uniongas
A Spectra Energy Company

February 8, 2016

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

Dear Ms. Walli:

Re: EB-2015-0237 – Union Gas Limited ("Union") – 2015 Natural Gas Market Review ("NGMR") Submission

Pursuant to the Ontario Energy Board's (the "Board") letter dated February 3, 2016, please find attached Union's written submission on issues raised at the NGMR Stakeholder Conference held January 21, 2016.

If you have any questions, please contact me at 519-436-5473.

Yours truly,

[*Original Signed by*]

Karen Hockin
Manager, Regulatory Initiatives

Encl.

c.c.: Mark Kitchen, Union Gas
Crawford Smith, Torys

Submission of Union Gas Limited

The Ontario Energy Board ("the Board") initiated the 2015 Natural Gas Market Review EB-2015-0237 ("NGMR") to examine ongoing developments in the North American natural gas market and to assist the Board in its consideration of potential impacts from those developments going forward.

On January 4, 2016, the Board released a 2015 Natural Gas Market Review Summary Report and related slide presentation prepared for Board staff by Navigant Consulting, Inc. ("Navigant"). The Report and presentation addressed factors influencing current North American and Ontario natural gas market trends and provided a forecast of natural gas supply, demand and prices. Slides included an update of the changes subsequent to the Board's 2014 NGMR Review.

On January 21, 2016, stakeholders participated in a Stakeholder Conference at which time presentations were made on various topics, with time allowed for questions and discussion. The original letter for the proceeding (dated November 25, 2015) invited stakeholders to submit written comments subsequent to the Stakeholder Conference.

Following is the written submission of Union Gas Limited ("Union"). Union's submission focuses on the key topics presented by it as well comments on the ICF and Navigant forecast presentations. It also responds to issues raised during the Stakeholder Conference by others.

I) UNION GAS PRESENTATION

Union highlighted the following key points in its presentation:

1. Appalachian production continues to outperform expectations providing Ontario the opportunity to assess abundant and cost effective supply located nearby

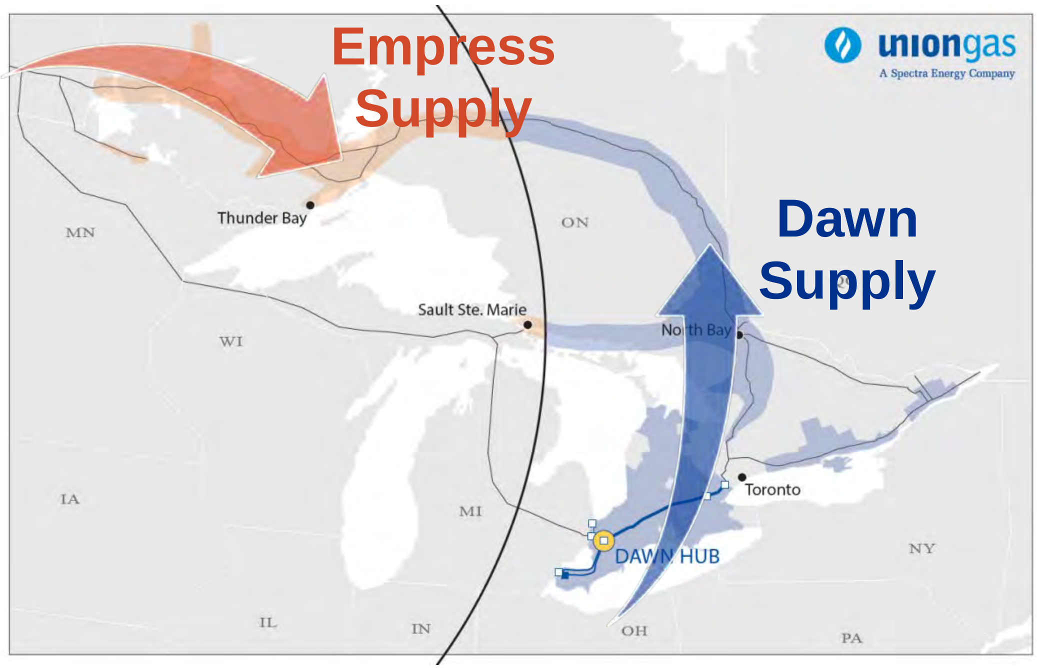
Union relies on ICF forecasts that show Appalachian natural gas production outperforming expectations, with the 2035 production forecast now three times higher than the 2035 production forecast made in 2011. Projected to be approximately 43 Bcf by 2035, Appalachia would produce over twice as much gas as the Western Canadian Sedimentary Basin ("WCSB") at its peak. Appalachian production provides Ontario with an opportunity to diversify supply and lower natural gas costs for many years to come.

