

EB-2015-0166 / EB-2015-0175

Ontario Energy Board

Union Gas Limited / Enbridge Gas Distribution

**Pre-Approval of the Cost Consequences of
Long-Term Transportation Contracts with
NEXUS Gas Transmission**

OEB STAFF COMPENDIUM

Sussex Panel

November 17, 2015

Tab 1

UNION GAS LIMITED

Answer to Interrogatory from
London Property Management Association ("LPMA")

Reference: Exhibit A, Schedule 3, pages 35-36

The heading at the bottom of page 35 implies that NEXUS will enhance Dawn liquidity. Given that the NEXUS contract will replace two other contracts associated with the same volumes being delivered to Dawn, please explain how this "enhances" Dawn liquidity as opposed to maintaining the current level of Dawn liquidity.

Response:

The following response was prepared by Sussex Economic Advisors, LLC.

In aggregate, NEXUS will enhance the liquidity at the Dawn Hub as it will diversify the gas supply available to the Dawn Hub. Specifically, NEXUS will provide increased gas supply diversity due to the following:

- New, incremental pipeline to the region – NEXUS will provide an incremental 1.5 Bcf/day of capacity to the region;
- New, incremental access to the Marcellus and Utica gas supply basin – NEXUS will provide a direct connection to the Marcellus and Utica basin;
- Access to new pricing points associated with the Marcellus and Utica basin – the natural gas supply area pricing points for Marcellus and Utica gas supply will be available to NEXUS shippers; and
- Incremental counterparties at the Dawn Hub – certain of the NEXUS shippers or short-term replacement shippers may represent new counterparties at the Dawn Hub.

Tab 2

UNION GAS LIMITED

Answer to Interrogatory from
Association of Power Producers of Ontario ("APPrO")

Reference: i) Sussex Economic Advisors Evidence Exhibit A Schedule 3 pages 35-36
"As proposed, NEXUS provides a direct pipeline path between the Marcellus and Utica supply basins and the Dawn Hub, allowing more supply to be delivered to the Dawn Hub. NEXUS will not only increase the physical supply to the Dawn Hub, but also increase the number of counterparties that are active at the Dawn Hub (e.g., the NEXUS capacity holders that are natural gas producers). This increase in natural gas supply and counterparties will increase the overall liquidity of the Dawn Hub. In addition, the transportation capacity on NEXUS that is contracted by the Ontario LDCs will be utilized to deliver physical natural gas supply to the Dawn Hub to meet customer demand."

Preamble: APPrO would like to better Sussex's understanding of the NEXUS Pipeline.

- a) Sussex's indicates that there will be increased NEXUS producer counterparties that will be active at Dawn. Please have Sussex provide:
- i. A list of all shippers and their respective capacity commitments that have been made to the NEXUS pipeline. If these are not all commencing as of November 2017, please illustrate how these will be phased in over time. Please also note the sector that they represent (e.g. LDCs, producers, marketers, etc.).
 - ii. Please provide Sussex's understanding of the minimum aggregate transportation commitments necessary for the NEXUS Pipeline to proceed to be developed.
 - iii. Please provide Sussex's understanding of the changes to the net physical pipeline capacity into Dawn as a result of the NEXUS Pipeline.
 - iv. Please provide Sussex's understanding of the net increases to the physical gas supply availability for sale to third parties at Dawn as a result of the NEXUS Pipeline.
- b) Sussex indicates that there will be increased liquidity at Dawn as a result of the NEXUS Pipeline. Please have Sussex provide the following:
- i. A definition of liquidity
 - ii. A description of how liquidity is quantified and measured.
 - iii. Please provide a quantitative estimate of the level of current liquidity at Dawn and an estimate of the liquidity after the NEXUS Pipeline has been completed. Please show how these were derived.
 - iv. To the extent that number of parties buying their gas at Dawn is a factor that increases liquidity, please confirm that an increase in the volume of gas purchased at Dawn will have a positive effect on liquidity. If not confirmed, please explain.

Response:

The following response was prepared by Sussex Economic Advisors, LLC.

a)

- i) With respect to project shippers on the NEXUS Gas Transmission Project (“NEXUS”), it is the understanding of Sussex that NEXUS has executed precedent agreements with both “market pull” entities (e.g. local distribution companies (“LDCs”)) and “supply push” entities (e.g. natural gas producers). Sussex has summarized the publicly available information regarding the capacity commitments on NEXUS, service commencement dates, and sector description by shipper in the table below.

NEXUS Project Shipper	Sector	Capacity Commitment (Dth/day)	Service Commencement Date	Source
Union Gas Limited	LDC	150,000	November 2017	Union Contract Approval Filing for NEXUS
Enbridge Gas Distribution Inc.	LDC	110,000	November 2017	Enbridge Contract Approval Filing for NEXUS
DTE Gas Company	LDC	75,000	November 2017	DTE Gas Contract Approval Filing, Case No. U-17691
DTE Electric Company	EDC	75,000	November 2017	DTE Electric Contract Approval Filing, Case No. U-17680
Chesapeake Energy Marketing Inc.	Producer	Not available	November 2017	Draft Resource Report 1 filed by NEXUS with the FERC in June 2015
CNX Gas Company LLC	Producer	Not available	November 2017	Draft Resource Report 1 filed by NEXUS with the FERC in June 2015
Noble Energy Inc.	Producer	Not available	November 2017	Draft Resource Report 1 filed by NEXUS with the FERC in June 2015

- ii) Sussex is not aware of the minimum aggregate capacity commitment level required for the NEXUS Pipeline to be developed.

