%, then line 28 - line 29	- line 30)			0.00%
32	50% earnings sharing \$ (line 27 x line 30 x 50%)				5,624
33	90% earnings sharing \$ (line 27 x line 31 x 90%)				<del>-</del>
34	Total earnings sharing \$ (line 32 + line 33)				5,624
35	Pre-tax earnings sharing (line 34 / (1 minus tax rate)				7,652
	Notes:				
i	Reclassification of optimization revenue as cost of gas				
ii	Exclusion of 2012 FT RAM revenue				
iii	Demand-side management incentive				
iv	Donations	(3,425)			
1 4		273			
1 V	CDM program	213			
14	2013 affiliate services true-up	(454)			

v Facility fees and customer deposit interest

vi Foreign exchange gain on bank balances

### UNION GAS LIMITED Allocation of 2015 Deferral Account Balances

					Union North									Union	South								
Line		Acct																		Excess			
No.	Particulars (\$000's)	No.	Rate 01	Rate 10	Rate 20	Rate 100	Rate 25	M1	M2	M4	M5A	M7	M9	M10	T1	T2	T3	M12	M13	Utility	C1	M16	Total (1)
·		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)
	Gas Supply Related Deferrals:																						
1	Spot Gas Variance Account	179-107	-	_	_	_	_	-	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2	Unabsorbed Demand Cost (UDC) Variance Account	179-108	(704)	(261)	(93)	-	_	1,167	254	11	3	10	-	0	_	_	-	-	-	-	_	-	388
3	Gas Supply Review Consultant Costs	179-128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Upstream Transportation Optimization	179-131	3,457	1,189	412	-	103	2,915	485	22	18	-	-	0	-	-	-	-	-	-	-	-	8,600
5	Deferral Clearing Variance Account - Supply (2)	179-132	-	-	-	-	-	102	62	4	(3)	7	-	0	-	-	-	-	-	-	-	-	172
6	Deferral Clearing Variance Account - Transport (2)	179-132	1,237	428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	1,665
7	Total Gas Supply Related Deferrals		3,990	1,356	319	-	103	4,184	801	36	19	17	-	0	-	-	-	-	-	-	-	-	10,825
	Storage Related Deferrals:																						
8	Short-Term Storage and Other Balancing Services	179-70	76	20	5	0	-	172	58	19	0	7	2	0	16	117	15	-	-	-	-	-	508
	Delivery Related Deferrals:																						
9	Unbundled Services Unauthorized Storage Overrun	179-103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10		179-112	176	-	-	-	-	584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	760
11		179-117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12		179-120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		179-123	(25)	(8)	(7)	(12)	-	(70)	(26)	(11)	(18)	(6)	-	-	(12)	(18)	-	-	-	-	-	-	(213)
14	Deferral Clearing Variance Account - Delivery (2)	179-132	324	196	-	-	-	(108)	906	-	-	-	-	-	-	-	-	-	-	-	-	-	1,317
15	J , , ,	179-133	4,276	1,026	-	- (1)	- (2)	4,699	545	- (1)	-	- (5)	- (-)	- (0)	-	- (5)	- (2)	-	- (5)	- (2)	- (5)	- (5)	10,546
16		179-134	(11)	(2)	(1)	(1)	(0)	(23)	(4)	(1)	(1)	(0)	(0)	(0)	(1)	(3)	(0)	(12)	(0)	(0)	(0)	(0)	(60)
17	Unaccounted for Gas (UFG) Volume Variance Account	179-135	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- (22.1)
18		179-136	60	(1)	5	7	3	259	28	10	8	3	0	0	9	45	2	(778)	0	3	4	0	(334)
19		179-137	163	22	18	15	5	376	50	13	13	4	1	0	9	34	3	(152)	0	5	(0)	(0)	579
20		179-138	- 27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 13	- 0	-	-	-	-
21 23	3,	179-139 179-141	(66)	2 (21)	2 (7)	2 (0)	1	69 (277)	6 (92)	(20)	3	(1.4)	(6)	Ü	2	5	1	13	(8)	1	U	(e)	137 (585)
23 22	Lobo C Compressor/Hamilton-Milton Pipeline Project Costs	179-141 179-142	(108)	(21)	(12)	(0)	- (4)	(245)	(92)	(38)	(50) (8)	(14)	(0)	- (0)	- (E)	(20)	- (2)	- 142	(0)	- (4)	- 1	(6)	(335)
24		179-142	4,815	1,199	(3)	(0)	(4)	5,264	1.381	(33)	(54)	(15)	(5)	(0)	(5)	44	(2)	(788)	(8)	(4)	<u> </u>	(5)	(333)_ 11,812
24	Total Delivery-Nelated Deletrals		4,015	1,199	(3)	(0)	3	5,204	1,301	(33)	(54)	(13)	(3)	U	2	44	4	(700)	(6)	4	3	(3)	11,012
25	Total 2015 Storage and Delivery Disposition (Line 8 + Line 24)		4,891	1,219	3	0	5	5,436	1,439	(14)	(53)	(9)	(3)	0	18	161	19	(788)	(8)	4	5	(5)	12,320
26	Total 2015 Deferral Account Disposition (Line 7 + Line 25)		8,882	2,575	322	0	108	9,621	2,240	22	(35)	8	(3)	0	18	161	19	(788)	(8)	4	5	(5)	23,145_
									_,,_		(55)		\-/					(1.23)		·			,
27	2015 Earnings Sharing (3)		-	-	-	-	-	- (2.5)	-	-	-	-	- (-)	- (5)	- (-)	-	-	-	-		-	- (5)	- (
28			(41)	(6)	(4)	(3)	(1)	(89)	(13)	(3)	(3)	(1)	(0)	(0)	(2)	(10)	(1)	(47)	(0)	(0)	(0)	(0)	(227)
29	Total Earnings Sharing		(41)	(6)	(4)	(3)	(1)	(89)	(13)	(3)	(3)	(1)	(0)	(0)	(2)	(10)	(1)	(47)	(0)	(0)	(0)	(0)	(227)
30	Grand Total (Line 26 + Line 29)		8,841	2,569	318	(3)	106	9,532	2,227	19	(38)	7	(3)	0	15	151	17	(835)	(8)	4	4	(5)	22,918

- Notes:
  (1) Exhibit A, Tab 1, Appendix A, Schedule 1.
  (2) Exhibit A, Tab 1, Schedule 7, pp. 2-3.
  (3) Exhibit A, Tab 2, Appendix B, Schedule 1.
  (4) 2014 Earnings Sharing adjustment of (\$0.227) million calculated as \$7.424 million, per EB-2015-0010, Exhibit A, Tab 2, Appendix B, Schedule 1, line 35, less \$7.652 million, per Settlement Agreement, Attachment 2, line 35.

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# Data Centre Consolidation Business Case



### **Executive Summary**

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- Propose elimination of Union's two data centres in Chatham and at Dawn\*
- Consolidate with Spectra's other 6 data centers into 2 new co-locate facilities in Lebanon, Ohio and Carrollton (Dallas), Texas
- CyrusOne to provide co-locate services and HCL to provide managed services
- Union will use approximately 35% of the consolidated data centres
- next 20 30 years and sizing new "owned" data centres Avoids required upgrades at existing data centres and/or estimating our infrastructure needs for the
- Benefits: Lower operational risk, modern technology, and quicker server/storage installations
- Reliability, scalability and security improvements
- Tier 3 4 facilities (existing is Tier 1 2) \*\*
- "Hot" Disaster Recovery Site (existing is "Warm")
- Scalable capacity
- Pay-as-you-go model
- Modest cost increase disappears after costs to achieve have been amortized (in 5 years)
- Eliminates capital expenditures on servers and storage at Union Gas
- Office space in Chatham and at Dawn will be made available for other purposes
- Little impact on the majority of the workforce main changes are in IT
- Timing: Migration in 2015

<sup>\*</sup> SCADA not in scope at this time

<sup>\*\*</sup> Tier 1 has little redundancy/Tier 4 is the highest level of redundancy

### Background

Union currently owns two data centres: primary is in Chatham with back-up at Dawn

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- Support currently provided by a mix of employees, contractors and managed services
- Chatham
- ➤ Located at Head Office: Owned 3,200 sq. ft.
- $\, 
  ightlederightarrow \,$  Space underutilized and trending downward (50% reduction in the past 15 years)
- Aging raised floor/cooling challenges
- May 2015 water leak could have seriously damaged data centre equipment
- Significant investment required to maintain current service levels
- Office space required for other purposes
- Storage and server growth has averaged approximately 20% per year for the last 3 years
- Location not ideal due to potential of Thames River flooding and the associated impact on power supply
- Power redundancy: Tier 2
- Dawr
- ➤ Located at compressor station: Owned 1,200 sq. ft.
- Data centre space is significantly constrained
- Power redundancy: Tier 1 2
- A "Warm" disaster recovery site
- Union has been looking for a long-term data centre solution for a number of years
- Existing data centres are not meeting our existing and future business requirements

### Industry Data Centre Trends Page 4 of 24



- Majority of Fortune 500 companies either co-locate \* or outsource data centre functions
- Recognition that operating a data centre is not their core competency
- > To improve redundancy/reliability (e.g. power), flexibility (scalability) and security

To reduce the risks associated with natural disasters (floods, tornadoes, earthquakes and hurricanes)

- > To control escalating costs of physical security, cooling, connectivity, management and maintenance
- Internally hosted data centres are difficult to scale up or down
- Scale up to accommodate growth (e.g. organic business and data)
- Data continues to grow in size and complexity \*\*
- Scale down to reflect trends in technology (e.g. applications moving to the cloud)
- Union currently receives 58 cloud services which do not use our data centre resources
- Data centre technologies are evolving rapidly. The power intensity of devices is increasing dramatically) they are getting smaller but use more power (infrastructure density has increased
- Constant temperature and humidity levels need to be maintained in a data centre at all times for the safety of the equipment
- \* Vendor provides building, cooling, power and physical security
- \*\*Big data is a term used to describe the collection of large, complex data sets. The "Internet of Things" is the term used to describe the proliferation of devices that will be connected to the internet, all of which will generate large quantities

### Se App Attac Page Page

Aligned with industry trends - removes Union from the data centre business – a non core competency

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- Improved reliability, scalability and security
- $\, 
  ightarrow \,$  Provides significantly more redundancy and eliminates single points for failure in power and the network
- Planned and unplanned outages of critical applications in the past have resulted from single points of failure (i.e. lack of redundancy in the current data centres)
- virtualized environment Positions company to take advantage of cloud and other vendor provided services and to take full advantage of a
- Accommodates business/data growth
- Reduced performance and operational risks results from moving away from existing owned data centres that have structural issues and scalability constraints
- Better monitoring and performance tools
- Lower natural disaster risk
- Allows office space to repurposed

## Benefits of Co-locating and Consolidating with Spectra

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- Economies of scale and scope possible
- More cost effective to improve reliability, scalability and security
- Creates "critical mass" to consider state-of-the-art vBlock \* converged infrastructure technology\*\*
- $\gg$  Provides an enterprise-wide standard IT services delivery and support processes model (release of processes and standardization of methodologies/controls problem management) — further reducing performance and operational risk through simplification management, change management, service request management, incident management and
- > Faster delivery of servers and storage to meet business needs (improved agility)
- Allows for more effective back-up of data centre resources
- Provides "Hot" Disaster Recover site
- $\gg$  Operational savings derived through standardized infrastructure and a variable cost model
- Significantly reduces overall data centre floor space requirements from 19,895 sq. ft. at the existing data centres (4,400 sq. ft. at Union alone) to 2,000 sq. ft. at the 2 consolidated data centres

Brand name used by VCE to describe racks containing data centre components

<sup>\*\*</sup> Preconfigured and integrated server, storage and network computing infrastructure (private cloud)

# Settlement Pendix B Comment 1 Pendix B Top 1 Pendix B Pen





- Currently, there are no data centre related in-bound affiliate service charges
- $\gg$  Union currently buys its own servers/storage and pays for the related hardware maintenance and support services (provided by a mix of employees, contractors and managed services)
- $\gg$  Union also pays for the power required to operate the servers and storage (and to control temperature/humidity) in the data centres that are owned in Chatham and at Dawn
- In 2014 these costs totalled approximately \$3.0 million in O&M and \$2.2 million in depreciation. anticipation of a decision on a long-term solution (see Appendix E) years is understated relative to a normalized steady state as costs have been deferred in We have been spending approximately \$2 - \$3 million in capital annually with certain years as high as \$5 million when major storage infrastructure is life cycled. Capital spending in recent

## Settlement Rependix B Appendix B Appendix I Property of Co-locating and Consolidating with



- Under the co-locating and consolidating Spectra data centre model, there will be an inbound attiliate service charge increase
- $\gg$  Co-locate data centre floor space (and the related power, cooling, physical security, security monitoring, UPS Spectra (approximately \$1.0 million USD annually) and back-up generators) will be rented from Cyrus One in Lebanon, Ohio and Carrolton (Dallas), Texas by
- $\gg$  Spectra will buy all of the servers/storage required by the enterprise from VCE, install the equipment in the of-the-art block converged infrastructure technology has been selected as the server/storage and network technology for all of Spectra's requirements two data centres and pay the related hardware maintenance (approximately \$2.0 million USD annually). State-
- V A 5 year capital lease will be used to finance the cost of the new vBlock (approximately \$23 million USD). Some equipment will last significantly longer than the 5 year capital lease term. i.e. It is anticipated that the capital lease cost will decline after 5 years
- $\triangleright$  The one time costs (e.g. labour, consulting and training) associated with all business units migrating to the new data centres (approximately \$18 million USD) will be amortized over 5 years
- > The above costs will be split between business units based on server, storage, network, CPU usage and user base lined on an annual basis to reflect actual usage) count. Union's proportionate share is estimated to be 35% based on current usage (each business unit will be
- HCL (approximately \$0.6 million USD annually) will provide managed services (server installs, will also continue to support the data centres as an enterprise support model monitoring and back-ups) at the data centres. Internal labour from Union Gas and Spectra
- Telecommunication services required to connect the two data centres to the enterprise will be contracted for from Verizon, AT&T and Sprint (approximately \$0.6 million USD annually)

# Spectra Cont'd Filed: 2016-07-07 EB-2016-0118 Settlement Spendix B Appendix B Appendix B Appendix B Consolidating with



Annual Data Centre Cost	2014	Co-locate	*
	(CAD)	(USD)	
Co-locate (including power):		(CyrusOne)	\$0.3 million
Hardware Maintenance:	\$1.2 million	(VCE/Cisco/IBM)	\$0.8 million
Capital Lease Depreciation:		(Spectra)	\$1.7 million
Managed Services:	\$0.5 million	(HCL)	\$0.6 million
Internal Labour:	\$1.1 million	(Union/Spectra)	\$0.8 million
Network:		(Verizon/AT&T/Sprint)	\$0.6 million
Power:	\$0.2 million	an and an	
Ongoing O&M:	\$3.0 million		\$4.8 million
Costs to Achieve (Amortized over 5 years):		(Spectra)	\$1.2 million
O&M (First 5 years):			\$6.0 million

Capital:

\$2 - \$3 million

Approx. \$40,000

\$2.2 million

Depreciation:

