

July 9, 2018

BY COURIER & RESS

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

Dear Ms. Walli:

**RE: EB-2018-0013 – Union Gas Limited (“Union”) – Kingsville Transmission  
Reinforcement Project – Responses to Board Panel Questions**

Please find attached Union’s responses to the questions asked by the Ontario Energy Board (“the Board”) Panel specific to the above-noted proceeding.

The responses will be filed through the Board’s RESS and will be available on Union’s website at: [www.uniongas.com](http://www.uniongas.com).

Should you have any questions or would like to discuss in more detail, please contact me at 519-436-5473.

Yours truly,

*[original signed by]*

Karen Hockin  
Specialist, Regulatory Initiatives

Encl.

cc: C. Keizer, Torys  
M. Seers, Torys  
EB-2018-0013 Intervenors

UNION GAS LIMITED

Answer to Board Panel

ISSUE #1: Long-term system expansion plans for the Panhandle System

**Question 1:**

Does Union Gas have any further work planned on the Panhandle System in the next 5 years that would require OEB approval under section 90 of the *Ontario Energy Board Act, 1998* (leave to construct approval)? Please provide details. If further applications are planned, please explain how the Kingsville Transmission Reinforcement Project may change if this project were considered in conjunction with future work.

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**Response:**

There is no transmission system reinforcement planned in the next 5 years. Based on the current demand forecast for the Panhandle System, additional Panhandle Transmission System reinforcement is required to serve the forecast design day demands beyond the winter of 2024/2025 and without additional reinforcement at that time no further customer growth in the Windsor and Kingsville–Leamington market areas could occur.

Union considered the future reinforcement needs of the Panhandle Transmission System to serve growth beyond winter of 2024/2025 when evaluating and comparing the alternatives for the Kingsville Transmission Reinforcement Project as shown in Exhibit A, Tab 8, Schedule 1. The next transmission project likely includes the installation of 14 km of NPS 36 looping of the existing NPS 20 Panhandle Line from the Dover Transmission Station toward the Comber Transmission Station.

Union has filed its Chatham-Kent Rural Project (EB-2018-0188) which is required to serve in-franchise growth in the Chatham Kent area. Panhandle Transmission System capacity is required to serve these customers. The Chatham-Kent Rural Project reinforces the high pressure distribution system downstream of the Panhandle Transmission System in a geographically distant location from the Kingsville Transmission Reinforcement Project. A combined project cannot be created which can simultaneously reinforce the Panhandle Transmission System and provide increased capacity of both the Chatham-Kent high pressure distribution system and the Leamington-Kingsville high pressure distribution system.

Union will be filing a leave to construct application for the Windsor Line Replacement Project. The age and overall integrity of the pipeline are the drivers for this replacement project. Construction is scheduled for 2020. There are no other integrity issues or class location issues in the 5 year forecast requiring leave to construct approval.

While changes to the demand forecast may occur due to unforeseen circumstances, based on the forecast that was filed for the Project there are no other distribution reinforcements in the next

five years that will require a leave to construct application (other than stated above). There can be an unexpected large customer locating in the area, changes to Class Location, or unknown changes to the forecast or location of growth that will drive a leave to construct application in the future.

UNION GAS LIMITED

Answer to Board Panel

ISSUE #1: Long-term system expansion plans for the Panhandle System

**Question 2:**

How will Union Gas ensure that the demand forecast for each planned capital expansion project will be unique, to avoid double counting the same incremental demand across distinct leave to construct applications?

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**Response:**

Union ensures there is no double counting of forecast demand across distinct leave to construct applications by including only incremental demands for each project and by matching the forecast demand on the system with the sum of the capacity created by the individual expansion projects.

The Panhandle System demand forecast supporting this application includes an update to the approved Panhandle System demand forecast filed in the Panhandle Reinforcement Project (EB-2016-0186). This update is provided in Table 6-1 of the pre-filed evidence (see Exhibit A, Tab 6, p. 2, lines 9-18). As shown in this table, the total cumulative increase in firm Design Day demand between 2017 and 2021 is now forecast to be 133 TJ/d. This demand forecast exceeds the 106 TJ/d previously forecast and filed in EB-2016-0186 by 27 TJ/d.

