The Corporation of the Town of Marathon
4 Hemlo Drive, P.O. Bag TM
Marathon, Ontario P0T 2E0
cao@marathon.ca
Phone: (807) 229-1341
Fax: (807) 229-1999
www.marathon.ca

OFFICE OF THE CAO/CLERK

DELIVERED VIA RESS & COURIER

August 15, 2019

Ms. Kirsten Walli
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Corporation of the Town of Marathon ("Corporation") North Shore LNG Project Application – EB-2018-0329

Further to the Corporation's notice of intent to file an application for orders related to the expansion of natural gas service to the Town of Marathon, Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay and Municipality of Wawa, filed December 3, 2018, enclosed please find an updated copy of the application, which requests the following:

- An order or orders approving a municipal franchise agreement for each Municipality, using the Ontario Energy Board's Model Franchise Agreement as a template;
- An order or orders granting a certificate of public convenience and necessity to supply natural gas within each Municipality;
- An order or orders for a leave to construct natural gas distribution works within each Municipality;
- An order or orders approving a form of easement agreements;
- An order or orders for a gas supply plan to serve each Municipality; and
- An order or orders providing pre-approval of the cost consequences of a long-term liquefied natural gas supply contract to serve each Municipality.

This application contains the following updates:

- Request for an order or orders approving a form of easement agreements (see Exhibit A, Tab 1, Schedule 2)
- Revised presentation of project cost information (see Exhibit A, Tab 9, Schedule 1)

Hard copies of the revisions will also be submitted.

This submission has been filed through the Ontario Energy Board's Regulatory Electronic Submission System and will be available on the Project website at https://northshorenaturalgas.com.

Yours truly,

Daryl Skworchinski
CAO/Clerk
Town of Marathon
4 Hemlo Drive, PO Bag TM
Marathon, ON P0T 2E0
E-mail: cao@marathon.ca
Telephone: +1 (807) 229-1340

NORTH SHORE LNG PROJECT

TABLE OF CONTENTS

Exhibit	Tab	Schedule	Attachment	Contents
			5	LNG Services Contract
APPENDIX A (CONFIDENTIAL)				Letter from Investment Bank

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Sched. B), as amended (the "OEB Act") and the *Municipal Franchises Act*, R.S.O. 1990, c. M.55, as amended;

AND IN THE MATTER OF an application by the Corporation of the Town of Marathon under Section 8 of the *Municipal Franchises Act* for an order or orders granting Certificates of Public Convenience and Necessity to the Corporation for the construction of works in the Town of Marathon, Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay, and Municipality of Wawa.

AND IN THE MATTER OF an application by the Corporation of the Town of Marathon under Section 90 of the OEB Act for an order or orders granting leave to construct natural gas distribution pipelines and ancillary facilities to serve the Town of Marathon, Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay, and Municipality of Wawa;

AND IN THE MATTER OF an application by the Corporation of the Town of Marathon under Section 97 of the OEB Act for an order or orders approving the form of easement agreements;

AND IN THE MATTER OF an application by the Corporation of the Town of Marathon for an order or orders for a gas supply plan to serve the Town of Marathon, Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay, and Municipality of Wawa;

AND IN THE MATTER OF an application by the Corporation of the Town of Marathon for an order or orders pre-approving the cost consequences associated with a long-term upstream liquefied natural gas contract to serve the Town of Marathon, Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay, and Municipality of Wawa.

APPLICATION

Introduction

The Corporation of the Town of Marathon (the "Corporation"), on its own behalf and as representative of the Township of Manitouwadge, the Township of Schreiber, the Township of Terrace Bay and the Municipality of Wawa (the "Municipalities") files the within Application with the Ontario Energy Board ("OEB").

The Municipalities are located along the North Shore of Lake Superior, between Nipigon and Sault Ste. Marie. All are established under the laws of the Province of Ontario. The combined population is approximately 11,000 people. Energy costs are a critical issue for residents, businesses and the Municipalities themselves. At present, they do not have access to natural gas in any form.

