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Charles Keizer ckeizer@torys.com P. 416.865.7512

January 14, 2015

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

Dear Ms. Walli

#### Re: Greenfield South Power Corporation Application for Certificate of Public Convenience and Necessity Board File No. EB-2014-0299

We are counsel to Union Gas Limited ("Union") and hereby submit a compendium of material to assist and expedite our cross-examination of Greenfield South's witnesses at the hearing on January 16, 2015.

Yours truly,

[Original signed by]

**Charles Keizer** 

cc (by email):

Hubert Vogt, Greenfield South / Eastern Power Limited Mike Richmond, McMillan LLP

#### ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.I5, Schedule B:

AND IN THE MATTER OF an application by Greenfield South Power Corporation for a certificate of public convenience and necessity, pursuant to section 8 of the *Municipal Franchises Act*, R.S.O. 1990, c. M. 55.

#### CROSS-EXAMINATION COMPENDIUM OF UNION GAS LIMITED

### Greenfield South Power Corporation - CPCN EB-2014-0299

#### CROSS-EXAMINATION COMPENDIUM OF UNION GAS LIMITED

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#### STORAGE AND TRANSPORTATION RATES FOR CONTRACT CARRIAGE CUSTOMERS

#### (A) Availability

Available to customers in Union's Southern Delivery Zone.

#### (B) Applicability

To a customer:

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

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

#### (C) Rates

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

#### STORAGE SERVICE:

				ners Providing ompressor Fuel
	Demand	Commodity	111011 0 1111 0	Commodity
	Charge	Charge	Fuel	Charge
	Rate/GJ/mo	Rate/GJ	Ratio	Rate/GJ
a) Annual Firm Storage Space				
Applied to contracted Maximum				
Annual Storage Space	\$0.011			
b) Annual Firm Injection/Withdrawal Right:				
Applied to the contracted Maximum Annual Firm Injection/Withdrawal Right				
Union provides deliverability Inventory	\$1.647			
Customer provides deliverability Inventory (4)	\$1.208			
c) Incremental Firm Injection Right:				
Applied to the contracted Maximum	<b>\$4,000</b>			
Incremental Firm Injection Right	\$1.208			
d) Annual Interruptible Withdrawal Right:				
Applied to the contracted Maximum	¢1 208			
Annual Interruptible Withdrawal Right	\$1.208			

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				ers Providing
	Demand	Commodity		Commodity
	Charge	Charge	Fuel	Charge
	Rate/GJ/mo	Rate/GJ	Ratio	Rate/GJ
e) Withdrawal Commodity				
Paid on all quantities withdrawn				
from storage up to the Maximum				
Daily Storage Withdrawal Quantity		\$0.031	0.400%	\$0.008
f) Injection Commodity				
Paid on all quantities injected into				
storage up to the Maximum Daily				
Storage Injection Quantity		\$0.031	0.400%	\$0.008
g) Short Term Storage / Balancing Service				
Maximum		\$6.000		

Notes:

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

3. Annual Firm Storage Space

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

3.1 Aggregate Excess

Aggregate excess is the difference between a customer's gas consumption in the 151-day winter period and consumption during the balance of the year. This calculation will be done using two years of historical data (with 25% weighting for each year) and one year of forecast data (with 50% weighting). If a customer is new, or an existing customer is undergoing a significant change in operations, the allocation will be based on forecast consumption only, as negotiated between Union and the customer. Once sufficient historical information is available for the customer, the standard calculation will be done. At each contract renewal, the aggregate excess calculation will be performed to set the new space allocation.