As part of the Kingsville Transmission Reinforcement Project application, Union has identified the incremental forecasted growth between 2017 and 2021 to be 27 TJ/d (Exhibit A, Tab 6, p. 2, lines 9-18) and an increase to the projected future demands of 10.9 TJ/d per year for the period beyond 2021, resulting in total incremental demand of 68 TJ/d (Exhibit A, Tab 6, p. 3, lines 1-4).

The Panhandle Reinforcement Project created incremental Panhandle Transmission System capacity of 102 TJ/d<sup>1</sup> and the Kingsville Transmission Reinforcement Project will create incremental system capacity of 71 TJ/d for total incremental capacity of 173 TJ/d.

As shown in Exhibit A, Tab 6, Table 6-1, the incremental demand on the Panhandle Transmission System is forecast to be 176 TJ/d by 2025, which can only be met through the construction of both projects. The combined capacity of 173 TJ/d compared to the forecast demand is how Union ensures there is no double counting.

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<sup>1</sup> See Exhibit A, Tab 7, p.9 for an explanation of the adjustment to capacity from 106 TJ/d as filed in EB-2016-0186 to 102 TJ/d of incremental capacity.

UNION GAS LIMITED

Answer to Board Panel

ISSUE #2: Multiple needs served by this project

**Question 3:**

In Union Gas' opinion, will this project serve distribution needs in addition to transmission needs?

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**Response:**

The Kingsville Transmission Reinforcement Project is a reinforcement of the Panhandle Transmission System and will have no directly connected customers. The Proposed Project is a transmission pipeline and, consistent with all transmission pipelines, it has an ancillary function of serving distribution needs. Many transmission reinforcement projects have the ability to increase capacity of downstream distribution systems depending upon where the transmission reinforcement facilities are constructed and/or where the distribution systems are connected to the transmission system.

The Proposed Project, because of its strategic location, allows both the Panhandle Transmission System and the downstream distribution systems to continue to serve the growth in system demands most efficiently, while offsetting costly distribution system reinforcement projects that will no longer be required once the Project is constructed (avoids \$10.4 million in distribution reinforcement costs).

The following excerpt from evidence at Exhibit A, Tab 8, p. 2, line 17 through p. 3 line 2 explains the importance of the strategic location for the Project.

*“Construction of the Project will decrease the pressure loss on the laterals between the NPS 20 Panhandle Line and the distribution system thus alleviating the constraint on the Panhandle System and allowing future system-wide growth. The Project will also bring a high pressure source of gas close to the location of the distribution constraint at the Kingsville Gate Station thus alleviating this constraint. This has the added benefit of offsetting significant distribution system reinforcement.”*

UNION GAS LIMITED

Answer to Board Panel

ISSUE #2: Multiple needs served by this project

**Question 4:**

The OEB's "Guidelines on the Economic Tests for Transmission Pipeline Applications" define a transmission pipeline as "any planned or proposed pipeline project that would provide transportation services to move natural gas on behalf of other shippers within Ontario".<sup>1</sup> What is Union Gas' understanding of the applicability of this definition to the proposed Kingsville Transmission Reinforcement Project?

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**Response:**

Union's position is that the Project is in the public interest, and that the Economic Tests set out in the Board's report issued in 1987 in E.B.O. 134 (the "E.B.O. 134 Report") are appropriate for the purposes of evaluating the project.

The Kingsville Transmission Reinforcement Project ("KTRP") is a transmission project that increases capacity on the Panhandle System to meet forecasted demand growth generally that arises from a variety of sources over a large geographic area of the Union Gas franchise. No specifically identified customer or customers is driving the Project. As the forecast incremental demand extends throughout the service area affected, the increased capacity is available on a first come, first served basis.

This pipeline is required to meet growing demand for natural gas, and will provide benefits, both direct and indirect, to a significant number of ratepayers in southwestern Ontario (please see response to Board Panel Question 8 for further discussion of benefits).