The Municipalities have a diverse and successful track record of identifying, building and maintaining public infrastructure projects and delivering critical core services for the residents and businesses of the Municipalities. Collectively, the Municipalities own and oversee a wide range of linear assets, including roads, water and waste water systems, sewers and bridges. These assets have an estimated replacement value of more than $400 million.

Utility to Be Formed

The Municipalities are currently in the process of developing a regional natural gas distribution system to provide natural gas service. Among the activities substantially completed by the Municipalities at this time are a feasibility study, market research, technical and financial resource analysis and planning, environmental reports, a gas supply plan, capital and operating cost estimates, economic models and project financing.

For the purposes of providing natural gas service to the residents and businesses therein, the Municipalities have resolved to incorporate, finance and resource a local gas distributor (the

"Utility") for the distribution of natural gas within the Municipalities. The Utility will be an entity created for the special purpose of designing, engineering, financing, constructing, testing, managing, marketing, operating and maintaining natural gas distribution facilities for providing natural gas service within the Municipalities.

In order for the Municipalities to proceed effectively and productively with the continued development of the project, it is important that the Municipalities now obtain certain approvals from the OEB prior to the formation and start-up of the Utility. Accordingly, the Corporation brings this Application for approvals from the OEB to furnish natural gas service within the Municipalities, subject to certain conditions.

Request of Approvals with Conditions

The creation of new natural gas distribution system infrastructure, as distinguished from the gradual expansion and growth of an existing system, presents issues which can be best addressed through the provision of conditional approvals for activities related to the formation and start-up of the Utility. This approach recognizes the realities of new gas infrastructure development, where it is not feasible nor expected that the finalized and specific plans are fully complete and known at the time of the OEB's consideration of an application for approval.

The OEB has previously granted conditional approvals for greenfield projects, including in the case of Wataynikaneyap Power LP.[1] Like the Utility described in this Application, Wataynikaneyap Power involved a greenfield entity without operating assets, which was developed by Northern Ontario communities to provide their residents and business with reliable energy when incumbent utilities failed to show interest in doing so. In the matter of natural gas expansion projects, the OEB has granted approvals to Enbridge Gas Distribution for

[1] 2472883 Ontario Limited on Behalf of Wataynikaneyap Power LP, Application for an Electricity Transmission Licence, Decision and Order dated November 19, 2015, EB -2015-0264.

the Fenelon Falls Pipeline Project subject to funding under the Natural Gas Grant Program.[2] As with the Fenelon Falls Pipeline Project, third-party funding for this Application is sufficiently certain, but not unconditionally committed.

To date, the Municipalities have obtained conditional commitments to resource the Utility. However, the providers of the resources required to finance, operate and maintain the Utility cannot commit these resources unconditionally until the project is approved by the OEB.

The providers of the resources to the Utility reasonably require regulatory certainty before unconditionally committing the resources to the Utility. Due to the high cost of energy in Northern Ontario, it would be detrimental to the public interest to postpone or deny authorization until the Municipalities have obtained unconditional commitments to resource and staff the Utility. To do so would create a "chicken-and-egg" dilemma, wherein the OEB and the providers of financial and technical resources cannot proceed without the full and complete commitment of the other.

Accordingly, the Corporation respectfully requests that the OEB determine that standards for approval are met, subject to the condition for subsequent review and approval by the OEB of certain specified aspects regarding the financial and technical capacity of the Utility.

By approving this Application, structured as a request for conditional approvals, the OEB will help to ensure that residential and business customers in the Municipalities have access to new, reliable, low cost and environmentally beneficial natural gas supplies on a timely basis, which is consistent with Ontario's energy and economic policies. At the same time, the OEB will preserve

[2] Enbridge Gas Distribution Inc., Application for approval to construct natural gas pipelines to serve the community of Fenelon Falls and charge a System Expansion Surcharge to all new customers in the community of Fenelon Falls, Application for a Certificate of Public Convenience and Necessity for the City of Kawartha Lakes, and Application to charge a System Expansion Surcharge to all new customers of future community expansion projects, Decision and Order dated March 1, 2018, EB-2017-0147.

its ability to accord final review of the permanent financing, construction plans, and resource plan, in order to assure that the project is consistent with the public interest.