- iii) It is the understanding of Sussex that NEXUS will utilize certain existing pipeline capacity for delivery to the Dawn Hub. Sussex has not reviewed the facility filings or application of the particular pipelines that will deliver NEXUS volumes to the Dawn Hub, and, as such Sussex does not have the requested information. Please see Union's response to Exhibit B.T1.Union.APPrO.2 c) ii).
- iv) NEXUS will provide direct access to the Marcellus and Utica shale basin, thus diversifying the physical gas supply available to the Dawn Hub. The addition of this gas supply source (i.e. Marcellus and Utica basin) will provide more physical gas supply options for third parties at Dawn. The volume of natural gas available to third parties as a result of the NEXUS Pipeline will depend on the utilization of that gas supply by the shippers, or replacement shippers, on NEXUS. For example, a natural gas producer with a capacity contract on NEXUS may provide that gas supply to third parties.
- b)
- i) In general, liquidity in reference to a natural gas pricing point or location refers to the ability of counterparties to enter into transactions to buy and sell natural gas in a manner that is efficient (i.e. available counterparties) and transparent (i.e. standard transactions with minimal transaction costs).
- ii) While there are different measures for liquidity, certain metrics may include:
- Trade volume – the higher the volume traded the more liquidity
 - Number of counterparties and diversity of parties (e.g. producers, LDCs, marketers and end-users) – the more parties available to transact and the diversity of those parties would provide more liquidity
 - Price volatility – lower price volatility would suggest more liquidity
 - Percent of days with a transaction – a higher number of days when a transaction has occurred would suggest more liquidity
 - Number of transactions per day – a great number of daily transactions or deals would suggest more liquidity

Finally, in general, natural gas price locations that are a “hub” may have certain physical facilities or other attributes that provide for a higher level of liquidity. These hub attributes may include:

- Deliveries to/from multiple pipelines
- Access to various gas supply basins
- Access to natural gas storage facilities
- Access to downstream markets

The U.S. Energy Information Administration (“U.S. EIA”) has noted that market centers/hubs offer certain key services: 1) transportation between and interconnections with other pipelines, and 2) the physical coverage of short-term receipt/delivery balancing

needs. The U.S. EIA further notes that many market centers “provide unique services that help expedite and improve the natural gas transportation process overall”. New sources of gas supply would only enhance the ability of a market center such as the Dawn Hub to provide these services.

- iii) With respect to a quantitative metric for the current liquidity at the Dawn Hub, Sussex provides the following information from Platts. Since 2003, Platts has grouped price point locations in its monthly natural gas price survey into three tiers:
- Tier 1, points with traded volumes of at least 100,000 MMBtu/day and at least 10 trades;
 - Tier 2, points with traded volumes of 25,000 to 99,999 MMBtu/day and at least five trades; and
 - Tier 3, points with traded volumes below 25,000 MMBtu/day and/or fewer than five trades.

The following table is a summary of the Platts ranking for the Dawn Hub price index.

Split-Year (Nov-Oct)	Dawn		
	Avg. Daily Volume (000 MMBtu)	Avg. No. of Deals	Avg. Tier
2009/2010	594	110	1
2010/2011	624	123	1
2011/2012	509	97	1
2012/2013	662	105	1
2013/2014	395	92	1
2014/2015	420	113	1

As illustrated in the table above, the Dawn Hub price index has been, on average, a Tier 1 price index (i.e. the highest category for traded volumes and number of deals) over the time period reviewed by Sussex.

For comparison purposes, a summary of the Platts ranking for Niagara is provided below.

Split-Year (Nov-Oct)	Niagara		
	Avg. Daily Volume (000 MMBtu)	Avg. No. of Deals	Avg. Tier
2009/2010	103	18	2
2010/2011	64	11	2
2011/2012	23	5	2
2012/2013	1	1	3
2013/2014	3	2	3
2014/2015	6	2	3

As illustrated above, Niagara was, on average, a Tier 2 price index in 2009/2010, 2010/2011, and 2011/2012; and a Tier 3 price index in 2012/2013, 2013/2014, and 2014/2015.

With respect to a forecast estimate of liquidity once the NEXUS project is in service, Sussex has not developed such an analysis. However, the gas supply from NEXUS should provide support for volumes traded and average number of deals, such that the Dawn Hub retains its Tier 1 ranking. Please see the response to Exhibit B.T1.Union.LPMA.8 regarding the benefits of NEXUS to the Dawn Hub.

- iv) As discussed in the response to Exhibit B.T1.Union.APPrO.5 b) iii), the level of transaction activity is one metric for assessing the liquidity at a pricing point. Therefore, an increase in the number of transactions at Dawn should have a positive effect on liquidity.