Ontario Energy Board | Commission de l'énergie de l'Ontario

DECISION AND ORDER

EB-2020-0192

ENBRIDGE GAS INC.

London Lines Replacement Project

BEFORE: Michael Janigan
Presiding Commissioner

Pankaj Sardana
Commissioner

January 28, 2021

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1 INTRODUCTION AND SUMMARY

On September 2, 2020 Enbridge Gas Inc. (Enbridge Gas) filed an application with the Ontario Energy Board (OEB) seeking orders for the following:

(a) Under section 90(1) of the *Ontario Energy Board Act, 1998* (Act), leave to construct (LTC) 90.5 kilometres of pipelines consisting of approximately 51.5 kilometres (km) of 4 inch diameter (NPS 4) pipeline and 30.6 km of 6 inch diameter (NPS 6) pipeline to replace the existing London Lines and of 8.4 km of NPS 6 additional new pipeline from the Strathroy Gate Station to a tie-in at the main NPS 6 pipeline. (London Lines Replacement Project or the Project). The Project is located in the County of Lambton; the Township of Dawn-Euphemia; Middlesex County; the Municipality of Southwest Middlesex; the Municipality of Strathroy-Caradoc; and the Municipality of Middlesex Centre.

(b) Under section 97 of the Act, approval of the form of easement agreements to be offered to landowners of the properties affected by the route and construction of the Project.

The proposed pipelines would replace the existing London Lines which consist of the London South Line and the London Dominion Line (Existing Pipelines). The Existing Pipelines are comprised of two parallel pipelines of 8 inch,10 inch and 12 inch diameters with a maximum operating pressure (MOP) of 1,900 kPa. The Existing Pipelines – specifically, the 60 km London South Line and 75 km of the London Dominion Line would be decommissioned and abandoned.

The Project is primarily needed to address physical integrity risks associated with the aging Existing Pipelines. The Project also addresses the need for additional capacity to serve new customers and to ensure reliability of supply of the London Lines System.

The London Lines are among the oldest in the Enbridge Gas distribution system dating back to 1935 and 1936 (London South Line) and were partially replaced in 1952 (London Dominion Line), using reclaimed and refurbished pipe from the 1920s and 1930s vintages of unknown grade. Enbridge Gas assessed the condition of these pipelines according to the Canadian Standards Association, CSA Z662 Oil and Gas Systems Standard (CSA Z662) requirements. The results of the Enbridge Gas assessments indicated multiple operational risks in the London Lines which compromise the integrity of the system and need to be addressed.
The general location of the Existing Pipelines and the proposed London Lines within Enbridge Gas's system is shown in Schedule A to this Decision and Order.

The OEB approves the Project subject to the conditions of approval attached as Schedule B to this Decision and Order. The OEB finds that Enbridge Gas has demonstrated the need for the Project; that the Project represents the most viable option and that estimated costs are reasonable. The OEB finds that Enbridge Gas has followed the OEB's *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines in Ontario (7th edition, 2016)* (OEB Environmental Guidelines) in its environmental assessment and Indigenous consultation for the Project. The OEB approves the Form of Temporary Land Use Agreement and Form of Transfer of Easement Agreement filed by Enbridge Gas pursuant to section 97 of the Act.

This Decision and Order is structured to cover the following public interest issues:

- Need for the Project
- Alternatives
- Project Economics
- Environmental Matters
- Land Matters
- Indigenous Consultation

2 THE PROCESS

The OEB issued a Notice of Hearing on September 25, 2020. In response to the Notice of Hearing, the following parties applied for intervenor status and were approved as intervenors:

- Association of Power Producers of Ontario (APPrO)
- Building Owners and Managers Association (BOMA)
- County of Middlesex (the County of Middlesex)[1]
- Energy Probe Research Foundation (Energy Probe)
- Environmental Defence (Environmental Defence)
- Federation of Rental-housing Providers of Ontario (FRPO)
- Lupine Properties Limited (Lupine Properties)[2]
- Pollution Probe (Pollution Probe)

APPrO, BOMA, Energy Probe, Environmental Defence, FRPO and Pollution Probe also applied and were granted cost award eligibility in accordance with the OEB's *Practice Direction on Cost Awards*.

The OEB received four letters of comment related to the Project. In its reply submission, Enbridge Gas indicated that it is working with the appropriate parties to address any of their concerns.

The OEB proceeded by a written hearing. No party requested an oral hearing.

In accordance with the procedural schedule set out in Procedural Order No. 1 interrogatories were filed by APPrO, BOMA, Energy Probe, Environmental Defence, FRPO, Pollution Probe and OEB staff on November 10, 2020, Enbridge Gas filed interrogatory responses on November 23, 2020

Enbridge Gas filed its argument-in-chief on November 30, 2020. APPrO, BOMA, Energy Probe, Environmental Defence, FRPO, Pollution Probe and OEB staff filed their respective submissions on December 14, 2020. The record of the proceeding was closed on December 21, 2020 with Enbridge Gas filing its final reply submission.

[1] On November 23, 2020 the County of Middlesex withdrew its intervention.
[2] Lupine Properties did not actively participate in the written hearing.

3 LEAVE TO CONSTRUCT

In this, application, Enbridge Gas seeks an order for leave to construct a natural gas pipeline under section 90 of the OEB Act. Section 96 of the OEB Act provides that the OEB shall make an order granting leave if the OEB finds that "the construction, expansion or reinforcement of the proposed work is in the public interest". When determining whether a project is in the public interest, the OEB typically considers the need for the project; the nature of the proposed facilities and any alternatives; project cost and economics; environmental matters; Indigenous consultation; land matters; and conditions of approval.

3.1 Need for the project

Enbridge Gas submitted that the main driver of the Project is the integrity and operational risk due to the deteriorating conditions of the Existing Pipelines. According to Enbridge Gas, the Project also addresses the need for additional capacity to serve new customers and to ensure reliability of supply of the London Lines System.

Enbridge Gas's Distribution Integrity Management Program (DIMP) was completed in July 2020[3] and identified multiple integrity issues and associated risks to safety and security of supply.

Enbridge Gas identified customer loss (i.e. loss of service for the customer) and safety of the public and workers as significant consequences of a pipeline failure due to leaks, loss of cover and corrosion. According to Enbridge Gas, the safe and efficient repair of the pipeline leaks is complicated and uncertain due to the compromised physical characteristics of the pipelines (i.e. compression couplings, exposed pipeline, un-weldable flaking pipe walls).

As part of the pre-filed evidence and in response to interrogatories, Enbridge Gas filed supporting information and reports that underpin the need for the replacement based on risks to physical integrity of the Existing Pipelines. Enbridge Gas identified multiple integrity issues and associated risks to safety and security of supply. These integrity issues monitored and reported by Enbridge Gas include:

[3] Exhibit B, Tab 2, Schedule 1, Attachment 1: *Distribution Integrity Management Program Integrity Assessment Report* (dated July 21, 2020)

(i) leaks (also referred to as loss of containment) due to problems with compression couplings[4] between the aged pipeline segments

(ii) issues caused by thinning of pipeline walls due to corrosion during pipeline repairs and the connection of new lateral pipelines to serve new customers due to pipe corrosion along cathodically unprotected aging pipeline segments[5]

(iii) potential surface damage to exposed pipelines at the locations of reduced depth of cover especially in agricultural areas

Enbridge Gas supported the need for the Project by a qualitative risk assessment using the Enbridge Gas Standardized Operational 7X7 Risk Matrix[6]. Enbridge Gas filed the Risk Assessment Report which provides details on the Operational Risk Matrix.[7] The Existing Pipelines were assessed primarily as a medium risk in the Operational Risk Matrix.[8] A summary table of the Operational Risk Matrix is presented below[9]:

	Very High	High	Medium	Low
Financial	0	0	17	1
Health and Safety	0	0	26	0
Customer Loss	0	4	10	6
Stakeholder Concerns	0	0	10	0

Table 1: Summary of risk ranked scnarios for the London Lines.

The risk assessment shows that four segments of the Existing Pipelines have a high risk for customer loss. High risk is assessed for sections where the twin pipelines cannot be isolated independently to effectively manage customer outages on the system.

Enbridge Gas determined, for the Existing Pipelines, a leak rate of 0.043 leaks/km/year for the period from 2013 to 2019.

Regarding the timing of the London Lines Replacement Project, Enbridge Gas stated that it has been considering the full replacement since 2016. The need for the full replacement of the Existing Pipelines was first documented in Union Gas's (now part of

[4] Compression couplings are mechanical fittings not welded to the pipeline and as such can cause pipeline leaks. Modern construction technology joins the pipe segments by welding.
[5] Cathodic protection, as a method to prevent corrosion, was introduced in 1965.
[6] Filed in response to Pollution Probe interrogatory 4 c)
[7] Filed in response to FRPO interrogatory 1
[8] Enbridge Gas Argument-in-Chief, November 30, 2020, page 9, paragraph 23
[9] Exhibit B, Tab 2, Schedule 1, page 6 of 6

Enbridge Gas) Asset Management Plan 2018-2027.[10] The Project has been assigned a priority in the current Enbridge Gas Inc. Asset Management Plan 2021-2025, dated October 5, 2020[11] which was filed as part of the supporting evidence in Enbridge Gas's 2021 Rates proceeding currently before the OEB.