There is new pipeline infrastructure planned which will provide direct access to Appalachian supply at Dawn and further access at Niagara/Chippawa. These include greenfield projects such as Rover and NEXUS, as well as organic growth within the National Fuel Gas ("NFG"), Tennessee Gas Pipeline ("TGP") and Empire Pipeline systems. When these projects are complete, there will be a balanced mix of transportation capacity from Appalachia to Ontario with receipts at both Dawn and Niagara/Chippawa.

2. Western Canadian supply available to Ontario is expected to continue to decline but remains available for supply diversity

Western Canadian natural gas is less economic than Dawn supply or most other basins landing at Dawn (including Appalachian supply) for most of the Ontario market. WCSB supply is expected to only be economic for portions of Ontario, as illustrated in Figure 1 below.

Figure 1 Western Canadian Supply Expectations

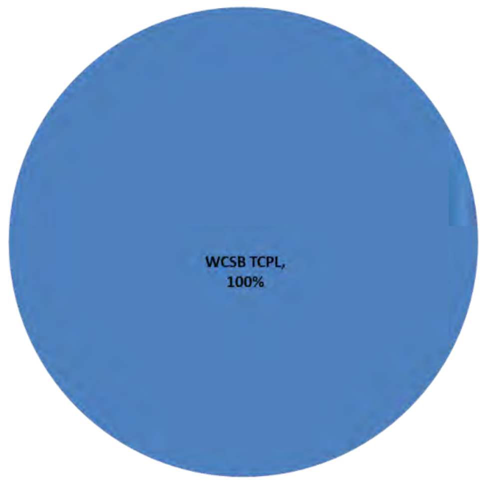


In the Northwest part of Ontario, including Sault Ste. Marie, Union will serve the market primarily through Empress supply. In Southwestern, Northern and Eastern Ontario, Dawn and Appalachian supply will be more economic due to its relative proximity. As has been discussed at length over the past few years in various applications before the Board, including the very recent NEXUS Long-term Contract Pre-approval Application (EB-2015-0166/EB-2015-0175), Union and other Eastern Canadian LDCs are in the process of replacing Empress supply with these new sources of supply.

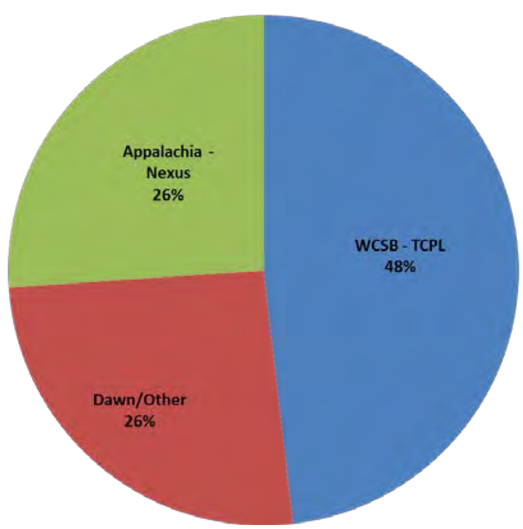
Western Canadian supply will continue to represent approximately 19% of Union's total natural gas supply portfolio and 48% of Union's North Portfolio in 2017/2018. Figures 2 and 3 illustrate Union's North and South natural gas supply mix. Figure 4 reflects the combined Union North and Union South portfolios currently, and in 2017/2018.