Notice of Intent

This Application is brought pursuant to a notice of intent filed by the Corporation with the OEB on 4 December 2018 to provide natural gas distribution services within the Municipalities. On 20 December 20, 2018, the OEB gave notice of the Corporation's proposal to serve the Municipalities and requested expressions of interest from any other parties with plans to provide natural gas services to the communities. On 16 January 2019 Enbridge Gas Inc. ("Enbridge") filed a letter with the OEB registering its interest in providing natural gas service to the Municipalities, but Enbridge subsequently withdrew its expression of interest on 4 February 2019. Accordingly, this Application does not engage the competitive process contemplated in the Community Expansion Decision.[3] On 13 March 2019, the OEB determined it would proceed to review the Corporation's application once it is filed as long as third-party funding was sufficiently certain. (See Tab 1, Schedule 2, Attachment 1.)

Municipal Franchise Agreements and Related Certificates

Each of the five Municipalities, acting on its own behalf, has resolved to enter into a Municipal Franchise Agreement with the Marathon Economic Development Corporation, a wholly owned subsidiary of the Corporation, for and on behalf the Utility to be incorporated. Assignment of Municipal Franchise Agreements from the Marathon Economic Development Corporation to the Utility is conditional on the project receiving all necessary approvals from the OEB. On this basis, the Corporation hereby applies to the OEB under Section 8 of the *Municipal Franchises Act* for a Certificate of Public Convenience and Necessity in respect of each of the Municipalities.

[3] Ontario Energy Board Generic Proceeding on Community Expansion, Decision with Reasons dated November 17, 2016, EB-2016-0004.

Leave to Construct

The Corporation proposes to design, construct, own and operate local gas delivery systems in each of the five Municipalities, including the distribution mains, service pipes and meters (collectively the "Project"). The Municipalities have developed forecasts of costs, customer additions and revenues for the Project and has concluded that the Project is in the public interest and economically feasible.

The route and location for the proposed pipelines were selected by an independent environmental consultant (Stantec Consulting Ltd.), through the process outlined in the OEB's Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario (Seventh Edition, 2016). The Municipalities engaged the Ministry of Energy Northern Development and Mines to determine if there is a duty to consult requirement triggered by the Project. Information on indigenous consultations and related activities can be found at Tab 12, Schedule 1.

Input from the public and area stakeholders and First Nations was sought during the route selection process and was incorporated into the final alignment decision. Details on the route selection and the Environmental and Socio-Economic Impact Assessments ("ERs") of the proposed facilities in each Municipality are included at Tab 10, Schedule 1, Attachment 1. The proposed measures outlined in the ERs will be implemented to mitigate potential environmental impacts.

On this basis, the Corporation hereby applies to the OEB under Section 90 of the OEB Act for leave to construct the Project.

Gas Supply Plan

The Corporation encloses herewith its proposed Gas Supply Plan (Tab 8, Schedule 1, Attachment 1) to serve the Municipalities.

Pre-Approval of Long-Term Upstream Contract

In this Application, the Corporation seeks pre-approval of the cost consequences of a proposed long-term gas service contract (the "Contract") between Nipigon LNG LP ("Nipigon LNG") and the Utility, pursuant to OEB Filing Guidelines for Pre-Approval of Long-Term Natural Gas Supply and/or Upstream Transportation Contracts[4] (the "Guidelines"). Nipigon LNG and the Utility intend to enter into the proposed Contract for the delivery of and payment for LNG for a period of 10 years. The proposed Contract will catalyze the investment required to build and operate the new infrastructure capacity, specifically the LNG Depots, to supply the Municipalities with natural gas. This upstream capacity represents 100% of the Utility's annual upstream portfolio.

Nipigon LNG and the Corporation seek pre-approval of the cost consequences of entering the contemplated long-term commitment for upstream capacity in order to (i) provide the Utility and its investors with the necessary assurance that the costs associated with the proposed Contract are eligible for recovery from the Utility's customers; and (ii) provide Nipigon LNG with the necessary assurance and financial commitment to construct the proposed facilities.