**Building Occupancy:** 

<sup>35%</sup> of Spectra's costs

## Expendix B Appendix B Appendix I Page 10 of 24 Page 10 of 24 The consolidating with the consolidation with the c



- state. Costs were deferred in anticipation of a decision on a long-term solution (see The financial analysis on page 10 utilizes the financial information presented on page 8 to costs it will incur in the future. 2014 costs are understated relative to a normalized steady identify the EBITDA and EBIT impacts of comparing the costs Union incurred in 2014 to the
- EBITDA impacts are much greater than the impact on EBIT as in the future the depreciation service charge which will be an O&M expense Union previously incurred on the server/storage assets will form part of an inbound affiliate
- For the first 5 years (until the costs to achieve have been amortized) there is a \$3.7 million unfavourable impact on EBITDA and \$1.5 million unfavourable impact on EBIT
- After 5 years (when the costs to achieve have been amortized) there is a \$2.3 million unfavourable impact on EBITDA and \$0.1 million unfavourable impact on EBIT
- In the future, Union will avoid capital expenditures of \$3 \$4 million annually related to data centre servers and storage (except for SCADA systems)
- 2015 will be a transition year, where the only costs incurred by Union at the new data centre will be Union's share of the capital lease cost
- Union will start to pay its full share of new data centre costs in 2016

# Spectra Cont'd Filed: 2016-07-07 EB-2016-0118 Settlement Spendix B Accachment 1 Personnic Impacts of Co-locating and Consolidating with





### Impact starting in 2016 (First 5 years):

Capital \$2	EBIT (\$5.	Depreciation ( <u>\$2.</u>	EBITDA (\$3.	0&M <u>\$3.</u>	CAD <b>20</b> :
\$2 - \$3 million	\$5.2 million)	\$2.2 million)	\$3.0 million)	\$3.0 million	2014 Costs
\$0.0 million	(\$6.7 million)	\$0.0 million	(\$6.7 million)	\$6.7 million	Co-locate *
(\$2 - \$3 million)	(\$1.5 million)	\$2.2 million	(\$3.7 million)	\$3.7 million	Difference

### Impact (After 5 years):

CAD 0&M	2014 Costs \$3.0 million (\$3.0 million)	Co-locate * \$5.3 million (\$5.3 million)
C&M	53.0 million	35.3 <u>[[]]]]]]]]</u>
EBITDA	(\$3.0 million)	(\$5.3 million)
Depreciation	(\$2.2 million)	\$0.0 million
EBIT	(\$5.2 million)	(\$5.3 million)
Capital	\$2 - \$3 million	\$0.0 million

<sup>\*</sup> Assumes a \$0.90 Canada/U.S. exchange rate

### Key Risks and Mitigation Plans

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•	_	•	•	• [	•	•	
Standard risks associated with data centre	Cost overruns	Response time latency	Potential conflicts for key resources with other projects	Operational model transition may need standardization of processes across business units	Some applications may need remediation/upgrades to fit the new technology platform standards	Significant amount of change for IT staff	Kov Ricke
<ul> <li>Actively manage with thorough planning and execution</li> <li>Perform low risk transitions first</li> </ul>	<ul> <li>Project management discipline</li> <li>Steering committee oversight</li> <li>External PMO assistance</li> </ul>	<ul> <li>Utilize flash for key applications</li> <li>Additional network tools/expand virtual desktops</li> <li>Converged infrastructure and storage systems</li> </ul>	<ul> <li>Project management discipline</li> <li>Steering committee oversight</li> <li>Detailed project plan</li> </ul>	<ul> <li>Complete development design and policy changes early</li> <li>Establish disaster recovery mitigation team</li> </ul>	<ul> <li>Perform additional tests of applications</li> <li>Collaborate with application architects to plan any remediation needed</li> <li>Provide sufficient time for remediation and testing</li> </ul>	<ul> <li>Change management strategy</li> <li>Frequent and consistent communication (e.g. newsletter)</li> <li>Quarterly IT department wide updates</li> </ul>	Mitigation Approach / Proposed Action

## Settlement Appendix B Attachment 1 Page 13 of 24 Risks and Mitigation Plans Cont'd



•	•	•	•	•	•	•
Having too many changes to analyze to effectively trouble-shoot the cause of a problem following application migration	Applications are not properly mapped, resulting in applications not performing properly (as a result of integrations not working) following migration	Needing to invoke Disaster Recovery (DR) before the end of the project, before we have had an opportunity to fully test it	Changing established release management, change management, service request management, incident management and problem management processes to accommodate enterprise approach	Disruption to Operations during transition	Legacy applications may not be easily hosted in standardized environment	Key Risks Limited knowledge of vBlock
Change IT wide Make a	Ensure Explain Rely on	Build w Incorpo VCE/EI	Retain Implem can be Ensure Maintai	Enhance Modify s Movelop Develop Clarity and Business activities	Factor i Test an	VCE/EI they wil
Change freeze 2 weeks before and 1 week after each wave migration IT wide slow down of changes to applications Make all necessary infrastructure changes well in advance of migration	Ensure the proper amount of time and effort is spent on this activity Explain the importance of the activity to the application teams Rely on the structure and expertise that can be provided by VCE/EMC	Build what DR testing that can be done into the project schedule Incorporate best data centre migration practices regarding DR from VCE/EMC into the project plan	Retain existing processes when possible; adjust only when necessary Implement bridge process until Configuration Management Database can be fully implemented Ensure applications have been categorized properly (i.e. criticality) Maintain and enhance daily operations meetings Planning and project management	Enhanced planning and project management Modify schedule to accommodate business requirements Develop good communication plan – brief business leaders Clarity around roles and accountability Business resources will be involved in testing and application migration activities	Factor into plan Test and remediate where needed	Mitigation Approach / Proposed Action VCE/EMC will be on-site for full support during the first year (2015) and they will assist with the application migration Employees will receive extensive training on the new technology

## Recommendation

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- generators. Consolidate with Spectra to take advantage of economies of scale and scope. Follow the trend in the industry and use co-locate space in state-of-the-art data centres. Service provider to furnish space, power, cooling, physical security and security monitoring, and back-up
- system needs to be closer to the users. (i.e. distance is more of a factor) SCADA not in scope at this time. SCADA servers will remain where they are for now as the
- Retain ownership of the network, servers, and storage. Provides vendor neutrality on hardware/software decisions and makes assets portable should the need arise
- Continue providing most administrative functions and network/data security. Managed services will include server installs, monitoring and back-ups
- Employ higher capacity telecom (additional redundancy between business units and Spectra).
- for from major telecommunication providers (Verizon, AT&T, and Sprint). redundant connectivity between the data centres but the actual connectivity will be contracted CyrusOne. However, CyrusOne will leverage their purchasing power to provide highly The network between the two data centres will not be owned by the co-locate service provider,
- on current usage. Direct billing from vendors providing data centre related services will be arranged wherever joint costs will be reviewed annually. Union's proportionate share is estimated to be 35% based business units based on server, storage, network, CPU usage and user count. The allocation of infrastructure at a co-locate site. There will be a need to split some costs between Spectra possible. An increase to affiliate service charges will result from jointly using converged

### **Appendix**

- Data Centre Terms
- φ. CyrusOne and HCL General Information
- VCE & vBlock Overview
- Avoided IT Expenditures 12 Month Capability Roadmap
- **Data Centre Footprints**

Calculation of Data Centre Allocation Factor

Tentative Wave Schedule



- uniongas A Spectra Energy Company
- Data centres are facilities used to house computer systems and the associated components company. (servers, storage, and network). They are critical to the day-to-day activities of the
- Tier rankings describe power redundancy safeguards
- Tier 1 Little redundancy (99.671% availability)
- Tier 2 Batteries provide reserve power temporarily before switching to generator (99.741% availability)
- Tier 3 Back-up generation (99.982% availability)
- ightarrow Tier 4 Everything is fully fault tolerant and dual powered (99.995% availability)
- Co-locate Services
- Where a vendor provides the building, cooling, power, and physical security while the customer provides servers, storage and bandwidth. Space in the facility is leased by the rack, cabinet, cage or room.
- Managed Services
- Where a vendor performs network, server, storage and system management services using a "pay as you go" pricing model. This can be at our facility or at the vendor's.
- A critical component of a co-locate service model is the network dependency
- $\, 
  ightarrow \,$  The further data needs to travel, the more likely latency (delay) could be an issue

## Data Centre Terms Cont'd

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## Disaster Recovery Sites

- Cold Least expensive. Hardware is not set up. Data has not been backed-up or mirrored. Hardware is inactive and not used until a DR test or business interruption event occurs.
- > Warm Hardware and connectivity provided on a smaller scale than primary site. Copies of data available.
- Hot Duplicate of the primary site. Minimal effort to move operations from primary site. Real time synchronization may completely mirror user data.

## Sem. Appendix Beachment 1 Page 18 of 24 CyrusOne and HCL General Information



### CyrusOne:

- CyrusOne is a publically owned American corporation that owns, operates and develops enterprise class, carrier neutral data centres
- CyrusOne is headquartered in Carrollton, Texas and operates 25 data centres across the U.S., the United Kingdom and in Singapore
- CyrusOne serves customers in a range of industries: energy, oil & gas, medical, technology, energy companies finance and consumer goods & services. The company's customers include 9 of the Fortune 20 and 135 of the Fortune 1000 companies, including several major utility and

### HCL:

- HCL Technologies Limited is a \$5.2 billion global IT services company headquartered in Noida, India
- outsourcing infrastructure management, engineering and R&D services, and business process Services offered include: software consulting, enterprise transformation, remote
- Extensive global offshore infrastructure and network of offices in 31 countries.
- companies HCL Technologies Limited is on the Forbes Global 2000 list and is one of Asia's Fab 50

## VCE & vBlock Overview

### VCE

- Started in 2009
- Joint Venture between EMC, Cisco, and VMware (VMware is also owned by EMC)
- Ranked #1 by Gartner for converged infrastructure computing
- Over a billion in sales, with a 50% growth rate

# Converged infrastructure allows customers to select a pre-configured and integrated

- Blade based technology (state-of-the-art: high availability)
- Smaller footprint and less power
- Multi layer redundancy throughout
- Easy to expand/only pay for what you have/need (low total cost of ownership)
- One call for support

### vBlock

- Brand name used by VCE to describe racks containing data centre components
- on the servers Consists of storage from EMC, switches and servers from Cisco and VMware virtualization software running
- Contains fewer storage arrays/ports, racks, and network points
- Used by 800 customers in 60 countries (in 2013)
- Nearly 2,000 vBlock systems have been sold (in 2013)

## Filed: 2016-07-07 EB-2016-0118 Settlement Settlement 1 Page 20 of 24 The conth Capability Roadmap



Managed Services		Architecture Data Centre			
Backup/ Restore	Monitoring	Automation	Architecture	Facility	
I I I	1 1		1 1	I I	
Prolonged recovery process for restoring data Higher data loss risk due to tapes Manual intensive tape management	Lack of centralized tools with adhoc reporting Limited event correlation for diagnosis & resolution	Extended deployment time for servers  Unused servers w/licensing and maintenance costs  Disparate patch management across Business Units	Varying technologies and tools across Business Units Equipment duplication for network and storage	Reduced reliability with aging facilities, lack of diverse power, suboptimal cooling & proximity to natural disaster areas  Scalability constraints limits responsiveness to business needs	Current State Limitations
<	<	<b>、</b> 、	4 4	< <	
Improved reliability and productivity driven by shift to disk and virtual backup	Increased uptime via faster diagnosis and resolution	Standardized service request process for all three business units using a unified form tool Improved patch management via a standard environment	Improved availability driven by hardware redundancy and consolidated and virtualized infrastructure Enhanced security, both physical and logical	Increased reliability and uptime driven by dual redundancy along with efficient power and cooling Improved connectivity via greater bandwidth	Day 1 (Q2, 2015) Capabilities
✓ Improved scalability – enhanced technology from compression, data deduplication and optimization	<ul> <li>✓ Enhanced resource planning and management via trend reporting tools</li> <li>✓ Enhanced financial transparency and showback</li> </ul>	<ul> <li>Faster builds of network, storage and server infrastructure</li> <li>Self-service portal, streamlining and automation of all operations</li> <li>Tighter license management via server decommissioning and rationalized and abstracted infrastructure</li> </ul>	✓ Improved operating and support model via enhanced equipment, tools and processes ✓ Private cloud and cloud service brokerage	✓ Enhanced demand management to rapidly address business growth	Q1, 2016 and beyond Capabilities

## uniongas

A Spectra Energy Company

### Settlem Appendi Apachme Avoided IT Expenditures

Improvements would need to be made at Union's two existing data centres if we continued to operate them:

- Internet Upgrades: increase in the Union Gas bandwidth
- Back-up Telecommunications to Houston: currently via Calgary circuit for redundancy
- Back-up Telecommunications to the Dawn Disaster Recovery Site: additional circuit for redundancy
- and circuits for redundancy Back-up Telecommunications into the Chatham data centre: additional network hardware
- Server and Storage Lifecycle & Growth: replacement of existing/new server and storage per year if we weren't deferring expenditures in anticipation of a long-term solution infrastructure. Current spend of \$2 - \$3 million per year would have been \$3 - \$4 million
- Core Network Lifecycle: replacement of existing data centre network hardware

## Calculation of Data Centre Allocation Factor

uniongas

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		Total	Total	Weighted
	Union Gas	Spectra	Capex	Capex
	Usage	Usage	\$millions	<u>\$millions</u>
	(a)	(b)	(c)	(a/b*c=d)
Unix AIX Servers	108 (2a)	143 (2a)	1.5	1.14
Wintel Servers	500 (2a)	2,335 (2a)	9.2	1.97
Server Monitoring	608 (2a)	2,478 (2a)	0.3	0.08
Storage	555 (2b)	1,215 (2b)	10.9	4.98
Network Connections	111 (2c)	446 (2c)	0.2	0.05
Total			22.1	8.22

### Notes:

- components by the associated capital cost in the new data centres (8.22 / 22.1 = 35% approximately) The 2015 allocation factor for Union Gas has been determined on the basis of weighting the usage of infrastructure
- 2. (a) # of servers; (b) TBs of storage; (c) # of network connections
- ω The allocation factor will be reviewed and updated annually based on infrastructure usage

## ata Centre Footprints

## "As is" State Data Centre Footprint

**Proposed Target State Data Centre** 

A Spectra Energy Company **union**gas



## Footprint

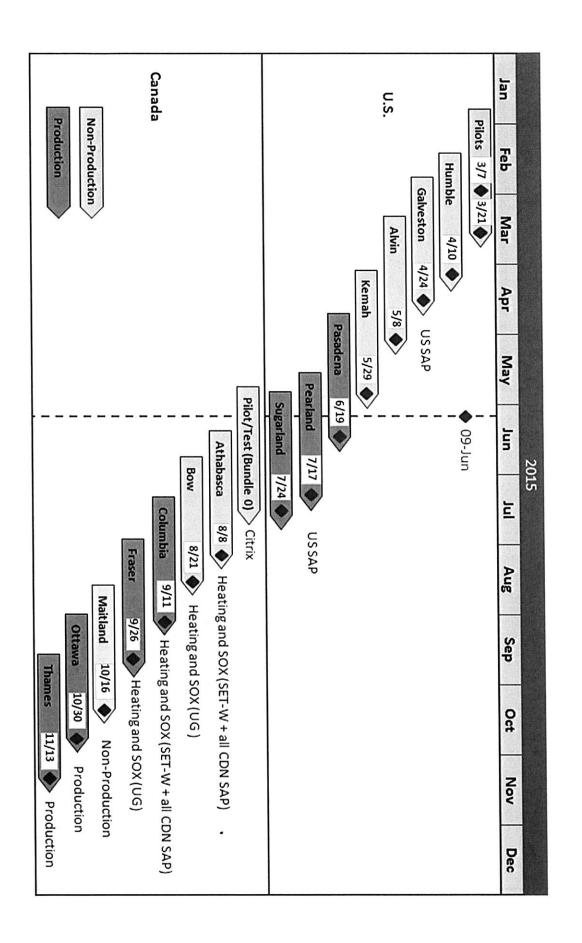
## "As Is" State Characteristics

- 8 data centres 19,895 SF

Target State Characteristics

- 2 data centres 2,000 SF

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### Affiliate Services Business Case - IT / Data Centre Services

Attachment 2
Page 1 of 5

Appendix B

Department Name: IT/DCC						
Services: Data Cent	Services: Data Centre Services					
Author	Date	Comment				
J. Hackett						

Context: The ARC requires the Utility to undertake a Business Case analysis in the following circumstances.