Submissions of the Parties and Reply Submission by Enbridge Gas

APPrO

APPrO expressed reservations about the data filed by Enbridge Gas to support the need for the Project. APPrO criticized Enbridge Gas's risk matrix evidence and the qualitative risk assessment and questioned the grounds Enbridge Gas used to prioritize the Project over other potential projects.

APPrO challenged Enbridge Gas's position that the leak data are a sufficient basis for a full replacement of the Existing Pipelines as a priority project at this time. APPrO questioned Enbridge Gas's interpretation of the average historical leaks data in the evidence, the classification of severity of the recorded leaks, and the physical integrity performance of the Existing Pipelines compared to all steel pipelines in the Enbridge Gas system.

Average Leak Rate for London Lines 2013-2019

	2013	2014	2015	2016	2017	2018	2019	Grandtotal
Leaks Associated with London Lines	33	0	4	0	3	0	0	40
Assumed Length (2020 active population)(km)	134	134	134	134	134	134	134	134
Leak Rate (leaks/km/yr)	0.246	0.000	0.030	0.000	0.022	0.000	0.000	0.043

APPrO questioned Enbridge Gas's interpretation of the historical average leak rates from 2013 to 2019 presented in the table above[12]. APPrO argued that Enbridge Gas's remedial and risk mitigation programs appeared to have resulted in reduction in the number of 33 leaks in 2013 and in the total number of leaks in the succeeding years.

Enbridge Gas remediation and risk mitigation measures included leak management surveys, preventive corrosion control, valve inspections as well as measures to minimize leak intensity such as minimizing small leaks from forming, minimizing pull-out forces on unrestrained compression couplings, walking the pipeline for inspection, and

[10] Filed in Enbridge Gas response to Environmental Defence interrogatory 1, Attachment 3: Union Gas Asset Management Plan 2018-2027
[11] Filed in Enbridge Gas response to Environmental Defence interrogatory 1, Attachment 1 EGI Asset Management Plan 2021-2025
[12] Table filed by Enbridge Gas in response to APPrO interrogatory 2 (b) page 3

reduction of system operating pressure of the Existing London Lines by approximately 25%.[13]

APPrO discussed the severity of leaks data from 2013 to 2019 for the London Lines and for the entire steel pipe population as filed by Enbridge Gas in response APPrO's interrogatories. The data are presented in the tables below. According to Enbridge Gas, Class A leaks are the most severe and require immediate repair. Class B leaks are less severe and require repair within a short time frame while Class C leaks are the least severe and require regular monitoring.

London Lines[14]

Leaks Associated with London Lines	2013	2014	2015	2016	2017	2018	2019	Grand Total
A Leaks	0	0	0	0	0	0	0	0
B Leaks	4	0	0	0	0	0	0	4
C Leaks	29	0	4	0	3	0	0	36
Total Leaks	33	0	4	0	3	0	0	40

Enbridge Gas System Steel Pipelines[15]

Leaks Class	2013	2014	2015	2016	2017	2018	2019	Grand Total
A	26	26	21	30	28	15	16	162
B	69	100	40	35	64	95	86	489
C	1757	359	263	333	318	604	529	4163
Grand Total	1852	485	324	398	410	714	631	4814

APPrO submitted that "…the relatively high number of leaks in the Existing Lines in 2013 appear to have been adequately addressed by the remedial measures…as evidenced by the significant reduction in leaks from 2014 to 2019…". Based on this assumption, APPrO argued that 2013 should be excluded from the leak rate calculations. APPrO observed that Enbridge Gas's data in the table above show no Class A leaks along the Existing Pipelines, and that all seven leaks between 2014 and 2019 are Class C, or the least severe leaks. To support its argument, APPrO calculated the average leak rate between 2014 and 2019, excluding 2013, to be 0.0087 leak/km/year and asked Enbridge Gas to confirm if that was a correct calculation.

[13] Table filed by Enbridge Gas in response to APPrO interrogatory 2 (c) page 3
[14] Table filed by Enbridge Gas in response to APPrO interrogatory 3(a)
[15] Table filed by Enbridge Gas in response to APPrO interrogatory 3(b)

Enbridge Gas stated that it derived the leak rate of 0.043 leaks/km/year for the period 2013-2019[16] from data it reported to the Canadian Gas Association (CGA). Enbridge Gas clarified that the reported data from 2013 to 2019, in each year, included leaks that are monitored but not repaired.[17] In reply to APPrO's submission, Enbridge Gas argued that the leak rate should include leaks recorded in 2013. Enbridge Gas submission was that APPrO incorrectly assumed that remedial measures resolved the Class B and Class C leaks in 2013 and clarified that 2013 leaks were not repaired and should be included in the leak rate calculation.

Enbridge Gas added that its 2020 surveys recorded five active Class C leaks[18].

APPrO submitted that compared to Enbridge Gas's entire steel pipelines population the London Lines "…are performing much better…". APPrO questioned if "…the Project reflects the right use of money at this time – given the other leaks occurring along the balance of the Enbridge Gas system." Regarding APPrO's position that the performance of the Existing Pipelines is much better that the performance to the entire steel pipeline population, Enbridge Gas submitted that such a comparison is not valid. Enbridge Gas explained that the definition of the entire steel main system includes all pipe sizes, pressures and vintages of all steel mains, services and fittings.[19] Enbridge Gas noted that "…based on the full span of available data, the Existing Lines perform worse than the available network average…as noted in DIMP Integrity Assessment Report...".[20]

APPrO also criticized Enbridge Gas's Risk Assessment for the Project. Enbridge Gas responded that the method used is "considered acceptable…" and is consistent with the appropriate standards specifically with CAN/CSA-IEC/ISO 3100.[21]

BOMA

BOMA supported the need for the Project based on the integrity issues of the Existing Pipelines.

Environmental Defence

Environmental Defence agreed with Enbridge Gas's position that a replacement of the Existing Pipelines was needed for safety and reliability reasons.

[16] Exhibit B, Tab 1, Schedule 1, page 6
[17] Enbridge Gas Final Argument, December 21, 2020, pages 2-3, paragraph 9
[18] Enbridge Gas Final Argument, December 21, 2020, pages 3, paragraph 10
[19] Enbridge Gas response to APPrO interrogatory 3 (b)
[20] Enbridge Gas Final Argument, December 21, 2020, page 5, paragraph 14
[21] Enbridge Gas Final Argument, December 21, 2020, page 6, paragraph 15

Energy Probe

Energy Probe agreed that the Project was needed based on the risk to the integrity of the Existing Pipelines. However, Energy Probe disagreed with Enbridge Gas's proposed timing for the Project and proposed that the Project be postponed for two years "…so that it can be built at lower cost due to expected productivity savings after re-basing". Energy Probe argued that cathodic protection pipe to soil readings indicate adequate corrosion protection and that "…if any corrosion leaks occur prior to re-basing, they can be remediated at low cost".[22]

Enbridge Gas's response was that Energy Probe's submission was not supported by technical evidence that the Project can be delayed for two years; it was unsubstantiated; and as such it should not be accepted by the OEB.[23]

Enbridge Gas's reply to Energy Probe's submission that the Project should be delayed for two years until after re-basing is further described in section 3.3. (Project Economics) of this Decision and Order.

FRPO

FRPO argued that the full replacement of the Existing Pipelines is not supported by the system integrity records and may not be necessary. FRPO's position was that if "…outages, cathodic protection and leaks are taken together, there is no compelling need for the complete replacement of the London Lines."[24]

FRPO further noted that there is no evidence on the record of loss of service or outages for Enbridge Gas's customers. FRPO pointed that there are no records of outages due to pool-out of unrestrained compression couplings.

Regarding the corrosion related risk, FRPO suggested that Enbridge Gas's "… cathodic protection readings do not support the entire replacement of the system."[25] In addition, FRPO submitted that the history of leaks due to corrosion of the pipeline did not support the full replacement of the Existing Pipelines.

In making its submission that the cathodic protection readings do not support the Project, FRPO referred to a pipe-to-soil potential of the pipeline as a measure of cathodic protection against corrosion and corrosion related leaks. FRPO noted that

[22] Energy Probe Argument Submission, December 13,2020, page 4
[23] Enbridge Gas Final Argument, December 21, 2020, page 8, paragraph 19
[24] FRPO Submission, December 12, 2020, page 4
[25] FRPO Submission, December 12, 2020, page 3

Enbridge Gas provided in response to interrogatories[26] data on 200 pipe-to-soil readings taken in 2020 and that "…with the exception of four readings, the rest of the readings easily surpassed the industry standard of 0.85V." FRPO submitted that these four locations that are at risk of leaks need to be further investigated, but that the rest of the readings "…do not support the entire replacement of the system."[27]

Regarding the leak history data, FRPO deferred to APPrO's submission that the leak history data does not warrant replacement of the Existing Pipelines.