Without pre-approval of the cost consequences of the proposed Contract, the Utility's investors would not commit the capital to finance the Utility, and, in turn, Nipigon LNG could not commit to build and operate the LNG Depots to supply the Utility with natural gas. As a result, the residents and businesses of the Municipalities would be exposed to the sustained impacts of higher-cost energy.

Under the proposed Contract, Nipigon LNG is committing to a fixed capacity charge based on the forecasts provided in this Application, and the Utility is not exposed to any capital cost overruns

[4] Guidelines for Pre-Approval of Long-Term Natural Gas Supply and/or Upstream Transportation Contracts, Ontario Energy Board, dated April 23, 2009 [*Guidelines*].

incurred by Nipigon LNG during the term. The upper limit of the fixed portion of the proposed Contract charges is therefore known and can be approved by the OEB.

On this basis, the Corporation hereby applies to the OEB for such order or orders as may be necessary to pre-approve the cost consequences associated with the proposed Contract.

Other Matters

The Corporation has included draft agreements as attachment to Tab 11, Schedule 1 that will be offered to affected landowners where the need for an easement, land lease or land purchase arises. The Corporation applies to the OEB under Section 97 of the OEB Act for approval of the form of easement agreements included in Tab 11, Schedule 1.

Construction is scheduled to commence no later than April 2020 in order to begin providing gas distribution service to the Municipalities by October 2020. Tab 7, Schedule 3, Attachment 1 provides the proposed construction schedule.

A list of interested parties and permitting authorities is provided in the Environmental Reports at Tab 10, Schedule 1, Attachment 1.

The Corporation requests that the Application proceed by way of written hearing in English.

Application

This Application addresses the OEB's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario; the Ontario Energy Board's decision in the Generic Proceeding on Community Expansion; and other relevant codes, guidelines, laws and regulations regarding the supply, distribution and financing of natural gas community expansion projects in Ontario.

The Project is in the public interest. The Municipalities are not in any utility's franchise area, and there is no evidence of interest by others to carry out the Project.

The Corporation seeks the OEB's conditional approval for and on behalf of the Utility to be formed. The Utility would not receive unconditional or final authority to furnish natural gas service in the Municipalities, and therefore will not commence construction of its proposed natural gas facilities or provide service to any customer, until such unconditional or final authority is granted in a subsequent order.

In this Application, the Corporation requests the following relief:

a. An order or orders approving a municipal franchise agreement for each Municipality, using the Ontario Energy Board's Model Franchise Agreement as a template;
b. An order or orders granting a certificate of public convenience and necessity to supply natural gas within each Municipality;
c. An order or orders for a leave to construct natural gas distribution works within each Municipality;
d. An order or orders approving the form of easement agreements;
e. An order or orders for a gas supply plan to serve each Municipality; and
f. An order or orders providing pre-approval of the cost consequences of a long-term liquefied natural gas supply contract to serve each Municipality.

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

Ontario

BY E-MAIL

March 13, 2019

Daryl Skworchinski
Chief Administrative Officer and Clerk
The Corporation of the Town of Marathon
4 Hemlo Drive, P.O. Bag TM
Marathon ON P0T 2E0
clerk@marathon.ca

Dear Mr. Skworchinski:

Re: Gas Distribution to the Town of Marathon, the Township of Manitouwadge, the Township of Schreiber, the Township of Terrace Bay and the Municipality of Wawa
Ontario Energy Board File Number EB-2018-0329

Under cover of a letter dated December 4, 2018, the Town of Marathon (Town), on its own behalf and as representative of the Township of Manitouwadge, the Township of Schreiber, the Township of Terrace Bay and the Municipality of Wawa (Municipalities), filed with the Ontario Energy Board (OEB) a notice of intent to file an application by June 28, 2019 to provide natural gas distribution services within the Municipalities.

On December 20, 2018, the OEB issued a letter requesting that any other party that is currently developing a plan to provide natural gas services to the Municipalities file a letter including certain enumerated minimum information by January 16, 2019. Among the required minimum information was confirmation that the party is in a position to file a complete application with the OEB by June 28, 2019.