- A. Before entering into a SLA for a service, product, resource or use of asset that it currently provides to itself;
- B. At least once every 5 years for a service, product, resource or use of asset that is it currently receiving.

### Instructions

Complete each section first then create a summary recommendation in the section immediately below.

### **Recommendation:**

Considering the quality of the service being purchased vs. the service that was being provided internally as well as future requirements of the company the recommendation to continue purchasing from Affiliate.

### **Business Case Context**

Question	
Does Union Gas currently provide this service to itself? (select one)	Yes No
("No" –improvements in reliability, scalability and security were required)	
If "No" above, for approximately how many years has this service been purchased from an affiliate?	none
What affiliate is Union Gas purchasing the service from?	Spectra (parent)
Is this service considered a "shared core corporate service" as defined in the Affiliate Relationship Code?	Yes No

The Affiliate Relationship Code defines "shared core corporate services" as follows:

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• "...business functions that provide shared strategic management and policy support to the corporate group of which the utility is a member, relating to legal, finance, tax, Appendix B treasury, pensions, risk management, audit services, corporate planning, human Attachment 2 resources, health and safety, communications, investor relations, trustee, or public Page 2 of 5 affairs"

### **Utility Service Needs**

List and describe the services that Union needs. This list should be specific and of sufficient detail to provide a clear understanding of the services Union Gas requires.

The utility needs a Data Centre (facilities used to house computer systems and the associated components (servers, storage, and network)) with the below characteristics:

- Scalable capacity ability to expand easily and cost effectively
- Enabling quick sever and storage installations
- Physically secure and with lower geographic risk from "acts of god' (e.g. flooding)
- Low Operational Risk (Tier 3-4 Facility)
- Reliable Modern Technology (Servers, Storage and Networking)
- "Hot" disaster recovery site (<u>i.e.</u>: duplicate of the primary site with minimal effort required to move from primary site)
- Co-locate style service that includes space, power, cooling, physical security and monitoring and back-up generators

-

### **Options Available (Internal and External)**

Describe the options available to fulfill the need. Internal means staffing with a Union employee. External means acquiring the service from an independent 3rd party or from an affiliate of Union.

A. Internal

Could Union Gas provide this service itself?

Union currently operates two data centres; one at Head Office (this is the primary location) and the other at the Dawn Compressor station. The data centre space at Head Office is significantly underutilized and trending downwards (50% reduction in the past 15 years), whereas space at the Dawn site is significantly constrained. Other operational and physical details make neither site ideal when it comes to being a state-of-the-art long-term solution. Examples of these details include: cooling challenges and aging floor, significant flooding risk and the need for the office space for other purposes.

The current data centers are not meeting the Company's current or anticipated future business requirements and a significant amount of capital expenditure would be required to upgrade either (or both) location(s).

While the Company could technically provide these services to itself, it does not possess the economies of scale to make this worthwhile. With technologies rapidly changing, a better option from both a value and focus perspective is to purchase the required

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services from a supplier that specializes in providing this type of service to multiple users.

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Attachment 2

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Provide an estimate of the cost of providing the service internally.

Estimated annual O&M cost of continuing to provide Data Center service internally include:

- Hardware Maintenance: \$1.2MM

- Internal Labour and Managed Services: \$1.6MM

- Power: \$0.2MM

- Total ongoing O&M (sum of above): \$3.0MM

In addition to the ongoing O&M cost of continuing to provide Data Centre services internally, the Company would also incur at least the following capital costs to update existing facilities that aren't meeting current needs:

- Depreciation on current assets: \$2.2MM
- Capital expenditure on new assets: \$2-3MM
- Building Occupancy: \$0.1MM
- Total Capital related expenditures if continue to provide internally: \$4.8MM

To be able to use the existing Data Centre, a substantial additional investment would be needed to satisfy the growing requirements as well as upgrade/repair much of the existing data centre facilities such as the raised floor, the HVAC and its physical access.

### B. External –3rd Party

Can an independent 3rd party provide the service?

Data Centre Co-location services are a commodity service. It was felt that greater economies of scale would be achieved if all SE business units combined their requirements. The Union Gas Ratepayer benefits from the improvements in reliability, scalability and security that are only achievable as a result of the economies of scale possible when all SE Business Units are combined.

Union Gas could have contracted with external 3<sup>rd</sup> party provider on its own to provide these services. However, the Company and Ratepayer wouldn't have benefited from the economies of scale that can be achieved with participating in the Spectra/group solution.

An external consultant was hired to support the selection of a co-location solution provider.

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### C. External -Affiliate Provider

Does Union have an affiliate that is currently providing or could provide the service?

The company has explored the option of Co-locating their Data Center requirements with Spectra at two sites in the US. Lebanon, Ohio and Carrolton (Dallas), Texas. The majority of Fortune 500 companies either Co-locate or outsource data centre functions to improve redundancy/reliability, reduce risk or reduce costs. Union Gas is looking to capitalize on this market trend and achieve similar benefits.

There are significant benefits to the Company if the Co-locate option is chosen vs. continuing to provide Data Centre services to itself.

Even though Union Gas would be bundling its Data Centre requirements with Spectra, the service would be provided by an external 3<sup>rd</sup> Party provider(s) including: CyrusOne, IBM Verizon/AT&T/Sprint, and HCL.

The planned approach calls for Spectra to manage and pay for the contracts with external providers. Union Gas would receive an intercompany bill for its share of the costs – current estimates are approx. 35% of total costs.

Provide an estimate of the cost of using an affiliate to provide the service.

The expected invoice from Spectra (for Union Gas's share of the External, 3<sup>rd</sup> Party invoices) will be approx. \$6M USD, comprised of:

- \$0.3M USD for Data Centre Facility (CyrusOne)
- \$0.8M USD for Hardware and Software Mtn (VCE/CISCO/IBM)
- \$1.7M USD for the first 5 years for Equipment (Capital Lease)
- \$0.6M USD for Monitoring Services (HCL)
- \$0.8M USD for Affiliate Infrastructure Support SLA (Affiliate IT Staff)
- \$0.6M USD for Data Network Connectivity Services (Verizon, AT&T, Sprint)
- \$1.2M USD for Installation and Setup SLA(approx. 5 years depreciation)

### **Selection Criteria**

Explain the selection criteria (including any non-price factors to be taken into account).

PWC, an external consultant, was retained to assist with the design of the selection process, technical design and negotiations with the selected supplier. A rigorous selection process was followed leveraging the guidance of experts obtained from large consulting organization – the overall selection criteria were based on Union Gas' current

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and future technical requirements as well as requirements of all participating Business
Units within Spectra Energy.

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### Benefits to the Utility's Ontario Ratepayers

Estimate any benefits to the utility's Ontario ratepayers from outsourcing.

Without the services provided by its Affiliate, Union would be required to make significant capital expenditures to upgrade current Data Centre sites (2) remediating concerns such as flooding, the HVAC system and structural deficiencies. These capital expenditures still wouldn't address the fact that the office space is needed for other purposes and most importantly that these expenditures wouldn't provide the degree of reliability, scalability and security provided by the Co-location solution.

With the significant dependency that the business has on the IT systems, it was determined that leveraging the expertise of companies that provide data centre services as their core business would be a better long-term solution.

The overall operational risk to UG was reduced by moving IT servers and storage to the new datacenters. Disaster Recovery capabilities have significantly improved with this solution.

Though from a purely economic perspective, the future costs are slightly higher. However, what has been purchased is far superior in many ways than the service that Union Gas could provide to itself had the decision been made to invest incremental capital dollars to address the existing deficiencies. In this sense, the Organization made the decision to participate in the Spectra/Group solution because of the significant benefits

### **Bundling of Services**

Justify why any separate items were bundled together when considered for outsourcing.

Services are being supplied by a variety of suppliers. Virtually no bundling has been done.

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### This SERVICE ASSIGNMENT ("SA") dated September 17, 2015 Between Spectra Energy Services, LLC (the "Provider") and Union Gas Limited (the "Receiver")

This SA is entered into pursuant to the Master Services Agreement ("MSA") between Provider and Receiver and together with the MSA establishes the terms and conditions upon which the Provider will provide certain services to the Receiver. Capitalized terms not otherwise defined in the SA shall have the meanings given in the MSA.

### Information Technology - Data Center Services SLA I

Receiver shall reimburse Provider for Receivers share of common costs for the information technology services more particularly described in Schedule A attached hereto.

### A. ATTACHMENTS

The following are hereby incorporated in and form part of this SA:

- a) Service Description ("Type"), Quantity, and Charges contained in Schedule A; and
- b) Contact and accounting information contained in Schedule B.

The information contained in Schedules A and B may be periodically amended or revised as permitted herein, and subject to the provisions herein shall not invalidate this SA.

### B. CHARGES AND COST ALLOCATION MECHANISMS

The Charges for the Services provided is based on the Provider's budgeted cost to perform the Services during the Term, as more particularly set out in Schedule A attached hereto. Provider's budgeted cost is allocated using a cost driver methodology. Provider confirms that the charges listed in Schedule A which are referenced as fully allocated costs are based on Provider's forecasted cost to perform the Service.

If Provider's costs vary from budget during the Term of this SA then, either the Provider or the Receiver can request either an increase or decrease in the Charges.

Provider's pricing and cost allocation methodology are included as an attachment to this SA.

Any charges for services, products and resources not contemplated in this SA will be agreed to by the parties and invoiced separately, based on Provider's cost. In such situations, the terms and conditions of this SA and the MSA will apply as if the services, products and resources had been contemplated and included in this SA.

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### C. TERM

The term of this SA shall be <u>January 1, 2015 to December 31, 2015</u> or the date terminated in accordance with the terms of either the SA or MSA.

Either party may terminate this SA upon 60 days prior written notice.

### D. APPORTIONMENT OF RISK

The rights, obligations and liabilities of Provider and Receiver are detailed in the MSA that governs this SA. Should services not be delivered in accordance with the type, quantity and quality detailed in this SA, Receiver can seek recourse as allowed by the MSA.

As per Section 2 of the MSA, either the Provider or the Receiver can request revisions to the SA. This could occur when:

- The level of service required by and/or provided to the Receiver changes during the Time Period; or
- The Provider's actual cost to perform the service varies from the budgeted cost to perform the service.

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### E. APPROVAL

It is hereby acknowledged that Receiver has requested and Provider has agreed to deliver the services, products and resources detailed in this SA.

Provider agrees that it will:

- (a) comply promptly with all requests made to the Receiver that originate from or are authorized by a regulating body (eg. Ontario Energy Board) for information with respect to
  - (i) the services, resources or products provided under this SA; and
  - (ii) the cost to the Provider of providing any service, resource or product under this SA; and
- (b) include equivalent provisions in any contracts that Provider enters into with another affiliate for the purpose of providing any service, resource or product used in the provision of a service, resource, or product to Receiver.

Spectra Energy Services, LLC (Provider)	Union Gas Limited (Receiver)
Per: Steve Craft  Print Name: Steve Craft	Print Name 10. Telond Mike Pacifitie: Director Information Systems U
Title: VP Information Technology	Title: Director Inturnation Systems U
Date: Sept 18, 2015	Date:
Per:	Per:
Title: GM Information Technology	Title:
Date: Sept 18, 2015	Date: Dec 8/2018

SA: SE to UGL Information Technology Data Center SLA I

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### 2015 SA pricing

Notice Date:

September 17, 2015

Effective Date

January 1, 2015

Service Agreement (SA):

Data Center Services SLA I

Initial Term

January 1, 2015 to December 31, 2015

SA Term:

No later than December 31, 2015

Provider:

Spectra Energy Services, LLC

Receiver:

**Union Gas Limited** 

The above referenced SA has a notice provision for pricing. For your convenience the specific section is noted below.

On an annual basis Provider will notify Receiver of any increase or decrease in the Charges for the Services for the upcoming Term. Such notice will include the budget cost data and cost allocation methodology. In the event that the Receiver does not advise the Provider in writing within 60 days of receipt of the notice as to any objection to the new Charges then Receiver will be deemed to have agreed to the new Charges. In the event that the Receiver does provide the Provider with an objection to the new Charges then the parties agree that the Charges for the previous Term shall be used to determine the cost of the Services until such time as the parties can agree to revised Charges or until this SA is otherwise terminated.

In accordance with the pricing provisions, Provider hereby notifies Receiver of the charges applicable for 2014. A revised Schedule A is attached in which the direct and indirect charges for each service are defined. Attached to this notice is a copy of the cost allocation model which details the calculations for the services.

Acceptance of the pricing by Receiver requires no further action, however if Receiver has an objection to the pricing, such objection must be received within 60 days from the date of this notice.

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### Schedule A to SERVICE ASSIGNMENT ("SA") between Spectra Energy Services, LLC (the "Provider") and Union Gas Limited (the "Receiver") SERVICES DESCRIPTION (Type and Quantity)

### **SA: Data Center Services**

**Type** 

### Overview

The data center consolidation is the migration from our existing eight data centers into two facilities. The data centers were selected based on location, limited exposure to natural disasters, high levels of security and very high levels of power and cooling availability/redundancy. The primary data center is in Lebanon, Ohio, and the disaster recovery site is in Carrollton, Texas.

The service level agreement charges are separated into the following components:

- Computer hardware, software and services leases
- Cost to achieve depreciation
- Labor and overhead

### Computer Hardware, Software and Services Leases

Computer hardware, software and services are leased over a period of five years. There will be twenty quarterly lease payments totaling \$22.3 million. They will be accounted for as a capital lease. These charges will begin in 2015.

### **Data Center Cost to Achieve Depreciation**

The costs to migrate the data centers includes hardware, software, services, support and internal labor. These charges will begin in 2016.

### Labor and Overhead

Spectra employees spread across the US, Union Gas and SET West business units will provide data center services. These charges will begin in 2016.

### **Direct Charges**

Managed services, hardware maintenance, network connections/WAN, software maintenance and software services and support related to the consolidated data center are paid directly by the respective business units. These charges will begin in 2016.

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Quantity

The allocation percentage is based on numbers of servers and storage utilized by the business unit as well as logon ID's.

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- The estimated allocation by business unit:
  - o Corporate 18%
  - o US Pipes 32%
  - o Union Gas 35%
  - o SET West 13%
  - Spectra Energy Liquids 2%

### **FEES**

The charges assessed for the services are noted in US dollars and are summarized in the table next following.

Capital Lease Depreciation

o 2015 - \$1.564 MM

 $\int_{s_{2}}^{s_{2}} 23M \times 35\% = \frac{51.569}{1.569} \text{ M (USD)}$  = 5715 = 81.955 M (AD)

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### Schedule B to SERVICE ASSIGNMENT ("SA") between Spectra Energy Services, LLC (the "Provider") and Union Gas Limited (the "Receiver")

### **Inter-company Administrative Requirements**

The information next following is used for the purpose of managing the SA administration and accounting transactions between the companies. Account numbers, key contacts and the like will be periodically updated by the administrative groups. Formal notice under this SA is not required.

