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**OF JULY, 2020.**



.....  
**A Commissioner, etc.**

## MacKenzie, Diane

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**From:** Rob Marson <RMarson@uniongas.com>  
**Sent:** Thursday, November 07, 2019 5:01 PM  
**To:** Krystal Kalbol  
**Cc:** Chantelle Rodger  
**Subject:** Windsor Line Questions - Capacity & Alignment  
**Attachments:** windsor\_line\_essex\_route\_response.docx; windsor\_line\_essex\_capacity\_response.docx; windsor-line\_replacement\_baseline\_schedule.pdf

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**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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Hi Krystal,

I want to thank you and Jane for meeting with us on October 3<sup>rd</sup>. It has taken longer to respond to your email from October 18<sup>th</sup> than I had hoped. I apologize for the delay, but the extra time was to ensure the responses to your questions were comprehensive. Our responses are attached: regarding capacity and alignment. Also included is the project schedule. I believe this covers all of the points from the October 18<sup>th</sup> email.

Krystal, I would like to follow up, and meet with you next week, to be able to clarify any remaining questions and to discuss next steps toward continuing with Municipal Consent approval.

Regards,

Rob

**Rob Marson, P.Eng.**

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## PROJECT SUMMARY

### Purpose and Need for Proposed Facilities

Enbridge Gas Inc. is planning to construct approximately 64 kilometres of Nominal Pipe Size (NPS) 6 pipeline, to replace a section of the existing Windsor Line (pipeline) located in the County of Essex and Municipality of Chatham-Kent. The location of the Project is shown in Figure 1 (Windsor Line).