Operationally, in addition to increasing capacity on the Panhandle Transmission System, the KTRP will also enable Union to avoid unnecessary and costly distribution reinforcement that would otherwise be necessary. This has a public interest benefit to existing and future ratepayers. Commercially, although a portion of the incremental capacity from the Project will serve forecasted demand growth in the Kingsville area, the Project will also serve growing demand from Chatham through to Windsor. All of these benefits are captured in the analysis set out in the E.B.O 134 Report.

The DCF methodology and resulting NPV and PI outcomes are the same under both the E.B.O. 134 Report and the Board's report issued in January 1998 in E.B.O. 188 (the "E.B.O. 188 Report"). The E.B.O. 188 Report was specific to distribution system expansion, drawing on the DCF criteria set out in the E.B.O. 134 Report, and approached distribution in the context of evaluating and managing distribution expansion projects as a portfolio.

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<sup>1</sup> Filing Guidelines on the Economic Tests for Transmission Pipeline Applications (EB-2012-0092)

There are a number of issues with applying the portfolio approach Economic Test set out in the E.B.O. 188 Report to the KTRP:

1. The KTRP does not connect any distribution customers. This is not a distribution project that connects a single, or even a small number of identifiable customers. It provides capacity on the Panhandle Transmission System that feeds a significant number of existing and potential customers over a wide geographic area. This is not a typical distribution project, with a specific customer need and clearly identifiable costs, where a potential aid to construct would apply.
2. For KTRP to meet the Project PI of 0.8, a significant aid to construct would be required. The magnitude of the aid required to get to a PI of 0.8 would impact the viability of the Project and it would likely not proceed. Without the ability to add transmission reinforcements, Union will not be able to continue to meet incremental demand from businesses, schools, hospitals, and other natural gas customers seeking access to natural gas. If the project does not proceed, the benefits to the broader southwestern Ontario economy will not be realized. (Please see response to Board Panel Question 9 for further details.)
3. Inclusion of the Project in the Rolling Portfolio is not feasible. The KTRP is 40 times the size of Union's normalized reinforcement cost embedded within the rolling portfolio. The portfolio cannot absorb the impact and meet the criteria set out in the E.B.O. 188 Report of maintaining a PI greater than or equal to 1.0. Even if the KTRP was able to be absorbed in the Rolling Portfolio, there are a number of other sizable transmission reinforcement projects that have been identified in the Union Gas Asset Management Plan, and are anticipated to be required over the next few years. The Rolling Portfolio is unable to absorb this type of large transmission expansion.

The inability to access the benefits of natural gas will have negative impacts to the existing and future customers, in the form of higher energy prices, and reduced economic competitiveness.

For clarity, once KTRP is in service, additional investment in distribution facilities will be required to attach all of the forecasted demand underpinning the KTRP. These customers will provide incremental distribution revenues. The Economic Test set out in the E.B.O. 188 Report was designed to evaluate this type of investment, where there are incremental distribution revenues and incremental costs, and will be used by Union to evaluate the distribution expansions that the KTRP enables.

Therefore, the Economic Tests set out in the E.B.O. 134 Report should be used to evaluate the public interest of the Project. This is consistent with the wording and intent of the E.B.O. 134 Report.

With respect to the quote from the OEB's "Guidelines on the Economic Tests for Transmission Pipeline Applications" that defines a transmission pipeline as "any planned or proposed pipeline project that would provide transportation services to move natural gas on behalf of other shippers within Ontario",<sup>2</sup> Union is of the view this definition is too narrow, incomplete and out of context. For context, that definition was added when the Board amended the guidelines set out in the E.B.O. 134 Report on February 21, 2013 in EB-2012-0092.

The Board added an additional requirement, Item 14 in the amended guidelines, which requires an assessment of the potential impacts of proposed natural gas pipelines on existing transportation pipeline infrastructure in Ontario. It also added a definition providing that this new specific requirement would only apply to "any planned or proposed pipeline project that would provide transportation services to move natural gas on behalf of other shippers within Ontario."