Provider:

6 4 L 3 3

Key Contact: Service

Tom Woody – Manager Asset Management713-627-4219Tony Nix - Director Technology Planning713-627-4237

Key Contact: Accounting

Alexia Brown - Manager Accounting Insurance 713-627-4133

Receiver: Union Gas Business Unit (BU) #10733

Key Contact: Service

Mike Packer - Director Information Technology UG 519-355-3670 ext 5013685

Richard Wathy - Assistant Controller, Canadian Regulatory

and Controls 519-436-4600 ext 5002216

Key Contact: Accounting

Linda Vienneau – Manager Accounting 519-436-5339 ext 5005339

Eric Vandenbrink – Sr. Finance Analyst Regulatory Accounting 519-436-4600 ext 5002825

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### This SERVICE ASSIGNMENT ("SA") Between Spectra Energy Services LLC (the "Receiver") And Union Gas Limited (the "Provider")

This SA is entered into pursuant to the Master Services Agreement ("MSA") between PROVIDER and RECEIVER and together with the MSA establishes the terms and conditions upon which the PROVIDER will provide certain services to the RECEIVER. Capitalized terms not otherwise defined in the SA shall have the meanings given in the MSA.

### <u>INFORMATION TECHNOLOGY INFRASTRUCTURE SERVICES – CAPITALIZED LABOUR</u>

PROVIDER shall provide Information Technology Infrastructure Services ("Services") to the RECEIVER as more particularly described in Schedule A attached hereto.

### A. ATTACHMENTS

The following are hereby incorporated in and form part of this SA:

- a) Service Description ("Type"), Quantity, and Charges contained in Schedule A; and
- b) Contact and accounting information contained in Schedule B.

The information contained in Schedules A and B may be periodically amended or revised as permitted herein, and subject to the provisions herein shall not invalidate this SA.

### **B. CHARGES AND COST ALLOCATION MECHANISMS**

The Charges for the Services provided is based on the PROVIDER's budgeted cost to perform the Services during the Term, as more particularly set out in Schedule A attached hereto. PROVIDER's budgeted cost is allocated using a cost driver methodology. PROVIDER confirms that the charges listed in Schedule A which are referenced as fully allocated costs are based on PROVIDER's forecasted cost to perform the Service.

If PROVIDER's costs vary from budget during the Term of this SA then, either the PROVIDER or the RECEIVER can request either an increase or decrease in the Charges.

PROVIDER's pricing and cost allocation methodology are included as an attachment to this SA.

Any charges for services, products and resources not contemplated in this SA will be agreed to by the parties and invoiced separately, based on PROVIDER's cost. In such situations, the terms and conditions of this SA and the MSA will apply as if the services, products and resources had been contemplated and included in this SA.

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### C. TERM

The term of this SA shall be January 1, 2015 to December 31, 2015 and thereafter this SA Attachment 3 shall be automatically renewed, without notice, for subsequent annual one (1) year terms ("Terms") until the earlier of:

a) December 31, 2019

b) the date terminated in accordance with the terms of either the SA or MSA

Either party may terminate this SA upon sixty (60) days prior written notice.

### D. APPORTIONMENT OF RISK

The rights, obligations and liabilities of PROVIDER and RECEIVER are detailed in the MSA that governs this SA. Should services not be delivered in accordance with the type, quantity and quality detailed in this SA, RECEIVER can seek recourse as allowed by the MSA.

As per Section 2 of the MSA, either the PROVIDER or the RECEIVER can request revisions to the SA. This could occur when:

- The level of service required by and/or provided to the RECEIVER changes during the Time Period; or
- The PROVIDER's actual cost to perform the service varies from the budgeted cost to perform the service.

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### E. APPROVAL

It is hereby acknowledged that RECEIVER has requested and PROVIDER has agreed to deliver the services, products and resources detailed in this SA.

### PROVIDER agrees that it will:

- (a) comply promptly with all requests made to the RECEIVER that originate from or are authorized by a regulating body (eg. Ontario Energy Board) for information with respect to
  - (i) the services, resources or products provided under this SA; and
  - (ii) the cost to the PROVIDER of providing any service, resource or product under this SA; and
- (b) include equivalent provisions in any contracts that PROVIDER enters into with another affiliate for the purpose of providing any service, resource or product used in the provision of a service, resource, or product to RECEIVER.

Union Gas Limited (Provider)  Per:	Spectra Energy Services LLC (Receiver) Per:
Print Name: Mike Packer	Print Name: Don Bolton
Title: Director, IS Applications U6	Title: General Manager Info Technology
Date:	Date: 10-28-15
Per:	Per: Sward
Print Name: Wendy Zelond	Print Name: Steve Craft
Title: Vice President Finance	Title: Vice President Info Technology
Date:	Date:
Per: Steve Police	
Print Name: Steve Baker	
Title: President	
Date: Dec 3 /2018	

SA: Union to Spectra Energy LLC - IT Infrastructure Services

### Schedule A to SERVICE ASSIGNMENT ("SA)

Between

Spectra Energy Services LLC (the "Receiver")

And

Union Gas Limited (the "Provider")

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### SERVICES DESCRIPTION (Type and Quantity)

### INFORMATION TECHNOLOGY INFRASTRUCTURE SERVICES -CAPITALIZED LABOUR

### ITI Enterprise Management

Type

Labour dollars to be capitalized within the RECEIVER BU in respect of IT Enterprise Management. Provide management of all ITI requirements and services.

### IT Architecture & Engineering

Type

- Labour dollars to be capitalized within the RECEIVER BU in respect of IT Architecture & Engineering. IT Architecture provides a technology roadmap for the company, helping to assure that technology choices (made on a project by project basis), are well aligned and cost effective. Specific deliverables include;
  - maintenance of the Standard Product List (including the active management of emerging and declining products),
  - provision of architectural consulting services to project teams and external providers
  - evaluate technology trends and provide recommendations for how Spectra Energy could benefit from new technology trends

### IT Enterprise Services

Type

- Labour dollars to be capitalized within the RECEIVER BU in respect of IT Enterprise Services.
- Provide operational support for network security, domain services and email services for the company, ensure services are well aligned and cost effective. Specific deliverables include;
  - Maintenance of all email systems and interfaces
  - Maintenance of all network security appliances and traffic controlling devices (e.g. Firewalls, IPS, Ironport)
  - Maintenance of domain controllers and related support systems

### ITI UNIX & Storage Mgmt

**Type** 

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• Labour dollars to be capitalized within the RECEIVER BU in respect of ITI UNIX & Storage Mgmt. Manage the lifecycle, upgrades or major changes to the UNIX servers and networked storage (SAN/NAS).

 Facilitate the review and approval of all infrastructure and application changes, management of large scale system changes, issuing daily problem/change reports and leading cross functional teams in resolution of system problems significantly impacting the business operations of any of the operation companies supported.

### ITI Wintel & Sys Mgmt

### Type

- Labour dollars to be capitalized within the RECEIVER BU in respect of ITI Wintel & Sys Mgmt. Manage the lifecycle, upgrades or major changes to the WINDOWS servers as well as provide server services monitoring tools, software distribution, remote control.
- Backup and restore services for UNIX and WINDOWS servers (virtual and physical)
- Perform monitoring of the environment, the scheduling of jobs-including completion monitoring, create and execute the electronic distribution of data and applications, design and execute the backup and recovery of data and applications.

### **Price**

The charges assessed for the services are based on actual hours incurred in each of the above areas on any qualifying Capital project. Hours to be transferred will be tracked via a detailed timetracking process and will be recorded and transferred to the RECEIVER BU on a fully allocated basis after costs are incurred and recorded in PROVIDER BU General Ledger. They are in *Canadian dollars* and annual amounts estimated are noted in Table 1 below.

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### EB-2016-0118 Settlement Appendix B Attachment 3

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### <u>Table 1 – Estimate of Annual Allocations</u>

Estimated Annual Capitalized Labour - 2015  Information Technology Infrastructure Services	Estimated \$s Accounting
PLFS Capitalized Labour	\$ 19,409
Benefits Overhead (83.74%)	\$ 16,253
	\$ 35,663 601515000 30% & 601715010 70%
US Capitalized Labour	\$ 926,943
Benefits Overhead (83.74%)	\$ 776,222
	\$ 1,703,166 MC.001541.005 100%

### Schedule B to SERVICE ASSIGNMENT ("SA") Between ra Energy Services LLC (the "Recei

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Appendix B

Attachment 3

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Spectra Energy Services LLC (the "Receiver")

And

Union Gas Limited (the "Provider")

### SA: Information Technology Infrastructure Services

### **Inter-company Administrative Requirements**

The information next following is used for the purpose of managing the SA administration and accounting transactions between the companies. Account numbers, key contacts and the like will be periodically updated by the administrative groups. Formal notice under this SA is not required.

### Provider:

Key Contact:

Joan HackettManager IT Business Management519-355-3670 ext. 5013931Stephanie HancockSr. Business Mgmt Specialist519-355-3670 ext. 5013723Linda VienneauMgr, Accounting519-436-4600 ext. 5004339

Key Contact: Accounting

Eric VandenBrink Sr. Analyst, Accounting 519-436-4600 ext. 5002825

IO # 318685 - ITI Services to US DCC Project

### Receiver:

Key Contact: Service

Tony Nix Director Technology Planning 713-627-4237

Key Contact: Accounting

Alexia Brown Team Lead Accounting Insurance 713-627-4133

**IN THE MATTER OF** the *Ontario Energy Board Act*, 1998, S.O. 1998, c.15, Sched. B;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders clearing certain noncommodity related deferral accounts;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order approving a deferral account to capture variances between balances approved for disposition and amounts actually refunded/recovered.

### **BEFORE:**

xxx Presiding Member

> xxx Member

### **DRAFT DECISION AND ORDER** (for rates effective October 1, 2016)

Union Gas Limited ("Union") filed an application dated April 19, 2016 to address the disposition of 2015 year-end deferral account balances and 2015 earnings sharing amount. Corrected evidence was filed May 6, 2016. The Board assigned docket number EB-2016-0118 to the application.

Union also proposed that the resulting impacts from the disposition be implemented on October 1, 2016 to align with other rate changes expected to result from the Quarterly Rate Adjustment Mechanism ("QRAM").

On May 19, 2016, the Board issued Procedural Order No. 1 which directed a Settlement Conference take place on June 23 and 24, 2016. The Settlement Conference was conducted on June 23, 2016. The resulting Settlement Proposal is attached to Union's letter dated July 7, 2016 with this draft Rate Order. All issues in the Proposal were settled by the parties.

- 2 -

This draft Rate Order represents the implementation in rates of the amounts settled in Union's

attached Settlement Proposal.

THE BOARD THEREFORE ORDERS THAT:

The rate changes set out in Appendix "A" and the rate schedules set out in Appendix "B" 1.

are approved effective October 1, 2016. Union shall implement these rates on the first

billing cycle on or after October 1, 2016.

2. The deferral account balances totalling \$23.102 million receivable from ratepayers as set

out in Appendix "C", including a refund of \$0.277 million representing 50% of a \$0.454

adjustment prior period earnings sharing and interest up to September 30, 2016, are

approved for disposition.

The disposition of the net balances of the total deferral and earnings sharing amounts will 3.

be done prospectively over six months starting October 1, 2016 for residential and general

**Board Secretary** 

service customer rate classes. For in-franchise contract and ex-franchise rate classes, a

one-time adjustment will be made on October 2016 bills as set out in Appendix "D".

DATED at Toronto	, 2016.
	ONTARIO ENERGY BOARD
	Kirsten Walli

Filed: 2016-07-07 EB-2016-0118

### EB-2016-0118 Index of Appendices

Appendix A	Summary of Changes to Sales Rates
Appendix B	General Service Rate Schedules
Appendix C	Deferral Account Balances (Year Ended December 31, 2015 with interest accrued to September 30, 2016)
Appendix D	Unit Rates for Prospective Recovery/(Refund) & One-Time Adjustment, and Storage and Transportation Service (Ex-Franchise) Amounts for Disposition

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### **UNION GAS LIMITED**

### Union North

### Summary of Changes to Sales Rates Rate 01A - Small Volume General Firm Service

Line No.	Particulars (cents/m³)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
140.	Tartiodiais (conts/iii)	(a)	(b)	(c)
1	Monthly Charge - All Zones	\$21.00		\$21.00
	Monthly Delivery Charge - All Zones			
2	First 100 m <sup>3</sup>	8.8679		8.8679
3	Next 200 m <sup>3</sup>	8.6424		8.6424
4	Next 200 m <sup>3</sup>	8.2886		8.2886
5	Next 500 m <sup>3</sup>	7.9639		7.9639
6	Over 1,000 m <sup>3</sup>	7.6957		7.6957
7	Delivery - Price Adjustment (All Volumes)	0.6393 (1)	0.6186	1.2579 (2)
	Gas Transportation Service			
8	Fort Frances	5.8185		5.8185
9	Western Zone	4.9868		4.9868
10	Northern Zone	6.4915		6.4915
11	Eastern Zone	7.7619		7.7619
12	Transportation - Price Adjustment (All Zones)	(0.4172) (3)	0.5091	0.0919 (4)
	Storage Service			
13	Fort Frances	3.6786		3.6786
14	Western Zone	3.3463		3.3463
15	Northern Zone	3.9476		3.9476
16	Eastern Zone	4.4552		4.4552
17	Storage - Price Adjustment (All Zones)	-		-
	Commodity Cost of Gas and Fuel			
18	Fort Frances	9.9172		9.9172
19	Western Zone	9.9854		9.9854
20	Northern Zone	10.0911		10.0911
21	Eastern Zone	10.1752		10.1752
22	Commodity and Fuel - Price Adjustment (All Zones)	(1.7675) (5)		(1.7675) (6)

### Notes

- (1) Includes a temporary charge of 0.6393 cents/m³ expiring December 31, 2016.
- (2) Includes a temporary charge of 0.6393 cents/m³ expiring December 31, 2016, and a temporary charge of 0.6186 cents/m³ expiring March 31, 2017.
- (3) Includes Prospective Recovery of (0.0985), (0.3510), (0.0065), and 0.0388 cents/m<sup>3</sup>.
- (4) Includes Prospective Recovery of (0.0985), (0.3510), (0.0065), and 0.0388 cents/m³, and a temporary charge of 0.5091 cents/m³ expiring March 31, 2017.
- (5) Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) cents/m<sup>3</sup>.
- (6) Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) cents/m³.

