

VINCENT J. DeROSE  
T 613.787.3589  
vderose@blg.com

Borden Ladner Gervais LLP  
World Exchange Plaza  
100 Queen St, Suite 1300  
Ottawa, ON, Canada K1P 1J9  
T 613.237.5160  
F 613.230.8842  
blg.com



**File No. 339583/000236**

December 14, 2016

**By Electronic Filing**

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

Dear Ms. Walli

**Re: Union Gas Limited ("Union")  
Panhandle Reinforcement Project**  
**Board File No.: EB-2016-0186**

Pursuant to Procedural Order No. 4 dated November 25, 2016, please find enclosed the Submissions of Canadian Manufacturers & Exporters ("CME") in the above-noted proceeding.

Yours very truly

A handwritten signature in blue ink, appearing to be 'VJ DeRose', with a long horizontal flourish extending to the right.

Vincent J. DeRose  
Encl..

c. Karen Hockin (Union)  
Charles Keizer (Torys LLP)  
EB-2016-0186 Intervenors  
Paul Clipsham and Ian Shaw (CME)

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

**AND IN THE MATTER OF** an application filed by Union Gas Limited pursuant to s.90(1) of the *Act* for an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the Township of Dawn-Euphemia, Township of St. Clair and the Municipality of Chatham-Kent;

**AND IN THE MATTER OF** an application by Union Gas Limited pursuant to s.36 of the *Act* for an Order or Orders for pre-approval of recovery of the cost consequences of all facilities associated with the development of the natural gas pipeline and ancillary facilities referred to as the Panhandle Reinforcement Pipeline Project.

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**SUBMISSIONS OF  
CANADIAN MANUFACTURERS & EXPORTERS ("CME")**

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**December 14, 2016**

Vincent J. DeRose  
Emma Blanchard  
Borden Ladner Gervais LLP  
World Exchange Plaza  
100 Queen Street  
Suite 1300  
Ottawa, ON K1P 1J9

Counsel for CME

## **I N D E X**

<b>I.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>II.</b>	<b>ARE THE PROPOSED FACILITIES NEEDED? .....</b>	<b>2</b>
<b>III.</b>	<b>UNION'S REQUEST FOR 20 YEAR DEPRECIATION SHOULD BE REJECTED .....</b>	<b>3</b>
<b>IV.</b>	<b>COSTS .....</b>	<b>5</b>

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## I. INTRODUCTION

1. These are the submissions of CME with respect to Union's proposal to expand the Panhandle System by replacing approximately 40 kilometres of NPS 16 pipeline with NPS 36 pipeline Dawn to the Dover Transmission Station (the "**Proposed Expansion**").
2. The Proposed Expansion comes at a time when manufacturers throughout Ontario are facing dramatic increases in their energy costs. Union's 2017 Cap and Trade Compliance Plan ("**Compliance Plan**"), filed as EB-2016-0296, confirms that in 2017:
  - (a) Rate increases for Union North customers in Rate 20, Rate 25 and Rate 100 will range from 122.3% to 381.7% on delivery charges which translates into 14.4% to 18.1% in Total Bill Impacts<sup>1</sup>; and,
  - (b) Rate increases for Union South customers in Rate M5, Rate M7, Rate M9, Rate M10 and Rate T1 will range from 49.4% and 177.9% on delivery charges which translates into 14.9% and 19% Total Bill Impacts.<sup>2</sup>
3. While CME acknowledges that the cost impacts set out in Union's Compliance Plan are not the subject of this Application, these increases set the context within which Union's customers now operate.
4. While the rate increases resulting from the Proposal are relatively small, they nevertheless represent another layer of incremental costs. In the current context, the level of sensitivity associated with any additional incremental cost increase cannot be understated.

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<sup>1</sup> EB-2016-0296, Exhibit 7, Schedule 7.

<sup>2</sup> EB-2016-0296, Exhibit 7, Schedule 7.

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5. CME urges the Board to keep in mind these cap and trade related cost pressures when balancing the need to expand the Panhandle System with the resulting costs.

