

September 30th, 2013

Ms. Kirsten Walli Board Secretary Ontario Energy Board Suite 2700, 2300 Yonge Street Toronto, Ontario M4P 1E4

Dear Ms. Walli:

RE: Union Gas Limited ("Union") - Undertakings EB-2012-0451/EB-2012-0433/EB-2013-0074

Please find attached Union's responses to the following Undertakings in the above captioned proceeding:

J3.3; J3.6; J4.5; J4.6

Yours truly,

[original signed by]

Karen Hockin Manager, Regulatory Initiatives Encl.

cc: Crawford Smith, Torys All intervenors

Filed: 2013-09-20 EB-2012-0451/EB-2012-0433/EB-2013-0074 Exhibit J3.3 Page 30

UNION GAS LIMITED

Undertaking of Mr. Isherwood <u>To Mr. Quinn</u>

To provide calculation of expected toll with Energy East Project included.

Please see response to J4.5 for the range of tolls. With respect to Energy East, Union is not in a position to estimate the impact, if any, of this Project on tolls. In Union's view however, the Project is not a relevant consideration as the impact will be the same regardless of whether the Settlement Term Sheet is approved by the NEB or not.

Filed: 2013-09-20 EB-2012-0451/EB-2012-0433/EB-2013-0074 Exhibit J3.6 Page 117

UNION GAS LIMITED

Undertaking of Mr. Henning <u>To Mr. Shrybman</u>

To produce analysis of competition for Marcellus and Utica shale gas.

The following response was provided by ICF International.

With the prolific volumes of gas currently being produced from the Marcellus shale play, the expectation for further growth in production in both the Marcellus and Utica Shale plays, and the associated decline in natural gas prices, a number of markets are seeking to access these economic gas supplies. In addition to the markets in Ontario and Québec, LDCs and gas-fired generation in New York and New England are seeking access to the Marcellus and Utica shale supplies. If approved and implemented, a settlement consistent with the principles of the Settlement Term Sheet combined with facilities that "debottleneck" the Parkway to Maple constraint will allow Ontario, Quebec, New York and New England to receive gas supplies via the Eastern Ontario Triangle.

In addition, growing power generation requirements for gas in the Mid-Atlantic states will access gas supplies from the Marcellus and Utica shale formations, first by displacement of the traditional south to north gas flows on the long-haul pipelines from the Gulf of Mexico and ultimately via physical reversal of flow during the summer month. Similarly, growing power generation requirements in the Southeastern U.S. are likely to also access Marcellus and Utica shale supplies, predominantly in the summer months. Finally, the existing Cove Point LNG import facility recently received approval to export LNG to non-free trade countries. If LNG export capacity is developed at this site, the facility will access production predominantly from the Marcellus.

The ICF Base Case reflects all of these various potential sources of demand for Marcellus and Utica shale gas. The Base Case analysis concludes that the resource base in the Marcellus, Utica and other shale formations across North America is sufficient to meet these requirements at competitive prices.

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UNION GAS LIMITED

Undertaking of Mr. Isherwood <u>To Mr. DeRose</u>

To update analysis with actual tolls.

This analysis is in response to the request for a review of the impact of the Settlement Term Sheet on Union's estimate of the forecast gas cost savings reflected in the pre-filed evidence, as updated August 23, 2013. In preparing the analysis Union has considered the savings in the event the effects of the Term Sheet are approved by the National Energy Board and in the event they are not.