This definition does not apply to the KTRP, because the Project would not directly "provide transportation services to move natural gas on behalf of other shippers within Ontario." But that does not render the Economic Tests set out in the E.B.O. 134 Report any less appropriate for the assessment of the KTRP. The purpose of the E.B.O. 134 Report was to set out Economic Tests that would apply to all natural gas system expansion projects in Ontario.<sup>3</sup> The definition added to the guidelines does not change that.

As set out above, Union understands that the Economic Tests set out in the E.B.O. 188 Report, do not apply to the KTRP because they only apply to distribution projects, and in any event are not appropriate. Thus, in Union's view, the Board should use the Economic Tests set out in the E.B.O. 134 Report to evaluate the KTRP.

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<sup>2</sup> Filing Guidelines on the Economic Tests for Transmission Pipeline Applications (EB-2012-0092)

<sup>3</sup> OEB's Report on the Expansion of Natural Gas System in Ontario, (the E.B.O. 134 Report), para. 6.68 "The Board directs all utilities to employ DCF analysis as part of its assessment of the feasibility of projects for system expansion,"



UNION GAS LIMITED

Answer to Board Panel

ISSUE #2: Multiple needs served by this project

**Question 5:**

Please confirm whether the demand forecast supporting this application is incremental to the demand forecast approved by the Panhandle Reinforcement decision (EB-2017-0118). If it is not incremental, please explain.

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**Response:**

Union assumes this question should refer to the Panhandle Reinforcement Project proceeding (EB-2016-0186) rather than EB-2017-0118.<sup>1</sup>

Confirmed. Please see the response to Board Panel Question 2.

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<sup>1</sup> EB-2017-0118 - Union Gas 2017 Panhandle Replacement Project. Application requested approval to construct 600 metres of NPS 16 pipeline in City of Windsor. Involved the removal of existing NPS 16 pipeline and replace it with new NPS 16 pipeline to comply with land use and population density design requirements. OEB issued Decision and Order June 23, 2017 approving the project.

UNION GAS LIMITED

Answer to Board Panel

ISSUE #2: Multiple needs served by this project

**Question 6:**

Please provide the proposed incremental pipeline capacity allocated to:

i) general service customers on the Panhandle System ii) contract customers (i.e. including shippers) on the Panhandle System iii) new contract distribution greenhouse customers to be served by the new pipeline.

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**Response:**

Union does not allocate capacity to specific customer segments. The capacity created by the Kingsville Transmission Reinforcement Project serves customer demand growth across the entire Panhandle Transmission System.

The demand forecast split between general service and contract is the following:

(i) General Service: 7 TJ/day

(ii) Contract Customers: 61 TJ/day

(iii) Of the 61 TJ/day of forecast contract demand, Union has executed contracts with greenhouse customers for 10 TJ/day as of June 2018. As per the pre-filed evidence, Union had executed contracts for 5 TJ/day of capacity (see Exhibit A, Tab 5, p. 7, lines 12-14).

The remaining capacity will be used to serve general service and/or contract customers on a first come first served basis, which may include additional contract greenhouse customers.

There are no customer attachments directly connected to the transmission system, they are all connected to downstream distribution facilities.

UNION GAS LIMITED

Answer to Board Panel

ISSUE #2: Multiple needs served by this project

**Question 7:**

Please identify all of the costs that new contract customers will be required to pay to connect to Union Gas' system, including both one-time and ongoing costs.

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**Response:**

The description below is the typical process applicable to connecting any contract sized distribution customer across Union's system. It is non-specific to E.B.O. 134 or E.B.O. 188.

Customers who contract for contract rate distribution service will be required to pay the applicable rates, billed monthly, for the contract service according to Union's rate schedules. These are ongoing costs for the term of the contract. Customers may also be required to make a one-time Contribution-in-Aid-of-Construction ("CIAC") payment.