## II. ARE THE PROPOSED FACILITIES NEEDED?

6. CME's members who operate within the Panhandle System are very concerned by Union's assertion that, absent the Proposed Expansion, it will no longer be able to meet all firm service requests effective November 1, 2017.<sup>3</sup> This would have a significant negative impact on some of CME's members who would be precluded from expanding existing operations within the Panhandle System area or from entering the Panhandle System market area.
7. As a matter of regulatory principle, CME supports rational expansion when there is a legitimate need. This approach is consistent with the Board's objectives in relation to gas as set out in the *Ontario Energy Board Act*, 1998 ("OEB Act"). Specifically, section 2(3) of the OEB Act establishes that one of the objectives of the Board in carrying out its responsibilities in relation to gas is "to facilitate rational expansion of transmission and distribution systems".
8. In order to determine whether a proposed pipeline is, or is not, a "rational" expansion all alternatives must be considered. We submit that this necessarily includes conducting a thorough assessment of the technical and economic feasibility of "no-build" alternatives.
9. In this regard, CME points to the work undertaken by the Association of Power Producers of Ontario ("APPrO"), the Federation of Rental-housing Providers of Ontario ("FRPO") and the Industrial Gas Users Association ("IGUA") who have, collectively,

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<sup>3</sup> Transcript Volume 1, p.40.

raised serious questions about whether the Panhandle System needs to be expanded at this time in order to meet firm service requests beyond November 1, 2017.

10. CME urges the Board to weigh the evidence presented by Union against the alternative scenarios advanced by APPrO, FRPO and IGUA. If the Board determines that the Proposed Expansion will not be required to meet firm system requests beyond November 1, 2017, then leave requested by Union should either not be granted or should be deferred.
11. Even if the Proposed Expansion is only deferred for a short period of time, to the extent that it can be done without jeopardizing Union's ability to meet all firm service requests beyond November 1, 2017, during this time of dramatic cost increases, ratepayers would benefit.
12. If, on the other hand, the Board accepts Union's evidence that, absent the Proposed Expansion, it will be unable to meet all firm service requests in the Panhandle System beyond November 1, 2017, CME submits that Union's application should be granted.

### **III. UNION'S REQUEST FOR 20 YEAR DEPRECIATION SHOULD BE REJECTED**

13. The use of Board-approved depreciation rates for this infrastructure project would result in a depreciation period of approximately 50 years. Union has requested that the 50 year depreciation period be reduced to 20 years. In CME's submission, this request should be rejected by the Board.
14. Union's rationale for the proposed reduction of the depreciation period is summarized at paragraph 55 of its Argument-in-chief as follows:

The uncertainty created by Cap and Trade and the CCAP has driven the need for Union to calculate the revenue requirement and resulting rate impacts based on an estimated 20-year useful life of the Project assets rather than the weighted average useful life of approximately 50 years based on Board-approved depreciation rates. Depreciating the asset over a 20-year useful life better aligns the cost with the timing of the reported restrictions and potential elimination of natural gas heating in homes and businesses.

15. Board Staff Interrogatory No. 4 confirms that the long-term risk identified by Union is directly related to the Ontario government's Climate Change Action Plan ("CCAP") which Union believes creates uncertainty with respect to the demand for natural gas over the long term.
16. Union acknowledges that it believes that the uncertainty identified for CCAP would apply to all of Union's assets, and not just those relating to the proposed Panhandle Application. In this regard, Union confirmed that the purpose of the depreciation study for the 2019 Test Year Rebasing Application would be to look at the whole system in light of climate change developments.<sup>4</sup>
17. Moreover, Union confirmed that if the Board is of the view that it would benefit from an independent depreciation study, the first opportunity that Union would have to file such a study would be 2019 Test Year Rebasing Application.<sup>5</sup> In our submission, making a change from 50 years to 20 years warrants an independent depreciation study.
18. With respect to the rate impact of changing depreciation from 50 years to 20 years, the annual expense would increase from approximately \$180 M per year to \$340 M per year. This translates into an average rate increase of about 16%.<sup>6</sup>

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<sup>4</sup> Transcript Volume 1, p.42.

<sup>5</sup> Transcript Volume 1, p.135.

<sup>6</sup> APPrO Interrogatory No. 7 and Transcript Volume 1, p.135.