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

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

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

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



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4. Annual Injection/Withdrawal Right

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

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

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

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

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

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

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

	Ø	<b>mion</b> gas	Effective 2015-01-01 <b>Rate T2</b> <u>Page 4 of 8</u>
TRANSPORTATION CHARGES:			For Customers Providing Their Own Compressor Fuel

			Their Own Cor	mpressor Fuel
	Demand	Commodity		Commodity
	Charge	Charge	Fuel	Charge
	<u>Rate/m<sup>3</sup>/mo</u>	Rate/m <sup>3</sup>	<u>Ratio (5) (6)</u>	Rate/m <sup>3</sup>
<ul> <li>Annual Firm Transportation Demand Applied to the Firm Daily Contract Demand</li> </ul>				
First 140,870 m <sup>3</sup> per month	20.9163 ¢			
All over 140,870 m <sup>3</sup> per month	11.0637 ¢			
<ul> <li>b) Firm Transportation Commodity</li> <li>Paid on all firm quantities redelivered to the customer's Point(s) of Consumption</li> <li>Commodity Charge (All volumes)</li> </ul>		0.0691 ¢	0.279%	0.0080 ¢
		0.0001.0	0.21070	0.0000 \$
<ul> <li>c) Interruptible Transportation Commodity</li> <li>Paid on all interruptible quantities redelivered to the customer's Point(s) of Consumption</li> </ul>				
Maximum		4.3247 ¢	0.279%	4.2636 ¢

#### Notes:

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



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

#### SUPPLEMENTAL CHARGES:

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

#### Notes:

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

#### **OVERRUN SERVICE:**

#### 1. Annual Storage Space

#### Authorized

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

#### Unauthorized

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

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



#### 2. Injection, Withdrawals and Transportation

#### Authorized

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

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

	Union Providing <u>Fuel</u>	For Customers Providing Their Own Compressor Fuel <u>Firm or Interruptible Service</u>	
	Firm or Interruptible <u>Service</u>	Fuel <u>Ratio</u>	Commodity <u>Charge</u>
Storage Injections	\$0.111/GJ	0.859%	\$0.062/GJ
Storage Withdrawals	\$0.111/GJ	0.859%	\$0.062/GJ
Transportation	0.7568 ¢/m³	0.279%	0.6957 ¢/m³

#### Unauthorized

For all quantities on any Day in excess of 103% of the customer's contractual rights, for which authorization has not been received, the customer will be charged 4.6757  $\phi$  per m<sup>3</sup> or \$1.221 per GJ, as appropriate.

#### 3. Storage / Balancing Service

#### Authorized

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

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



#### OTHER SERVICES & CHARGES:

#### 1. Monthly Charge

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

Monthly Charge

\$5,943.28

#### 2. Diversion of Gas

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

#### 3. Delivery Obligations

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

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

#### 4. Nominations

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

#### 5. Additional Service Information

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

The additional information consists of, but is not limited to, the following: www.uniongas.com/business/account-services/unionline/contracts-rates/T1-service-features

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

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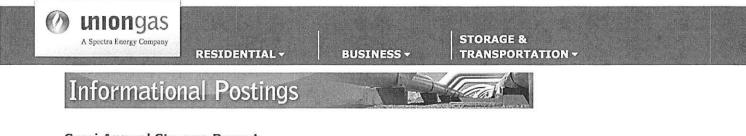
#### (D) Delayed Payment

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

Effective

January 1, 2015 O.E.B. Order # EB-2014-0356 Chatham, Ontario

Supersedes EB-2014-0271 Rate Schedule effective January 1, 2015.



