



Brittany Zimmer
Advisor, Regulatory Applications
Leave to Construct
Regulatory Affairs

tel 519-436-4600 ext. 5004651
brittany.zimmer@enbridge.com
egiregulatoryproceedings@enbridge.com

Enbridge Gas Inc.
50 Keil Drive North,
Chatham, ON N7M 5M1
Canada

VIA Email and RESS

December 17, 2021

Ms. Christine Long
Registrar
Ontario Energy Board
2300 Yonge Street, Suite 2700
Toronto, Ontario, M4P 1E4

Dear Ms. Long:

**Re: Enbridge Gas Inc. ("Enbridge Gas")
Ontario Energy Board ("OEB") File No. EB-2019-0294
Low Carbon Energy Project ("Project")**

On October 29, 2020 the OEB issued its Decision and Order for the above noted proceeding which included, as Schedule C, several Conditions of Approval.

Per Schedule C, Section 6. (a) in the aforementioned Decision and Order, Enbridge Gas is to provide the OEB with the Post Construction Report, within 3 months of the in-service date. Please find enclosed a copy of the Post Construction Report for the Low Carbon Energy Project.

Please contact me if you have any questions.

Yours truly,

Brittany Zimmer
Advisor, Regulatory Applications – Leave to Construct



ENBRIDGE GAS INC.

Post-Construction (Interim) Report

Low-Carbon Energy Project (EB-2019-0294)

Table of Contents

Acronyms and Abbreviations

1.0	Introduction	1
1.1	Project Description.....	2
1.2	Studies Completed for the Project.....	3
2.0	Construction Effects and Mitigation Measures	4
2.1	Construction within Species at Risk Habitat	4
2.2	Water Management.....	4
2.3	Excess Soils.....	5
2.4	Spills	5
2.5	Traffic Disruption	5
3.0	Post-Construction Site Conditions	6
4.0	Indigenous Consultation	7
5.0	Comments and Complaints	8
6.0	Summary	10

Appendix

A	Executive Certifications
B	Restoration Log

Acronyms and Abbreviations

AFN	Alderville First Nation
CLFN	Curve Lake First Nation
Dillon	Dillon Consulting Limited
Enbridge Gas	Enbridge Gas Inc.
EPP	Environmental Protection Plan
ER	Environmental Report
ESQS	Excess Soil Quality Standards
HFN	Hiawatha First Nation
HWN	Huron-Wendat Nation
m	metre(s)
MCFN	Mississaugas of the Credit First Nation
MENDM	Ministry of Energy, Northern Development and Mines
MSIFN	Mississaugas of Scugog Island First Nation
NPS	nominal pipe size
OEB	Ontario Energy Board
RPIC	Real Property Institute of Canada
the Project	Low-Carbon Energy Project
SAR	species at risk
TMHC	Timmins Martelle Heritage Consultants Inc.

1.0

Introduction

On October 29, 2020, the Ontario Energy Board (OEB), in its Decision and Order for EB-2019-0294, granted Enbridge Gas Inc. (Enbridge Gas) leave to construct the “Low-Carbon Energy Project” consisting of infrastructure for a hydrogen-blended gas distribution pilot project (the Project) in close proximity to its Technology and Operations Centre in the City of Markham, Ontario.

Construction of the Project began on April 1, 2021 and the pipeline was energized with an in-service date of October 1, 2021. Enbridge Gas filed notifications of these Project milestones with the OEB, in accordance with the Conditions of Approval for the Project.

Condition 6(a) in Schedule C of the OEB Decision and Order (EB-2019-0294), states that:

6. *Both during and after construction, Enbridge Gas shall monitor the impacts of construction, and shall file with the OEB an 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’ adherence to Condition 1 [i.e., “Enbridge Gas shall construct the facilities and restore the land in accordance with the OEB’s Decision and Order in EB-2019-0294 and these Conditions of Approval”];*
 - 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; and*
 - v. *provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.*

This Post-Construction Report (Interim Report) has been prepared to satisfy the requirements set out in Condition 6(a), as outlined above. The certifications required pursuant to conditions 6(a)(i) and 6(a)(v) are provided in **Appendix A**.

1.1 Project Description

The Project included the installation of new pipelines and facilities. An overview of the Project is provided on **Figure 1**.

A total of 685¹ m of pipeline was installed including:

- 380 m of nominal pipe size (NPS) 6-inch extra-high pressure steel pipeline;
- 295 m of the NPS 6-inch high pressure steel pipeline; and,
- 10 m of NPS 8-inch intermediate pressure polyethylene pipeline.