19. The 16% increase for Panhandle is being proposed by Union at a time when customers are already facing incredible rate increases as a direct result of the Cap and Trade Program. Union's Compliance Plan confirms that for Union North customers in Rate 20, Rate 25 and Rate 100 the increases range between 122.3% and 381.7% on delivery charges which translate into 14.4% to 18.1% on the Total Bill Impact. For customers in Union South in Rate M5, Rate M7, Rate M9, Rate M10 and Rate T1 the increases range between 49.4% and 177.9% on delivery charges which translates into Total Bill Impacts ranging between 14.9% and 19%.
20. Union's request to layer onto these increases the resulting 16% rate increase because of changing the depreciation period from 50 years to 20 years significantly exacerbates the challenges faced by manufacturers in the province of Ontario. It should be rejected at this time.

#### IV. COSTS

21. CME requests that it be awarded 100% of its reasonably incurred costs in connection with this matter.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 14<sup>th</sup> day of December, 2016.



Vincent J. DeRose  
Emma Blanchard

Counsel for CME



UNION GAS LIMITED  
Calculation of Sales Service and Direct Purchase Bill Impacts for Typical Small and Large Customers - Union North

Line No.	Particulars	EB-2016-0245 (1)		Proposed - EB-2016-0296				Proposed - EB-2016-0296			
		Proposed		Excluding Customer-Related GHG Obligation				Including Customer-Related GHG Obligation (2)			
		Total Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Total Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Total Bill Change (\$)	Bill Impact (%)	Total Bill (\$)	Unit Rate (cents/m <sup>3</sup> )	Total Bill Change (\$)	Bill Impact (%)
		(a)	(b)	(c)	(d)	(e) = (c-a)	(f) = (d/a)	(g)	(h)	(i) = (g-a)	(j) = (i/a)
<b>Small Rate 01</b>											
1	Delivery Charges	452	20.5614	453	20.6123	1.12	0.2%	526	23.9305	74.12	16.4%
2	Gas Supply Charges	466	21.1673	466	21.1673	-	0.0%	466	21.1673	-	0.0%
3	Total Bill	918	41.7287	919	41.7796	1.12	0.1%	992	45.0977	74.12	8.1%
4	Sales Service Impact					1.12	0.1%			74.12	8.1%
5	Bundled-T (Direct Purchase) Impact					1.12	0.2%			74.12	11.2%
<b>Small Rate 10</b>											
6	Delivery Charges	4,807	8.0111	4,829	8.0489	23	0.5%	6,820	11.3670	2,014	41.9%
7	Gas Supply Charges	11,392	18.9865	11,392	18.9865	-	0.0%	11,392	18.9865	-	0.0%
8	Total Bill	16,199	26.9976	16,221	27.0354	23	0.1%	18,212	30.3535	2,014	12.4%
9	Sales Service Impact					23	0.1%			2,014	12.4%