An economic analysis to determine if a CIAC payment is required is completed for each contract customer prior to connecting to Union's system. For each connection a PI is determined based on the revenue stream and the cost specific to the customer to connect the load. These connection costs are directly related to attaching the customer and are the responsibility of the customer. These costs may include the cost of installing a new station or modifying an existing individual customer station, installing a service line and/or extend the main or reinforce the local distribution system.

The DCF will determine if the revenue is sufficient to recover these costs. If there is a shortfall a CIAC is collected from that customer. A CIAC is a one-time cost. The length of contract term that the customer chooses will influence the present value of the revenue stream. It is often an iterative approach with the customer to determine their preference for revenue parameters based on changing volumes and length of term; however if the outcome is shortfall relative to costs, the CIAC is collected to a PI of 1.0 for customers.

UNION GAS LIMITED

Answer to Board Panel

ISSUE #2: Multiple needs served by this project

**Question 8:**

What percentage of the benefits resulting from the Kingsville Transmission Reinforcement Project accrue to the overall system, as opposed to contract rate customers? Explain any assumptions or supporting calculations.

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**Response:**

For purposes of responding, Union defines benefits as i) customers who are provided service (see response to Board Panel Question 6) and ii) public interest benefits of the Project. The demand forecast to be served includes general service and contract customers. There are broad public interest benefits of the Project across the system and in the economy.

The capacity created by the Project serves customer demand growth across the entire Panhandle System, including both contract and general service customers. Please see the response to Board Panel Question 6 regarding the split of the forecast demands to be served for different customers. The forecast split is approximately 10% general service and 90 % contract customers.

As shown in the pre-filed evidence at Exhibit A, Tab 9, the economic feasibility analysis performed for the Kingsville Transmission Reinforcement Project under EBO 134 involved a 3-Stage approach. Stage 1 consisted of a discounted cash flow (“DCF”) analysis specific to Union while a Stage 2 and Stage 3 cost/benefit analysis was also completed since the Project’s net present value (“NPV”) was less than \$0 and the profitability index (“PI”) was less than 1.0.

In terms of benefits resulting from the Project, both general service and contract customers will realize the benefits resulting from the Stage 1 and Stage 2 analysis. Stage 3 benefits are realized by the broader economy. Although customers specific to the Project can and will benefit from these benefits, in reality these types of benefits are more societal in nature. For example, the availability of natural gas from the construction of the Project will in turn spur investment by customers (i.e. commercial and industrial development, new schools, etc.) and provide employment and related economic spin offs resulting in further positive economic impact for the communities where the investment occurs.

In addition, the benefits to the overall system are summarized in the following evidence excerpt as filed at Exhibit A, Tab 3, p. 3, line 16 through p. 4, line 11:

*The Project as proposed is designed to reliably serve these increased forecast demands for firm service not only in the Kingsville-Leamington market area but across the Panhandle System Market. This is very important for the continued economic well-being of the Market. The additional capacity of 71 TJ/d resulting from the Project will help support the continued reliable and secure delivery of natural gas to residential, commercial and industrial customer segments within the Market.*

*The Project reinforces the high pressure Panhandle System from which not only customers located in the Kingsville-Leamington market area can be served but future development in the Panhandle System Market can be met. Without the availability of this incremental natural gas capacity on the Panhandle System, there is a risk businesses will delay or cancel plans to expand, or may establish their operations in different jurisdictions where reliable, affordable energy is available. Further, without the availability of this incremental capacity, residential developments, schools, hospitals as well as other small volume customers in the Panhandle System Market may require an alternative (more expensive and less clean burning) energy source. In doing so, this will put additional pressure on the finances and operating budgets of the residents and businesses within the Market. If the Kingsville Transmission Reinforcement Project (the Project) is not constructed, economic development in this region of Ontario may be significantly impacted.*

UNION GAS LIMITED

Answer to Board Panel

ISSUE #3: Economics of the Proposed Project

**Question 9:**

If the OEB were to require Union Gas to collect a contribution-in-aid-of-construction in order to increase the project's profitability index to 0.8, what would Union propose? Please explain the rationale.