- 1. Toll Certainty with a Settlement
- a) Toll Benefits of the Settlement
 - Reduction in ROE and Financial Contribution by TCPL. Under the Settlement, TCPL will be making two significant contributions. First, TCPL has agreed to an ROE of 10.1% as opposed to the NEB approved ROE of 11.5% – this contribution is estimated at approximately \$35M/yr or \$210M over the 6 year toll agreement. Second, TCPL has agreed to provide a \$20M/yr contribution or \$120M over the 6 years. In total, TCPL has agreed to provide \$330M in relief. These contributions result in settlement tolls being lower than they otherwise would be under the no settlement scenario.
- ii. Segmentation of the EOT. EOT shippers will only contribute to the shortfall resulting from the conversion to short haul for the first six years (although it is amortized over 16 years).
- b) Impacts of TCPL Changes on Union Customers

In addition to market access, the settlement provides for toll certainty. In its updated, pre-filed evidence, Union calculated the forecast gas cost savings based on TCPL's compliance tolls to be the \$15.4M/yr.

Customers that shift from long haul to short haul will create a revenue deficiency on the TCPL system. Under a cost of service framework, any revenue deficiency would be captured through toll adjustments on the TCPL system. Union has calculated the impact

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of the toll changes on TCPL as they impact Union's supply costs as follows.

a) Assume all of the revenue impact on TCPL is allocated to the Eastern Ontario Triangle (as of Nov 1, 2016)

- Total Transportation Savings (Long Haul to Short Haul) \$35.7M
- Union's total EOT transportation = 315,000 Gj/d
- Total EOT transportation (all shippers) = 4,500,000 Gj/d
- Union as a percent of total (315,000/4,500,000) = 7%

Therefore, Union System Customers would pay 7% of the \$35.7M or \$2.5M each year. In this scenario, the \$15.4M of annual gas cost savings would be reduced to \$12.9M.

b) Assume the revenue impact to TCPL is allocated to all shippers on TCPL

- It is expected that 15 basis points of the 50% increase in short haul tolls will be a surcharge to recover revenue deficiencies on the Prairies and Northern Ontario Line. For the short haul toll from Parkway to the TCPL EDA, a 50% increase represents 12.5 cents/Gj.
- 15 basis points would represent 3.75 cents per Gj for all shippers on the Mainline system. Assuming the conversion from long haul to short haul is the predominate driver of the 3.75 cents, Union has assumed that 3 cents is directly attributable to the conversion cost (there is also some general deficiencies that would be recovered as well and is assumed to be the remainder of the surcharge).
- Union's total capacity on the TCPL system is approximately 530,000 Gj/d (includes long haul, short haul and STS).
- Therefore, the total cost for Union supply would be 3 cents x 530,000 x 365d = \$5.8M
- In this scenario, Union's annual gas cost savings would be reduced from \$15.4 to \$9.6M

In this second example, the 3 cent surcharge recovers not only the impact of Union's 2015 conversion to short haul, but also the short haul conversion costs from all shippers forecast for 2015 and 2016. In recent discussions with TCPL it has proposed allocating the conversion impact to all customers as assumed in this example.

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2. Expected Tolls

Path	Compliance	Tolls- 45% SH	Tolls- 55% SH
	Tolls (\$/Gj)	Increase (\$/Gj)	Increase (\$/Gj)
Empress to Enbridge	1.62	1.83	1.94
EDA			
Empress to Enbridge	1.57	1.77	1.88
CDA			
Empress to Union EDA	1.65	1.87	1.98
Empress to Union NDA	1.32	1.41	1.49
Empress to Union CDA	1.54	1.74	1.85
Parkway to Enbridge EDA	0.32	0.46	0.50
Darlaman ta Enhridaa	0.12	0.17	0.10
Parkway to Enbridge CDA	0.12	0.17	0.19
Parkway to Union EDA	0.25	0.36	0.39
Parkway to Union NDA	0.36	0.52	0.56
Parkway to Union CDA	0.10	0.14	0.15

Note: For case of 45% increase to short haul tolls, Union has assumed that long haul toll to EOT increases by 13% and all other long haul paths increase by 7%. In the case of 55% increase to short haul tolls, Union has assumed that long haul toll to EOT increases by 20% and all other long haul paths increase by 13%. Although the unit increase in long haul tolls reflected in the above ranges is higher than the unit increase in short haul tolls, the difference is a function of the different recovery periods for the long haul and short haul surcharges (6 years vs.15 years, respectively). Over the settlement period, the toll differential is expected to be approximately the same as the differential in the Compliance Tolls.