On January 16, 2019, Enbridge Gas Inc. (Enbridge) filed a letter with the OEB registering its interest in providing natural gas service to the Municipalities. No other expressions of interest were filed in response to the OEB's December 20, 2018 letter. In its letter, Enbridge stated that it is premature to be able to commit to filing a complete application by June 28, 2019 when key elements of such an application are yet to be determined. In particular, according to Enbridge the economic viability of any project, whether by Enbridge or the Town, cannot be determined until regulations under the *Access to Natural Gas Act, 2018* (formerly Bill 32) are issued and implemented.

2300 Yonge Street, 27th floor, P.O. Box 2319, Toronto, ON, M4P 1E4
2300, rue Yonge, 27e étage, C.P. 2319, Toronto (Ontario) M4P 1E4

T 416-481-1967 1-888-632-6273
F 416-440-7656 OEB.ca

On January 23, 2019, the Town filed a letter in response, requesting that the OEB disregard Enbridge's letter, stating that Enbridge did not provide the minimum information required by the OEB in its December 20, 2018 letter. Among other things, the Town stated that Enbridge's interest in serving the Municipalities is speculative and that the OEB should not delay its review of the Municipalities' application to accommodate the filing of any competitive application. The Town also stated that "the Municipalities established the economic feasibility of the North Shore Project in 2016, more than two years before Bill 32 was contemplated in 2018".

On February 4, 2019, Enbridge filed a letter stating that it would not compete to serve the Municipalities, as it understood from the Town's January 23, 2019 letter that the Municipalities are receiving funding directly from the government and that feasibility of the project is not dependent on funding under the *Access to Natural Gas Act, 2018.*

As Enbridge has withdrawn its expression of interest, the OEB does not expect to undertake a competitive process with respect to the provision of natural gas service to the Municipalities. The OEB therefore anticipates that it will proceed to review the Municipalities' application once it is filed. Please be aware, however, that the OEB may hold in abeyance any application to expand natural gas service that is contingent on or underpinned by third party funding, the receipt of which is not sufficiently certain.

Please do not hesitate to contact me should you have any questions.

Yours truly,

Original signed by

Christine E. Long
Registrar
Office of the Registrar

c: Karen Hockin, Enbridge Gas Inc.

PROJECT SUMMARY

INTRODUCTION TO THE NORTH SHORE LNG PROJECT

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa are located on the North Shore of Lake Superior, along the Highway 17 corridor between Nipigon, Ont., and Sault Ste. Marie, Ont. (see Figure 1).