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### **UNION GAS LIMITED**

### Union North

### Summary of Changes to Sales Rates Rate 10 - Large Volume General Firm Service

Line	Portion laws (controlled)	EB-2016-0181 Approved July 1, 2016	Rate	EB-2016-0118 Approved October 1, 2016
No.	Particulars (cents/m³)	Rate(a)	Change (b)	Rate (c)
		(4)	(5)	(0)
1	Monthly Charge - All Zones	\$70.00		\$70.00
	Monthly Delivery Charge - All Zones			
2	First 1,000 m <sup>3</sup>	7.1977		7.1977
3	Next 9,000 m <sup>3</sup>	5.8626		5.8626
4	Next 20,000 m <sup>3</sup>	5.1787		5.1787
5	Next 70,000 m <sup>3</sup>	4.6839		4.6839
6	Over 100,000 m <sup>3</sup>	2.8093		2.8093
7	Delivery - Price Adjustment (All Volumes)	0.5971 (1)	0.4730	1.0701 (2)
	Gas Transportation Service			
8	Fort Frances	5.1333		5.1333
9	Western Zone	4.3016		4.3016
10	Northern Zone	5.8063		5.8063
11	Eastern Zone	7.0767		7.0767
12	Transportation - Price Adjustment (All Zones)	(0.4061) (3)	0.5312	0.1251 (4)
	Storage Service			
13	Fort Frances	2.4007		2.4007
14	Western Zone	2.0684		2.0684
15	Northern Zone	2.6697		2.6697
16	Eastern Zone	3.1773		3.1773
17	Storage - Price Adjustment (All Zones)	-		-
	Commodity Cost of Gas and Fuel			
18	Fort Frances	9.9172		9.9172
19	Western Zone	9.9854		9.9854
20	Northern Zone	10.0911		10.0911
21	Eastern Zone	10.1752		10.1752
22	Commodity and Fuel - Price Adjustment (All Zones)	(1.7675) (5)		(1.7675) (6)

- (1) Includes a temporary charge of 0.5971 cents/m³ expiring December 31, 2016.
- (2) Includes a temporary charge of 0.5971 cents/m³ expiring December 31, 2016, and a temporary charge of 0.4730 cents/m³ expiring March 31, 2017.
  (3) Includes Prospective Recovery of (0.0926), (0.3498), (0.0052), and 0.0415 cents/m³.
- (4) Includes Prospective Recovery of (0.0926), (0.3498), (0.0052), and 0.0415 cents/m³, and a temporary charge of 0.5312 cents/m³ expiring March 31, 2017. (5) Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) cents/m³.
- (6) Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) 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-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
		(a)	(b)	(c)
1	Monthly Charge	\$932.79		\$932.79
	Delivery Demand Charge			
2	First 70,000 m <sup>3</sup>	29.3047		29.3047
3	All over 70,000 m <sup>3</sup>	17.2326		17.2326
	Delivery Commodity Charge			
4	First 852,000 m <sup>3</sup>	0.5826		0.5826
5	All over 852,000 m <sup>3</sup>	0.4217		0.4217
	Monthly Gas Supply Demand Charge			
6	Fort Frances	55.7556		55.7556
7	Western Zone	34.5138		34.5138
8	Northern Zone	72.9435		72.9435
9	Eastern Zone	105.4062		105.4062
10	Gas Supply Demand - Price Adjustment (All Zones)	-		-
	Commodity Transportation 1			
11	Fort Frances	4.4802		4.4802
12	Western Zone	4.0146		4.0146
13	Northern Zone	4.8570		4.8570
14	Eastern Zone	5.5682		5.5682
15	Transportation 1 - Price Adjustment (All Zones)	(0.3957) (1)		(0.3957) (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	9.6866		9.6866
21	Western Zone	9.7532		9.7532
22	Northern Zone	9.8564		9.8564
23	Eastern Zone	9.9384		9.9384
24	Commodity and Fuel - Price Adjustment (All Zones)	(1.7675) (3)		(1.7675) (4)
	Bundled Storage Service (\$/GJ)			
25	Monthly Demand Charge	12.489		12.489
26	Commodity Charge	0.159		0.159
27	Storage Demand - Price Adjustment	-		-

- $\frac{\text{Notes:}}{\text{(1)}} \quad \text{Includes Prospective Recovery of (0.1076), (0.3725), 0.0235, and 0.0609 cents/m}^3.$
- (2) Includes Prospective Recovery of (0.1076), (0.3725), 0.0235, and 0.0609 cents/m<sup>3</sup>.
- (3) Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) cents/m³.
   (4) Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) 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/m³)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
	- attoute (contom)	(a)	(b)	(c)
1	Monthly Charge	\$1,423.71		\$1,423.71
	Delivery Demand Charge			
2	All Zones	15.5220		15.5220
	Delivery Commodity Charge			
3	All Zones	0.2251		0.2251
	Monthly Con Cymply Domand Charge			
4	Monthly Gas Supply Demand Charge Fort Frances	103.8605		103.8605
5	Western Zone	79.0784		79.0784
6	Northern Zone	123.9130		123.9130
7	Eastern Zone	161.7862		161.7862
8	Gas Supply Demand - Price Adjustment (All Zones)	-		-
	Commodity Transportation 1			
9	Fort Frances	7.1222		7.1222
10	Western Zone	6.7730		6.7730
11	Northern Zone	7.4048		7.4048
12	Eastern Zone	7.9382		7.9382
13	Transportation 1 - Price Adjustment (All Zones)	-		-
	Commodity Transportation 2			
14	Fort Frances	-		-
15	Western Zone	-		-
16	Northern Zone	-		-
17	Eastern Zone	-		-
	Commodity Cost of Gas and Fuel			
18	Fort Frances	9.6866		9.6866
19	Western Zone	9.7532		9.7532
20	Northern Zone	9.8564		9.8564
21	Eastern Zone	9.9384		9.9384
22	Commodity and Fuel - Price Adjustment (All Zones)	(1.7675) (1)		(1.7675) (2)
	Bundled Storage Service (\$/GJ)			
23	Monthly Demand Charge	12.489		12.489
24	Commodity Charge	0.159		0.159
25	Storage Demand - Price Adjustment	-		-

Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) cents/m³.
 Includes Prospective Recovery of (0.2116), 0.4405, (1.0675), and (0.9289) cents/m³.

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#### <u>UNION GAS LIMITED</u> Union North <u>Summary of Changes to Sales Rates</u>

Line No.	Particulars (cents/m³)	EB-2016-0181     Approved     July 1, 2016     Rate     (a)	Rate Change (b)	EB-2016-0118 Approved October 1, 2016 Rate (c)
1	Rate 25 - Large Volume Interruptible Service Monthly Charge	\$331.70		\$331.70
2	Delivery Charge - All Zones * Maximum	4.7654		4.7654
3 4	Gas Supply Charges - All Zones Minimum Maximum	1.4848 675.9484		1.4848 675.9484

<sup>\*</sup> see Appendix C.

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#### **UNION GAS LIMITED** Union South Summary of Changes to Sales Rates

Line No.	Particulars (cents/m³)  Utility Sales	EB-2016-0181     Approved     July 1, 2016     Rate     (a)	Rate Change (b)	EB-2016-0118 Approved October 1, 2016 Rate (c)
1	Commodity and Fuel	10.1666		10.1666
2	Commodity and Fuel - Price Adjustment	(0.4420) (1)	0.1957	(0.2463) (2)
3	Transportation	4.0983		4.0983
4	Total Gas Supply Commodity Charge	13.8229	0.1957	14.0186
5	M4 Firm Commercial/Industrial  Minimum annual gas supply commodity charge	4.6788		4.6788
6	M4 / M5A Interruptible Commercial/Industrial Minimum annual gas supply commodity charge	4.6788		4.6788
	Storage and Transportation Supplemental Services - Rate T1, Rate T2 & Rate T3	<u>\$/GJ</u>		<u>\$/GJ</u>
7	Monthly demand charges: (\$/GJ) Firm gas supply service	59.279		59.279
8	Firm backstop gas	1.578		1.578
	Commodity charges:			
9	Gas supply	2.570		2.570
10	Backstop gas	4.083		4.083
11	Reasonable Efforts Backstop Gas	4.910		4.910
12	Supplemental Inventory	Note (3)		Note (3)
13	Supplemental Gas Sales Service (cents/m³)	17.1501		17.1501
14	Failure to Deliver	2.567		2.567
15	Discretionary Gas Supply Service (DGSS)	Note (4)		Note (4)

- $\frac{\text{Notes:}}{\text{(1)}} \quad \text{Includes Prospective Recovery of 0.2545, (0.1174), (0.0942), and (0.4849) cents/m}^3.$
- (2) Includes Prospective Recovery of 0.2545, (0.1174), (0.0942), and (0.4849) cents/m³, and a temporary charge of 0.1957 cents/m³ expiring March 31, 2017.
- 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.

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#### **UNION GAS LIMITED** Union South Summary of Changes to Sales Rates

Line No.	Particulars (cents/m³)	EB-2016-0181 Approved July 1, 2016 Rate (a)	Rate Change (b)	EB-2016-0118 Approved October 1, 2016 Rate (c)
1	Rate M1 - Small Volume General Service Rate Monthly Charge	\$21.00		\$21.00
•	Monany ondigo	Ψ21.00		Ψ21.00
2	First 100 m <sup>3</sup>	4.0898		4.0898
3	Next 150 m <sup>3</sup>	3.8812		3.8812
4	All over 250 m <sup>3</sup>	3.3422		3.3422
5	Delivery - Price Adjustment (All Volumes)	0.4966 (1)	0.2283	0.7249 (2)
6	Storage Service	0.7027		0.7027
7	Storage - Price Adjustment	-		-
	Rate M2 - Large Volume General Service Rate			
8	Monthly Charge	\$70.00		\$70.00
9	First 1,000 m <sup>3</sup>	4.0304		4.0304
10	Next 6,000 m <sup>3</sup>	3.9552		3.9552
11	Next 13,000 m <sup>3</sup>	3.7666		3.7666
12	All over 20,000 m <sup>3</sup>	3.4949		3.4949
13	Delivery - Price Adjustment (All Volumes)	0.6649 (3)	0.1629	0.8278 (4)
14	Storage Service	0.6161		0.6161
15	Storage - Price Adjustment	-		-

- (1) Includes a temporary charge of 0.4966 cents/m³ expiring December 31, 2016.
- (2) Includes a temporary charge of 0.4966 cents/m³ expiring December 31, 2016, and a temporary charge of 0.2283 cents/m³ expiring March 31, 2017.
- (3) Includes a temporary charge of 0.6649 cents/m³ expiring December 31, 2016
   (4) Includes a temporary charge of 0.6649 cents/m³ expiring December 31, 2016, and a temporary charge of 0.1629 cents/m³ expiring March 31, 2017.

## <u>UNION GAS LIMITED</u> Union South Summary of Changes to Sales Rates

		EB-2016-0181 Approved		EB-2016-0118 Approved
Line		July 1, 2016	Rate	October 1, 2016
No.	Particulars (cents/m³)	Rate	Change	Rate
		(a)	(b)	(c)
	Rate M4 - Firm comm/ind contract rate			
	Monthly demand charge:			
1	First 8,450 m <sup>3</sup>	52.9231		52.9231
2	Next 19,700 m <sup>3</sup>	23.7294		23.7294
3	All over 28,150 m <sup>3</sup>	19.9360		19.9360
	Monthly delivery commodity charge:			
4	First block	1.2247		1.2247
5	All remaining use	0.5094		0.5094
6	Delivery - Price Adjustment (All Volumes)	-		-
7	Minimum annual firm delivery commodity charge	1.4157		1.4157
	Interruptible contracts *			
8	Monthly Charge	\$669.55		\$669.55
	Daily delivery commodity charge:			
9	2,400 m³ to 17,000 m³	2.9858		2.9858
10	17,000 m³ to 30,000 m³	2.8559		2.8559
11	30,000 m³ to 50,000 m³	2.7876		2.7876
12	50,000 m³ to 60,000 m³	2.7397		2.7397
13	Delivery - Price Adjustment (All Volumes)	-		-
14	Minimum annual interruptible delivery commodity charge	3.1768		3.1768
	Rate M5A - interruptible comm/ind contract			
	Firm contracts *			
15	Monthly demand charge	30.7027		30.7027
16	Monthly delivery commodity charge	2.2746		2.2746
17	Delivery - Price Adjustment (All Volumes)	-		-
	Interruptible contracts *			
18	Monthly Charge	\$669.55		\$669.55
	Daily delivery commodity charge:			
19	2,400 m³ to 17,000 m³	2.9858		2.9858
20	17,000 m³ to 30,000 m³	2.8559		2.8559
21	30,000 m³ to 50,000 m³	2.7876		2.7876
22	50,000 m³ to 60,000 m³	2.7397		2.7397
23	Delivery - Price Adjustment (All Volumes)	-		-
24	Minimum annual interruptible delivery commodity charge	3.1768		3.1768

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

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## <u>UNION GAS LIMITED</u> Union South Summary of Changes to Sales Rates

Line No.	Particulars (cents/m³)	EB-2016-0181 Approved July 1, 2016 Rate (a)	Rate Change (b)	EB-2016-0118 Approved October 1, 2016 Rate (c)
		(a)	(5)	(0)
	Rate M7 - Special large volume contract			
	<u>Firm</u>			
1	Monthly demand charge	27.6801		27.6801
2 3	Monthly delivery commodity charge Delivery - Price Adjustment	0.3513 -		0.3513 -
	Interruptible *			
	Monthly delivery commodity charge:			
4	Maximum	4.9470		4.9470
5	Delivery - Price Adjustment	-		-
	Seasonal *			
	Monthly delivery commodity charge:			
6	Maximum	4.7029		4.7029
7	Delivery - Price Adjustment	-		-
	Rate M9 - Large wholesale service			
8	Monthly demand charge	17.4339		17.4339
9	Monthly delivery commodity charge	0.1704		0.1704
10	Delivery - Price Adjustment	-		-
	Rate M10 - Small wholesale service			
11	Monthly delivery commodity charge	5.9046		5.9046

<sup>\*</sup> 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/m³)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
110.	Tartionale (outlotti)	(a)	(b)	(c)
	Contract Carriage Service			
	Rate T1 - Storage and Transportation			
	Storage (\$ / GJ)			
	Monthly demand charges:			
1	Firm space	0.011		0.011
_	Firm Injection/Withdrawal Right			
2	Union provides deliverability inventory	1.542		1.542
3	Customer provides deliverability inventory	1.195		1.195
4 5	Firm incremental injection Interruptible withdrawal	1.195 1.195		1.195 1.195
5	interruptible withdrawal	1.195		1.193
	Commodity charges:			
6	Withdrawal	0.026		0.026
7 8	Customer provides compressor fuel	0.008 0.026		0.008 0.026
9	Injection Customer provides compressor fuel	0.026		0.028
10	Storage fuel ratio - customer provides fuel	0.403%		0.403%
10	Clorage racinatio customer provides raci	0.40070		0.40070
	Transportation (cents / m³)	22.522		00 5000
11 12	Monthly demand charge first 28,150 m <sup>3</sup>	32.5602 22.4954		32.5602 22.4954
12	Monthly demand charge next 112,720 m <sup>3</sup>	22.4954		22.4954
	Firm commodity charges:			
13	Union provides compressor fuel - All volumes	0.1292		0.1292
14	Customer provides compressor fuel - All volumes	0.0760		0.0760
	Interruptible commodity charges: *			
15	Maximum - Union provides compressor fuel	4.9470		4.9470
16	Maximum - customer provides compressor fuel	4.8938		4.8938
17	Transportation fuel ratio - customer provides fuel	0.303%		0.303%
	Authorized overrun services Storage (\$ / GJ) Commodity charges			
18	Injection / Withdrawals	0.098		0.098
19	Customer provides compressor fuel	0.059		0.059
20	Transportation commodity charge (cents/m³)	1.1997		1.1997
21	Customer provides compressor fuel	1.1465		1.1465
22	Monthly Charge	\$1,924.04		\$1,924.04

<sup>\*</sup> 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	Detic los (conte/o2)	EB-2016-0181 Approved July 1, 2016	Rate	EB-2016-0118 Approved October 1, 2016
No.	Particulars (cents/m³)	Rate (a)	Change (b)	Rate (c)
	Contract Corriage Consider			
	Contract Carriage Service Rate T2 - Storage and Transportation			
	Character (C. I. C. IV			
	Storage (\$ / GJ)  Monthly demand charges:			
1	Firm space	0.011		0.011
	Firm Injection/Withdrawal Right			
2	Union provides deliverability inventory	1.542		1.542
3	Customer provides deliverability inventory	1.195		1.195
4 5	Firm incremental injection	1.195 1.195		1.195 1.195
5	Interruptible withdrawal	1.195		1.195
	Commodity charges:			
6 7	Withdrawal	0.026		0.026
8	Customer provides compressor fuel Injection	0.008 0.026		0.008 0.026
9	Customer provides compressor fuel	0.008		0.020
10	Storage fuel ratio - customer provides fuel	0.403%		0.403%
	_Transportation (cents / m³)			
11	Monthly demand charge first 140,870 m <sup>3</sup>	22.7402		22.7402
12	Monthly demand charge all over 140,870 m <sup>3</sup>	12.0285		12.0285
	Firm commodity charges:			
13	Union provides compressor fuel - All volumes	0.0576		0.0576
14	Customer provides compressor fuel - All volumes	0.0082		0.0082
	Interruptible commodity charges: *			
15	Maximum - Union provides compressor fuel	4.9470		4.9470
16	Maximum - customer provides compressor fuel	4.8976		4.8976
17	Transportation fuel ratio - customer provides fuel	0.282%		0.282%
	Authorized overrun services Storage (\$ / GJ) Commodity charges			
18	Injection / Withdrawals	0.098		0.098
19	Customer provides compressor fuel	0.059		0.059
	·			
20	Transportation commodity charge (cents/m³)	0.8052		0.8052
21	Customer provides compressor fuel	0.7558		0.7558
22	Monthly Charge	\$5,751.12		\$5,751.12

<sup>\*</sup> Price changes to individual interruptible contract rates are provided in Appendix C.