Figure 2[1]

January 2015 Union North Portfolio



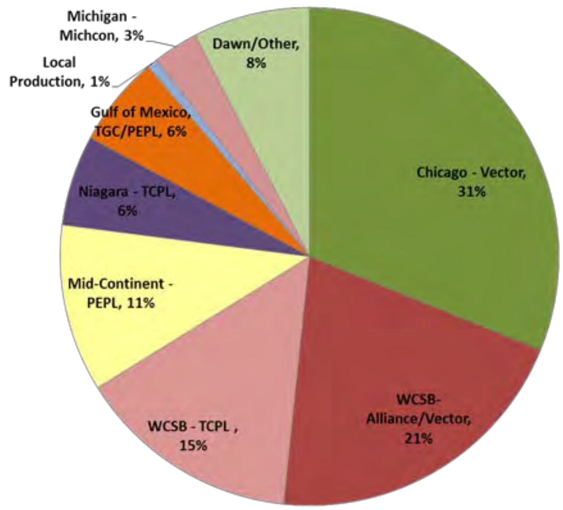
January 2018 Projected Union North Portfolio



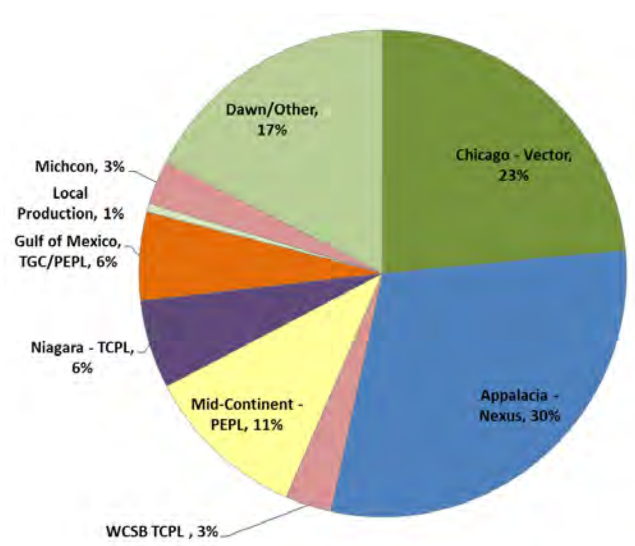
[1] EB-2015-0166, Exhibit A, p 29, Figure 5-1

FIGURE 3[2]

January 2015 Union South Portfolio



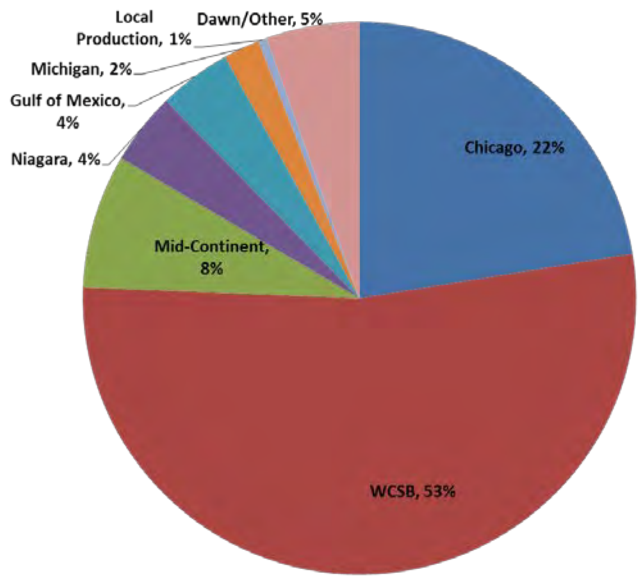
January 2018 Projected Union South Portfolio



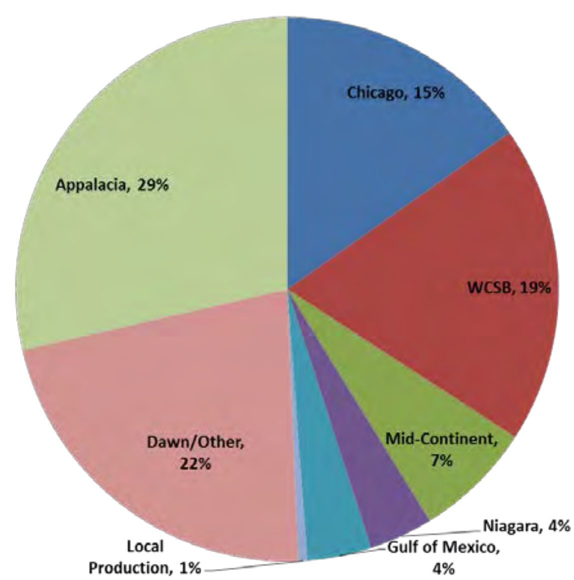
[2] EB-2015-0166, Exhibit A, p 31, Figure 5-2