3. Toll uncertainty without a Settlement

In RH-003-2011, the NEB-approved two deferral accounts to address TCPL revenue variances. The first, LTAA, had a balance of approximately \$300M at the start of 2013. This amount was expected to increase by a fixed amount of \$95M per year over the 5 year period (2013-2017). By the end of 2017, the LTAA would have a balance of approximately \$800M.

The balance in the second account, the Toll Stabilization Account (TSA), is a function of TCPL's financial performance relative to the throughput forecast approved by the NEB in RH-003-2011. Variances from the forecast (positive or negative on annual revenue) accrue in this account. The TSA therefore reflects throughput forecast risk.

Also relevant to any toll assessment is whether access to Dawn is or is not available. In the event TCPL could not or would not provide access to Dawn during the period (whether because of revenue risk or otherwise), the landed gas of cost in the Ontario EDA would be high (see Undertaking J3.5). In this scenario, the AECO basis (relative to Henry Hub) is expected to increase by approximately 34 cents/Gj – exceeding the impact of the Settlement Term Sheet (an increase of approximately 12.5 cents/Gj).

In the event access is available and provided by TCPL, any shortfall resulting from long haul and short haul conversion in 2015 or 2016 would accrue in the TSA and create further toll uncertainty. In this respect, it is Union's view that Fundamental Risk to the Mainline has not been realized or even if it has, that TCPL would likely not be exposed to material financial risk. In the result, any balance in the TSA would be the shippers' responsibility and the impact reflected in tolls.

Filed: 2013-09-29 EB-2012-0451/EB-2012-0433/EB-2013-0074 Exhibit J4.6 Page 59

UNION GAS LIMITED

Undertaking of Mr. Hockin <u>To Mr. Quinn</u>

To run DCF analysis with anticipated savings.

The attached DCF filed as Schedule 9-3A has been re-run using gas cost savings of \$9.6 million per year (Attachment 1) and \$12.9 million per year (Attachment 2) as outlined in Undertaking J4.5. Gas savings are for a period of 15 years in each case. No other inputs have changed. The resulting 30 yr DCF has the following resulting.

Case	Annual Gas Savings	PI	NPV
	(\$ Millions)		(\$ Millions)
Attachment 1	\$9.6	1.01	\$1.8
Attachment 2	\$12.9	1.13	\$27.4

	2015 Brantford-Kirkwall Pipeline and Parkway D Compressor DCF with Estimated Net Impact of Bridging Toll Change										
Project Year (\$000's)	1	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
Cash Inflow											
Revenue Expenses:	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	
Gas Supply Cost Savings	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	
O & M Expense	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	
Municipal Tax	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	
Income Tax	(336)	1,023	359	(258)	(791)	(1,254)	(1,656)	(2,005)	(2,309)	(2,574)	
Net Cash Inflow	16,973	18,332	17,668	17,052	16,518	16,055	15,653	15,304	15,000	14,735	
Cash Outflow											
Incremental Capital	200,069	4,007	-	-	-	-	-	-	-	-	
Change in Working Capital	16		-	-	<u> </u>	-	-	-		-	
Cash Outflow	200,085	4,007		-						-	
Cumulative Net Present Value											
Cash Inflow	16,556	33,570	49,172	63,499	76,704	88,916	100,245	110,783	120,611	129,797	
Cash Outflow	200,085	203,898	203,898	203,898	203,898	203,898	203,898	203,898	203,898	203,898	
NPV By Year	(183,529)	(170,328)	(154,726)	(140,399)	(127,194)	(114,982)	(103,653)	(93,114)	(83,286)	(74,100)	
Project NPV	1,807										
Profitability Index By Year PI Project PI	0.0827	0.1646	0.2412	0.3114	0.3762	0.4361	0.4916	0.5433	0.5915	0.6366	