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

Line No.	Particulars (cents/m³)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
110.	Tarticulars (conto/m)	(a)	(b)	(c)
	Rate T3 - Storage and Transportation			
	Storage (\$ / GJ)  Monthly demand charges:			
1	Firm space	0.011		0.011
'	Firm Injection/Withdrawal Right	0.011		0.011
2	Union provides deliverability inventory	1.542		1.542
3	Customer provides deliverability inventory	1.195		1.195
4	Firm incremental injection	1.195		1.195
5	Interruptible withdrawal	1.195		1.195
	Commodity charges:			
6	Withdrawal	0.026		0.026
7	Customer provides compressor fuel	0.008		0.008
8	Injection	0.026		0.026
9	Customer provides compressor fuel	0.008		0.008
10	Storage fuel ratio - customer provides fuel	0.403%		0.403%
	Transportation (cents / m³)			
11	Monthly demand charge	11.6340		11.6340
12	Union provides compressor fuel - All volumes	0.0771		0.0771
13	Customer provides compressor fuel - All volumes	0.0108		0.0108
14	Transportation fuel ratio- Cust. provides fuel	0.378%		0.378%
	Authorized overrun services			
	Storage (\$ / GJ)			
	Commodity charges			
15	Injection / Withdrawals	0.098		0.098
16	Customer provides compressor fuel	0.059		0.059
17	Transportation commodity charge (cents/m³)			
18	Customer provides compressor fuel	0.4596		0.4596
	Monthly Charge	0.3933		0.3933
10	Monthly Charge	¢20, 200, 17		¢20, 200, 17
19 20	City of Kitchener Natural Resource Gas	\$20,208.17 \$3,102.16		\$20,208.17 \$3,102.16
20	Six Nations	\$3,102.16 \$1,034.05		\$3,102.16 \$1,034.05
۷.	OIA INQUOIS	φ1,034.03		φ1,034.03

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## UNION GAS LIMITED Union South Summary of Changes to Unbundled Rates

		EB-2016-0181		EB-2016-0118
Line		Approved July 1, 2016	Rate	Approved October 1, 2016
No.	Particulars (cents/m³)	Rate	Change	Rate
110.	· another (contorn)	(a)	(b)	(c)
	U2 Unbundled Service			
	Storage (\$ / GJ)			
	Monthly demand charges:			
	Standard Storage Service (SSS)			
1	Combined Firm Space & Deliverability	0.023		0.023
	Standard Peaking Service (SPS)			
2	Combined Firm Space & Deliverability	0.115		0.115
3	Incremental firm injection right	1.039		1.039
4	Incremental firm withdrawal right	1.039		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	0.403%		0.403%
	Authorized overrun services			
	Storage (\$ / GJ)			
	Commodity charges:			
8	Injection customer provides compressor fuel	0.060		0.060
9	Withdrawal customer provides compressor fuel	0.060		0.060

### <u>UNION GAS LIMITED</u> <u>Summary of Changes to Storage and Transportation Rates</u>

Line No.	Particulars (\$/GJ)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
		(a)	(b)	(c)
	M12 Transportation Service			
	Firm transportation			
	Monthly demand charges:			
1	Dawn to Kirkwall	2.421		2.421
2	Dawn to Oakville/Parkway	2.883		2.883
3	Kirkwall to Parkway	0.462		0.462
4	F24-T	0.069		0.069
•	M12-X Firm Transportation	0.000		0.000
5	Between Dawn, Kirkwall and Parkway	3.602		3.602
•	Commodity charges:	5.552		
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	6.919		6.919
	Commodity charges :			
10	Others	Note (1)		Note (1)
	Authorized Overrun			
	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		(1)	0.080 (1)
14	Dawn to Oakville/Parkway - Shipper supplied fuel		(1)	0.095 (1)
15	Kirkwall to Parkway - Union supplied fuel	Note (1)	(1)	Note (1)
16	Kirkwall to Parkway - Shipper supplied fuel	0.015		0.015
17	Westerly - Union supplied fuel	Note (1)		Note (1)
18	Westerly - Shipper supplied fuel	\ /	(1)	0.095 (1)
	M12-X Firm Transportation		( )	,
19	Between Dawn, Kirkwall and Parkway - Union supplied fuel	Note (1)		Note (1)
20	Between Dawn, Kirkwall and Parkway - Shipper supplied fuel		(1)	0.118 (1)
	MOTO CONTROL DE LO CONTROL DE LA CONTROL DE			
0.4	M13 Transportation of Locally Produced Gas	40.40.47		0010 17
21	Monthly fixed charge per customer station	\$946.47		\$946.47
22	Transmission commodity charge to Dawn	0.035 0.007		0.035 0.007
23	Commodity charge - Union supplies fuel			
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		(2)	0.070 (2)
_0		0.070	\ <del>-</del> /	0.070 (E)

- Notes:

  (1) Monthly fuel rates and ratios per Schedule "C".

  (2) Plus customer supplied fuel per rate schedule.

### <u>UNION GAS LIMITED</u> <u>Summary of Changes to Storage and Transportation Rates</u>

Line No.	Particulars (\$/GJ)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
	M16 Stayaga Transportation Saviga	(a)	(b)	(c)
1	M16 Storage Transportation Service  Monthly fixed charge per customer station  Monthly demand charges:	\$1,505.73		\$1,505.73
2	East of Dawn	0.765		0.765
3	West of Dawn	1.055		1.055
4	Transmission commodity charge to Dawn Transportation Fuel Charges to Dawn:	0.035		0.035
5	East of Dawn - Union supplied fuel	0.007		0.007
6	West of Dawn - Union supplied fuel	0.007		0.007
7	East of Dawn - Shipper supplied fuel	Note (1)		Note (1)
8	West of Dawn - Shipper supplied fuel	Note (1)		Note (1)
9	Transportation Fuel Charges to Pools:  East of Dawn - Union supplied fuel	0.009		0.009
10	West of Dawn - Union supplied fuel	0.020		0.020
11	East of Dawn - Shipper supplied fuel	Note (1)		Note (1)
12	West of Dawn - Shipper supplied fuel	Note (1)		Note (1)
	Authorized Overrun			
	Transportation Fuel Charges to Dawn:			
13	East of Dawn - Union supplied fuel	0.067		0.067
14	West of Dawn - Union supplied fuel	0.077		0.077
15	East of Dawn - Shipper supplied fuel	0.060 (1)		0.060 (1)
16	West of Dawn - Shipper supplied fuel Transportation Fuel Charges to Pools:	0.070 (1)		0.070 (1)
17	East of Dawn - Union supplied fuel	0.034		0.034
18	West of Dawn - Union supplied fuel	0.055		0.055
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)
	C1 - Cross Franchise Transportation Service Transportation service Monthly demand charges:			
21	St. Clair / Bluewater & Dawn	1.055		1.055
22	Ojibway & Dawn	1.055		1.055
23	Parkway to Dawn	0.719		0.719
24 25	Parkway to Kirkwall Kirkwall to Dawn	0.719 1.268		0.719 1.268
26	Dawn to Kirkwall	2.421		2.421
27	Dawn to Parkway	2.883		2.883
28	Kirkwall to Parkway	0.462		0.462
29	Dawn to Dawn-Vector	0.029		0.029
30	Dawn to Dawn-TCPL	0.137		0.137
	Short-term:			
31	Maximum	75.00		75.00
32	Commodity charges:	0.012		0.012
32	St. Clair / Bluewater & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.012		0.012
33 34	St. Clair / Bluewater & Dawn - Union supplied fuel (Apr. 1 - Oct. 31) Ojibway & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.009		0.009
35	Ojibway & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.020		0.020
36	Parkway to Kirkwall / Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.007		0.007
37	Parkway to Kirkwall / Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.013		0.013
38	Kirkwall to Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.007		0.007
39	Kirkwall to Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.007		0.007
40	Dawn to Kirkwall - Union supplied fuel (Nov. 1 - Mar. 31)	0.034		0.034
41	Dawn to Kirkwall - Union supplied fuel (Apr. 1 - Oct. 31)	0.014		0.014
42	Dawn to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.046		0.046
43	Dawn to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.026		0.026
44	Kirkwall to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.019		0.019
45	Kirkwall to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.018		0.018

 $<sup>\</sup>label{eq:Notes:Notes:Notes:Notes:Notes:Notes:Notes:Notes:(1) Plus customer supplied fuel per rate schedule.$ 

### <u>UNION GAS LIMITED</u> <u>Summary of Changes to Storage and Transportation Rates</u>

Line No.	Particulars (\$/GJ)	EB-2016-0181 Approved July 1, 2016 Rate	Rate Change	EB-2016-0118 Approved October 1, 2016 Rate
		(a)	(b)	(c)
	C1 - Cross Franchise Transportation Service Transportation service cont'd			
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 6	Parkway to Kirkwall / Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31) Parkway to Kirkwall / Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	Note (1) Note (1)		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 15	Kirkwall to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)  Dawn to Dawn-Vector - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1)		Note (1)
16	Dawn to Dawn-Vector - Shipper supplied fuel (Nov. 1 - Mar. 31)	Note (1) Note (1)		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)
19	Interruptible commodity charges:  Maximum	75.00		75.00
20	Dawn(Tecumseh), Dawn(Facilities or TCPL), Dawn (Vector) and Dawn (TSLE)	Note (1)		Note (1)
	Authorized Overrun			
	Firm transportation commodity charges:			
21	St. Clair / Bluewater & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.047		0.047
22	St. Clair / Bluewater & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.044		0.044
23	Ojibway & Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.048		0.048
24	Ojibway & Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.055		0.055
25 26	Parkway to Kirkwall / Dawn - Union supplied fuel (Nov. 1 - Mar. 31) Parkway to Kirkwall / Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.130 0.136		0.130 0.136
27	Kirkwall to Dawn - Union supplied fuel (Nov. 1 - Mar. 31)	0.049		0.049
28	Kirkwall to Dawn - Union supplied fuel (Apr. 1 - Oct. 31)	0.049		0.049
29	Dawn to Kirkwall - Union supplied fuel (Nov. 1 - Mar. 31)	0.141		0.141
30	Dawn to Kirkwall - Union supplied fuel (Apr. 1 - Oct. 31)	0.122		0.122
31	Dawn to Parkway - Union supplied fuel (Nov. 1 - Mar. 31)	0.169		0.169
32	Dawn to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.148		0.148
33 34	Kirkwall to Parkway - Union supplied fuel (Nov. 1 - Mar. 31) Kirkwall to Parkway - Union supplied fuel (Apr. 1 - Oct.31)	0.062 0.061		0.062 0.061
3 <del>4</del> 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)	0.095	(1)	0.095 (1)
40	Parkway to Kirkwall / Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.095	(1)	0.095 (1)
41	Kirkwall to Dawn - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.042	(1)	0.042 (1)
42	Kirkwall to Dawn - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.042	(1)	0.042 (1)
43 44	Dawn to Kirkwall - Shipper supplied fuel (Nov. 1 - Mar. 31)  Dawn to Kirkwall - Shipper supplied fuel (Apr. 1 - Oct. 31)	0.080 0.080	(1) (1)	0.080 (1) 0.080 (1)
45	Dawn to Rirkwaii - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.095	(1)	0.095 (1)
46	Dawn to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)	0.095	(1)	0.095 (1)
47	Kirkwall to Parkway - Shipper supplied fuel (Nov. 1 - Mar. 31)	0.015	(1)	0.015 (1)
48	Kirkwall to Parkway - Shipper supplied fuel (Apr. 1 - Oct.31)	0.015	(1)	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 52	Dawn to Dawn-TCPL - Shipper supplied fuel (Nov. 1 - Mar. 31) Dawn to Dawn-TCPL - Shipper supplied fuel (Apr. 1 - Oct . 31)	0.005 0.005	(1) (1)	0.005 (1) 0.005 (1)
32	Daminio Daminion L. Shipper Supplied Idel (Apr. 1 - Oct. 31)	0.005	(1)	0.005 (1)
	Short Term Firm transportation commodity charges:			75.00
53	Maximum	75.00		75.00

Notes:
(1) Plus customer supplied fuel per rate schedule.



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#### 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.	Fort Frances 201	Western 101	Northern 301	<u>Eastern</u> 601
	APPLICABLE	E TO ALL SERVICES		
MONTHLY CHARGE	\$21.00	\$21.00	\$21.00	\$21.00
DELIVERY CHARGE	¢ per m³	¢ per m <sup>3</sup>	¢ per m <sup>3</sup>	¢ per m <sup>3</sup>
First 100 m <sup>3</sup> per month @	8.8679	8.8679	8.8679	8.8679
Next 200 m <sup>3</sup> per month @	8.6424	8.6424	8.6424	8.6424
Next 200 m <sup>3</sup> per month @	8.2886	8.2886	8.2886	8.2886
Next 500 m <sup>3</sup> per month @	7.9639	7.9639	7.9639	7.9639
Over 1,000 m <sup>3</sup> per month @	7.6957	7.6957	7.6957	7.6957
Delivery-Price Adjustment (All Volumes)	1.2579 (1)	1.2579 (1)	1.2579 (1)	1.2579 (1)

#### Notes:

(1) Includes a temporary charge of 0.6393 cents/m³ expiring December 31, 2016, and a temporary charge of 0.6186 cents/m³ expiring March 31, 2017.



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#### 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.
- 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.



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#### 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 Rate Schedule No.	Fort Frances 210	<u>Western</u> 110	Northern 310	<u>Eastern</u> 610
	APPLICABLE	E TO ALL SERVICES		
MONTHLY CHARGE	\$70.00	\$70.00	\$70.00	\$70.00
DELIVERY CHARGE	¢ per m³	¢ per m³	¢ per m³	¢ per m³
First 1,000 m <sup>3</sup> per month @	7.1977	7.1977	7.1977	7.1977
Next 9,000 m <sup>3</sup> per month @	5.8626	5.8626	5.8626	5.8626
Next 20,000 m <sup>3</sup> per month @	5.1787	5.1787	5.1787	5.1787
Next 70,000 m <sup>3</sup> per month @	4.6839	4.6839	4.6839	4.6839
Over 100,000 m <sup>3</sup> per month @	2.8093	2.8093	2.8093	2.8093
Delivery-Price Adjustment (All Volumes)	1.0701 (1)	1.0701 (1)	1.0701 (1)	1.0701 (1)

<sup>(1)</sup> Includes a temporary charge of 0.5971 cents/m³ expiring December 31, 2016, and a temporary charge of 0.4730 cents/m³ expiring March 31, 2017.