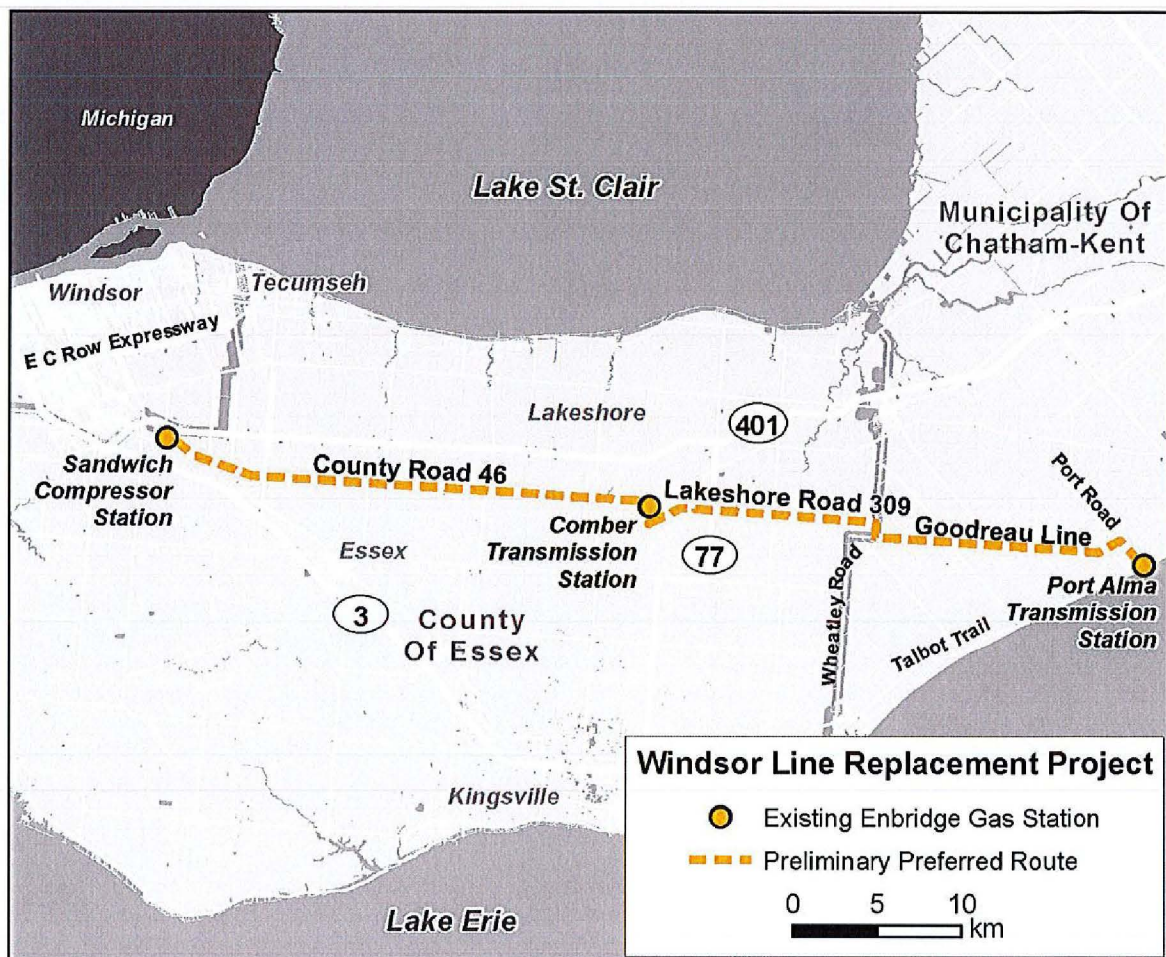


Figure 1. Information map provided during public consultation.

The Windsor Line acts as a trunkline to the local natural gas distribution system providing natural gas service to residents and businesses from Port Alma, in the Municipality of Chatham-Kent to the City of Windsor, located in the County of Essex. There are 399 customers directly served off the section of pipeline being replaced with these 399 customers being a mixture of residential and commercial services. Without this distribution pipeline, those customers would not be connected to natural gas service.

As part of the Enbridge Gas Integrity Management Program and Standard Operating Procedures, the Windsor Line is surveyed and inspected on a regular basis. Leak surveys and emergency valve inspections are completed on an annual basis. A recent depth of cover survey has indicated shallow sections of the pipeline. The results from these inspections and subsequent analysis have identified multiple integrity and depth of cover issues that could pose safety and security of supply concerns if not addressed.

A significant portion of the Windsor Line was installed in the 1930s, 1940s and 1950s, however age alone is not driving the need for replacement.

There are several other factors related to its condition that are equally as relevant when considering the need for replacement. Such factors include:

- History of leakage along the length being targeted for replacement with significant costs to repair leakage events;
- All joints prior to 2000s were made with unrestrained mechanical couplings (compared to welded joints which is industry practice now); portions of the older vintage pipe are not weldable;
- Some sections of the pipeline cannot be isolated because of inoperable mainline valves, which leads to larger customer outages in the event of an emergency; and

- Depth of cover concerns and risk damage by third party contractors, homeowners and farming activities.

Based on these concerns and the significant effort and resources spent already repairing leaks, the Windsor Line has been deemed an operational risk. A risk review of the portion of the existing Windsor Line in the County of Essex was completed in April 2017. The risk review identified that the concerns with the Windsor Line needed to be addressed and replacement of the proposed section of the Windsor Line is the most effective way of managing its ongoing safety and reliability.

#### Project Timing

Through reviews and inspections, portions of the Windsor Line have been identified as having integrity and reliability concerns.

To assess these concerns Enbridge Gas applies a risk review process to assign severity ranking of the various risks. Through this ranking process the portion of the line along County Road 46 was deemed of most concern.

During project planning, schedule development and stakeholder impacts it was determined that the timely path forward to address the risks would be to consider installation of the replacement pipeline in road allowance and not in easement.

#### Proposed Facilities

Enbridge Gas is proposing to replace approximately 62 kilometres of NPS 10 and NPS 8 pipeline currently operating at a maximum operating pressure ("MOP") of 1380 kPa with 64 kilometres of NPS 6 pipeline operating at a MOP of 3450 kPa. The existing Windsor Line is installed in road allowance and easement. The following



chart represents the portions in road allowance and easement along County Road 46.

County Road 46	
Road Allowance (km)	Easement (km)
21.8	7.1

Within the County of Essex, the first portion of the existing pipeline that is in easement along County Road 46 starts east of Puce Road and continues for approximately 2.1 km [PL2429-AL-25 thru -29]. The next lengthy segment in easement starts near the Canadian Southern Railway Company abandoned rail line and continues to the intersection of County Road 46 and Rochester Townline Road for 5.0 km [PL2429-AL-43 thru -51].

The Project also involves the installation of small plastic main extensions off the NPS 6 mainline in some areas. In Woodslee, the installation of plastic pipe is being proposed because no landowner was willing to sell Enbridge property to build and install the required distribution station to serve the local area. The installation of plastic removes the need for high pressure services. The other areas where the installation of the plastic main is being proposed, in the same road allowance as the NPS 6 replacement, is to manage areas where deep drainage ditch exist. Installing plastic in these areas will eliminate the need for services to cross the road.