Approximately 257 m of NPS 6 extra-high pressure steel natural gas pipeline was constructed along the municipal road right-of-way on Woodbine Avenue. The remaining pipeline was constructed on Enbridge Gas-owned property.

The facilities included five new stations, all of which were constructed on Enbridge Gas-owned property:

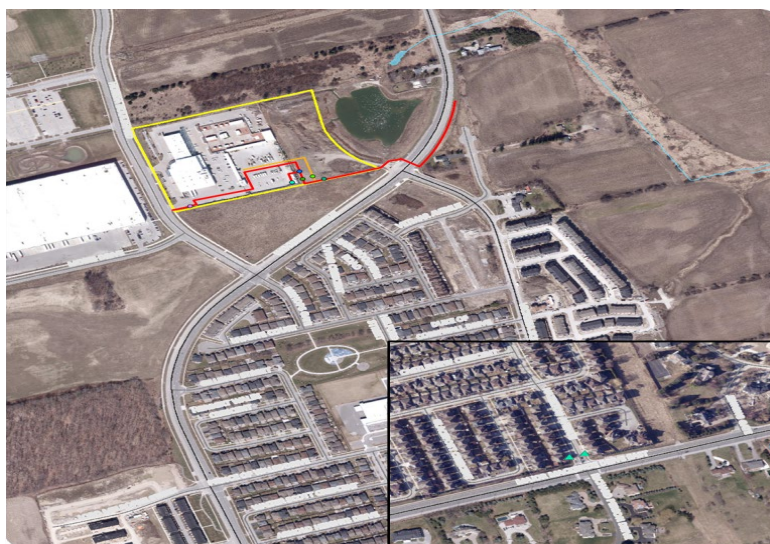
- The hydrogen station regulates hydrogen flow from the existing hydrogen storage tanks to the inlet of the hydrogen blending station. The hydrogen station ensures that no more than 2% hydrogen by volume is blended with standard natural gas.
- The hydrogen blending station/regulation station regulates the pressure of the natural gas feed from extra-high pressure to high pressure. This station supplies natural gas to the district station and into the isolated network. Hydrogen is injected downstream of this station.
- The district station regulates the pressure of the blended gas from high-pressure to intermediate pressure and introduces the blended gas into the blended gas area.
- A sales station for the natural gas vehicle compressor, which regulates the pressure of natural gas feed from extra high pressure to intermediate pressure.²
- An XHP filter station that is installed upstream of the regulation station, which filters out any debris from the upstream pipeline.²

In addition, in order to isolate the blended gas area from the rest of the existing distribution system, two connections within the existing system were disconnected (Disconnects). Both are located at the intersection of Major Mackenzie Drive and Hazelton Avenue.

¹ The minor variance between the total length of pipe installed (685 m) and what was proposed (755 m) is a result of techniques used to estimate length in early project planning, which underpins the project description in the leave to construct application approved by the OEB. Exact pipe length is determined once installation is complete.

² In the EB-2019-0293 Decision and Order dated October 29, 2020, the OEB granted leave to construct 3 stations: (i) a hydrogen station, (ii) a hydrogen blending station, and (iii) a district station. The sales station installed as part of the Project was determined to be required in early project planning to facilitate connection of the TOC natural gas vehicle (NGV) compressor, the need for the station was described in Enbridge Gas's pre-filed evidence at Exhibit B, Tab 1, Schedule 1, Attachment 1 paragraph 30. Total cost of this station is \$31,000. During the design stage of the project, it was determined that a filter station was required to be installed upstream of the Hydrogen Blending Station to protect downstream equipment and prevent failure of regulators from debris that may exist in the gas system. The total cost of this station is \$128,000.

Figure 1: Project Overview



1.2 Studies Completed for the Project

As part of the Project, Enbridge Gas conducted the studies listed in **Table 1** to inform the design, planning and permitting process, identify environmental and socio-economic impacts potentially resulting from construction, and reduce impacts through the application of documented mitigation measures.