FIGURE 4[3]

January 2015 North/South Combined Portfolio



Projected January 2018 North/South Combined Portfolio



[3] EB-2015-0166, Exhibit A, p 31, Figures 5-3, 5-4

3. Ontario market adjusting to the changing North American supply dynamics

Union has received Board approval, through several applications, to expand its Dawn Parkway System. Construction is well underway. Union is investing approximately $1.5 billion in infrastructure in order to grow take-away capacity from Dawn by 1.3 Bcf/d. TransCanada and Enbridge are making a similar investment to expand, and to provide more access for customers to Dawn and to Appalachian gas. All the facilities, with the exception of TransCanada's 2017 Vaughan Mainline Expansion, which is currently in front of the National Energy Board ("NEB"), have received regulatory approval.

Union's Dawn Parkway System expansion is driven by long term commitments from Eastern Canadian utilities that reserved approximately 85% of the incremental transportation capacity. Eastern consumers are seeking access to supply closer to the market through Dawn and other eastern receipt points such as Niagara and Chippawa.

The Mainline Settlement Agreement between TransCanada and the Eastern Canadian utilities (signed October 2013) enables the expansion of infrastructure in Ontario and provides a framework to continue to expand capacity to meet market demand for further access to Dawn and Niagara/Chippawa to 2030.

If TransCanada is planning to expand a certain path, they are able to request existing customers on the same path to "term up" by extending their contract term by 5 years. This ensures that TransCanada is only adding new capacity if existing customers have plans to use the same path long term. As a result of TransCanada's Term Up Provision, almost all short haul TransCanada shippers on the Eastern Ontario Triangle have committed to the path and have extended the term of their transportation contracts to 2022. At the same time, the Eastern Canadian utilities have adjusted to the changing North American supply dynamics, not only by altering transportation capacity held as part of the gas supply portfolio, but through changes to Quarterly Rate Adjustment

Mechanism ("QRAM") reference prices and offering of new services such as North T-service Transportation from Dawn.

Union conducted an open season for transportation capacity commencing November 2018 and November 2019 that was coordinated with a TransCanada new capacity open season. Union is in the process of assessing the bids received, however incremental Dawn Parkway System facilities in 2018 are not likely required. Potential demand for Dawn Parkway System transportation beyond 2018 includes additional long haul to short haul conversion for Eastern Canadian utilities as well as industrial growth, power generation load, LNG/CNG development for the transportation market, and other growth in Canada and the U.S. Northeast consuming markets. Union would expect to conduct another open season for transportation commencing November 2019 at the end of 2016.

4. Robust and reliable Dawn Parkway System provides a critical link between Ontario markets and natural gas supply sources.

The Dawn Parkway System is a critical component of gas supply, not only for Union South, but for Union North, the GTA, other parts of Eastern Canada (including all of Quebec) and the U.S. Northeast. Reliability of supply is paramount to Union and its customers.

Union supports reliability of gas supply through:

- Multiple upstream connections to the Dawn Parkway System (at Dawn, Kirkwall and Parkway) that include TransCanada, Great Lakes Gas Transmission, Vector Pipeline, Panhandle Eastern Pipeline, Bluewater Gas Storage, and DTE Energy as well as NFG, TGP and Empire Pipeline via TransCanada.
- The abundant readily available storage assets of Union and Enbridge at the Dawn Hub which total 271 Bcfd and hold enough gas to serve approximately 2.7 million single detached houses in Ontario for a full year.

- Robust Dawn Parkway System design (including multiple pipelines, cross-over valves, remote operation capability and loss of critical unit ("LCU") protection).
- Comprehensive Operations Management System and Risk Management Processes.