Enbridge Gas responded that FRPO's position was based on "…FRPO's non-expert and non-substantiated opinion related to the value of one solitary statistic based on pipe-to-soil readings measured in 2020."[28] Enbridge Gas further explained that "…the majority of the leaks were on compression couplings and repair clamps (38%) and not due to corrosion." Enbridge Gas refuted FRPO's assertion stating that the DIMP report recognized that the corrosion rates "…due to the age, the long lengths of uncoated pipe, the large number of compression couplings and the unknown CP [Cathodic protection] history…"[29] are measures of the Existing Pipelines integrity risk.

Pollution Probe

Pollution Probe did not contest the need for the Project based on physical integrity risk as a driver for the Project.

OEB Staff

OEB staff submitted that the Project is needed based on the assessed risk to the physical integrity of the Existing Pipelines.

OEB staff noted that Enbridge Gas has been continuously monitoring and repairing multiple integrity problems with the Existing Pipelines. The Project has been identified as a priority in Enbridge Gas's Asset Management Plan 2021-2025 currently before the OEB in Enbridge Gas's 2021 Rates proceeding.

Enbridge Gas's integrity management and monitoring is in accordance with the requirements of CSA Z662. Enbridge Gas's risk assessment shows customer loss and health and safety risks for the Existing Pipelines ranging from high to medium. Deterioration of the Existing Pipelines has been continuous and is likely to accelerate as

[26] Enbridge Gas response to Energy Probe interrogatories 3 and 4
[27] FRPO Submission, December 12, 2020, page 3
[28] Enbridge Gas Final Argument, December 21, 2020, pages 7-8, paragraph 17
[29] Enbridge Gas Final Argument, December 21, 2020, pages 8, paragraph 18

the infrastructure further ages. For these reasons OEB staff supported a full replacement of the Existing Pipelines in 2021 as proposed by Enbridge Gas.

Findings

The OEB finds that Enbridge Gas has demonstrated the need for this Project and that it is prudent for Enbridge Gas to proceed with the Project at this time given the age and deteriorating condition of the existing pipelines.

The OEB was assisted in its findings by the rigour of the analyses requested by the intervenors and the responses to those requests given by Enbridge Gas. The Enbridge Gas provision of the data concerning leak rates to determine pipeline performance over time and compared to Enbridge Gas's overall system, as well as data on outages and cathodic protection contributed important information to the OEB's overall assessment of the Project. The OEB's conclusion is based on an assessment of the Project in totality. To this end, the OEB finds that the age of the London Lines, the high operational risk presented as whole by the thousands of unrestrained compression couplings (the location of some which is unknown due a lack of records), the degradation of the integrity of the Existing Pipelines, the lack of cathodic protection on many sections of the lines, containment concerns, reduced depth of cover, leak rates, and finally, the integrity management and reporting done by Enbridge Gas, all support the replacement of the Existing Pipelines as the most effective way of managing the required ongoing safety and reliability.

3.2 Alternatives to the Project

Alternatives to the Project

Enbridge Gas selected the Project as a preferred alternative after considering six physical and one non-build alternative. The assessment of alternatives was documented in Enbridge Gas's study "System Design Criteria for the Replacement of London Lines"[30] (System Design Study). The System Design Study analyzed and evaluated the system integrity risks and forecasted growth in demand of the London Lines System.

[30] Exhibit B, Tab 2, Schedule 2, pages 1-15

Below is a comparison of the alternatives, including the rationale for the decision to accept or reject each alternative and the cost estimates including direct capital costs and abandonment costs for each alternative.[31]

Alt #	Alternative Description	Rationale for Decision	Cost ($M)
	Proposed Project Replace with NPS 6/4 3450kPa MOP, dual fed line *(See Section 3.5.2.2 in Exhibit B, Tab 2, Schedule 2)*	Provides replacement capacity for the current London Lines while also providing reliability of supply for emergency and operational scenarios in summer and shoulder month conditions.	132.9
Alt 1	Replace with NPS 12/8 1900 kPa MOP, single fed line *(See Section 3.5.1.1 in Exhibit B, Tab 2, Schedule 2)*	Provides replacement capacity for the current London Lines, but no reliability of supply for emergency and operational scenarios. Cost is 24% higher than the proposed option.	164.7
Alt 2	Replace with NPS 10/8/6 1900 kPa MOP dual fed line *(See Section 3.5.1.2 in Exhibit B, Tab 2, Schedule 2)*	Provides replacement capacity for the current London Lines while also providing reliability of supply for emergency and operational scenarios in summer conditions but not shoulder months when construction is common. Cost is 12% higher than proposed option.	148.2
Alt 3	Replace with NPS 10/8/6 3450 kPa MOP single fed line *(See Section 3.5.2.1 in Exhibit B, Tab 2, Schedule 2)*	Provides replacement capacity for the current London Lines, but no reliability of supply for emergency and operational scenarios. Cost is 11% higher than recommended design.	146.9
Alt 4	Replace with NPS 10/8/4 1900 kPa MOP and NPS 6 420 kPa MOP dual fed line *(See Section 3.5.3.1 in Exhibit B, Tab 2, Schedule 2)*	Provides replacement capacity for the current London Lines, but no reliability of supply for emergency and operational scenarios. Cost is 8% higher than proposed design.	144.1
Alt 5	Replace with NPS 6/4 3450 kPa line, reducing proportion of NPS 6 through supplemental DSM *(See Section 3.5.5 in Exhibit B, Tab 2, Schedule 2)*	Provides capacity to serve 2021 expected demand only, while also providing reliability of supply for emergency and operational scenarios. Savings on pipeline size reduction would be exhausted by less than 2 years of supplemental DSM programming, after which continued supplemental DSM spend or pipeline reinforcement would be required.	130.0

Note: All costs shown in the above table are direct capital and abandonment costs. Interest during construction and indirect overhead costs were not included.

[31] Exhibit B, Tab 2, Schedule 5, page 1 of 1

OTHER ALTERNATIVES CONSIDERED

Alt #	Alternative Description	Rationale for Decision
Alt 6	Obtaining supply from non-Enbridge pipelines *(See Section 3.5.4 in Exhibit B, Tab 2, Schedule 2)*	No nearby non-Enbridge pipelines or alternative sources of supply with adequate, reliable capacity to serve the system demands.

Enbridge Gas's rationale for selecting the Project as the best alternative was that it had the lowest cost, addressed the integrity risks, while also providing the required capacity to serve current and forecast system demands.

One of the five physical alternatives is the replacement of the Existing Pipelines with NPS 6 and NPS 4 pipelines at 3450 kPa. This alternative reduces the proportion of NPS 6 through supplemental Demand Side Management (DSM) (Alternative 5).

The OEB is currently conducting a proceeding on Enbridge Gas's Integrated Resource Plan (IRP) Proposal. [32] The IRP Proposal includes DSM and other programs that may be considered as part of alternatives to pipeline projects.

Enbridge Gas, in its updated IRP Proposal, proposes that the Discounted Cash Flow (DCF) analysis method, consistent with the principles underpinning the OEB's Reports in E.B.O. 134 and E.B.O. 188, would be the basis for assessing the economic feasibility of IRP Alternatives (IRPA), including DSM.

In response to interrogatories on DSM and IRPA related to the Project, Enbridge Gas stated that it conducted a high level analysis of DSM programs in accordance with the OEB 2015-2020 DSM Framework direction. This direction requires that as part of any LTC application utilities should file evidence on "…how DSM has been considered as an alternative at the preliminary stage of project development".[33]

The cost of Alternative 5 is estimated at $130 million while the cost of the Project is estimated at $132.9 million. However, Enbridge Gas clarified that the $130 million cost for Alternative 5 does not include the $4.3 million cost of DSM that would be required for the first two years. Enbridge Gas submitted that "…these costs would be further increased in the future, as any increase in demand would require additional DSM programming, and still the critical project drivers of integrity and safety would not be addressed."[34]

[32] EB-2020-0091
[33] Enbridge Gas response to OEB staff interrogatory 13 a) and Pollution Probe interrogatory 10
[34] Enbridge Gas response to OEB staff interrogatory 12 a)

Enbridge Gas included in Alternative 5 the effect of DSM which reduces the demand on the London Lines and consequently reduces the pipeline diameter. Enbridge Gas's rationale for rejecting Alternative 5 is that it: "Provides capacity to serve 2021 expected demand only, while also providing reliability of supply for emergency and operational scenarios. Savings on pipeline size reduction would be exhausted by less than 2 years of supplemental DSM programming, after which continued supplemental DSM spend or pipeline reinforcement would be required."[35]

Enbridge Gas pointed out that the current IRP proceeding would consider the scope of alternatives (e.g. require consideration of other forms of non-build alternatives). Enbridge Gas noted that DSM cannot address integrity and safety issues which are the main drivers for the Project's need. Enbridge Gas also noted that DSM alternatives are not economically feasible compared to the Project. Enbridge Gas noted that the additional comparative benefits of the Project include "…additional capacity in the area to deliver natural gas to new customers."[36]

Submissions by Parties and Reply Submission by Enbridge Gas

Phased Replacement Alternative Proposed by APPrO and FRPO

Two intervenors, APPrO and FRPO, submitted that Enbridge Gas should have considered a phased approach to the replacement of the Existing Pipelines. APPrO and FRPO referred to three reports: *The London Lines,* December 18, 2002, by Katie Hooper (Hooper Report), *The London Lines Report, 2004,* by Bob Wellington (Wellington Report) and *Engineering Asset Plan – The London Lines by Jack Chen, 2016* (Chen Report). Enbridge Gas filed the Hooper Report, Wellington Report and Chen Report in response to BOMA's interrogatories.[37]

APPrO expressed concerns with the scope of the alternatives considered by Enbridge Gas. APPrO submitted that Enbridge Gas should have included in the comparative assessment options identified in the Hooper Report and the Wellington Report. In APPrO's submission, Enbridge Gas should have included as a viable option the alternative, identified in the Hooper Report and further assessed in the Wellington Report, of abandoning the London South Line and providing for continuity of service using excess capacity on the London Dominion Line.