Table 1: Studies Completed for the Project

Study	Completed By	Date
Stage 1 Archaeological Assessment	Timmins Martelle Heritage Consultants	March 2019
Environmental Report	Dillon Consulting Limited (Dillon)	May 2019
Environmental Report Addendum	Dillon	September 2019
Environmental Report Addendum #2	Dillon	December 2019
Environmental Report Amendment	Dillon	March 2020
Environmental Protection Plan	Dillon	March 2021
Phase 1 Environmental Site Assessment	Dillon	April 2021
Environmental Activity Sector Registration (EASR): Enbridge Gas Inc. Low Carbon Energy Project: Hydrogen Blending	Ortech Consulting Inc.	April 2021
Emission Summary and Dispersion Modelling (ESDM) Report	Ortech Consulting Inc.	April 2021
Acoustic Assessment Report	HGC Engineering	April 2021
Excess Materials Management Plan	Dillon	August 2021

2.0

Construction Effects and Mitigation Measures

All construction and rehabilitation activities comply with the Conditions of Approval set out in the OEB Decision and Order for EB-2019-0294, including ensuring that the requirements of all approvals, permits, licenses and certificates are fully addressed. Additionally, the Project activities were conducted in accordance with Enbridge Gas's Construction Policies and Procedures and followed the mitigation measures, and monitoring and contingency plans recommended in the Environmental Report (ER) and Environmental Protection Plan (EPP) for the Project.

Many of the potential environmental impacts identified in the ER were avoided by locating the pipeline within the existing road allowance and previously disturbed Enbridge Gas-owned property. An Environmental Inspector was assigned to the Project to monitor construction activities for potential environmental concerns, and provide guidance on environmental protection, as required. This contributed to successful Project completion.

A Project Construction Kick-off meeting was held on March 29, 2021 to communicate Project-specific details, including scope, schedule, key contacts, roles and responsibilities, health and safety requirements and environmental requirements. The overview of the EPP and environmental requirements included key mitigation measures for construction, including dewatering, air and dust, soil handling, excess soils, contaminated soils, spills, wildlife, species at risk (SAR), and archaeological resource discoveries.

In August 2021, letters were sent to residents notifying them that they were going to be receiving blended gas in the fall.

2.1

Construction within Species at Risk Habitat

Project construction did not occur in SAR habitat areas. However, potential SAR habitat was identified outside the Project footprint. The Project boundary was established with clear "no go" areas delineated through survey (e.g., the nearby stormwater management pond which was actively being used by bank swallows and waterfowl). These areas were avoided during active construction.

2.2

Water Management

As excavation dewatering did not exceed 50,000 L/day, a Ministry of Environment, Conservation and Parks water taking permit was not required. There were no private water wells located nearby, and therefore a well monitoring program was not initiated. Minimal water takings were completed using submersible pumps and appropriate mitigation measures along the Woodbine Avenue tie-in location. The pumped water measured an average rate of 15,000L/day and a 100,000 L capacity ballast tank was used to store and remove any water generated from site, as a protective measure near agricultural lands

Terrapure Environmental Ltd. was contracted by Aecon to receive the water and perform the required laboratory tests. No surface or groundwater issues were recorded by the EI during active construction.

2.3 Excess Soils

An Excess Materials Management Plan (EMMP) was completed for the Project as a regulatory requirement and was received by the contractor in August, 2021. Two areas of potential environmental concern (APECs) were identified during the Phase I – ESA conducted by Dillon. Spoils from these areas were sampled independently and found to be within O.Reg.406/19 Table 1 Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (Table 1 RPIC ESQS) standards for re-use. All excess soil was either used as backfill on site or received by the Rice Group under contract of Aecon.

Liquid soils produced through utility locating processes via hydrovac removal were stored within 100,000 L ballast tanks. Samples were collected on site and were found to be within ESQS Table 3.1 ICC standards. The contained liquid soils were transported and received by Rice Group at their Mount Albert, Ontario facility.

2.4 Spills

One spill was reported to Enbridge Gas during construction activities. The spill involved an estimated 0.5 L of power steering fluid released during a power steering line break on an Aecon dump truck. The spill occurred at 101 Honda Boulevard in the front parking lot, on asphalt, which was cleaned up upon being noticed. No fluid travelled into any storm sewers or catch basins. An internal spill report was filed as a part of Enbridge Gas's spill response plan. There were no adverse effects to the environment.

2.5 Traffic Disruption

The Project was primarily constructed within the municipal road right-of-way. As a result, vehicular traffic flow along the roadway was modified during construction. In addition to communicating with residents and businesses along the construction route, traffic control plans were developed in accordance with Ontario Traffic Manual (OTM) Book 7: Temporary Conditions. Traffic control measures included applying traffic restrictions (timing of lane closures for equipment movement and access and egress to construction zones) and installing appropriate signage along the affected route.