#### Design Scope

The existing Windsor Line is a distribution pipeline. It performs the same function as other distribution pipelines in the City of Windsor, Towns of Tecumseh, Lakeshore and Municipality of Chatham-Kent. The industry best practice for locating distribution pipelines is in road allowance as these distribution lines are the direct delivery pipelines to natural gas using consumers. The portion of the Windsor Line being replaced has 399 direct customer services plus it is the local higher-pressure source

of gas for each side road off County Road 46. This increases the customer delivery in the local area by several hundred connections.

During the routing stage of the design development several factors are considered. Some of the key factors to consider for a replacement project is where the current pipeline is installed, environmental impacts, social impacts, stakeholder impacts, constructability, schedule and cost. Other points to consider is the current condition of the existing line and how the existing line was constructed. In the case of the existing Windsor Line the pipe sections are predominantly connected using mechanical couplings. This is an important consideration as there is the potential for the mechanical couplings to separate if the connections are exposed during construction while the pipeline is still in service. To complete the replacement of the Windsor Line the existing pipeline must remain in service until the replacement pipeline and all services have been transferred to the new pipeline. Installing the replacement pipeline near the existing pipeline increases construction complexity and will introduce operational, worker and public safety risks.

The installation of distribution pipelines within road allowance is in the public's interest as road allowances become vehicle and utility corridors. These corridors benefit the public along with the Indigenous communities who are served by them. The road allowance route provides cost efficient delivery of services and the lowering of the environmental impact to undisturbed land. This minimizes archeological disturbances and other concerns that Indigenous communities speak to during the consultation process. Being in road allowance also reduces the impact to individual landowners, the enjoyment of their property and coordinating activities across the utility providers and municipalities.

The use of road allowances as a preferred corridor to provide public services is reflected in the general environmental practices applied in Ontario and is within the County of Essex's Official Plan.

*The County of Essex Official Plan (2014) states that 'Preferred routes for utility corridors are those that follow existing rights-of-way, property lines and fence lines' (Section 2.11, c, i). The Official Plan further goes on to state that 'Generally, when determining the most appropriate location for future utility corridors, agriculturally designated land and the natural heritage system will be protected and preserved to the greatest extent possible' (Section 2.11).*

When considering these points, the desire to rectify the issues with the Windsor Line as quickly practical as possible, to manage stakeholder concerns, worker safety, and to prudently manage capital employed. The only installation of the replacement pipeline that would meet all these objectives is to install it in road allowance. Further, in the County of Essex, most of the existing pipeline is already within road allowance. To consider installation of any portions of the replacement pipeline in easement will increase disturbance to private lands, increase the complexity and difficulty to obtain the necessary land rights and extend the time to replace the pipeline by up to two years.

### Abandonment

The County has expressed concern with abandoning in place the existing pipeline in road allowance. Enbridge recognizes this concern and is proposing to remove the abandoned pipeline west of Manning Road. In areas, where it is not practical to remove the existing pipeline, it will be abandoned in place. Areas where abandonment in place is likely to occur will be road crossings, stream crossings, environmentally sensitive areas and finished driveways. The Technical Standards and Safety Authority (TSSA) abandonment guidelines and the applicable current edition of CSA code Z662 (code applicable to natural gas and oil pipelines) will be followed for all pipeline abandonment in place.



### Next Steps

Enbridge Gas recognizes the concerns the County has expressed during the Municipal Consent consultation. The proposed alignment has continued to be refined by moving it closer to property lines where possible west of Sexton Side Road. Additional adjustments to the alignment have been considered by the design team to move the pipeline closer to property line in other locations along County Road 46 and Enbridge would respectively request an opportunity to share these changes with County staff. Enbridge Gas requests site visits to review these changes and discuss with the County its concerns to find a way to satisfy all parties.

Enbridge continues to engage with the Towns of Tecumseh and Lakeshore to seek their Municipal Consent.

### **Windsor Line Capacity**

Enbridge Gas currently forecasts system load growth using historical attachment rates for the following customer categories - residential, small commercial, large commercial, small industrial and large industrial. The natural gas growth forecasts range between a 10- or 20-year time horizon. Natural gas growth and/or volumes beyond these timelines lose certainty and are largely dependent upon speculative business estimates and difficult to predict overall economic activity. Therefore, it can be challenging to forecast both development location and requested volumes beyond this time frame.

The time horizon selected for an area may also vary depending on the customer mix and/or internal system piping configuration or constraints. For example, residential growth is generally more predictable than small or large industrial growth such as the Windsor Mega Hospital.

In general, the existing Windsor pipeline is currently at approximately half utilization at points along the pipeline segment. However, the level of pipeline utilization may vary depending on the specific location of future growth along the pipeline. In order to maintain the capacity within the area the newly proposed pipeline has been designed to match the original capacity as closely as possible while utilizing a smaller diameter pipe with a higher pressure.