The Hooper Report, completed in 2002, concluded that the Existing Pipelines were

[35] Exhibit B, Tab 2, Schedule 5, page 1
[36] Exhibit G, Tab 1, Schedule 1, Attachment 1, page 6 of 9
[37] Enbridge Gas response to BOMA interrogatory 5, Attachment 1, Attachment 2, Attachment 3, November 23, 2020

needed for continuous supply but noted that only one of the two lines was needed to be active to maintain the supply.[38] The recommended alternative in the Hooper Report was to abandon the London South Line, which was in worse physical integrity condition than the London Dominion Line. The Hooper Report stated that this would be the least cost option without "…strain on any other parts of the system as it takes advantage of the existing excess capacity in the London Dominion Line".[39]

The Wellington Report, completed in 2004, followed up on the Hooper Report and confirmed that the abandonment of the London South Lines would be a priority option. This recommendation was based on a qualitative assessment and ranking of the integrity of the Existing Pipelines. The Wellington Report included a cost assessment of abandoning each segment of London South Line. APPrO pointed that the Wellington Report recommended a sequence of abandonment of high risk segments of the London South Line and that Enbridge Gas "…identify all sections of the London South line that are incurring additional maintenance costs due to leakage and if budget permits, abandon these sections accordingly."[40]

APPrO asked, in its submission, that Enbridge Gas file additional evidence to address APPrO's reservations about the need and alternatives evidence filed on the record by Enbridge Gas.

FRPO submitted, similarly to APPrO, that based on its interpretation of the Hooper Report, the Wellington Report and the Chen Report, Enbridge Gas should have considered "…phased replacement of segments prioritized by condition assessments of the respective segments."[41]

Enbridge Gas, in its reply submission, noted that neither the Hooper Report nor the Wellington Report was current. The Chen Report, in Enbridge Gas's submission, should be considered in the context of the DIMP Integrity Report for the Existing Pipelines. Enbridge Gas confirmed that both the Hooper Report and the Wellington Report "…recommended the abandonment of the South London Line and continued use of and risk mitigation for the remaining London Dominion Line since it would be the sole source of supply…". Enbridge Gas submitted that none of these reports "…provide a robust consideration of alternatives". Enbridge Gas indicated that the reports do not recommend phased or paced abandonment and refurbishment but "…endorse an entirely different alternative…abandonment of the London South Line and operation of

[38] The London Lines by Kathi Hooper, Section 4.0 Options and Recommendations, December 18, 2002
[39] APPrO Submission, December 14, 2020, pages 9-10, paragraph 43
[40] APPrO Submission, December 14, 2020, page10, paragraphs 45-48
[41] FRPO Submission, December 15, 2020, page 5

the London Dominion Line as a single feed." which is included as Alternative 1 in its assessment of the seven viable alternatives. [42]

In Enbridge Gas's view, the alternative proposed by APPrO and FRPO should not be considered because it was not supported by the evidence and would be more costly and impractical. Enbridge Gas stated that the Project was the preferred alternative for the cost efficiencies due to smaller pipe size and fittings and savings of the single mobilization of construction.

BOMA

BOMA noted its expectation that in the future Enbridge Gas would incorporate the IRP alternatives into its system planning process.

Environmental Defence

Environmental Defence criticized Enbridge Gas for not incorporating the analysis of IRP alternatives more rigorously and on a more timely basis into the assessment of alternatives to the Project. Environmental Defence submitted that many times over the last 30 years, the OEB directed Enbridge Gas to apply IRP into the system planning and alternative assessment.[43] Environmental Defence's view was that Enbridge Gas "…did not meet the Board's directions regarding IRP…" and that Alternative 5, which incorporated DSM, was insufficient.

Environmental Defence argued that the assessment of alternatives was insufficient because: i) it ignored the DSM cost savings that accrue to the customers ii) it ignored other DSM alternatives such as demand response iii) it ignored other alternatives of decreasing the length of size of the pipe by supplemental DSM iv) it ignored impacts of declining demand for natural gas v) it failed to document the calculation of $4.3 million incremental cost Enbridge Gas noted in assessment of its Alternative 5 vi) and the consideration of IRP alternatives was too late as the need for replacement was determined 20 years ago. [44] In conclusion, Environmental Defence asked the OEB to "…once again to remind Enbridge Gas of its obligation to conduct a more rigorous Integrated Resource Planning assessment at the preliminary stage of projects development in future cases."[45]

[42] Enbridge Gas Reply Submission, December 21, 2020, pages 9-10, paragraphs 23-24
[43] Submissions Environmental Defence, December 14, 2020*, Background: OEB directions regarding IRP,* page 2
[44] Submissions Environmental Defence, December 14, 2020, *Enbridge Contravened OEB IRP Directives*, pages 3-4
[45] Submissions Environmental Defence, December 14, 2020, *Conclusion*, page 5

Enbridge Gas noted that Environmental Defence accepted the need for the Project and criticized Enbridge Gas's consideration of IRP "…in conjunction with the consideration of alternatives". In response, Enbridge Gas stated that it initiated the current IRP proceeding to develop the IRP Framework that would include the "…appropriate scope of alternatives. Enbridge Gas anticipates that the OEB will provide direction how to address this issue in future projects".[46] Regarding the criticism of the cost assessment for Alternative 5, Enbridge Gas responded that "…although the cost savings of reduced gas use was not considered, any additional costs of supplemental DSM programs…was also not considered'". Enbridge Gas reiterated that these considerations would be more appropriately considered in the current IRP proceeding and "…should not be developed on a one-off basis…"[47]

Energy Probe

Energy Probe did not comment on Enbridge Gas's alternatives but suggested that the Project be delayed for two years after the OEB's re-basing rate proceeding. Energy Probe stated that it believed that Enbridge Gas followed the appropriate process for the selection of the preferred alternative route.

Enbridge Gas's reply to Energy Probe's proposal is provided in sections 3.1(Need for the Project) and 3.3 (Project Economics) of this Decision and Order.

Pollution Probe

Pollution Probe recognized the need for the replacement of the Existing Pipelines and submitted that the alternatives to the Project should include "...optimal size of a proposed replacement pipeline and routing considerations…". Pollution Probe noted that as the Existing Pipelines serve 135 direct customers and 25 distribution stations it would be "…difficult to select a different route…".[48] Pollution Probe criticized Enbridge Gas for the lack of detailed analysis of the alternatives, specifically a more detailed analysis supporting the downsizing of the pipeline and its approach to the development and assessment of IRP alternatives.

Pollution Probe recommended that the OEB recognize Enbridge Gas's consideration of DSM in developing the Alternative 5 as a way to downsize the pipeline and noted that although the consideration of the IRP was not "… fulsome or perfect, it is a step in the

[46] Enbridge Gas Reply Submission, December 21, 2020, page 11, paragraphs 26-27
[47] Enbridge Gas Reply Submission, December 21, 2020, page 12, paragraph 28
[48] Pollution Probe Submission, December 13, 2020, *Project Options and Integrated Resource Planning,* page 6

right direction until the OEB can raise the bar through enhanced requirements in the generic IRP proceeding."

Pollution Probe requested that the OEB impose a condition that "Enbridge shall report scope 1 and scope 2 to the Project in its post-construction report." Enbridge Gas in

response to Pollution Probe interrogatories[49], confirmed that it calculated scope 1 and scope 2 emissions for the Project. Pollution Probe also submitted that this reporting "…would enable the OEB to understand the air emissions related to projects it approves." [50]

Enbridge Gas did not take a position on Pollution Probe's proposed condition of approval. Enbridge Gas in its reply submission highlighted Pollution Probe's statement that Enbridge Gas "… attempted to mature its IRP approach by conducting an analysis of broader options. This additional level of diligence has resulted in a downsizing of infrastructure needs and related costs."[51]

OEB Staff

OEB staff submitted that the Project is the preferred alternative because it is the least-cost alternative, and it addresses the integrity driven need while providing the required capacity to serve the current and forecasted system demands.