Daily field safety meetings were conducted at the beginning of every shift for all on-site personnel which included vigilance around vehicular safety.

3.0

Post-Construction Site Conditions

Hydrovacs were used to confirm utility locates and to create pressure relief pits to facilitate the horizontal directional drilling (HDD) of the pipeline main. These methods were used to reduce the potential for inadvertent releases of drilling mud at the surface and the likelihood of damaging belowground infrastructure. Open cut excavation was limited to Enbridge Gas owned property and Honda Boulevard for the tie-in excavation.

Restoration was required at areas of disturbance along the main, including areas where entry and exit pits were located for the services. The condition of these areas were observed during site inspections to identify potential deficiencies and to advise the contractor prior to restoration. Following the completion of construction activities, the erosion and sediment control (ESC) measures were removed and a topsoil cap and approved seed was applied to the disturbed areas.

The restoration log in **Appendix B** documents current conditions within the construction footprint with any deficiencies identified and recommendations for outstanding issues. Final restoration for all remaining areas will be completed prior to the filing of the Post-Construction (Final) Report with the OEB.

4.0

Indigenous Consultation

In a letter dated March 1, 2019, the Ministry of Energy, Northern Development and Mines (MENDM) advised that the Project may have the potential to affect Indigenous communities and provided a list of the following communities that should be consulted:

- Alderville First Nation (AFN);
- Curve Lake First Nation (CLFN);
- Hiawatha First Nation (HFN);
- Huron-Wendat Nation (HWN);
- Mississaugas of the Credit First Nation (MCFN); and
- Mississaugas of Scugog Island First Nation (MSIFN).

All of the Indigenous communities listed above were engaged and consulted with during planning of the Project, including development of the ER. Enbridge Gas gathered information through outreach (written and verbal) and face to face meetings starting in 2019. Throughout the consultation process, the identified Indigenous groups did not express any Project-specific concerns.

Prior to, and during construction, the identified Indigenous communities were provided opportunities to access information on Project activities through emails and phone calls including Project updates, environmental technical briefings, and archaeological and environmental field studies.

Additionally, as part of Enbridge Gas's Operational Lifecycle approach, Enbridge Gas supported key community initiatives and events to help build and continue fostering a long-term relationship between the identified Indigenous communities and Enbridge Gas.

5.0

Comments and Complaints

Table 2, below, provides a log of comments and complaints received during Project construction.

Table 2: Comment and Complaint Log

Date Received	Contact Name	Contact Type	Method of Contact	Comment	Resolution
May 19, 2021	Not provided	Resident/property owner (east of Woodbine Ave.)	In-person/on-site	Resident stated concern about water being pumped from the Project excavation into an adjacent ditch.	<ul style="list-style-type: none">• A water holding tank was placed on-site to store the discharged water, which was then shipped off-site to an appropriate disposal facility once full.• Homeowner was satisfied.
May 28, 2021	Executive Assistant to Councillor Ho	City of Markham Councillor's Office	Phone call and email	Councillor Ho's office called an Enbridge Gas representative about a complaint that was received from a constituent regarding the level of dust in the Project area.	<ul style="list-style-type: none">• On May 28, 2021, the Enbridge Gas representative stated they would look into the issue and committed to contacting the Councillor's office back with additional information.• On June 1, 2021, an Enbridge Gas representative called Councillor's Ho's office leaving a detailed voice message explaining that the dust was not created by an Enbridge Gas construction crew. Subsequent to leaving the Councillor's office a voicemail, the Enbridge Gas representative followed up with an email explaining that the dust in the area may have been initiated from the construction company working adjacent to the Mobis Parts Canada Corp at Honda Blvd. and Mobis Dr. The Enbridge Gas representative further indicated that the Enbridge Gas construction crews also experienced thick dust the previous week and had difficulty seeing the road. Enbridge Gas stated that they believed the dust would have headed towards all the homes on the east side of Woodbine Ave. Enbridge Gas provided a map highlighting the Enbridge Gas work area vs the other construction company work site.• On June 1, 2021, the Councillor's office responded back via email, thanking Enbridge Gas for the information and the photos.
August 25, 2021	Resident	Resident in blended gas distribution area	Phone call to Project 1-800 number	Resident left a voicemail asking how the Project would affect their monthly bill.	<ul style="list-style-type: none">• On September 3, 2021, an Enbridge Gas representative called the resident back and explained that they would see a slight increase in gas usage on their monthly bill compared to traditional natural gas. Enbridge Gas representative noted that the increase is anticipated to be less than \$10 per year based on the typical gas usage of a residential home.• The resident indicated they had no further issues or concerns.
August 26, 2021	Resident	Resident in blended gas distribution area	Email to the Project email address	Resident requested details on how the Project would affect them as a consumer in the near and long-term, as far as monthly energy usage. They also asked how the addition of hydrogen gas would affect the flame in their gas range and they inquired whether there was any danger to them living close to the Enbridge Gas Technology and Operations Centre.	<ul style="list-style-type: none">• On September 8, 2021, an Enbridge Gas representative emailed the resident with responses to their concerns. The Enbridge Gas representative stated that the Project would not have a material effect on consumers, noting that there would only be a slight increase in an individual's gas usage compared to traditional natural gas. The Enbridge Gas representative explained that the increase in usage is anticipated to amount to less than \$10 per year based on typical gas usage of a residential home and noted that Enbridge Gas would be reimbursing homeowners \$10 per year for the 5-year life of the Project. The Enbridge Gas representative stated that the low blend percentage of the gas would not affect the resident's gas range or other gas appliances and explained how this was thoroughly researched, tested, and confirmed prior to initiating the Project. The Enbridge Gas representative assured the resident that safety is at the core of Enbridge Gas's operations and the Technology and Operations Centre is built and operated to the highest regulatory and industry standards.