2015 Brantford-Kirkwall Pipeline and Parkway D Compressor DCF with Estimated Net Impact of Bridging Toll Change											
Project Year (\$000's)	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	
Cash Inflow											
Revenue Expenses:	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	
Gas Supply Cost Savings	9,600	9,600	9,600	9,600	9,600	1,775	1,775	1,775	1,775	1,775	
O & M Expense	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	
Municipal Tax	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	
Income Tax	(2,805)	(3,007)	(3,184)	(3,339)	(3,476)	(1,522)	(1,627)	(1,720)	(1,802)	(1,875)	
Net Cash Inflow	14,504	14,302	14,125	13,970	13,834	7,963	7,857	7,764	7,682	7,609	
Cash Outflow											
Incremental Capital	-	-	-	-	-	-	-	-	-	-	
Change in Working Capital						13				-	
Cash Outflow	<u> </u>					13				-	
Cumulative Net Present Value											
Cash Inflow	138,400	146,472	154,057	161,195	167,920	171,603	175,061	178,312	181,373	184,257	
Cash Outflow	203,898	203,898	203,898	203,898	203,898	203,904	203,904	203,904	203,904	203,904	
NPV By Year	(65,497)	(57,426)	(49,841)	(42,703)	(35,978)	(32,301)	(28,843)	(25,592)	(22,531)	(19,647)	
Project NPV											
Profitability Index By Year PI Project PI	0.6788	0.7184	0.7556	0.7906	0.8235	0.8416	0.8585	0.8745	0.8895	0.9036	

	EB-2013-0074 Exhibit J4.6 Attachment #1 <u>Page 3 of 3</u>									
Project Year (\$000's)	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Cash Inflow										
Revenue Expenses:	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204
Gas Supply Cost Savings	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775
O & M Expense	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)
Municipal Tax	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)
Income Tax	(1,939)	(1,997)	(2,048)	(2,093)	(2,133)	(2,170)	(2,202)	(2,231)	(2,257)	(2,280)
Net Cash Inflow	7,545	7,487	7,437	7,391	7,351	7,315	7,282	7,253	7,227	7,204
Cash Outflow										
Incremental Capital	-	-	-	-	-	-	-	-	-	-
Change in Working Capital										-
Cash Outflow	<u> </u>		<u> </u>				<u> </u>			-
Cumulative Net Present Value										
Cash Inflow	186,979	189,548	191,977	194,273	196,446	198,503	200,452	202,299	204,050	205,711
Cash Outflow	203,904	203,904	203,904	203,904	203,904	203,904	203,904	203,904	203,904	203,904
NPV By Year	(16,926)	(14,356)	(11,928)	(9,631)	(7,458)	(5,401)	(3,452)	(1,605)	146	1,807
Project NPV										
<u>Profitability Index</u> By Year PI Project PI	0.9170	0.9296	0.9415	0.9528	0.9634	0.9735	0.9831	0.9921	1.0007	1.0089