Regarding the option of non-build IRP alternatives such as DSM or a combination of DSM and physical pipeline options, OEB staff's position was that such alternatives should be given more consideration in pipeline projects. That being said, in this particular case, because the cost for Alternative 5 (including capital cost and DSM cost) would exceed the Project cost, OEB staff did not consider Alternative 5 to be preferred compared to the Project.

However, OEB staff expressed concerns with several of the assumptions made by Enbridge Gas in its analysis of Alternative 5, which involves a combination of reduced size pipeline and DSM.

[49] Enbridge Gas response to Pollution Probe interrogatory 11 explained that its sustainability goals related to greenhouse gas (GHG) emissions are in relation to scope 1 emissions, which are direct GHG emissions from sources it owns or controls and scope 2 emissions, which are GHG emissions from the generation of purchased electricity it consumed.
[50] Pollution Probe Submission, December 13, 2020, *Conclusions and Recommendation,* pages 10-11
[51] Enbridge Gas Reply Submission, December 21, 2020, page 12, paragraph 29

Enbridge Gas noted that “DSM is not relevant as it cannot address the integrity and safety drivers that underpin the need for this project”.[52] OEB staff argued that these factors should not provide a blanket exemption from consideration of DSM or other potential alternatives in LTC applications. Rather, these factors need to be considered on a case-by-case basis. In this specific application, Enbridge Gas has provided no evidence that the alternative involving DSM (Alternative 5) has higher risks to integrity or safety than the proposed Project. OEB staff stated its expectation that in future LTC applications, if Enbridge Gas believes that integrity or safety considerations preclude or limit the consideration of non-build or combined alternatives, Enbridge Gas should provide more evidence in support of this position.

OEB staff submitted that while Enbridge Gas has not provided full details of its economic analysis of Alternative 5, it appears that Enbridge Gas has:

- Included the administrative and incentive costs of supplemental DSM but assigned no value to the benefits realized by its customers in the form of lower gas commodity costs due to supplemental DSM.

- Assumed no focusing of DSM on measures or program types (e.g. gas demand response) most likely to reduce peak demand and enable pipeline downsizing.

OEB staff noted that the approach taken by Enbridge Gas makes it unlikely that Enbridge Gas would select an alternative including DSM or other non-build alternative as a preferred alternative to an infrastructure project. OEB staff acknowledged that more direction on how to address these issues is likely to be provided to Enbridge Gas for future projects as part of the ongoing IRP proceeding.

Findings

The OEB has reviewed the alternatives to the Enbridge Gas-preferred Project, both from the standpoint of addressing the established need in the most cost effective manner and the potential provision of system benefits.

The OEB finds that the Project proposal to replace the existing dual fed London Lines with NPS 6/4 steel pipelines, operating at 3450kPa MOP represents the most viable option for replacement capacity for the current London Lines. The OEB agrees with Enbridge Gas that the proposed Project will also also provide reliability of supply for emergency and operational scenarios in summer and shoulder month conditions.

[52] Enbridge Gas response to Environmental Defence interrogatory 5

However, despite the OEB approval of the application for leave to construct this Project, the OEB agrees with Environmental Defence that Enbridge Gas has an obligation to conduct a more rigorous Integrated Resource Planning assessment at the preliminary stage of projects development in future cases.[53] As OEB staff also notes the failure to present detailed analyses makes it unlikely that Enbridge Gas would select an alternative including DSM or other non-build project option. The OEB acknowledges that more direction is likely to be provided to Enbridge Gas in future leave to construct projects as part of the ongoing IRP proceeding. In the interim, however, the OEB believes that all parties would be assisted if Enbridge Gas would, in the future, undertake in-depth quantitative and qualitative analyses of alternatives that specifically include the impacts of DSM programs on the need for, or project design of facilities for which Enbridge Gas has applied for leave to construct.

3.3 Project Economics

The total estimated cost of the Project is approximately $164 million. In this application, Enbridge Gas is seeking approval of the costs of the mainline which is estimated at $95.2 million. Enbridge Gas has provided the following capital cost estimates for the proposed Project: [54]

London Line Replacement Project
Total Estimated Project Capital Costs

Line No.	Particulars ($000's)	Mainline	Stations	Services	Abandonment (1)	Total
1	Materials	5,616	1,823	125	-	7,564
2	Construction and Labour	77,321	8,221	4,005	19,776	109,323
3	Contingencies	11,402	1,310	619	2,633	15,964
4	Interest During Construction	867	142	49	-	1,058
5	Estimated Incremental Project Capital Costs	95,206	11,496	4,798	22,409	133,909
6	Indirect Overhead	21,881	2,640	991	4,677	30,189
7	Total Estimated Project Capital Costs	117,087	14,136	5,789	27,086	164,098

Notes:
(1) Abandonment costs will not be included in Enbridge Gas's ICM request for rate recovery.

A Discounted Cash Flow (DCF) analysis was not completed for the Project. Enbridge Gas stated that the rationale for not conducting a DCF analysis was that the Project was underpinned by the integrity requirements and would not create a significant change in capacity available on the London Lines.

[53] Submissions Environmental Defence, December 14, 2020, *Conclusion*, page 5
[54] Exhibit F, Tab 1, Schedule 1, page 1

Enbridge Gas has applied for the OEB's approval to recover the Project costs including the cost of ancillary facilities through the OEB's Incremental Capital Module (ICM) mechanism in its 2021 Rates Application which is currently before the OEB.[55]

Enbridge Gas provided a comparison of estimated and actual construction costs for similar OEB-approved projects completed in the past:[56]

Case #	Project Name	City	Construction Year	Pipe Size (Diameter / Material)	Length (km)	Estimated Total Costs (millions)	Estimated $/meter*	Assumed Contingency	Actual Total Costs (millions)	Actual $/meter
EB-2015-0042	Sudbury NPS 10 Replacement Project	Sudbury	2015	NPS 12 Steel	0.7	$2.023	$2,890	10%	$1.023	$1,461
EB-2016-0122	2016 Sudbury Replacement Project	Sudbury	2016	NPS 12 Steel	0.85	$2.188	$2,574	13%	$3.360	$3,953
EB-2016-0222	Sudbury Maley Replacement Project	Sudbury	2016-2017	NPS 12 Steel	2.8	$6.304	$2,251	12%	$4.206	$1,502
EB-2017-0180	2018 Sudbury Replacement Project	Sudbury	2018	NPS 12 Steel	20	$74.000	$3,700	15%	$82.616	$4,131
EB-2019-0172	Windsor Line Replacement Project	Southwestern Ontario	2020	NPS 6 Steel	64	$92.744	$1,449	15%	TBD	TBD
EB-2020-0192	London Line Replacement Project	Southwestern Ontario	2021	NPS 4 & NPS 6 Steel	90.5	$133.909	$1,480	14%	TBD	TBD

*Variations in cost per metre are signficantly influenced by specific project scope parameters (such as rural or urban setting, rock excavation, local land costs, etc).

EB-2017-0180: The 2018 Sudbury Replacement Project had large proportions of rock excavation, wetland management, a specialized Cathodic Protection design and bypass installations, which are all costly activities that are not present to the same extent or not present at all in the previously approved OEB projects as indicated in the table. It is the influence of this construction scope that has increased the cost per metre for the 2018 Sudbury Replacement Project. Estimated Total Costs for this project were later increased to $83 million.

EB-2019-0172: For comparison purposes, Estimated Total Costs as indicated in the table for the Windsor Line Replacement Project represents "Estimated Incremental Project Capital Costs" (includes Stations, Services, and IDC; excludes Indirect Overheads of $14.061 million).

EB-2020-0192: For comparison purposes, Estimated Total Costs as indicated in the table for the London Line Replacement Project represents "Estimated Incremental Project Capital Costs" (includes Stations, Services, Abandonment and IDC; excludes Indirect Overheads of $30.189 million).

In the above table Enbridge Gas presented data for four Sudbury area projects constructed between 2015 and 2018 and for the Windsor Line Replacement Project (Windsor Line)[57] located in Southwestern Ontario and constructed most recently in 2020. Based on the data above the Windsor Line project seems most comparable to London Lines Replacement. The estimated cost of Windsor Line construction was $1,449/metre which is close to the $1,480/metre cost estimate for the Project. These estimates include pipelines and ancillary facilities costs.

Submissions by the Parties and Reply by Enbridge Gas

APPrO and BOMA did not raise any issues regarding the economics of the Project. As described in section 3.2, Environmental Defence criticized Enbridge Gas's economic

[55] EB-2020-0181
[56] Enbridge Gas response to OEB staff interrogatory 11 c)
[57] EB-2019-0172

assessment of DSM programs as an alternative in terms of the cost savings to the customers in comparison to the Project costs.

Submissions by Energy Probe, FRPO, Pollution Probe and OEB staff and replies by Enbridge Gas are outlined below.

Energy Probe

Energy Probe was concerned with the costs of the Project, and specifically with the $16 million (or about 15% of the costs) contingency costs and $ 30.2 million for indirect overhead costs. Energy Probe's view was that the 15% contingency should not be applied to the cost of all labour and materials and submitted that "…common construction industry practice [is] to apply a lower contingency to materials than to labour."[58]

Energy Probe noted that Enbridge Gas already spent $4.8 million on the Project[59] and that it has not allocated contingency to this amount. On this basis, in Energy Probe's view, the total Project contingency should be reduced by 15% of $4.8 million or by $720,000.