Benefits of Changing Supply/Market Dynamics

The Appalachian Basin (Marcellus and Utica supplies) has experienced the most prolific natural gas production growth in North America. This abundant supply is located within the Great Lakes region in close proximity to Ontario and other Eastern North American consuming markets.

As Union noted in the 2014 NGMR, accessing this new supply is essential to providing diversity of supply and affordable energy prices to fuel Ontario's economic competitiveness. New infrastructure is required to Ontario from Appalachia and within Ontario to access the new and developing supply sources through incremental short haul transportation services.

Ultimately, the combination of new take away capacity and new pipeline connectivity to Dawn will increase the depth and liquidity of the Dawn Hub, benefiting all Ontario natural gas consumers through diversity of supply, increased security of supply and access to more cost-competitive supply. The Board has supported new pipeline connectivity to Dawn through its recent Decisions in the NEXUS case (EB-2015-0166/EB-2015-0175) and additional take-away capacity through the approval of the 2017 Dawn Parkway Project (EB-2015-0200). These Decisions and projects result in a positive impact on Ontario by facilitating a direct connection to new sources of supply and to support and grow Dawn as a liquid trading hub.

II) ICF AND NAVIGANT FORECASTS

ICF presented an update to the assessment of the Ontario natural gas market it prepared and presented at the 2014 NGMR. ICF noted there have been significant changes in the North American gas market that have had a material impact on ICF's projections.

These changes include:

- higher shale production from Appalachia and the WCSB than previously forecast (less pessimistic forecast for WCSB)
- lower natural gas price outlook to 2025
- modest increase in North American demand due to lower prices, Ontario consumption about the same
- lower oil price outlook
- announced Ontario infrastructure expansions are progressing
- the Energy East Settlement Agreement better defined future Ontario capacity and costs for TransCanada's system

The Board engaged Navigant to prepare and present an update of the changes since their 2014 review in market conditions and emerging trends and developments in the North American and Ontario natural gas markets.

The general conclusions of the ICF and Navigant forecasts are for the most part aligned. However, differences in forecast methodology and modelling assumptions resulted in variations in their specific forecasts. Two main differences were that ICF forecast an increase in the WCSB production as a result of more shale gas production than previously forecast, while Navigant forecast a slight decrease in WCSB production. In addition, ICF included the impact of the announced Ontario infrastructure expansions in their forecast including the 2015 Dawn to Parkway expansions that are now in service and the 2016 and 2017 Dawn to Parkway expansions that have been approved by the Board and are in various phases of construction. The Ontario infrastructure projects that Navigant included in their forecast is unclear. They did not include TransCanada's Kings North Project (without this project included the other upstream projects on Enbridge and Union could not flow to market) and did not specify whether or not the remainder of the planned and completed infrastructure expansion in Ontario (2015-2017) was included in their forecast. Not including planned and completed infrastructure within Ontario would dramatically impact the forecast.

ICF Key Observations

The following key observations were presented by ICF at the NGMR Stakeholder Conference.

- Rapid growth in shale gas production will continue to drive change in Ontario gas markets. Production from Appalachia has consistently exceeded analyst projections.

- ICF projects the Appalachian Basin to be the lowest cost major source of delivered natural gas supply for most of Ontario.

- Additional infrastructure through Michigan and New York to Ontario, and within Ontario, will be needed to ensure that Ontario has reliable, economic access to the growing Appalachian Basin supply.
  - Ontario has already taken significant steps to expand infrastructure to provide greater access to Dawn and Appalachian supplies. The Board has also approved the cost consequences of long term transportation contracts for both Enbridge and Union on the NEXUS pipeline.
  - Without new infrastructure, Ontario will have to rely on supplies from Western Canada, which have a higher delivered cost and will expose Ontario to more seasonal price volatility.

- Western Canadian natural gas supply delivered to Ontario will continue to decline through 2020. Western Canadian supplies will continue to be an important source of supply to Ontario (especially in the Northwest part of the province) and contribute to supply diversity within Ontario.