	2015 Brantford-Kirkwall Pipeline and Parkway D Compressor DCF with Estimated Net Impact of Bridging Toll Change										
Project Year (\$000's)	1	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>Z</u>	<u>8</u>	<u>9</u>	<u>10</u>	
Cash Inflow											
Revenue Expenses:	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	
Gas Supply Cost Savings	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	
O & M Expense	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	
Municipal Tax	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	
Income Tax	(1,211)	148	(516)	(1,132)	(1,666)	(2,129)	(2,531)	(2,880)	(3,184)	(3,449)	
Net Cash Inflow	19,398	20,758	20,094	19,477	18,943	18,480	18,079	17,729	17,425	17,160	
Cash Outflow											
Incremental Capital	200,069	4,007	-	-	-	-	-	-	-	-	
Change in Working Capital	11	-	-		-				-	-	
Cash Outflow	200,080	4,007	<u> </u>							-	
Cumulative Net Present Value											
Cash Inflow	18,922	38,187	55,931	72,296	87,440	101,497	114,581	126,790	138,207	148,905	
Cash Outflow	200,080	203,892	203,892	203,892	203,892	203,892	203,892	203,892	203,892	203,892	
NPV By Year	(181,158)	(165,705)	(147,961)	(131,596)	(116,452)	(102,395)	(89,311)	(77,102)	(65,685)	(54,987)	
Project NPV	27,446										
<u>Profitability Index</u> By Year PI Project PI	0.0946	0.1873	0.2743	0.3546	0.4289	0.4978	0.5620	0.6218	0.6778	0.7303	

2015 Brantford-Kirkwall Pipeline and Parkway D Compressor DCF with Estimated Net Impact of Bridging Toll Change											
Project Year (\$000's)	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	
Cash Inflow											
Revenue Expenses:	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	
Gas Supply Cost Savings	12,900	12,900	12,900	12,900	12,900	1,775	1,775	1,775	1,775	1,775	
O & M Expense	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	
Municipal Tax	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	
Income Tax	(3,680)	(3,882)	(4,059)	(4,214)	(4,350)	(1,522)	(1,627)	(1,720)	(1,802)	(1,875)	
Net Cash Inflow	16,929	16,727	16,550	16,395	16,259	7,963	7,857	7,764	7,682	7,609	
Cash Outflow											
Incremental Capital	-	-	-	-	-	-	-	-	-	-	
Change in Working Capital		<u> </u>		<u> </u>	<u> </u>	19				-	
Cash Outflow	<u> </u>	<u> </u>				19	<u> </u>			-	
Cumulative Net Present Value											
Cash Inflow	158,947	168,387	177,275	185,652	193,556	197,239	200,697	203,948	207,009	209,893	
Cash Outflow	203,892	203,892	203,892	203,892	203,892	203,901	203,901	203,901	203,901	203,901	
NPV By Year	(44,945)	(35,505)	(26,617)	(18,241)	(10,336)	(6,662)	(3,204)	47	3,108	5,992	
Project NPV											
<u>Profitability Index</u> By Year PI Project PI	0.7796	0.8259	0.8695	0.9105	0.9493	0.9673	0.9843	1.0002	1.0152	1.0294	

2015 Brantford-Kirkwall Pipeline and Parkway D Compressor DCF with Estimated Net Impact of Bridging Toll Change											
Project Year (\$000's)	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	
Cash Inflow											
Revenue Expenses:	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	9,204	
Gas Supply Cost Savings	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775	
O & M Expense	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	(642)	
Municipal Tax	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	(853)	
Income Tax	(1,939)	(1,997)	(2,048)	(2,093)	(2,133)	(2,170)	(2,202)	(2,231)	(2,257)	(2,280)	
Net Cash Inflow	7,545	7,487	7,437	7,391	7,351	7,315	7,282	7,253	7,227	7,204	
Cash Outflow											
Incremental Capital	-	-	-	-	-	-	-	-	-	-	
Change in Working Capital										-	
Cash Outflow	<u> </u>						<u> </u>			-	
Cumulative Net Present Value											
Cash Inflow	212,615	215,185	217,613	219,909	222,082	224,140	226,089	227,935	229,686	231,347	
Cash Outflow	203,901	203,901	203,901	203,901	203,901	203,901	203,901	203,901	203,901	203,901	
NPV By Year	8,714	11,283	13,712	16,008	18,181	20,238	22,187	24,034	25,785	27,446	
Project NPV											
<u>Profitability Index</u> By Year PI Project PI	1.0427	1.0553	1.0672	1.0785	1.0892	1.0993	1.1088	1.1179	1.1265	1.1346	