Effective 2016-10-01 **Rate 10** 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 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

- 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.
- 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 October 1, 2016 O.E.B. Order # EB-2016-0118 Chatham, Ontario

Supersedes EB-2016-0181 Rate Schedule effective July 1, 2016.

### **union**gas

Effective 2016-10-01 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:

**Utility Sales** 

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

(C) Rates

,		Fort Frances	Western	Northern	Eastern
Rate 01A (cents / m³)					
Stora Storage - Price Adjustme	-	3.6786	3.3463	3.9476 -	4.4552 -
Commodity and Fo		9.9172	9.9854	10.0911	10.1752
Commodity and Fuel - Price Adjustme	ent	(1.7675)	(1.7675)	(1.7675)	(1.7675)
Transportati	on	5.8185	4.9868	6.4915	7.7619
Transportation - Price Adjustme	ent _	0.0919	0.0919	0.0919	0.0919
Total Gas Supply Char	ge	17.7387	16.6429	18.8546	20.7167
Rate 10 (cents / m³)					
Rate TO (cents / m )					
Stora	ge	2.4007	2.0684	2.6697	3.1773
Storage - Price Adjustme	ent	-	-	-	-
Commodity and Fo	uel (1)	9.9172	9.9854	10.0911	10.1752
Commodity and Fuel - Price Adjustme	ent	(1.7675)	(1.7675)	(1.7675)	(1.7675)
Transportati	on	5.1333	4.3016	5.8063	7.0767
Transportation - Price Adjustme	ent _	0.1251	0.1251	0.1251	0.1251
Total Gas Supply Char	ge	15.8088	14.7130	16.9247	18.7868

<sup>(1)</sup> The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/m³.



### **union**gas

Effective 2016-10-01 Schedule "A" Page 2 of 2

## Union Gas Limited Union North Gas Supply Charges

**Utility Sales** 

Commodity and Fuel (1)   9.6866   9.7532   9.8564   9.9384	2		Fort Frances	Western	Northern	Eastern
Commodity and Fuel - Price Adjustment       (1.7675)       (1.7675)       (1.7675)       (1.7675)         Commodity Transportation - Charge 1       4.4802       4.0146       4.8570       5.5682         Transportation 1 - Price Adjustment       (0.3957)       (0.3957)       (0.3957)         Commodity Transportation - Charge 2       -       -       -       -         Monthly Gas Supply Demand       55.7556       34.5138       72.9435       105.4062         Gas Supply Demand - Price Adjustment       -       -       -       -       -	Rate 20 (cents / m³)					
Commodity and Fuel - Price Adjustment       (1.7675)       (1.7675)       (1.7675)       (1.7675)         Commodity Transportation - Charge 1       4.4802       4.0146       4.8570       5.5682         Transportation 1 - Price Adjustment       (0.3957)       (0.3957)       (0.3957)         Commodity Transportation - Charge 2       -       -       -       -         Monthly Gas Supply Demand       55.7556       34.5138       72.9435       105.4062         Gas Supply Demand - Price Adjustment       -       -       -       -       -				. 7500	0.0504	
Commodity Transportation - Charge 1       4.4802       4.0146       4.8570       5.5682         Transportation 1 - Price Adjustment       (0.3957)       (0.3957)       (0.3957)       (0.3957)         Commodity Transportation - Charge 2       -       -       -       -         Monthly Gas Supply Demand       55.7556       34.5138       72.9435       105.4062         Gas Supply Demand - Price Adjustment       -       -       -       -		• • • • • • • • • • • • • • • • • • • •				
Transportation 1 - Price Adjustment       (0.3957)       (0.3957)       (0.3957)       (0.3957)         Commodity Transportation - Charge 2       -       -       -       -       -         Monthly Gas Supply Demand       55.7556       34.5138       72.9435       105.4062         Gas Supply Demand - Price Adjustment       -       -       -       -		•	, ,	` ,	` ,	` ,
Commodity Transportation - Charge 2						
Monthly Gas Supply Demand 55.7556 34.5138 72.9435 105.4062 Gas Supply Demand - Price Adjustment		•	(0.3957)	(0.3957)	(0.3957)	(0.3957)
Gas Supply Demand - Price Adjustment		, ,	-	-	-	-
			55.7556	34.5138	72.9435	105.4062
Commissioning and Decommissioning Rate 7.2502 5.4810 8.6818 11.3853	G	as Supply Demand - Price Adjustment	-	-	-	-
	Comr	missioning and Decommissioning Rate	7.2502	5.4810	8.6818	11.3853
Rate 100 (cents / m³)	Rate 100 (cents / m <sup>3</sup> )					
Commodity and Fuel (1) 9.6866 9.7532 9.8564 9.9384		Commodity and Fuel (1)	9 6866	9.7532	9 8564	9 9384
Commodity and Fuel - Price Adjustment (1.7675) (1.7675) (1.7675)	C	• • • • • • • • • • • • • • • • • • • •				
Commodity Transportation - Charge 1 7.1222 6.7730 7.4048 7.9382		•	, ,	` ,	,	` ,
Commodity Transportation - Charge 2		, ,	-		-	
Monthly Gas Supply Demand 103.8605 79.0784 123.9130 161.7862		, ,	103.8605	79.0784	123.9130	161.7862
Commissioning and Decommissioning Rate 7.9304 6.6168 8.9933 11.0007	Comr	missioning and Decommissioning Rate	7.9304	6.6168	8.9933	11.0007
Rate 25 (cents / m³)	Rate 25 (cents / m³)					
Gas Supply Charge: Interruptible Service	Gas Supply Charge:	·				
Minimum 1.4848 1.4848 1.4848 1.4848						
Maximum 675.9484 675.9484 675.9484 675.9484		Maximum	675.9484	675.9484	675.9484	675.9484

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

Gas Supply Charge: Interruptible Service

 Minimum
 0.3919

 Maximum
 178.3976

#### Notes:

 $(1) \ \ The \ Commodity \ and \ Fuel \ rate \ includes \ a \ gas \ supply \ administration \ charge \ of \ 0.1910 \ cents/m^3.$ 

(2) Billing in energy (\$/GJ) will only apply to the Natural Gas Liquefaction Service.

Effective: October 1, 2016

O.E.B. Order # EB-2016-0118 Chatham, Ontario

Supersedes EB-2016-0181 Rate Schedule effective July 1, 2016.



Effective 2016-10-01 **Rate M1** Page 1 of 2

#### 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 Ch	\$21.00
---------------	---------

b) Delivery Charge

First	100 m³	4.0898 ¢ per m³
Next	150 m³	3.8812 ¢ per m³
All Over	250 m³	3.3422 ¢ per m³

Delivery – Price Adjustment (All Volumes) 0.7249 ¢ per m³ (1)

c) Storage Charge (if applicable) 0.7027 ¢ per m³

Storage - Price Adjustment (All Volumes) 0.0000 ¢ per m³

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 0.4966 cents/m³ expiring December 31, 2016, and a temporary charge of 0.2283 cents/m³ expiring March 31, 2017.

### (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.



Effective 2016-10-01 **Rate M1** Page 2 of 2

#### (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 4.7925 ¢ per m³ for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m³, plus 7¢ per m³.

#### (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

- 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

October 1, 2016 O.E.B. Order # EB-2016-0118 Chatham, Ontario

Supersedes EB-2016-0181 Rate Schedule effective July 1, 2016.



Effective 2016-10-01 **Rate M2** Page 1 of 2

#### 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 Next Next All Over	1 000 m <sup>3</sup> 6 000 m <sup>3</sup> 13 000 m <sup>3</sup> 20 000 m <sup>3</sup>	4.0304 ¢ per m³ 3.9552 ¢ per m³ 3.7666 ¢ per m³ 3.4949 ¢ per m³	
	Delivery – Price Adjustment (All Volumes)		0.8278 ¢ per m³	(1)
c)	Storage Charge (if applicable)		0.6161 ¢ per m³	
	Storage - Price Adjustment (All Volumes)		0.0000 ¢ per m³	

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 0.6649 cents/m³ expiring December 31, 2016, and a temporary charge of 0.1629 cents/m³ expiring March 31, 2017.

### (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.



Effective 2016-10-01 **Rate M2** Page 2 of 2

#### (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 4.6465 ¢ per m³ for the delivery and the total gas supply charge for utility sales provided in Schedule "A" per m³, plus 7¢ per m³.

#### (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

- 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.

	Assumed
	Atmospheric
	Pressure
<u>Zone</u>	<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

October 1, 2016 O.E.B. Order # EB-2016-0118

Chatham, Ontario

Supersedes EB-2016-0181 Rate Schedule effective July 1, 2016.



Effective 2016-10-01 Schedule "A"

cents / m3

#### **Gas Supply Charges**

#### (A) Availability:

Available to customers in Union's Southern Delivery Zone.

### (B) Applicability:

Rates:

(C)

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.

<u>Utility Sales</u>		
	Commodity and Fuel	10.1666 (1)
	Commodity and Fuel - Price Adjustment	(0.2463)
	Transportation	4.0983
	Total Gas Supply Commodity Charge	14.0186

#### Minimum Annual Gas Supply Commodity Charge

Rate M4 Firm and Rate M5A Interruptible Contract 4.6788

Storage and Transportation Supplemental Services - Rate T1, Rate T2 & Rate T3	<u>\$/GJ</u>
Monthly demand charges:  Firm gas supply service	59.279
Firm backstop gas	1.578
Commodity charges:	1.376
Gas supply	2.570
Backstop gas	4.083
Reasonable Efforts Backstop Gas	4.910
Supplemental Inventory	Note (2)
Supplemental Gas Sales Service (cents / m³)	17.1501
Failure to Deliver: Applied to quantities not delivered to Union in the event the customer's supply fails	2.567
Discretionary Gas Supply Service (DGSS)	Note (3)

#### Notes:

- (1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1910 cents/ m³.
- (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: October 1, 2016

O.E.B. Order # EB-2016-0118 Chatham, Ontario

Supersedes EB-2016-0181 Rate Schedule effective July 1, 2016.

Filed: 2016-07-07 EB-2016-0118 Rate Order Appendix C

# UNION GAS LIMITED Deferral Account Balances Year Ending December 31, 2015

			Filed
Line No.	Account Number	Account Name	Balance <sup>1</sup> (\$000's)
<u>G</u>	as Supply A		
1	179-107	Spot Gas Variance Account	-
2	179-108	Unabsorbed Demand Costs (UDC) Variance Account	391
3	179-128	Gas Supply Review Consultant Costs	-
4	179-131	Upstream Transportation Optimization	8,671
5	179-132	Deferral Clearing Variance Account - Supply	173 <sup>3</sup>
6	179-132	Deferral Clearing Variance Account - Transport	1,679 3
7	Total Gas	Supply Accounts (Lines 1 through 6)	10,914 ²
<u>S</u> 1	torage Accou	unts:	
8	179-70	Short-Term Storage and Other Balancing Services	512
	ther:		
9	179-103	Unbundled Services Unauthorized Storage Overrun	-
10	179-112	Gas Distribution Access Rule (GDAR) Costs	760
11	179-117	Carbon Dioxide Offset Credits	-
12	179-120	IFRS Conversion Cost	-
13	179-123	Conservation Demand Management	(214)
14	179-132	Deferral Clearing Variance Account	1,328 <sup>3</sup>
15	179-133	Normalized Average Consumption	10,634
16	179-134	Tax Variance	(60)
17	179-135	Unaccounted for Gas (UFG) Volume Variance Account	-
18	179-136	Parkway West Project Costs	(337)
19	179-137	Brantford-Kirkwall/Parkway D Project Costs	583
20	179-138	Parkway Obligation Rate Variance	-
21	179-139	Energy East Pipeline Consultation Costs	138
22	179-141	Unaccounted for Gas (UFG) Price Variance Account	(590)
23	179-142	Lobo C Compressor/Hamilton-Milton Pipeline Project Costs	(338)
24	N/A	2014 Earnings Sharing Adjustment	(227)
25	Total Othe	er Accounts (Lines 9 through 24)	11,677
26	Total Def	<b>Gerral Account Balances (Lines 7 + 8 + 25)</b>	23,103

<sup>&</sup>lt;sup>1</sup> Account balances include interest to September 30, 2016.

With the exception of UDC (No. 179-108), Gas Supply Review Consultant Costs (No. 179-128), Upstream Transportation Optimization (No. 179-131), Deferral Clearing Variance Account (No. 179-132) related to Supply and Transport, and a portion of the Spot Gas Variance Account (No. 179-107), all gas supply-related deferral account balances are disposed of through the QRAM process.

<sup>&</sup>lt;sup>3</sup> Deferral Clearing Variance Account (No. 179-132) total balance of \$3,180 (\$173 + \$1,679 + \$1,328)

Filed: 2016-07-07 EB-2016-0118 Rate Order Appendix D Page 1 of 6

## <u>UNION GAS LIMITED</u> General Service Unit Rates for Prospective Recovery/(Refund) - Delivery 2015 Deferral Account Disposition

Line No.	Particulars	Rate Class	2015 Deferral Balances (\$000's) (a)	Earnings Sharing Mechanism (\$000's) (b)	Deferral Balance for Disposition (\$000's) (c) = (a+b)	Forecast Volume (10 <sup>3</sup> m <sup>3</sup> ) (1) (d)	Unit Rate for Prospective Recovery/(Refund) (cents/m³) (e) = (c/d)*100
1	Small Volume General Service	01	4,929	(41)	4,889	790,336	0.6186
2	Large Volume General Service	10	1,230	(6)	1,224	258,683	0.4730
3	Small Volume General Service	M1	5,476	(89)	5,387	2,359,719	0.2283
4	Large Volume General Service	M2	1,451	(13)	1,438	882,624	0.1629

<sup>(1)</sup> Forecast volume for the period October 1, 2016 to March 31, 2017.

Filed: 2016-07-07 EB-2016-0118 Rate Order Appendix D Page 2 of 6

# <u>UNION GAS LIMITED</u> General Service Unit Rates for Prospective Recovery/(Refund) - Gas Supply Transportation 2015 Deferral Account Disposition

Line No.	Particulars	Rate Class	2015 Deferral Balances (\$000's)	Earnings Sharing Mechanism (\$000's)	Deferral Balance for Disposition (\$000's)	Forecast Volume (10 <sup>3</sup> m <sup>3</sup> ) (1)	Unit Rate for Prospective Recovery/(Refund) (cents/m³)
INO.	Faiticulais	Class	<del></del>	<del></del>	$\frac{(5000 \text{ s})}{(c) = (a+b)}$		$\frac{(cents/iii)}{(e) = (c/d)*100}$
			(a)	(b)	(0) = (a+b)	(d)	$(e) = (c/a) \cdot 100$
1	Small Volume General Service	01	4,024	-	4,024	790,336	0.5091
2	Large Volume General Service	10	1,368	-	1,368	257,433	0.5312

### Notes:

(1) Forecast volume for the period October 1, 2016 to March 31, 2017.