Energy Probe submitted that the indirect overhead costs at $30.2 million is "…simply 22.7% percentage applied to all project costs based on legacy Union Gas financial data prior to its last rebasing." Energy Probe submitted that Enbridge Gas is a different company with fewer staff after the merger and that ratepayers should not have to pay for the reduced indirect costs. Energy Probe submitted that the Project should be delayed until after re-basing "…so that lower Indirect Overhead can be allocated…based on productivity savings…" since the merger.[60]

Energy Probe concluded that the Project is not urgently needed, as demonstrated by the cathodic protection readings of the pipe, and therefore should be delayed to after rebasing due to post merger savings. Enbridge Gas replied that these concerns were to be "...fully resolved either in the evidence or through the OEB's regulatory practice and should not be taken into account…" in this leave to construct proceeding.

Energy Probe also claimed that it "seems" that Enbridge Gas applied for the Project approval at this time because it can use the ICM funding to recover the capital cost.

[58] Energy Probe Argument Submission, December 13, 2020, page 3
[59] Enbridge Gas response to Energy Probe interrogatory 9, page 2
[60] Energy Probe Argument Submission, December 13, 2020, page 5

FRPO

As noted in section 3.2., FRPO proposed a phased segment-by- segment replacement of the Existing Pipelines.[61] Regarding the Project cost and economics, FRPO argued that the comparison of alternatives should include additional evidence on cost comparison of phased replacement with other alternatives considered by Enbridge Gas. In support of its position, FRPO submitted that Enbridge Gas's risk assessment of the physical integrity of the system does not warrant the full replacement of the Existing Pipelines at this time.

FRPO, in its conclusion, urged that the OEB reject the application or "…in the alternative require EGI to provide more evidence on targeted, segmented phasing of the replacement including costs and economics".[62]

Pollution Probe

Pollution Probe focused on the issue of the Project's capital cost recovery process.

As Enbridge Gas included the recovery of the capital cost of the Project in its 2021 IRM application currently before the OEB, Pollution Probe suggested that the OEB's approval of the LTC application in advance of 2021 IRM decision "…could be interpreted as pre-approval…and binding on the 2021 ICM proceeding panel."[63]

Pollution Probe also argued that the cost estimates for the Project, as presented in the LTC application, are preliminary and may change. Based on that, Pollution Probe proposed that "…it is more appropriate to complete the capital funding request and then assess Leave to Construct approvals for this project…".[64]

Enbridge Gas did not agree with Pollution Probe's proposed approach to regulatory review of capital costs and approval of capital cost recovery. Enbridge Gas noted that the forecast cost of a project has been appropriately reviewed within the scope of public interest test in a leave to construct proceeding and that the prudence of "…actual costs relative to the forecast project costs underlying the project for which leave to construct is granted is the basis of the OEB's review in all rate recovery proceedings."[65]

[61] APPrO and FRPO both proposed a phased replacement as a new alternative. Submissions by APPrO and FRPO and response by Enbridge Gas is addressed in section on alternatives in this decision.
[62] FRPO London Lines Argument, December 15, 2020, page 10
[63] Pollution Probe Submission, December 13, 2020, page 8
[64] Ibid
[65] Enbridge Gas Final Argument, December 21, 2020, pages 15-16, paragraph 36

OEB Staff

OEB staff submitted that the forecast Project costs seem reasonable based on a comparison of the cost of Windsor Line project which is a similar project recently approved by the OEB. OEB staff had no concerns with the estimated abandonment costs or the method of recovery of these costs.

OEB staff noted that prudence of the actual capital costs for the Project will be examined by the OEB upon Enbridge Gas filing its Post Construction Financial Report. OEB staff proposed a condition of approval requiring that Enbridge Gas file such a report with the OEB. [66] Enbridge Gas agreed with the proposed condition. The Post Construction Financial Report would include a variance analysis of project cost, schedule and scope compared to the estimates filed in this proceeding, including the extent to which the project contingency was utilized. Enbridge Gas would also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where Enbridge Gas proposes to start collecting revenues associated with the Project, whichever is earlier.

Findings

The OEB finds that the proposed costs of the Project are reasonable, including the budgeted contingency. The OEB notes that the purpose of examining costs in an LTC application is not to approve their inclusion in rate base but to determine whether they present the most cost-effective and prudent way of undertaking the work. The OEB approval of the proposed budget does not replace a full review of the prudence of the actual spending on the Project when Enbridge Gas applies to add those costs into rate base after the filing of the agreed-upon Post Construction Financial Report.

3.4 Environmental Assessment

Enbridge Gas retained Stantec Consulting Ltd. (Stantec) to complete an environmental assessment for the proposed pipeline, in accordance with the OEB's Environmental Guidelines.

Stantec prepared an Environmental Report (ER) for the Project identifying the environmental and socio-economic features along the route of the proposed pipelines.

[66] Condition 7 in the Schedule B to this Decision

On July 22, 2020, the ER was made available to the Ontario Pipeline Coordinating Committee (OPCC), local Conservation Authorities, and all affected municipalities[67] for review and comments.

Stantec did not anticipate any permanent or adverse environmental impacts from the construction and operation of the Project, provided the mitigation measures recommended in the ER are followed.

Enbridge Gas stated in the ER that it would complete the Environmental Protection Plan (EPP) for the Project prior to mobilization and construction start. Enbridge Gas stated that a qualified Environmental Inspector would be present on the construction site to assist the Project Manager with the mitigation measures, permitting requirements and conditions.[68] The EPP will incorporate the mitigation measures identified in the ER and received during the consultation with the OPCC and agencies. In response to OEB staff interrogatories, Enbridge Gas confirmed that the EPP would include site specific environmental management, monitoring and contingency plans in order to implement general mitigation and contingency measures identified in the ER and in the consultation process.[69]

Public consultation was conducted through a Virtual Open House which replaced the typical in-person open house events due to the COVID-19 pandemic restrictions. Twenty-five comments were received as of July 2020. Enbridge Gas filed on November 23, 2020, an updated summary of the comments, issues and concerns expressed by the members of the OPCC, municipalities, local Conservation Authorities and the general public, along with Enbridge Gas's actions and plans to address the concerns and resolve issues.[70] The comments were received from the Ministry of Transportation, County of Middlesex, Ministry of Heritage, Sports, Tourism and Culture Industries (MHSTCI), Ministry of Natural Resources and Forestry (MNRF), Upper Thames River Conservation Authority, and St. Clair Region Conservation Authority in addition to the comments provided by the general public. The updated summary of comments by the OPCC members and the municipalities do not include any outstanding concerns.

[67] The County of Middlesex, the County of Lambton, the Township of Dawn-Euphemia, the Municipality of Southwest Middlesex, the Municipality of Strathroy-Caradoc and the Municipality of Middlesex Centre
[68] Exhibit C, Tab 1, Schedule 1, page 3, paragraphs 11-12 and page 4, paragraph 14
[69] Enbridge Gas response to OEB staff interrogatory 6 a)
[70] Enbridge Gas response to OEB staff interrogatory 5, Attachments 1: Correspondence Tracking-Post Environmental Report Submission OPCC and Attachment 2: Correspondence Tracking-Post Environmental Report Submission Non-OPCC

Comments by other parties dealt with various permits and approvals required for the construction and operation of the Project. For example, the MTO referred to the permitting conditions (i.e. highway crossings) to be met by Enbridge Gas before construction can be permitted to start.

The ER listed environmental permits and regulatory requirements (from and of federal, provincial, and municipal governments and other entities, such as the Canadian National Railway and Hydro One Networks Inc.) for construction and operation of the Project. Enbridge Gas updated on November 23, 2020 the status of each permit/approval application and expected date of acquiring each of the permits. [71] Enbridge Gas anticipated receiving all the permits by the First Quarter of 2021. Enbridge Gas did not anticipate potential delays that may affect the construction schedule for the Project.

In accordance with the requirements under the authority of the MHSTCI, Stantec conducted the initial stages of assessment and studies to protect archaeological resources, built heritage resources and cultural heritage landscapes potentially impacted by the proposed Project. Stantec completed a Stage 1 Archaeological Assessment (AA) which identified areas that have archaeological potential and require a Stage 2 AA. The final Stage 2 AA Report was expected to be completed by the Fourth Quarter of 2020.

Stantec completed a checklist of the MHSTCI *Criteria for Evaluation Potential for Built Heritage Resources and Cultural Heritage Landscapes* for the study area. Enbridge Gas expects to complete a *Cultural Heritage Evaluation Report* (CHER) and submit it to the MHSTCI for its review and comment at the beginning of 2021.[72] The MHSTCI review of the CHER Report is expected to be completed by April 1, 2021.

Submissions by the Parties and Reply by Enbridge Gas

Only Pollution Probe and OEB staff filed submissions on environmental matters and assessment. Enbridge Gas reply to these submissions is noted below.