#### Semi Annual Storage Report

For the period March 1, 2014 to August 31, 2014

Shipper	Unit Rate (\$CDN/GJ)	Total Revenue (\$CDN)
1425445 Ontario Limited o/a Utilities Kingston	\$0.5200	\$ 25,058
1425445 Ontario Limited o/a Utilities Kingston	\$0.6200	\$ 29,195
1425445 Ontario Limited o/a Utilities Kingston	\$0.6400	\$ 65,184
Ag Energy Co-operative Ltd.	\$0.6000	\$ 52,753
BP Canada Energy Group ULC	\$0.4739	\$ 45,137
Cargill Limited	\$0.3791	\$ 120,670
Cargill Limited	\$0.3791	\$ 116,482
Cargill Limited	\$0.3317	\$ 107,043
Cargill Limited	\$0.5497	\$ 419,446
EDF Trading North America, LLC	\$0.2843	\$ 53,128
EDF Trading North America, LLC	\$0.2843	\$ 26,547
Enbridge Gas Distribution Inc.	\$0.4400	\$ 866,011
Exelon Generation Company, LLC	\$0.4208	\$ 160,547
Freepoint Commodities LLC	\$0.4631	\$ 33,079
J. Aron & Company	\$0.3791	\$ 233,145
Koch Canada Energy Services, LP	\$0.4929	\$ 235,655
Koch Canada Energy Services, LP	\$0.5876	\$ 280,974
MIECO Inc.	\$0.4739	\$ 67,702
PetroChina International (America), Inc.	\$0.3886	\$ 74,026
PetroChina International (America), Inc.	\$0.3886	\$ 74,026
Powerex Corp.	\$0.3791	\$ 69,331
Powerex Corp.	\$0.5308	\$ 48,953
Shell Energy North America (Canada) Inc.	\$0.3791	\$ 157,382
Shell Energy North America (Canada) Inc.	\$0.3791	\$ 123,637
Shell Energy North America (Canada) Inc.	\$0.3791	\$ 123,637
Shell Energy North America (Canada) Inc.	\$0.3791	\$ 123,637
Suncor Energy Marketing Inc.	\$0.5687	\$ 216,955
Suncor Energy Marketing Inc.	\$0.3599	\$ 61,089
Suncor Energy Marketing Inc.	\$0.4502	\$ 73,022
Tenaska Marketing Canada - a division of TMV Corp.	\$0.6161	\$ 470,069
Tenaska Marketing Canada - a division of TMV Corp.	\$0.3791	\$ 207,981
United Energy Trading Canada, ULC	\$0.5687	\$ 54,239

Unit rate reflects demand charge only. Unit rate assumes that US/Cdn exchange rate = 1.00.

This report shows only those contracts that were new or amended in the stated period. Please click <u>here (/~/media/storage-transportation/infopostings/storagereport/STAR storage\_report\_all.pdf</u> to view a full report of all contracts that were current in the stated period.

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# Semi Annual Storage Report For the period March 1, 2014 to August 31, 2014

	Unit Rate	Total Revenue
Shipper	(\$CDN/GJ)	(\$CDN)
1425445 Ontario Limited o/a Utilities Kingston	0.6200	29,195
1425445 Ontario Limited o/a Utilities Kingston	0.6400	65,184
1425445 Ontario Limited o/a Utilities Kingston	0.5200	25,058
Ag Energy Co-operative Ltd.	0.6000	52,753
AltaGas Ltd.	0.5734	47,998
Barclays Canadian Commodities Limited	0.2891	319,586
BP Canada Energy Group ULC	0.4739	45,137
Cargill Limited	0.7867	76,823
Cargill Limited	0.3791	120,670
Cargill Limited	0.3791	116,482
Cargill Limited	0.4834	161,845
Cargill Limited	0.3317	107,043
Cargill Limited	0.5497	419,446
Castleton Commodities Merchant Trading L.P.	0.4151	142,687
Castleton Commodities Merchant Trading L.P.	0.3488	209,906
Castleton Commodities Merchant Trading L.P.	0.3952	68,012
Castleton Commodities Merchant Trading L.P.	0.3952	68,012
EDF Trading North America, LLC	0.2843	53,128
EDF Trading North America, LLC	0.2843	26,547
Enbridge Gas Distribution Inc.	0.8500	245,915
Enbridge Gas Distribution Inc.	0.6539	1,712,033
Enbridge Gas Distribution Inc.	0.4400	866,011
Energy Source Canada Inc.	0.6161	0
Exelon Generation Company, LLC	0.7962	160,007
Exelon Generation Company, LLC	0.3625	251,297
Exelon Generation Company, LLC	0.4208	160,547
Freepoint Commodities LLC	0.5213	10,932
Freepoint Commodities LLC	0.4631	33,079
Gaz Metro Limited Partnership	0.8100	1,343,363
Gaz Metro Limited Partnership	-	396,000
Gaz Metro Limited Partnership	0.8200	1,986,903
J. Aron & Company	0.4739	69,910
J. Aron & Company	0.3791	233,145
J. Aron & Company	0.2938	58,307
J. Aron & Company	0.2938	57,666
J. Aron & Company	0.2938	57,979
J. Aron & Company	0.2938	57,979
J.P. Morgan Commodities Canada Corporation	0.7298	142,540
Koch Canada Energy Services, LP	0.4929	235,655
Koch Canada Energy Services, LP	0.6161	354,733
Koch Canada Energy Services, LP	0.3791	220,125
Koch Canada Energy Services, LP	0.5876	280,974
MIECO INC.	0.4739	67,702
NJR Energy Services Company	0.8056	927,761
PetroChina International (America), Inc.	0.3886	74,026
PetroChina International (America), Inc.	0.2843	868,270
PetroChina International (America), Inc.	0.3886	74,026