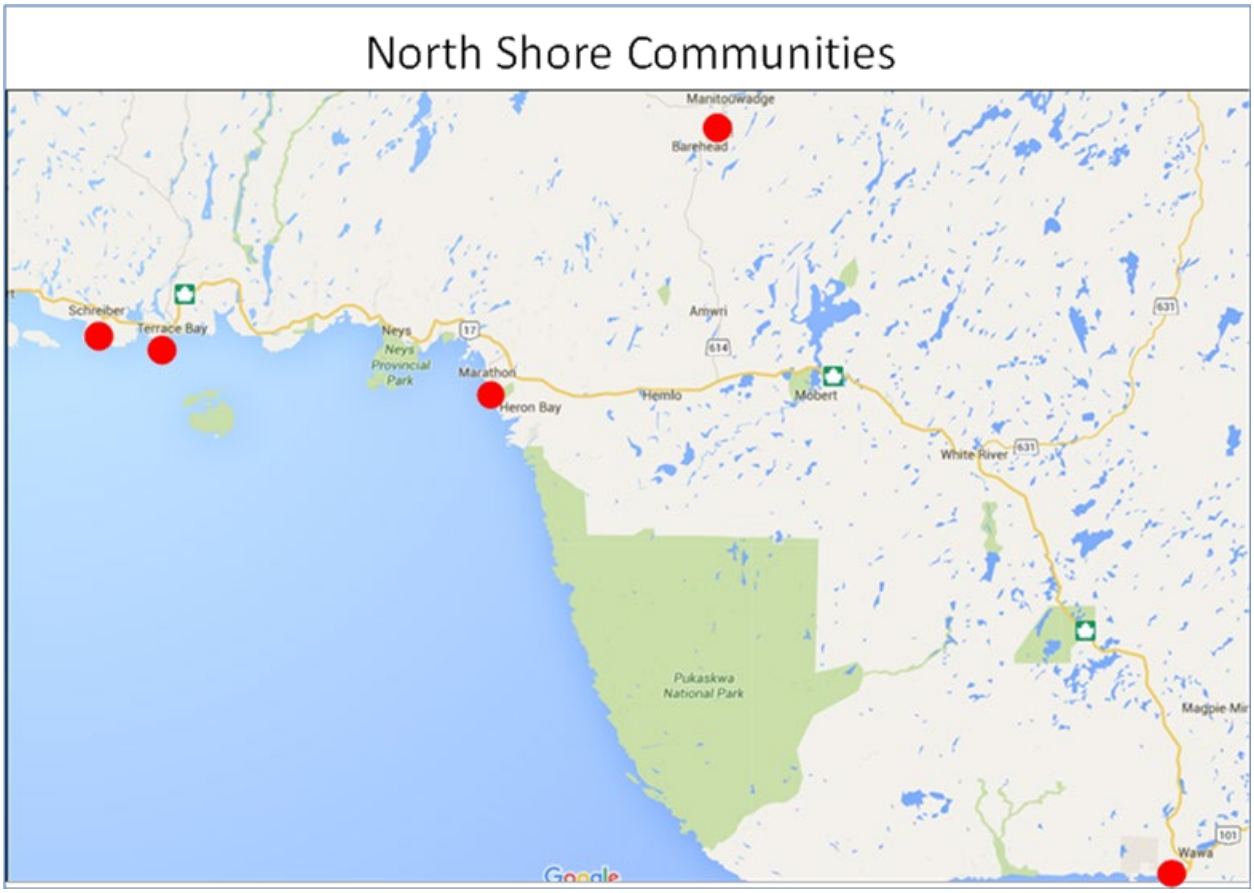


Figure 1: Map of the Municipalities

The Municipalities are proposing a Project scope that encompasses a natural gas delivery system supplied by liquefied natural gas ("LNG") in each Municipality.

The following diagram (Figure 2) shows the proposed natural gas delivery model.

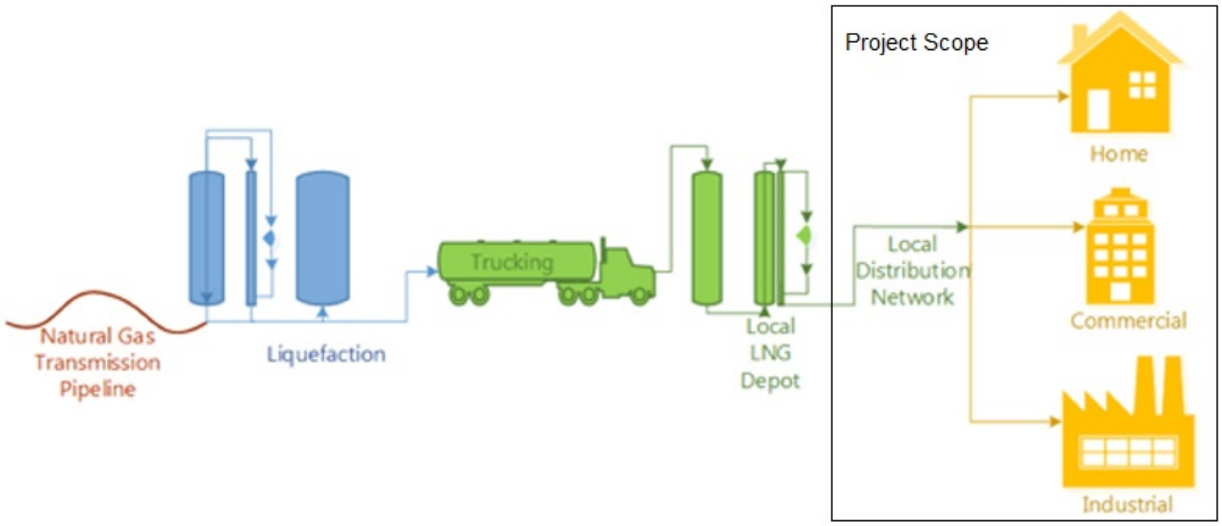


Figure 2: Natural Gas Delivery Model

The scope of the Application includes the construction and operation of local gas delivery works in each Municipality, including the distribution mains, service pipes and meters.[1]