[71] Enbridge Gas response to OEB staff interrogatory 7
[72] Exhibit C, Tab 5, Schedule 1, page 5, paragraphs 17 and 18 and Enbridge Gas response to OEB staff interrogatory 9

Pollution Probe

Pollution Probe noted that a detailed mitigation plan was not filed in the proceeding. Having said that, Pollution Probe noted that the OEB can approve a LTC project "…without detailed information on location, depth, proposed mitigation and residual environmental and socio-economic impacts."[73]

In addition, Pollution Probe pointed that the specific location of the pipeline within the route and the depth of cover for the pipeline were not part of the evidence. In Pollution Probe's view, changes to location of the pipeline alignment and the depth of cover may require additional approvals (for example, by way of an application under section 101 of the Act).[74] Pollution Probe was also concerned with a scenario that despite the standard OEB condition of approval that all permits and approvals must be obtained prior to construction start, there may be a risk that a permit was not obtained in time. In its submission Pollution Probe referred to "…recent Leave to Construct projects have resulted in project changes, delays and significant permitting issues."[75]

OEB Staff

OEB staff had no concerns with the environmental aspects of the Project, given that Enbridge Gas is committed to implementing the proposed mitigation measures.

OEB staff noted that Enbridge Gas agreed with the draft Conditions of Approval including requirements for the completion of the EPP, Environmental Management Plan, and Contingency Plan, environmental reporting and monitoring and acquisition of all required other permits and approvals.[76]

Findings

The OEB finds that Enbridge Gas has followed the OEB's Guidelines in its assessment of the potential environmental impact of the Project. Provided the mitigation measures recommended in Stantec's ER are followed, the OEB is satisfied that, permanent or adverse environmental impacts from the construction and operation of the Project should not manifest.

[73] Pollution Probe Submission, December 13, 2020, page 9
[74] This reference by Pollution Probe was to OEB File No. EB-2020-0160
[75] Pollution Probe Submission, December 13, 2020, page 9
[76] Enbridge Gas response to OEB staff interrogatory 14

The OEB notes that Enbridge Gas is required to adhere to the conditions of approval for this Decision and Order, which includes implementing all the recommendations in the Environmental Report. Enbridge Gas is also obligated to monitor the impacts of construction both during and after construction and report to the OEB.

3.5 Land Matters

Most of the proposed Project will be located entirely within existing municipal road allowances in the County of Middlesex, the County of Lambton, the Township of Dawn-Euphemia, the Municipality of Southwest Middlesex, the Municipality of Strathroy-Caradoc and the Municipality of Middlesex Centre.

Enbridge Gas would need approximately 0.584 acres of permanent easement on two locations along the pipeline route and approximately 114.9 acres of temporary land use rights for the construction and storage of topsoil. Enbridge Gas proposed to purchase fee simple land rights for new station sites and expansion of the existing stations. [77]

Enbridge Gas filed for approval of the form of Temporary Land Use Agreement[78] and the form of Transfer of Easement Agreement [79]. Enbridge Gas stated that the OEB previously approved the form of Temporary Land Use Agreement in the OEB's Windsor Line Replacement proceeding.[80] Enbridge Gas submitted that the filed form of Transfer of Easement Agreement was not previously approved and that it is a modification of the form approved in the OEB's Don River 30" Pipeline Project proceeding [81]. Enbridge Gas noted that the modifications were changes of terms Transferor and Transferee to Owner and Company, respectively; and the addition of clauses concerning the *Planning Act* to remove the need for a witness to the signing of a Declaration, the company's compliance with provincial environmental legislation, and the purpose of the easement.[82]

[77] Exhibit E, Tab 2, Schedule 2, page 8 of 9
[78] Exhibit E, Tab 2, Schedule 3
[79] Exhibit E, Tab 2, Schedule 4
[80] EB-2019-0172
[81] EB-2018-0108
[82] In its letter dated January 21, 2021, Enbridge Gas clarified its request for approval of Forms of Easement Agreements and filed as an attachment a form of previously approved transfer of easement agreement with marked modifications.

Submissions by the Parties and Reply by Enbridge Gas

Only OEB staff commented on land matters.

OEB staff noted that Enbridge Gas has been negotiating with the affected landowners to obtain land rights and fee purchases for the Project.

OEB staff expressed no concerns with the forms of easement agreements submitted by Enbridge Gas for OEB approval under section 97 of the Act as these forms have been approved by the OEB in previous proceedings. OEB staff noted that these forms contain minimum requirements and that negotiations between Enbridge Gas and a landowner may result in additional or modified terms of agreement should the parties bilaterally agree.

Enbridge Gas stated that it has been negotiating with the landowners for the temporary and permanent land rights and stated that "…no concerns about the Project have been raised at this time."[83] On December 21, 2020, Enbridge Gas confirmed that negotiations were continuing and that 34 landowners indicated their agreement for land use of the Project.[84]

Findings

The OEB approves the Form of Temporary Land Use Agreement and Form of Transfer of Easement Agreement filed by Enbridge Gas pursuant to section 97 of the Act. The agreements are consistent with previously approved forms of agreement. The OEB notes that the conditions of approval for this Decision and Order require Enbridge Gas to certify that the company obtained all approvals, permits, licenses and certificates required to construct, operate and maintain the Project.

3.6 Indigenous Consultation

In accordance with the OEB's Environmental Guidelines, Enbridge Gas contacted the Ministry of Energy, Northern Development and Mines (MENDM) in respect of the Crown's duty to consult related to the Project on December 9, 2019. By a letter dated February 26, 2020 (Delegation Letter), the MENDM delegated the procedural aspects of the Crown's Duty to Consult for the Project to Enbridge. In the Delegation Letter, the

[83] Enbridge Gas response to OEB staff interrogatory 4 b)
[84] Reply Argument of Enbridge Gas Inc, December 21, 2020, page 16, paragraph 37

MENDM identified six Indigenous communities with which Enbridge Gas should consult in relation to the Project:

- Oneida Nations of the Thames
- Aamjiwnaang
- Caldwell
- Chippewas of Thames
- Chippewas of Kettle and Stony Point
- Bkejwanong (Walpole Island)

Each of these six Indigenous communities and the Metis Nation of Ontario (MNO) were served the Notice of Hearing for the Project, in accordance with the OEB's Letter of Direction. No Indigenous community applied for intervenor status in the proceeding.

Enbridge Gas provided the MENDM with its Indigenous Consultation Report[85] for the Project and requested that the MENDM determine if the procedural aspects of the Duty to Consult are acceptable. The Indigenous Consultation Report includes, for each of the six Indigenous communities potentially affected by the Project, the record of consultation chronology, concerns expressed, Enbridge Gas's responses to questions and concerns raised, and information on any outstanding concerns. The information in the Indigenous Consultation Report was dated August 31, 2020. Enbridge Gas filed updated Indigenous consultation summary tables, current as of November 16, 2020.[86] Enbridge Gas indicated that there were no outstanding concerns raised in the Indigenous consultation process. Regarding the anticipated date of obtaining a letter of opinion from the MENDM on the adequacy of the consultation, Enbridge Gas said on November 30, 2020, that it is committed to working with the MENDM "…to ensure they have information necessary to make their determination".[87]

Only OEB staff addressed the issue of Indigenous consultation. OEB staff submitted that Enbridge Gas has provided the requested Indigenous Consultation Report and updated consultation summary tables as requested. However, at this time MENDM has not yet provided its opinion on the adequacy of that consultation. OEB staff submitted that, while the OEB is the decision maker with respect to the adequacy of the consultation, the opinion of MENDM is important in this regard. OEB staff recommended that, should the OEB determine that leave should be granted, it should be conditional on

[85] Exhibit G, Tab 2, Schedule 1: Indigenous Consultation Report: Summary Tables and Schedule 2: Indigenous Consultation Report: Log and Project Correspondence
[86] Enbridge Gas response to OEB interrogatory 10, Attachment 1: Indigenous Consultation Report: Summary Tables
[87] Enbridge Gas, Argument-in-Chief, November 30, 2020, pages 12 -13, paragraph 32

Enbridge Gas filing with the OEB, a letter of opinion from the MENDM, prior to the start of construction. [88] OEB staff proposed the following condition of approval:

3 Enbridge Gas shall file with the OEB, prior to the commencement of construction, a letter of opinion from the Ministry of Energy, Northern Development and Mines (MENDM) stating that the MENDM is satisfied with the adequacy of procedural aspects of the Indigenous consultation for the Project. Leave to construct shall terminate if the letter of opinion is not filed within 12 months of the date on this Decision and Order.

Enbridge Gas did not object to this proposed condition of approval.

Findings

The OEB finds that Enbridge Gas followed the OEB's Guidelines and has made efforts to consult with the six Indigenous communities that were identified by the MENDM, as described in Enbridge Gas' Indigenous Consultation Report. The Indigenous communities were given direct notice of this proceeding and did not intervene or otherwise raise concerns before the OEB. The OEB grants leave to construct for the Project subject to Enbridge Gas satisfying the conditions of approval in this Decision.