## Semi Annual Storage Report

## For the period March 1, 2014 to August 31, 2014

Shipper	Unit Rate (\$CDN/GJ)	Total Revenue (\$CDN)
Propaging 1 and		800 - 900 - 1.000 B
Powerex Corp.	0.5876 0.6350	57,386 62,014
Powerex Corp. Powerex Corp.	0.6303	181,459
Powerex Corp.	0.5687	654,890
Powerex Corp.	0.5497	316,530
Powerex Corp.	0.3791	240,559
Powerex Corp.	0.4170	262,350
Powerex Corp.	0.3791	69,331
Powerex Corp.	0.5308	48,953
Repsol Energy Canada Ltd.	0.5592	643,975
Shell Energy North America (Canada) Inc.	0.8056	134,871
Shell Energy North America (Canada) Inc.	0.7583	1,654,459
Shell Energy North America (Canada) Inc.	0.3791	157,382
Shell Energy North America (Canada) Inc.	0.3791	123,637
Shell Energy North America (Canada) Inc.	0.3791	123,637
Shell Energy North America (Canada) Inc.	0.3791	123,637
Shell Energy North America (Canada) Inc.	0.3791	1,047,824
St. Lawrence Gas Company, Inc.	0.3500	213,207
Suncor Energy Marketing Inc.	0.5687	216,955
Suncor Energy Marketing Inc.	0.3599	61,089
Suncor Energy Marketing Inc.	0.3602	207,382
Suncor Energy Marketing Inc.	0.2938	588,859
Suncor Energy Marketing Inc.	0.4502	73,022
Tenaska Marketing Canada - a division of TMV Corp.	0.8056	959,165
Tenaska Marketing Canada - a division of TMV Corp.	0.4611	101,317
Tenaska Marketing Canada - a division of TMV Corp.	0.3791	63,469
Tenaska Marketing Canada - a division of TMV Corp.	0.3791	63,469
Tenaska Marketing Canada - a division of TMV Corp.	0.4455	129,826
Tenaska Marketing Canada - a division of TMV Corp.	0.4455	129,826
Tenaska Marketing Canada - a division of TMV Corp.	0.6161	470,069
Tenaska Marketing Canada - a division of TMV Corp.	0.3791	207,981
United Energy Trading Canada, ULC	0.5500	72,553
United Energy Trading Canada, ULC	0.5687	54,239
York Energy Centre LP	7.2857	127,479
York Energy Centre LP	8.4171	875,698

#### Notes:

Unit rate reflects demand charge only.

Unit rate assumes that US/Cdn exchange rate = 1.00.

Contracts will be excluded from this report once they expire.