- Ontario and the U.S. Northeast markets will continue to be linked.
  - Appalachian Basin production will rely on Michigan and Ontario storage to serve seasonal markets.
  - Pipeline capacity additions from the Appalachian Basin to demand centers in New York and New England are not expected to be sufficient to meet peak winter demand without flows from Ontario and Québec into the Northeastern U.S. on Iroquois, PNGTS and other pipes. As a result, pipeline capacity through Ontario and Quebec to the Northeast U.S. will remain a critical component of peak period supply.

These expected changes in supply and transportation will ensure Ontario consumers have access to diverse, reliable and economic natural gas supply.

III) UNION'S RESPONSE TO ISSUES RAISED BY OTHERS

Union's response to issues that were raised by other parties during their presentations, specifically Northeast Midstream and TransCanada, is set out below:

Northeast Midstream

Northeast Midstream presented LNG information related to both peak usage and the use of LNG as an alternative in the Ontario market. Union received the corrected slide 2 from the Northeast Midstream presentation which compared the cost of Dawn Parkway System capital expansions to the cost of an LNG alternative based on days of utilization.

In their correction letter dated January 22, 2016, Northeast Midstream indicated that after adjusting for an error in calculation, the marginal cost of the Dawn Parkway System expansion is less than the cost of LNG in all cases, and an updated graph was provided.

Union acknowledges there may be a place for future LNG in Ontario and will consider LNG alternatives where appropriate.

<u>TransCanada</u>

TransCanada presented the following conclusions in its presentation at the NGMR:

i. Alternate sources of supply are available but the WCSB continues to be a significant supply source for Ontario
ii. Niagara/Chippawa and Waddington offer path diversity and landed cost advantages
iii. Future gas supply decisions should consider:
   - Landed cost values
   - Supply diversity
   - Path Diversity

As addressed below, Union disagrees with many of TransCanada's statements.

i) Alternate Sources of Supply

a) Contrary to assertions by TransCanada, the diversity of Ontario gas supply has increased as a result of the shift from the WCSB

TransCanada's presentation slide 11 suggests Union's portfolio is 91 % at Dawn. The correct figures are set out in Figures 2 and 3 for Union North and Union South, plus

Figure 4 for total Union portfolio figures. The 2015 portfolios are prior to the shift from the WCSB and long haul transportation to supply located closer to the market and short haul transportation. The 2018 portfolios include this shift as well as inclusion of the long term NEXUS transportation contract.

TransCanada appears to be confusing supply flowing through Dawn with supply at Dawn. Most of Union's "Dawn Supply" is actually sourced upstream of Dawn (for example, in the Gulf of Mexico, mid-continent, Chicago or, for 2017 the Marcellus/Utica supply basin). These upstream supplies offer diversity and in doing so, help make Dawn as a market hub increasingly robust and liquid. Providing more physical supply options for parties at Dawn also means more shippers and markets will be attracted to Dawn in the future. Union also buys gas at Dawn. In this case, the source of supply of this "Dawn Gas" is not known. Gas bought directly at Dawn represents a small part of Union's total portfolio (i.e. usually less than 10%).

The movement of Western Canadian natural gas into Ontario will decline but western gas will continue to make up part of Ontario's supply portfolio and remains available for supply diversity. Union's supply portfolio is diversified, as demonstrated in the 2015 to 2018 comparison charts in Figures 2, 3 and 4.

b) Contrary to assertions by TransCanada, supply basin diversity will reduce price volatility, and Ontario will be less susceptible to price spikes going forward.

Regarding price spikes, ICF noted in its presentation at slide 3 that "Without new infrastructure, Ontario will have to rely on supplies from Western Canada, which have a higher delivered cost. Ontario will also be exposed to more seasonal price volatility". TransCanada's presentation slide 9 is a comparison of spot gas prices at two locations separated by thousands of kilometers. TransCanada has not included the cost of short term transportation in those spot gas prices which would directly, and fairly, compare landed cost at Dawn from Empress with purchases in the market at Dawn. Including the cost of the short term transportation (such as IT or STFT on the TransCanada Mainline) would capture the volatility of these market based services.