10	Bundled-T (Direct Purchase) Impact					23	0.2%			2,014	21.8%
<b>Large Rate 10</b>											
11	Delivery Charges	15,828	6.3313	15,923	6.3891	95	0.6%	24,218	9.6872	8,390	53.0%
12	Gas Supply Charges	47,466	18.9865	47,466	18.9865	-	0.0%	47,466	18.9865	-	0.0%
13	Total Bill	63,295	25.3178	63,389	25.3556	95	0.1%	71,684	29.6737	8,390	13.3%
14	Sales Service Impact					95	0.1%			8,390	13.3%
15	Bundled-T (Direct Purchase) Impact					95	0.3%			8,390	24.4%
<b>Small Rate 20</b>											
16	Delivery Charges	75,663	2.5221	75,909	2.5303	246	0.3%	175,452	5.8484	99,789	131.9%
17	Gas Supply Charges	476,292	15.8764	476,292	15.8764	-	0.0%	476,292	15.8764	-	0.0%
18	Total Bill	551,956	18.3986	552,202	18.4067	246	0.0%	651,745	21.7248	99,789	18.1%
19	Sales Service Impact					246	0.0%			99,789	18.1%
20	Bundled-T (Direct Purchase) Impact					246	0.1%			99,789	46.9%
<b>Large Rate 20</b>											
21	Delivery Charges	294,134	1.9609	295,364	1.9691	1,230	0.4%	793,079	5.2872	498,945	169.8%
22	Gas Supply Charges	2,283,610	15.2241	2,283,610	15.2241	-	0.0%	2,283,610	15.2241	-	0.0%
23	Total Bill	2,577,744	17.1850	2,578,974	17.1932	1,230	0.0%	3,076,689	20.5113	498,945	19.4%
24	Sales Service Impact					1,230	0.0%			498,945	19.4%
25	Bundled-T (Direct Purchase) Impact					1,230	0.1%			498,945	56.6%
<b>Average Rate 25</b>											
26	Delivery Charges	61,764	2.7149	61,803	2.7166	39	0.1%	137,289	6.0347	75,525	122.3%
27	Gas Supply Charges	293,771	12.9130	293,771	12.9130	-	0.0%	293,771	12.9130	-	0.0%
28	Total Bill	355,535	15.6279	355,573	15.6298	39	0.0%	431,060	18.9477	75,525	21.2%
29	Sales Service Impact					39	0.0%			75,525	21.2%
30	T-Service (Direct Purchase) Impact					39	0.1%			75,525	122.3%
<b>Small Rate 100</b>											
31	Delivery Charges	257,308	0.9530	257,416	0.9534	108	0.0%	1,153,303	4.2715	895,995	348.2%
32	Gas Supply Charges	5,949,940	22.0368	5,949,940	22.0368	-	0.0%	5,949,940	22.0368	-	0.0%
33	Total Bill	6,207,247	22.9898	6,207,355	22.9902	108	0.0%	7,103,242	26.3083	895,995	14.4%
34	Sales Service Impact					108	0.0%			895,995	14.4%
35	T-Service (Direct Purchase) Impact					108	0.0%			895,995	348.2%
<b>Large Rate 100</b>											
36	Delivery Charges	2,086,720	0.8695	2,087,680	0.8699	960	0.0%	10,051,120	4.1880	7,964,400	381.7%
37	Gas Supply Charges	51,762,036	21.5675	51,762,036	21.5675	-	0.0%	51,762,036	21.5675	-	0.0%
38	Total Bill	53,848,756	22.4370	53,849,716	22.4374	960	0.0%	61,813,156	25.7555	7,964,400	14.8%
39	Sales Service Impact					960	0.0%			7,964,400	14.8%
40	T-Service (Direct Purchase) Impact					960	0.0%			7,964,400	381.7%