#### EB-2014-0299 (January 2015)

## **Green Electron Power Plant**

#### Strorage Cost Analysis

#### **Ex-franchise - Market-Based Pricing**

		Total	HDS (10%)
Space	Rate <sup>1</sup>	Annual Cost	Deliverability
(GJ)	(\$/GJ)	(\$)	(GJ per Day)
464,000	7.2857	3,380,565	46,400
371,200	7.2857	2,704,452	37,120
164,590	7.2857	1,199,153	16,459

<sup>1</sup> Published rate paid between March and August 2014 by a Clean Energy Supply power generator (York Energy Centre) requiring high deliverability storage service. (http://www.uniongas.com/storage-and-transportation/informational-postings/storage-report)

Note: Storage for a power services customer includes the following components:

1) storage space

2) High Deliverability Service

3) firm service

4) firm storage service - all day (F24S)

5) 13 nomination windows

6) load shaping - Upstream Pipeline Balancing service

## Transportation

## Tariff

of

## **Vector Pipeline Limited Partnership**

(Effective April 1, 2004 Unless Indicated Otherwise)

Communications Concerning this Tariff Should be Addressed to:

**Vector Pipeline Limited** 

38705 Seven Mile Road, Suite 490 Livonia, Michigan 48152 United States Attention: President Phone: (734) 462-0230 Fax: (734) 462-0231

Sheet Revision Date December 19, 2011 Effective January 1, 2012

## GENERAL TERMS AND CONDITIONS

effect the service requested by Shipper. Transporter may waive this requirement at its discretion, on a non-discriminatory basis.

For the purposes of this section, Transporter's construction, acquisition, and/or installation costs shall include, but shall not be limited to: Transporter's design costs, equipment costs, labour costs, material costs, supervision costs, construction financing costs (including a return on equity), taxes (whether income or otherwise), filing fees, right of way costs and permitting costs. Nothing in this section shall be construed to require Transporter to seek authorization to construct any facilities.

#### 25. REQUEST FOR SERVICE AND ALLOCATION OF CAPACITY

Subject to any conditions set forth in the applicable Toll Schedules, this section shall govern: requests for service under all of Transporter's Toll Schedules; accommodating requests for firm service; posting and awarding of firm capacity; and capacity reserved for expansion projects.

**25.1** All Shippers requesting service from Transporter must provide the following information in writing to Transporter. Completed requests should be sent to:

Vector Pipeline Limited Partnership c/o Vector Pipeline Limited 38705 Seven Mile Road, Suite 490 Livonia, Michigan 48152 United States Attention: President Fax: (734) 462-0231 Email: Vector@vector-pipeline.com

Any request shall include the following information:

- (a) Shipper information:
  - (i) Shipper's legal name in full and DUNS number.
  - (ii) Shipper's mailing address for notices and billing.
  - (iii) Shipper's street address if different from above.
  - (iv) The name(s), telephone number(s) and fax number(s) of Shipper employees responsible for nominations and/or dispatching.
  - (v) The name(s), telephone number(s) and fax number(s) of Shipper employees responsible for payment of invoices.

- (vi) The name(s), telephone number(s) and fax number(s) of Shipper employees responsible for other matters.
- (vii) Whether the Shipper is affiliated with Transporter.
- (b) Type of service requested.
- (c) Requested Contract Quantity for Toll Schedules FT-1, FT-L or FT-H service stated in GJ per day and Hourly Delivery Period (4 to 20 hours) and Hourly Delivery Quantity (GJ per hour) for Toll Schedule FT-H service (if applicable).
- (d) Requested date of commencement of service (if applicable).
- (e) Requested term of service (if applicable).
- (f) Requested Receipt Point(s) and Delivery Point(s), identified by NAESB Common Code, together with the name of the entity delivering Gas to Transporter and the name of the entity to receive Gas from Transporter (if applicable).
- (g) A copy of a signed Agency Notification Form, available on Transporter's Web Site, from Shipper authorizing agent to act on behalf of the Shipper to secure the service requested. If agent requests service on behalf of a Shipper, the agent shall provide the name, address, telephone number and primary business of the Shipper (if applicable).
- **25.2** Accommodating Requests for Firm Service
  - (a) Subject to the provisions of GT&C section 32, requests for firm services shall be fulfilled with the requested service offering the greatest economic value for the capacity available as defined in GT&C section 25.2(b). If the economic values, as determined below, of separate service requests are equal, then service shall be offered in sequence starting with the request for such service with the earliest date. If separate service requests have equal economic values and the same date of request, service shall be offered to such requests on a pro-rata basis.