The Windsor Line is supplied by the Panhandle Transmission System, which has had its capacity significantly increased by a \$250 million expansion in 2017 and the \$100 million Kingsville Transmission Reinforcement expansion this year (2019). As identified in Figure 1, the Windsor Line is connected to the Panhandle Transmission System at the Comber Transmission Station. Future growth on the Windsor Line can be met by additional improved connectivity to the Panhandle Transmission System.

At current attachment rates the new Windsor Line is forecasted to be capable of servicing the anticipated customer volumes for the next 20 years. The new pipeline is forecasted to be closer to full utilization at that time, depending on the location of actual attachments. Enbridge Gas forecasts that the optimal solution in the future for additional pipeline capacity is to replace the remaining section of the current Windsor Line within the City of Windsor, or to provide improved connectivity to the Panhandle Transmission System, not by upsizing or to twin the new proposed replacement for the Windsor Line.

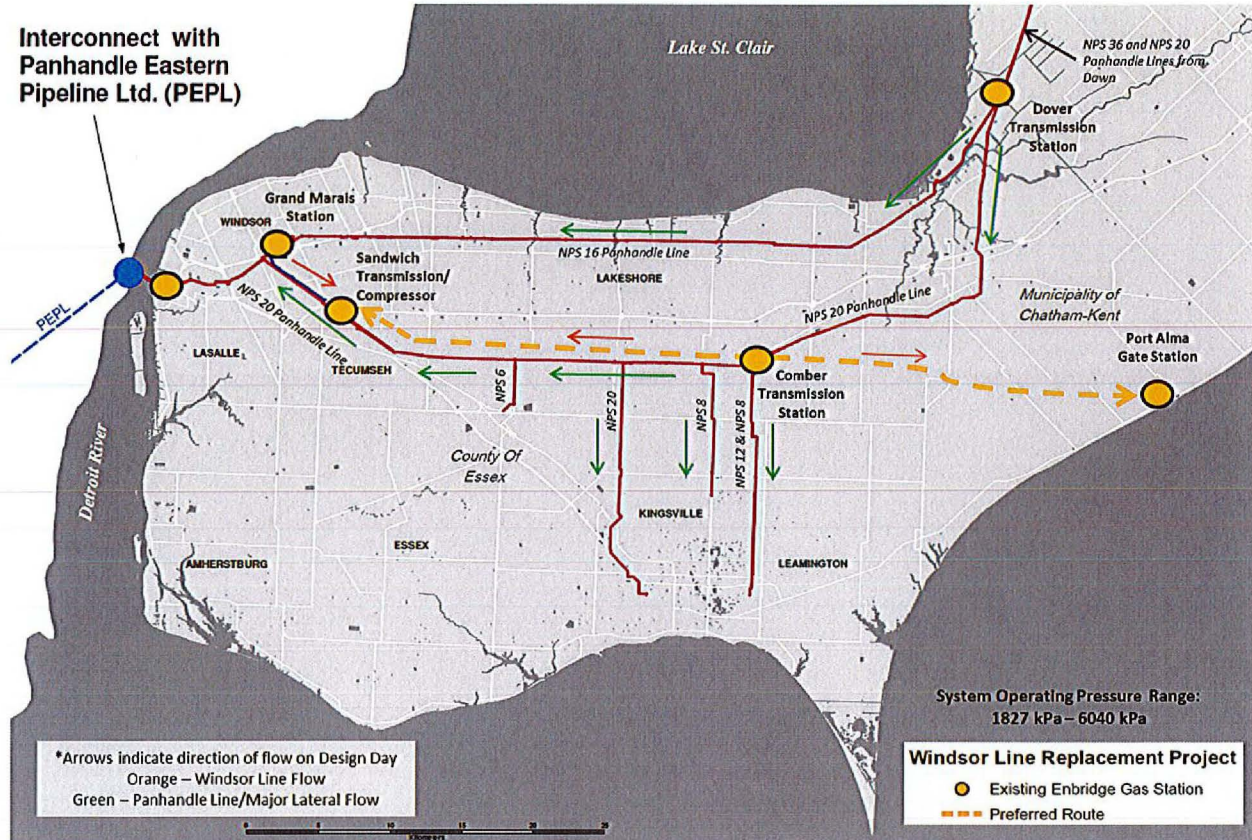


Figure 1. Windsor Line, Panhandle Transmission System, Kingsville Pipeline and Leamington Line general location map. Note arrows on the map indicate normal direction of natural gas flow.