Notes:

- (1) Reflects proposed rates per 2017 Rates filing (EB-2016-0245), Appendix A.  
(2) Bill impacts including customer-related GHG obligation are applicable to customers for whom Union is required to fulfill cap-and-trade obligations.

UNION GAS LIMITED  
Calculation of Sales Service and Direct Purchase Bill Impacts for Typical Small and Large Customers - Union South

Line No.	Particulars	EB-2016-0245 (1)		Proposed - EB-2016-0296				Proposed - EB-2016-0296			
		Proposed		Excluding Customer-Related GHG Obligation				Including Customer-Related GHG Obligation (2)			
		Total Bill	Unit Rate	Total Bill	Unit Rate	Total Bill Change	Bill Impact	Total Bill	Unit Rate	Total Bill Change	Bill Impact
		(\$)	(cents/m <sup>3</sup> )	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)
		(a)	(b)	(c)	(d)	(e) = (c-a)	(f) = (e/a)	(g)	(h)	(i) = (g-a)	(j) = (i/a)
<b>Small Rate M1</b>											
1	Delivery Charges	367	16.6632	368	16.7068	0.96	0.3%	441	20.0250	73.96	20.2%
2	Gas Supply Charges	347	15.7723	347	15.7723	-	0.0%	347	15.7723	-	0.0%
3	Total Bill	714	32.4355	715	32.4791	0.96	0.1%	788	35.7973	73.96	10.4%
4	Sales Service Impact					0.96	0.1%			73.96	10.4%
5	Direct Purchase Impact					0.96	0.3%			73.96	20.2%
<b>Small Rate M2</b>											
6	Delivery Charges	3,983	6.6384	4,003	6.6711	20	0.5%	5,994	9.9692	2,011	50.5%
7	Gas Supply Charges	9,464	15.7729	9,464	15.7729	-	0.0%	9,464	15.7729	-	0.0%
8	Total Bill	13,447	22.4113	13,466	22.4440	20	0.1%	15,457	25.7621	2,011	15.0%
9	Sales Service Impact					20	0.1%			2,011	15.0%
10	Direct Purchase Impact					20	0.5%			2,011	50.5%
<b>Large Rate M2</b>											
11	Delivery Charges	13,401	5.3606	13,482	5.3927	80	0.6%	21,777	8.7108	8,376	62.5%
12	Gas Supply Charges	39,432	15.7729	39,432	15.7729	-	0.0%	39,432	15.7729	-	0.0%
13	Total Bill	52,834	21.1335	52,914	21.1656	80	0.2%	61,209	24.4837	8,376	15.9%
14	Sales Service Impact					80	0.2%			8,376	15.9%
15	Direct Purchase Impact					80	0.6%			8,376	62.5%
<b>Small Rate M4</b>											
16	Delivery Charges	45,178	5.1632	45,590	5.2103	412	0.9%	74,624	8.5284	29,445	65.2%
17	Gas Supply Charges	138,013	15.7729	138,013	15.7729	-	0.0%	138,013	15.7729	-	0.0%
18	Total Bill	183,191	20.9361	183,603	20.9832	412	0.2%	212,637	24.3013	29,445	16.1%
19	Sales Service Impact					412	0.2%			29,445	16.1%
20	Direct Purchase Impact					412	0.9%			29,445	65.2%
<b>Large Rate M4</b>											
21	Delivery Charges	344,790	2.8733	349,523	2.9127	4,732	1.4%	747,695	6.2308	402,904	116.9%
22	Gas Supply Charges	1,892,748	15.7729	1,892,748	15.7729	-	0.0%	1,892,748	15.7729	-	0.0%
23	Total Bill	2,237,538	18.6462	2,242,271	18.6856	4,732	0.2%	2,640,443	22.0037	402,904	18.0%
24	Sales Service Impact					4,732	0.2%			402,904	18.0%
25	Direct Purchase Impact					4,732	1.4%			402,904	116.9%
<b>Small Rate M5</b>											
26	Delivery Charges	32,858	3.9828	33,137	4.0166	279	0.8%	60,511	7.3347	27,653	84.2%
27	Gas Supply Charges	130,126	15.7729	130,126	15.7729	-	0.0%	130,126	15.7729	-	0.0%
28	Total Bill	162,984	19.7557	163,263	19.7895	279	0.2%	190,638	23.1076	27,653	17.0%
29	Sales Service Impact					279	0.2%			27,653	17.0%
30	Direct Purchase Impact					279	0.8%			27,653	84.2%
<b>Large Rate M5</b>											
31	Delivery Charges	189,888	2.9060	191,085	2.9398	2,197	1.2%	406,761	6.2579	217,874	115.3%
32	Gas Supply Charges	1,025,239	15.7729	1,025,239	15.7729	-	0.0%	1,025,239	15.7729	-	0.0%
33	Total Bill	1,214,126	18.6789	1,216,323	18.7127	2,197	0.2%	1,432,000	22.0308	217,874	17.9%
34	Sales Service Impact					2,197	0.2%			217,874	17.9%
35	Direct Purchase Impact					2,197	1.2%			217,874	115.3%
<b>Small Rate M7</b>											
36	Delivery Charges	772,183	2.1450	789,427	2.1929	17,244	2.2%	1,983,943	5.5110	1,211,760	156.9%
37	Gas Supply Charges	5,678,244	15.7729	5,678,244	15.7729	-	0.0%	5,678,244	15.7729	-	0.0%
38	Total Bill	6,450,427	17.9179	6,467,671	17.9658	17,244	0.3%	7,662,187	21.2839	1,211,760	18.8%
39	Sales Service Impact					17,244	0.3%			1,211,760	18.8%
40	Direct Purchase Impact					17,244	2.2%			1,211,760	156.9%
<b>Large Rate M7</b>											
41	Delivery Charges	2,897,037	5.5712	2,921,945	5.6191	24,908	0.9%	4,647,357	8.9372	1,750,320	60.4%
42	Gas Supply Charges	8,201,908	15.7729	8,201,908	15.7729	-	0.0%	8,201,908	15.7729	-	0.0%
43	Total Bill	11,098,945	21.3441	11,123,853	21.3920	24,908	0.2%	12,849,265	24.7101	1,750,320	15.8%
44	Sales Service Impact					24,908	0.2%			1,750,320	15.8%
45	Direct Purchase Impact					24,908	0.9%			1,750,320	60.4%