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#### 1 **Proposed Facilities**

2 The Generating Facilities will be located in the east half of Lot 26, Concession 2, in the Township of

3 St. Clair, County of Lambton, and east of Union's existing Sarnia Industrial Line system and south of

- 4 Oil Springs Line in Union's franchised service area.
- 5

6 In order to meet the Generating Facilities' demand for an interruptible service of 59,000 m<sup>3</sup>/hour at a

7 delivery pressure of 3103 kPag, Union requires approximately 60 metres of NPS 8 pipeline and a

8 customer station, which form this application. Union also requires minor upgrading of the Sarnia

- 9 Industrial Station to meet customer requirements.
- 10

11 A schematic showing the operation of the proposed pipeline system servicing the Generating

- 12 Facilities can be found in Schedule 7.
- 13

### 14 Alternatives Considered

15 An interruptible service from Union based on a Vector connection was determined to be comparable

16 in capital cost to the estimate Union has determined to provide interruptible service from the Sarnia

17 Industrial Line system. However, the benefits related to security of supply and pressure provided by

18 the Proposed Facilities being located adjacent to and served from the Sarnia Industrial Line system

19 outweighed the Vector alternative.

20

## 21 **PROJECT COSTS AND ECONOMICS**

#### 22 Project Costs

23 The total estimated capital cost for all the Proposed Facilities, including pipeline and customer

24 station, is as follows:

Total Pipeline Cost (including Environmental cost)	\$1.45 million
Total Station Cost	\$4.51 million
Total Project Cost	\$ 5.96 million

25

26 The estimated total capital cost of the project includes contingencies and interest during construction.

27

1	Estimates of the capital cost for construction of the proposed pipeline are provided in Schedule 8.
2	
3	The estimated costs associated with environmental measures are included in the total pipeline capital
4	costs shown in Schedule 8 and are detailed separately in Schedule 9. These costs are identified as
5	pre-construction related, construction related, and post-construction related. The estimated total
6	environmental costs are \$10,000.
7	
8	The estimated total costs for construction of the proposed station is \$4.51 million as provided in
9	Schedule 10. These station costs include plant items, contingencies and interest during construction.
10	
11	Project Economics
12	Union has employed an economic feasibility test consistent with the principles approved by the
13	Board in the E.B.O. 188 proceeding.
14	
15	A Discounted Cash Flow (DCF) analysis for the interruptible option requested by Greenfield South
16	can be found at Schedule 11. This analysis indicates that the Proposed Facilities project has a
17	Profitability Index (PI) of 1.068.
18	
19	CONSTRUCTION
20	Construction Matters
21	Schedule 12 illustrates the proposed Pipelines and Customer Station to be constructed.
22	
23	The Proposed Facilities to be constructed include:
24	i. 47 metres of NPS 8 to connect the NPS 12 Sarnia Industrial Line to the Customer Station.
25	ii. 12 metres of NPS 8 to connect the NPS 20 Sarnia Industrial Line to the Customer Station.
26	iii. A Customer Station that will have the following components:
27	a. Buildings containing telemetry, boilers and the odourant system.
28	b. Fuel gas, power gas, and HVAC will be installed as required for each of these
29	buildings.