[88] The OEB took this approach in its Decision and Order on Enbridge Gas Inc. Scugog Island LTC (EB-2017-0261), dated May 31, 2018. The OEB made its approval conditional on Enbridge Gas filing the adequacy letter prior to the commencement of construction. The MENDM's adequacy letter, dated October 1, 2018, stating it was satisfied with the procedural aspects of Indigenous consultation, was filed with the OEB prior to the commencement of construction. The project went in-service in May 2020.

4 ORDER

THE ONTARIO ENERGY BOARD ORDERS THAT:

1. Enbridge Gas Inc. is granted leave, pursuant to section 90(1) of the OEB Act, to construct 90.5 kilometres of pipelines consisting of approximately 51.5 kilometres (km) of 4 inch diameter (NPS 4) pipeline and 30.6 km of 6 inch diameter (NPS 6) pipeline to replace the existing London Lines and of 8.4 km of NPS 6 additional new pipeline from the Strathroy Gate Station to a tie-in at the main NPS 6 pipeline located in the County of Lambton; the Township of Dawn-Euphemia; Middlesex County; the Municipality of Southwest Middlesex; the Municipality of Strathroy-Caradoc; and the Municipality of Middlesex Centre,
   as described in its application.

2. Pursuant to section 97 of the OEB Act, the OEB approves the Form of Transfer of Easement Agreement and Form of Temporary Land Use Agreement that Enbridge Gas Inc. has offered or will offer to each owner of land affected by the Project.

3. Leave to construct is subject to Enbridge Gas Inc. complying with the conditions of approval set out in Schedule B.

4. Eligible intervenors shall file with the OEB and forward to Enbridge Gas Inc. their intervenor cost claim in accordance with the OEB's *Practice Direction on Cost Awards* on or before **February 11, 2021**.

5. Enbridge Gas Inc. shall file with the OEB and forward to intervenors any objections to the costs claimed by Intervenors on or before **February 25, 2021**.

6. If Enbridge Gas Inc. objects to any intervenor costs, intervenors shall file with the OEB and forward to Enbridge Gas Inc. their response, if any, to the objections to cost claims on or before **March 11, 2021**.

7. Enbridge Gas Inc. shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.

All materials filed with the OEB must quote the file number, **EB-2020-0192**, and be submitted in a searchable/unrestricted PDF format with a digital signature through the OEB's web portal at https://p-pes.ontarioenergyboard.ca/PivotalUX/. Filings must clearly state the sender's name, postal address, telephone number, fax number and e-mail

address. Parties must use the document naming conventions and document submission standards outlined in the Regulatory Electronic Submission System (RESS) Document Guidelines found at www.oeb.ca/industry. We encourage the use of RESS; however, parties who have not yet set up an account, may email their documents to registrar@oeb.ca.

All communications should be directed to the attention of the Registrar and be received no later than 4:45 p.m. on the required date.

With respect to distribution lists for all electronic correspondence and materials related to this proceeding, parties must include the Case Manager, Zora Crnojacki at Zora.Crnojacki@oeb.ca and Board Counsel, James Sidlofsky at James.Sidlofsky@oeb.ca

DATED at Toronto January 28, 2021

ONTARIO ENERGY BOARD

Original Signed By

Christine E. Long
Registrar

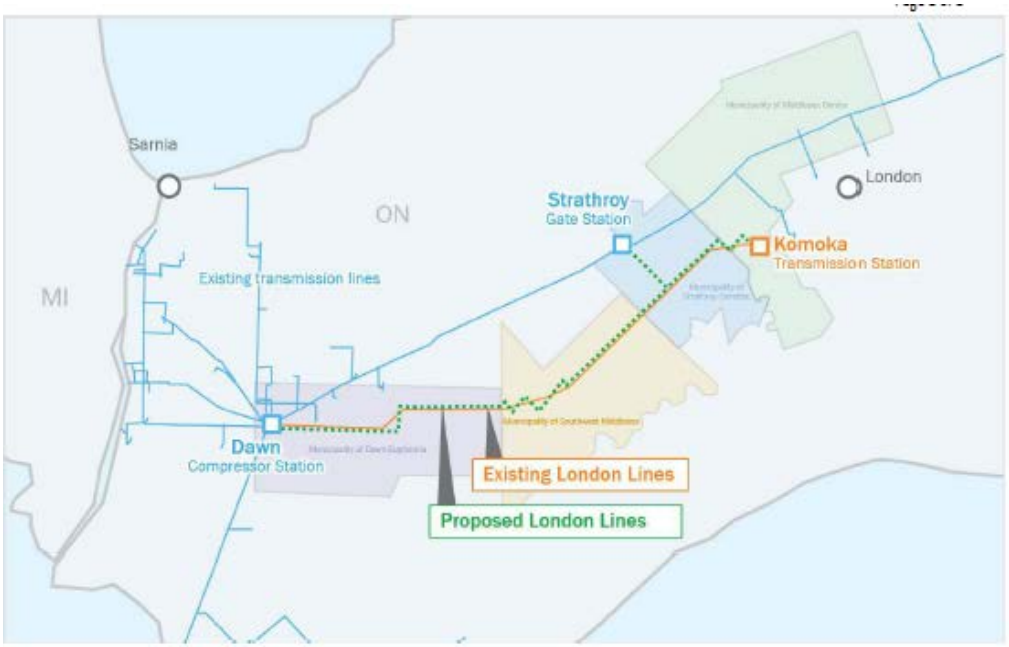
SCHEDULE A

DECISION AND ORDER

ENBRIDGE GAS INC.

EB-2020-0192

JANUARY 28, 2021


Sarnia
ON
MI
Existing transmission lines
Strathroy
Gate Station
London
Komoka
Transmission Station
Dawn
Compressor Station
Existing London Lines
Proposed London Lines

SCHEDULE B

DECISION AND ORDER

ENBRIDGE GAS INC.

EB-2020-0192

JANUARY 28, 2021

Leave to Construct Application under
Section 90 of the OEB Act

Enbridge Gas Inc.
EB-2020-0192
Conditions of Approval

1 Enbridge Gas Inc. (Enbridge Gas) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2020-0192 and these Conditions of Approval.

2 Enbridge Gas shall obtain all necessary approvals, permits, licences, certificates, agreements and rights required to construct, operate and maintain the Project.

3 Enbridge Gas shall file with the OEB, prior to the commencement of construction, a letter of opinion from the Ministry of Energy, Northern Development and Mines (MENDM) stating that the MENDM is satisfied with the adequacy of procedural aspects of the Indigenous consultation for the Project. Leave to construct shall terminate if the letter of opinion is not filed within 12 months of the date on this Decision and Order.

4 Enbridge Gas shall implement all the recommendations of the Environmental Report filed in the proceeding, and implement all commitments made in response the Ontario Pipeline Coordinating Committee member review.

5 Enbridge Gas shall notify the OEB and all parties in this proceeding, prior to the start of construction, of completion of each of Environmental Protection Plan (EPP) Environmental Management Plan (EMP), and Contingency Plan documents and make a copy of the documents available to a party upon their request.

6 (a) Authorization for leave to construct shall terminate 12 months after the decision is issued, unless construction has commenced prior to that date.

(b) Enbridge Gas shall give the OEB notice in writing of the following:

i. The commencement of construction, at least ten days prior to the date construction commences
ii. The planned in-service date, at least ten days prior to the date the facilities go into service
iii. The date on which construction was completed, no later than 10 days following the completion of construction

iv. The in-service date, no later than 10 days after the facilities go into service

7 Enbridge Gas shall advise the OEB of any proposed change in the project, including but not limited to changes in: OEB-approved construction or restoration procedures, the proposed route, construction schedule and cost, the necessary environmental assessments and approvals, and all other approvals, permits, licences, certificates and rights required to construct the proposed facilities. Except in an emergency, Enbridge Gas shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.

8 Concurrent with the final monitoring report referred to in Condition 8(b), Enbridge Gas shall file a Post Construction Financial Report, which shall provide a variance analysis of project cost, schedule and scope compared to the estimates filed in this proceeding, including the extent to which the project contingency was utilized. Enbridge Gas shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where Enbridge Gas proposes to start collecting revenues associated with the Project, whichever is earlier.

9 Both during and after construction, Enbridge Gas shall monitor the impacts of construction, and shall file with the OEB one electronic (searchable PDF) version of each of the following reports:

(a) A post construction report, within three months of the in-service date, which shall:

i. Provide a certification, by a senior executive of the company of Enbridge Gas's adherence to Condition 1

ii. Describe any impacts and outstanding concerns identified during construction

iii. Describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction

iv. Include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions

v. Provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project

(b) A final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:

i. Provide certification, by a senior executive of the company, of Enbridge Gas's adherence to Condition 4

ii. Describe the condition of any rehabilitated land

iii. Describe the effectiveness of any such actions taken to prevent or mitigate any identified impacts of construction

iv. Include the results of analyses and monitoring programs and any recommendations arising therefrom

v. Include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions

10 Enbridge Gas shall designate one of its employees as project manager who will be responsible for the fulfillment of these conditions, and shall provide the employee's name and contact information to the OEB and to all the appropriate landowners, and shall clearly post the project manager's contact information in a prominent place at the construction site.