The Board has already dealt with this issue. It acknowledged the importance of diversity of supply and access to emerging supply basins to reduce volatility in its Decision (EB-2015-0166/EB-2015-0175 dated December 17, 2015) in the NEXUS contract application by Union and Enbridge ("NEXUS Decision"):

> *The OEB agrees with Union and Enbridge that procuring supply directly in the Appalachian region results in benefits that could not be achieved through the purchase of delivered natural gas supplies at a market hub. These benefits include access to pricing signals, and pricing indices available in the Appalachian region that the utilities would not be able to access directly without the Contracts. The OEB finds that this new, direct access enhances diversity of supply. In situations where gas prices are increasing at one location, the ability to access gas supply at another location provides alternatives that can reduce price volatility. In addition, the evidence indicates that at times of peak demand, a lack of transportation capacity can be the primary constraint driving cost increases for the utilities. (p. 15)*

c) Contrary to assertions by TransCanada that Union's gas supply decisions result in risk through over-reliance on Dawn and the Dawn Parkway System, Union has increased diversity with recent gas supply portfolio changes.

Union is not overly reliant on the Dawn Parkway System. As shown in the portfolio charts in Figures 2, 3 and 4 above and as stated by the Board in its NEXUS Decision, there is increased diversity in Union's portfolio.

> *The OEB finds that securing transportation capacity on a new pipeline increases contract diversity. In addition to contract diversity for transportation, the OEB finds the Contracts will increase supply diversity. As a result, the proposed Contracts are appropriate additions to the applicants' gas supply portfolios. While the Contracts represent a significant portion of each applicant's overall gas supply portfolio, the OEB does not find that the Contracts represent an overreliance on a single contract. (p. 17)*

In addition, as noted earlier in this submission, Union addressed the benefits of diverse supply in providing supply reliability at Dawn, including the interconnected pipelines and the large storage assets connected directly to the Dawn Hub and the Dawn Parkway System in its NGMR presentation. In addition, Union's multiple integrated pipeline and compressor design as well as the comprehensive Operations Management Systems and Risk Management Processes provide Ontario consumers with a safe and reliable Dawn Parkway System. Union understands that a utility's primary function is to ensure the physical reliability of its assets.

The Board acknowledged in its NEXUS Decision that transportation diversity will be enhanced:

> *For Union, the Appalachian supplies flowing on NEXUS will replace some of its Western Canadian supplies. The increase in diversity is most pronounced in Union's northern service area, which is currently 100% reliant on Western Canadian gas, although diversity will also be improved in Union's southern service area. In the case of Enbridge, the Appalachian supplies flowing on NEXUS will replace some of the gas currently sourced at Chicago, which will enhance the diversity of Enbridge's supply portfolio. The OEB finds that transportation diversity will be enhanced for both Union and Enbridge by the addition of a new, direct route for Appalachian basin gas to reach Dawn. (pp 14,15)*

ii) <u>Niagara/Chippawa and Waddington</u>

TransCanada asserts that there is a lower landed cost at Niagara/Chippawa than at Dawn. As Union stated in its recent Burlington Oakville Pipeline Project (EB-2014-0182) hearing, as import capacity and takeaway capacity at Niagara come into equilibrium, the low price anomalies recently experienced at Niagara would disappear and the landed cost of gas from Niagara would become similar to or higher than the landed cost of gas at Dawn. Since November 1, 2015, Union has seen this come to fruition. Since that time, the landed cost advantage of Niagara gas compared to Dawn has reduced and in some months reversed, with Unions' most recent monthly purchase showing Niagara purchased gas landing at Dawn at more than $0.10/GJ higher than gas purchased at Dawn.

TransCanada also asserts that there is a low cost to expand capacity from Niagara into Ontario. However, TransCanada did not address any costs needed to expand capacity upstream of Niagara that would be needed to deliver gas to TransCanada's system at Niagara.

Further, Niagara is not a liquid trading hub (see Union's Burlington Oakville Pipeline Proceeding (EB-2014-0182), Union's Reply evidence, Exhibit C, pp. 9-15). Rather, Niagara is a trans-shipment point between TransCanada and three U.S. Pipelines: National Fuel Gas, Dominion Transmission and Tennessee Gas Pipeline.