Notes:

- (1) Reflects proposed rates per 2017 Rates filing (EB-2016-0245), Appendix A.
- (2) Bill impacts including customer-related GHG obligation are applicable to customers for whom Union is required to fulfill cap-and-trade obligations.

UNION GAS LIMITED  
Calculation of Sales Service and Direct Purchase Bill Impacts for Typical Small and Large Customers - Union South

Line No	Particulars	EB-2016-0245 (1)		Proposed - EB-2016-0296				Proposed - EB-2016-0296			
		Proposed		Excluding Customer-Related GHG Obligation				Including Customer-Related GHG Obligation (2)			
		Total Bill	Unit Rate	Total Bill	Unit Rate	Total Bill Change	Bill Impact	Total Bill	Unit Rate	Total Bill Change	Bill Impact
		(\$)	(cents/m <sup>3</sup> )	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)
		(a)	(b)	(c)	(d)	(e) = (c-a)	(f) = (d-b)	(g)	(h)	(i) = (g-a)	(j) = (i/a)
<b>Small Rate M9</b>											
1	Delivery Charges	169,921	2.4449	173,000	2.4892	3,079	1.8%	403,608	5.8073	233,687	137.5%
2	Gas Supply Charges	1,096,217	15.7729	1,096,217	15.7729	-	0.0%	1,096,217	15.7729	-	0.0%
3	Total Bill	1,266,137	18.2178	1,269,216	18.2621	3,079	0.2%	1,499,824	21.5802	233,687	18.5%
4	Sales Service Impact					3,079	0.2%			233,687	18.5%
5	Direct Purchase Impact					3,079	1.8%			233,687	137.5%
<b>Large Rate M9</b>											
6	Delivery Charges	504,687	2.5012	513,626	2.5455	8,939	1.8%	1,183,152	5.8636	678,465	134.4%
7	Gas Supply Charges	3,182,656	15.7729	3,182,656	15.7729	-	0.0%	3,182,656	15.7729	-	0.0%
8	Total Bill	3,687,343	18.2741	3,696,282	18.3164	8,939	0.2%	4,365,808	21.6365	678,465	18.4%
9	Sales Service Impact					8,939	0.2%			678,465	18.4%
10	Direct Purchase Impact					8,939	1.8%			678,465	134.4%
<b>Average Rate M10</b>											
11	Delivery Charges	6,437	6.8119	6,480	6.6572	43	0.7%	9,616	10.1753	3,178	49.4%
12	Gas Supply Charges	14,905	15.7729	14,905	15.7729	-	0.0%	14,905	15.7729	-	0.0%
13	Total Bill	21,343	22.5848	21,385	22.6301	43	0.2%	24,521	25.9482	3,178	14.9%
14	Sales Service Impact					43	0.2%			3,178	14.9%
15	Direct Purchase Impact					43	0.7%			3,178	49.4%
<b>Small Rate T1</b>											
16	Delivery Charges	141,757	1.8808	143,882	1.9090	2,125	1.5%	393,968	5.2271	252,211	177.9%
17	Gas Supply Charges	1,188,803	15.7729	1,188,803	15.7729	-	0.0%	1,188,803	15.7729	-	0.0%
18	Total Bill	1,330,561	17.6537	1,332,686	17.6819	2,125	0.2%	1,582,771	21.0000	252,211	19.0%
19	Sales Service Impact					2,125	0.2%			252,211	19.0%
20	Direct Purchase Impact					2,125	1.5%			252,211	177.9%
<b>Average Rate T1</b>											
21	Delivery Charges	217,502	1.8805	220,763	1.9087	3,262	1.5%	604,533	5.2268	387,031	177.9%
22	Gas Supply Charges	1,824,284	15.7729	1,824,284	15.7729	-	0.0%	1,824,284	15.7729	-	0.0%