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**Response:**

As noted in the response to Board Panel Question 4, Union does not believe the OEB should require Union to collect a contribution-in-aid-of-construction ("CIAC") in order to meet a profitability index ("PI") of 0.8 as this is a transmission project and not a distribution project.

The PI of the Kingsville Transmission Reinforcement Project ("KTRP") as filed is 0.44 resulting in a negative NPV of \$59 million (Exhibit A, Tab 9, Schedule 4). This includes the cost of KTRP and revenue from only the "Transmission Margin" as described beginning at Exhibit A, Tab 9, p.3.

The markets served by the Panhandle Reinforcement Project (EB 2016-0186) are similarly situated to KTRP; it allows demands to be met from Dawn through Windsor. The Panhandle Reinforcement Project was not attributed to individual customers in the form of a cost for a CIAC nor should KTRP. Both are common-use upstream facilities for a large geographic area.

As requested in the question above, applying an aid to KTRP for Panhandle Transmission System capacity would result in a geographic group of customers paying an aid while consuming Panhandle Transmission System capacity (those at the terminus of KTRP) while a similar customer consuming the same amount of Panhandle Transmission System capacity but not located at the terminus would not incur the aid cost. Such a situation may result in customer perception of bias or cost disadvantage to one group of customers relative to another.

However, to be responsive to the question, for illustrative purposes, in order to increase the project's PI to 0.8, approximately \$53 million of CIAC or recovery of equivalent revenue would need to be collected from customers. In determining the amount to collect as CIAC, all capital costs – pipeline and individual customer distribution attachment costs - would need to be included to determine the PI. Union estimates that the total distribution costs to be recovered would be approximately \$20 million. The total capital costs for the Project and any future distribution facilities would be estimated at \$125 million. Including these costs along with transmission and distribution margin results in a PI of 0.57 prior to any CIAC or equivalent revenue.

Union's proposal would be to allocate the \$53 million to all large volume customers who consume more than 200 m<sup>3</sup>/hour. The allocation would be based on an hourly allocation factor applied to each customer's economic analysis. The 200 m<sup>3</sup>/hour is the approximate size that is large enough for a customer to qualify for a contract rate in Union south (350,000 m<sup>3</sup>/year under Rate M4). This approach is consistent with that applied to the Leamington Expansion Pipeline Projects as well as the proposed Chatham-Kent Rural Expansion Project<sup>1</sup>. The amount of the hourly allocation factor resulting from the \$53 million economic shortfall is approximately \$501/m<sup>3</sup>/hour. This hourly allocation factor would only be applied to large volume customers who require the Project to be placed into service in order to provide capacity for them to connect to the distribution system<sup>2</sup>. This amount is more than double what Union was able to contract with customers serviced from the Leamington Expansion Pipeline Phase II project<sup>3</sup>.

Although Union has not included the hourly allocation factor of \$501/m<sup>3</sup>/hour in any discussion with the expected large volume customers, Union expects it would result in customers being unable to afford to connect to the system for their business operations. The demand forecast for the Proposed Project would be at significant risk. Customers would choose to not attach at Greenfield sites and would not expand at existing operations. It is also possible some customers would move their total operations out of Ontario. As a consequence, Union believes that a requirement to achieve a PI of 0.8 would very likely result in cancellation of the Project and no opportunity to achieve the public interest benefits of \$341 to \$691 million as reflected in pre-filed evidence.<sup>4</sup>

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<sup>1</sup> EB-2012-0431, EB-2016-0013, EB-2018-0188

<sup>2</sup> These customers would include any new large volume loads serviced in the Kingsville/Leamington market area until such time as the hourly capacity of 102,000 m<sup>3</sup>/hour made available by the Project is fulfilled

<sup>3</sup> Union applied hourly allocation factors of \$230/m<sup>3</sup>/hour, and \$287/m<sup>3</sup>/hour for the Leamington Phase II, and proposed Chatham-Kent Rural Expansion Projects, respectively.

<sup>4</sup> Exhibit A, Tab 9, Table 9-2