> *Since 2012, flow has primarily reversed from the United States to bring Marcellus production through Niagara into Canada. Despite its proximity to the Marcellus region, **Niagara is not a liquid point**. Liquidity at Niagara is low due to its limited pipeline connectivity, distance from storage, limited number of counterparties who buy and sell at that point and limited price discovery. Even with TransCanada transportation contracts expected to exceed 1 PJ/d from Niagara to points in Ontario and Quebec, Niagara remains a trans-shipment point and is not expected to develop into a liquid trading point. (p.10)*

This lack of liquidity at Niagara is reiterated in the following excerpt from the Board's NEXUS Decision:

> *The OEB does not find flowing gas through Niagara to be a comparable alternative to the Contracts which provide direct access at the gas supply source through NEXUS. In addition, the OEB does not find Niagara to be a viable alternative as the evidence indicates that capacity at Niagara is not available in sufficient quantities to meet Union's needs. (p.16)*

TransCanada asserts that Waddington will become a net import point on an annual basis, with a landed cost to Eastern Ontario similar to the landed cost from Dawn. TransCanada did not address the likelihood that the change in pipeline capacity upstream of Waddington necessary to enable flows into Ontario (the South-to-North "SONO" Project proposed by Iroquois Pipeline) would proceed. However, as noted by ICF, even if SONO proceeds, Waddington is likely to become only a seasonal supply point, with potential flows into Ontario only during the summer and shoulder months. As forecast by ICF, pipeline flows from Ontario into New York through Waddington are expected to continue during winter months, even if Waddington becomes a supply point for Ontario during summer months.

Union notes that Waddington is also a trans-shipment point between pipelines: TransCanada and its affiliate Iroquois Gas Transmission. Waddington is also not a liquid trading point and, as can be seen in peak winter periods, can be extremely volatile with natural gas prices multiple times higher than Dawn.

iii) Future gas supply decisions

TransCanada implies Union would make different gas supply decisions if they were based on landed cost values, supply diversity and path diversity. Union, in fact, uses these criteria and others, as part of its decision-making.

When managing its transportation portfolio and analyzing potential pipeline paths and supply sources, Union does so in the context of its Gas Supply Planning Principles. These principles ensure customers consistently receive secure, diverse natural gas supply at a prudently incurred cost and at minimal risk. They also help Union determine whether changes are required to the current transportation and supply portfolios. The principles are as follows:

1. Ensure secure and reliable natural gas supply to Union's service territory;
2. Minimize risk by diversifying contract terms, supply basins and upstream pipelines;
3. Encourage new sources of supply as well as new infrastructure to Union's service territory;
4. Meet planned design day and seasonal gas delivery requirements; and

5. Deliver natural gas to various receipt points on Union's system to maintain system integrity.

Union's Gas Supply Planning Principles were reviewed by Sussex Consultants in an independent review of Union's Gas Supply Planning process and have been presented to and accepted by the Board on many occasions.

The factors identified by TransCanada are included as considerations within these principles, a point noted by the Board in the NEXUS Decision.

In summary, while there is production in the WCSB, the amount available to Ontario is declining and is at a higher delivered cost for most of Ontario. Union continues to hold long haul capacity from WCSB for the Northwest part of Ontario. However, that supply is less economic than Dawn or Appalachian supply for most of the Ontario market.

Significant investments are underway to provide more access to Dawn and to Appalachian gas. Dawn and the Dawn Parkway System are robust and reliable and provide a critical link between Ontario markets and natural gas supply sources. Accessing new Appalachian supply is essential to providing diversity of supply and affordable energy prices to fuel Ontario's economic competitiveness.

The Board has recognized the benefit of increased diversity of supply and of transportation path by having direct access to this new source of supply in addition to other basins. As noted earlier in this submission, the Board has also recognized the limitations regarding Niagara.

IV CONCLUSIONS

The NGMR allowed parties the opportunity to share updates and information on the overall natural gas market. Union found that the Stakeholder Conference was informative and facilitated a useful exchange of ideas. No changes to the current regulatory framework are necessary as a result of the NGMR. To the extent the NGMR highlighted changes in the natural gas market, the consequences of these changes are or will be before the Board in a variety of upcoming proceedings; for example, the Distributors Gas Supply Planning Consultation and, the Community Expansion generic proceeding.