23	Total Bill	2,041,786	17.6534	2,045,047	17.6816	3,262	0.2%	2,428,817	20.9997	387,031	19.0%
24	Sales Service Impact					3,262	0.2%			387,031	19.0%
25	Direct Purchase Impact					3,262	1.5%			387,031	177.9%
<b>Large Rate T1</b>											
26	Delivery Charges	482,530	1.8831	489,756	1.9113	7,226	1.5%	1,339,989	5.2294	857,459	177.7%
27	Gas Supply Charges	4,041,661	15.7729	4,041,661	15.7729	-	0.0%	4,041,661	15.7729	-	0.0%
28	Total Bill	4,524,191	17.6560	4,531,417	17.6842	7,226	0.2%	5,381,649	21.0023	857,459	19.0%
29	Sales Service Impact					7,226	0.2%			857,459	19.0%
30	Direct Purchase Impact					7,226	1.5%			857,459	177.7%
<b>Small Rate T2</b>											
31	Delivery Charges	616,006	1.0396	626,553	1.0574	10,548	1.7%	2,592,727	4.3755	1,976,721	320.9%
32	Gas Supply Charges	9,346,390	15.7729	9,346,390	15.7729	-	0.0%	9,346,390	15.7729	-	0.0%
33	Total Bill	9,962,395	16.8125	9,972,943	16.8303	10,548	0.1%	11,939,116	20.1484	1,976,721	19.8%
34	Sales Service Impact					10,548	0.1%			1,976,721	19.8%
35	Direct Purchase Impact					10,548	1.7%			1,976,721	320.9%
<b>Average Rate T2</b>											
36	Delivery Charges	1,467,576	0.7420	1,502,783	0.7598	35,207	2.4%	8,065,648	4.0779	6,598,072	449.6%
37	Gas Supply Charges	31,197,195	15.7729	31,197,195	15.7729	-	0.0%	31,197,195	15.7729	-	0.0%
38	Total Bill	32,664,771	16.5149	32,699,978	16.5327	35,207	0.1%	39,262,843	19.8508	6,598,072	20.2%
39	Sales Service Impact					35,207	0.1%			6,598,072	20.2%
40	Direct Purchase Impact					35,207	2.4%			6,598,072	449.6%
<b>Large Rate T2</b>											
41	Delivery Charges	2,418,016	0.6534	2,483,891	0.6712	65,876	2.7%	14,763,815	3.9893	12,345,799	510.6%
42	Gas Supply Charges	58,373,768	15.7729	58,373,768	15.7729	-	0.0%	58,373,768	15.7729	-	0.0%
43	Total Bill	60,791,784	16.4263	60,857,659	16.4441	65,876	0.1%	73,137,582	19.7622	12,345,799	20.3%
44	Sales Service Impact					65,876	0.1%			12,345,799	20.3%
45	Direct Purchase Impact					65,876	2.7%			12,345,799	510.6%
<b>Large Rate T3</b>											
46	Delivery Charges	5,202,920	1.9078	5,320,186	1.9508	117,266	2.3%	14,369,043	5.2689	9,166,123	176.2%
47	Gas Supply Charges	43,014,591	15.7729	43,014,591	15.7729	-	0.0%	43,014,591	15.7729	-	0.0%
48	Total Bill	48,217,511	17.6807	48,334,777	17.7237	117,266	0.2%	57,383,634	21.0418	9,166,123	19.0%
49	Sales Service Impact					117,266	0.2%			9,166,123	19.0%
50	Direct Purchase Impact					117,266	2.3%			9,166,123	176.2%

Notes:

(1) Reflects proposed rates per 2017 Rates filing (EB-2016-0245), Appendix A.

(2) Bill impacts including customer-related GHG obligation are applicable to customers for whom Union is required to fulfill cap-and-trade obligations.