Filed: 2016-07-07 EB-2016-0118 Rate Order Appendix D Page 3 of 6

# <u>UNION GAS LIMITED</u> Unit Rates for Prospective Recovery/(Refund) - Gas Supply Commodity 2015 Deferral Account Disposition

Line No.	Particulars	Rate Class	2015 Deferral Balances (\$000's) (a)	Earnings Sharing Mechanism (\$000's) (b)	Deferral Balance for Disposition (\$000's) (c) = (a+b)	Forecast Volume (10 <sup>3</sup> m <sup>3</sup> ) (1) (d)	Unit Rate for Prospective Recovery/(Refund) (cents/m³) (2) (e) = (c/d)*100
1	Small Volume General Service	M1	4,218	-	4,218	2,104,190	0.1957
2	Large Volume General Service	M2	807	-	807	457,042	0.1957
3	Firm Com/Ind Contract	M4	36	-	36	19,180	0.1957
4	Interruptible Com/Ind Contract	M5	19	-	19	5,994	0.1957
5	Special Large Volume Contract	M7	17	-	17	17,842	0.1957
6	Small Wholesale	M10	0	-	0	279	0.1957
7	Total				5,097	2,604,528	0.1957

- (1) Forecast sales service volumes for the period October 1, 2016 to March 31, 2017.
- (2) Unit rate for prospective recovery/refund for each rate class equal to the gas supply commodity weighted-average unit rate.

Filed: 2016-07-07 EB-2016-0118 Rate Order Appendix D Page 4 of 6

# <u>UNION GAS LIMITED</u> Contract Unit Rates for One-Time Adjustment - Delivery 2015 Deferral Account Disposition

Line No.	Particulars	Rate Class	2015 Deferral Balances (\$000's) (a)	Earnings Sharing Mechanism (\$000's) (b)	Deferral Balance for Disposition (\$000's) (c) = (a+b)	2015 Actual Volume (10 <sup>3</sup> m <sup>3</sup> ) (d)	Unit Rate (cents/m³) (e) = (c/d)*100
	Union North						
1	Medium Volume Firm Service (1)	20	(1)	(1)	(1)	102,074	(0.0013)
2	Medium Volume Firm Service (2)	20T	(2)	(4)	(6)	438,518	(0.0013)
3	Large Volume High Load Factor (2)	100T	(0)	(3)	(4)	1,398,188	(0.0003)
4	Large Volume Interruptible	25	5	(1)	4	147,757	0.0026
	Union South						
5	Firm Com/Ind Contract	M4	(14)	(3)	(17)	457,209	(0.0038)
6	Interruptible Com/Ind Contract	M5	(54)	(3)	(57)	208,864	(0.0271)
7	Special Large Volume Contract	M7	(9)	(1)	(10)	427,949	(0.0023)
8	Large Wholesale	M9	(3)	(0)	(3)	66,511	(0.0048)
9	Small Wholesale	M10	0	(0)	0	301	0.0542
10	Contract Carriage Service	T1	18	(2)	15	443,869	0.0035
11	Contract Carriage Service	T2	163	(10)	152	4,365,603	0.0035
12	Contract Carriage- Wholesale	T3	19	(1)	17	263,235	0.0066

- (1) Sales and Bundled-T customers only.
- (2) T-Service customers only.

Filed: 2016-07-07 EB-2016-0118 Rate Order Appendix D Page 5 of 6

# <u>UNION GAS LIMITED</u> Contract Unit Rates for One-Time Adjustment - Gas Supply Transportation and Bundled Storage <u>2015 Deferral Account Disposition</u>

Line		Rate	2015 Deferral Balances	Earnings Sharing Mechanism	Deferral Balance for Disposition	2015 Actual Volume/	Billina	Unit Volumetric/ Demand
No.	Particulars	Class	(\$000's)	(\$000's)	(\$000's)	Demand	Units	Rate
			(a)	(b)	(c) = (a+b)	(d)		(e) = (c/d)*100
	Gas Supply Transportation (cents/m³)							
1	Medium Volume Firm Service	20	322	-	322	5,688	10 <sup>3</sup> m <sup>3</sup> /d	5.6607
2	Large Volume Interruptible	25	103	-	103	97,426	10 <sup>3</sup> m <sup>3</sup>	0.1062
	Storage (\$/GJ)							
3	Bundled-T Storage Service	20T/100T	6	-	6	147,504	GJ/d	0.0389

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# <u>UNION GAS LIMITED</u> Storage and Transportation Service Amounts for Disposition 2015 Deferral Account Disposition

Line No.	Particulars (\$000's) (1)	Rate Class	2015 Deferral Balances	Earnings Sharing Mechanism	Deferral Balance for Disposition
			(a)	(b)	(c)
1	Storage and Transportation	M12	(793)	(47)	(841)
2	Local Production	M13	(8)	(0)	(8)
3	Short-Term Cross Franchise	C1	<b>.</b> 5	(0)	4
4	Storage Transportation Service	M16	(5)	(0)	(5)

<sup>(1)</sup> Exfranchise Rate M12, Rate M13, Rate M16 and Rate C1 customer specific amounts determined using approved deferral account allocation methodologies.

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### EB-2016-0118 Working Paper Index

Schedule 1 Allocation of 2015 Deferral Account Balances and Earnings Sharing

Amounts to Rate Classes

Schedule 2 General Service Bill Impacts

#### UNION GAS LIMITED Allocation of 2015 Deferral Account Balances

				U	Inion North			Union South															
Line		Acct																		Excess			
No.	Particulars (\$000's)	No. (a)	Rate 01	Rate 10	Rate 20	Rate 100 (e)	Rate 25	M1 (g)	M2 (h)	(i)	M5A	M7 (k)	M9	M10 (m)	T1	(o)	(p)	M12 (q)	M13 (r)	Utility	(t)	M16	Total (1)
		(a)	(b)	(c)	(d)	(e)	(1)	(g)	(n)	(1)	(j)	(K)	(I)	(m)	(n)	(0)	(p)	(q)	(r)	(s)	(t)	(u)	(V)
	Gas Supply Related Deferrals:																						
1	Spot Gas Variance Account	179-107																		_			
,	Unabsorbed Demand Cost (UDC) Variance Account	179-108	(709)	(263)	(93)	-	-	1,176	256	11	3	10	-	0	-	-	-	-	-	-	-	-	391
3	Gas Supply Review Consultant Costs	179-128	()	-	-	-	-				-		-		-	-	-	-	-	-	-	-	
4	Upstream Transportation Optimization	179-131	3,485	1,199	415	-	103	2,939	489	22	18	-	-	0	-	-	-	-	-	-	-	-	8,671
5	Deferral Clearing Variance Account - Supply (2)	179-132	-	-		-	-	102	63	4	(3)	7		ō	-	-	-	-		-		-	173
6	Deferral Clearing Variance Account - Transport (2)	179-132	1,247	432	-	-	-	-	-	-	- '	-	-	-	-	-	-	-	-	-	-	-	1,679
7	Total Gas Supply Related Deferrals		4,024	1,368	322		103	4,218	807	36	19	17		0		-					-		10,914
	Storage Related Deferrals:																						
8	Short-Term Storage and Other Balancing Services	179-70	77	20	5	0	-	174	58	19	0	7	2	0	16	118	15	-	-	-	-	-	512
	Delivery Related Deferrals:																						
9	Unbundled Services Unauthorized Storage Overrun	179-103	_	_	_	_	_				_	_	_	_	_	_	_		_	_			
10	Gas Distribution Access Rule (GDAR) Costs	179-112	176					584															760
11	Carbon Dioxide Offset Credits	179-117	-					304															700
12	IFRS Conversion Costs	179-120	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
13	Conservation Demand Management	179-123	(25)	(8)	(7)	(12)	-	(71)	(26)	(11)	(18)	(6)	-	-	(12)	(18)	-	-	-	-	-	-	(214)
14	Deferral Clearing Variance Account - Delivery (2)	179-132	326	197	- (-)	-	-	(109)	913	- (,	- ()	- (-)	-	-	- (/	- ()	-	-	-	-	-	-	1,328
15	Normalized Average Consumption (NAC)	179-133	4,311	1,035	-	-	-	4.738	550	-	-	-	-	-	-	-	-	-	-	-	-	-	10,634
16	Tax Variance	179-134	(11)	(2)	(1)	(1)	(0)	(23)	(4)	(1)	(1)	(0)	(0)	(0)	(1)	(3)	(0)	(12)	(0)	(0)	(0)	(0)	(60)
17	Unaccounted for Gas (UFG) Volume Variance Account	179-135	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '	- '
18	Parkway West Project Costs	179-136	60	(1)	5	7	3	261	29	10	8	3	0	0	9	45	2	(784)	0	3	4	0	(337)
19	Brantford-Kirkwall/Parkway D Project Costs	179-137	164	22	18	15	5	379	51	13	13	4	1	0	9	35	3	(154)	0	6	(0)	(0)	583
20	Parkway Obligation Rate Variance	179-138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	Energy East Pipeline Consultation Costs	179-139	28	2	2	2	1	70	7	2	3	1	0	0	2	5	1	13	0	1	0	0	138
23	Unaccounted for Gas (UFG) Price Variance Account	179-141	(67)	(21)	(7)	(0)	-	(279)	(93)	(38)	(51)	(14)	(6)	-	-	-	-	-	(8)	-	-	(6)	(590)
22	Lobo C Compressor/Hamilton-Milton Pipeline Project Costs	179-142	(110)	(15)	(12)	(10)	(4)	(247)	(33)	(8)	(9)	(3)	(0)	(0)	(5)	(20)	(2)	143	(0)	(4)	1_	0	(338)
24	Total Delivery-Related Deferrals		4,853	1,210	(3)	(0)	5	5,302	1,393	(33)	(54)	(16)	(5)	0	2	45	4	(793)	(8)	4	5	(5)	11,904
25	Total 2015 Storage and Delivery Disposition (Line 8 + Line 2	M)	4,929	1,230			- 5	5,476	1,451	(14)	(54)	(9)	(3)		18	163	19	(793)	(8)		5	(5)	12,416
23	Total 2013 Storage and Delivery Disposition (Elife 6 + Elife 2	,	4,323	1,200				3,470	1,451	(17)	(34)	(5)	(0)			100	13	(733)	(0)	<del></del>		(5)	12,410
26	Total 2015 Deferral Account Disposition (Line 7 + Line 25)		8,953	2,597	325	0	109	9,693	2,259	22	(35)	8	(3)	1	18	163	19	(793)	(8)	4	5	(5)	23,330
27	2015 Earnings Sharing (3)		-		-	-		-	-			-	-			-		-	-		-		
28	2014 Earnings Sharing Adjustment (4)		(41)	(6)	(4)	(3)	(1)	(89)	(13)	(3)	(3)	(1)	(0)	(0)	(2)	(10)	(1)	(47)	(0)	(0)	(0)	(0)	(227)
29	Total Earnings Sharing		(41)	(6)	(4)	(3)	(1)	(89)	(13)	(3)	(3)	(1)	(0)	(0)	(2)	(10)	(1)	(47)	(0)	(0)	(0)	(0)	(227)
30	Grand Total (Line 26 + Line 29)		8,912	2,591	320	(3)	107	9,605	2,245	19	(38)	7	(3)	0	15	152	17	(841)	(8)	4	4	(5)	23,103

Notes:
(1) Exhibit A, Tab 1, Appendix A, Schedule 1.
(2) Exhibit A, Tab 1, Appendix A, Schedule 7, pp. 2-3.
(3) Exhibit A, Tab 2, Appendix B, Schedule 1.
(4) 2014 Earnings Sharing adjustment of (\$0.227) million calculated as \$7.424 million, per EB-2015-0010, Exhibit A, Tab 2, Appendix B, Schedule 1, line 35, less \$7.652 million, per Settlement Agreement, Attachment 2, line 35.

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#### UNION GAS LIMITED Allocation of 2015 Earnings Sharing Amounts and 2014 Earnings Sharing Adjustment to Rate Classes

Line No.	Particulars	Rate Class	C2013 Return on Equity Allocation (1) (\$000's) (a)	2015 Earnings Sharing (2) (\$000's)	2014 Earnings Sharing Adjustment (3) (\$000's) (c)
	Union North				
1	Small Volume General Firm Service	01	48,294	-	(41)
2	Large Volume General Firm Service	10	7,443	-	(6)
3	Medium Volume Firm Service	20	5,272	=	(4)
4	Large Volume High Load Factor Firm Service	100	4,062	-	(3)
5	Large Volume Interruptible Service	25	1,443	=	(1)
6	Total Northern & Eastern Operations Area		66,514	-	(56)
	Union South				
7	Small Volume General Service Rate	M1	105,486	-	(89)
8	Large Volume General Service Rate	M2	15,971	=	(13)
9	Firm Industrial and Commercial Contract Rate	M4	3,973	-	(3)
10	Interruptible Industrial & Commercial Contract Rate	M5A	3,369	-	(3)
11	Special Large Volume Industrial & Commercial Contract Rate	M7	1,384	-	(1)
12	Large Wholesale Service Rate	M9	262	-	(0)
13	Small Wholesale Service Rate	M10	10	=	(0)
14	S & T Rates for Contract Carriage Customers	T1	2,755	=	(2)
15	S & T Rates for Contract Carriage Customers	T2	12,178	=	(10)
16	S & T Rates for Contract Carriage Customers	Т3	1,609	-	(1)
	Storage and Transportation				
17	Cross Franchise Transportation Rates	C1	404	-	(0)
18	Storage & Transportation Rates	M12	56,060	-	(47)
19	Transportation of Locally Produced Gas	M13	38	-	(0)
20	Storage & Transportation Services - Transportation Charges	M16	69	-	(0)
21	Total Southern Operations Area		203,568		(171)
22	Total		270,082		(227)
					(==/)

Notes:
(1) Allocated costs as per EB-2011-0210, Updated for Board Decision.
(2) Exhibit A, Tab 2, Appendix B, Schedule 1.

<sup>(3) 2014</sup> Earnings Sharing adjustment of (\$0.227) million calculated as \$7.424 million, per EB-2015-0010, Exhibit A, Tab 2, Appendix B, Schedule 1, line 35, less \$7.652 million, per Settlement Agreement, Attachment 2, line 35.

#### UNION GAS LIMITED General Service Customer Bill Impacts

Unit Rate

Line No.	Particulars	Rate Component	for Prospective Recovery/(Refund) (cents/m³) (1) (a)	Volume (m³) (2) (b)	Bill Impact (\$) $(c) = (a \times b) / 100$
1 2 3 4	Rate 01	Delivery Commodity Transportation	0.6186 - 0.5091 1.1277	1,733 1,733 1,733	10.72 - 8.82 19.54
5 6	Sales Service Direct Purchase Bundled T				19.54 19.54
7 8 9 10	<u>Rate 10</u>	Delivery Commodity Transportation	0.4730 - 0.5312 1.0042	66,961 66,961 66,961	316.72 - 355.69 672.42
11 12	Sales Service Direct Purchase Bundled T				672.42 672.42
13 14 15	Rate M1	Delivery Commodity	0.2283 0.1957 0.4240	1,679 1,679	3.83 3.29 7.12
16 17	Sales Service Direct Purchase				7.12 3.83
18 19 20	Rate M2	Delivery Commodity	0.1629 0.1957 0.3586	55,772 55,772	90.85 109.15 200.00
21 22	Sales Service Direct Purchase				200.00 90.85

Exhibit A, Tab 3, Schedule 2, pages 1-3, column (e).
 Average consumption, per customer, for the period October 1, 2016 to March 31, 2017.

Rate 01 volume based on annual consumption of 2,200 m<sup>3</sup>.

Rate 10 volume based on annual consumption of 93,000 m<sup>3</sup>.

Rate M1 volume based on annual consumption of 2,200 m<sup>3</sup>.

Rate M2 volume based on annual consumption of 73,000 m<sup>3</sup>.