6.0

Summary

This Interim Report has been prepared in accordance with the OEB Decision and Order in EB-2019-0294. It documents the post-construction and restoration activities completed as part of the Project construction from April 2021 to September 2021. Mitigation measures implemented during construction and restoration activities have been successful.

A Post-Construction (Final) Report will document the remaining site restoration activities and will be filed with the OEB no later than June 1, 2023 in accordance with Condition 6(b) in Schedule C of the OEB Decision and Order (EB-2019-0294) for the Project.

Appendix A

Executive Certifications

**Low Carbon Energy Project
EB-2019-0294
Decision and Order
October 29, 2020**

I hereby certify Enbridge Gas Inc. has constructed the facilities and restored the land in accordance with the OEB's Decision and Order, EB-2019-0294, Schedule C, Condition 6. a).

Dec 15, 2021
Date

Wes Armstrong
Wes Armstrong
VP, Engineering & STO
Enbridge Gas Inc.

Condition 6.

Both during and after construction, Enbridge Gas shall monitor the impacts of construction, and shall file with the OEB an 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' 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; and*
- v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.*



Condition 1.



Enbridge Gas shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2019-0294 and these Conditions of Approval.

Appendix B

Restoration Log

Location	Site Condition	Additional Work Recommended (Y/N)	Comments/Recommendations	Representative Photo (September 8, 2021)	
Woodbine Avenue and site entrance	<p>Topsoil and seed applied to disturbed area.</p> <p>No settlement issues observed.</p> <p>Permanent sidewalk installed.</p>	N	<p>No issues to report at the time of inspection.</p> <p>Area to be assessed during post-construction environmental monitoring.</p>		
Corner of Woodbine Ave. and Victoria Square	<p>Topsoil and seed applied.</p> <p>No settlement issues observed.</p> <p>Permanent sidewalk installed.</p>	N	<p>No issues to report at the time of inspection.</p> <p>Area to be assessed during post-construction environmental monitoring.</p>		

Location	Site Condition	Additional Work Recommended (Y/N)	Comments/Recommendations	Representative Photo (September 8, 2021)
Woodbine Avenue tie-in location, east side	Regraded and seeded. No slope erosion observed at time of inspection.	N	Area to be assessed during post-construction environmental monitoring.	
Southern portion of Enbridge Gas property site	Topsoil application completed.	N	Topsoil evenly distributed across Project lands. Area to be assessed during post-construction environmental monitoring.	

Location	Site Condition	Additional Work Recommended (Y/N)	Comments/Recommendations	Representative Photo (September 8, 2021)	
Southern area of Enbridge Gas lands Project site	Seed application by Hermann’s landscaping.	N	Seed application was evenly distributed.		
Excavated swale on southern area of Enbridge Gas lands Project site	ESC in place and site in good condition.	N	Area to be assessed during post-construction environmental monitoring.		

Location	Site Condition	Additional Work Recommended (Y/N)	Comments/Recommendations	Representative Photo (September 8, 2021)	
Eastern portion of southern Project site near to above-ground infrastructure	Germination has begun and no issues documented at the time of inspection.	N	No issues documented at time of inspection. Area to be assessed during post-construction environmental monitoring.		