At present, there is no natural gas supply or distribution within any of the Municipalities and no other entity has applied for or been granted authority to serve any of the Municipalities. Consequently, energy sources are currently limited to propane, fuel oil, wood and electricity, all of which are more expensive and less reliable than the proposed natural gas distribution system.

Several gas supply alternatives were reviewed according to their cost effectiveness, reliability (which includes security of supply) and support for public policy. They included a lateral pipeline

[1] The construction and operation of the LNG plant, the trucking of LNG and the construction of LNG depots for local storage and regasification of LNG are outside the scope of the Application.

from the TransCanada Mainline, LNG and compressed natural gas ("CNG"). The preferred supply option is LNG from a new plant near Nipigon.[2]

It is proposed that the LNG will be transported from Nipigon by truck to the Municipalities, where it will be stored locally. As required, the LNG will be converted into natural gas for distribution to homes and businesses in the service areas. Trucking distances from the LNG plant to the Municipalities range from 110 kilometres to 385 kilometres one way. To view a map of the plant location relative to the communities, see Tab 13, Schedule 1, Attachment 2.

The proposed Project is consistent with the energy and economic development policies of the Government of Ontario, as articulated in the Fall Statement 2018:

> *There is significant demand for natural gas, particularly among families and businesses in rural and Northern Ontario. Natural gas is the most common heating source in Ontario and is more affordable than other sources, such as electricity, oil or propane. The government is committed to meeting this demand and is taking action to expand access to natural gas across Ontario…. Expanding natural gas would make Ontario communities more attractive for job creation and new business growth, and send a clear message that Ontario is open for business.*[3]

The energy cost savings associated with the Project alone will lower the financial strain on winter heating bills for residential, commercial and institutional customers. In addition to the annual savings associated with converting to natural gas, the installation of new or updated heating

[2] Ontario Energy Board. EB-2018-0248. Nipigon LNG Corp. on behalf of Nipigon LNG LP. A CPCN to Construct Works to Supply Natural Gas in the Unincorporated Township of Ledger. Decision with Reasons, November 22, 2018.
[3] Ontario, Government of. (2018). Fall Statement 2018. November 2018. https://www.fin.gov.on.ca/fallstatement/2018/chapter-1b.html#section-6.

systems will improve energy efficiency, further increasing the benefit to customers and the Municipalities.

The Project will build economic capacity in Northern Ontario and promote, attract and support growth in the existing and emerging priority economic sectors identified in the *Growth Plan for Northern Ontario*. It will help Northern communities and businesses respond to their economic opportunities and challenges according to their individual priorities, and to pursue regional collaboration to advance common goals to strengthen Northern Ontario's competitive advantages.

The Project is a community-led and community-endorsed initiative. Subject to a timely decision from the OEB for the necessary approvals and orders to construct and operate the Project, the Municipalities will have timely access to delivery services in a manner that maximizes energy affordability, cost-effectiveness and community acceptance, starting in fall 2020.

In addition to providing residents and businesses with significant energy cost savings, the Project will contribute toward the GDP of Ontario and cut GHG emissions from the built environment in Ontario.

Moreover, the Project has scale. The "virtual pipeline" distribution model is proven in numerous markets where traditional pipeline models do not work, such as Fairbanks, Alaska. Where feasible, the Project can be expanded to include additional Northern Ontario municipalities and First Nation communities.

THE UTILITY

INTRODUCTION TO THE UTILITY

In this Application, the Corporation seeks conditional approvals to furnish natural gas service within the Municipalities, as required, for and on behalf of the Utility. The Utility is planned but not yet formed. The conditional approvals are necessary to resource the Utility with the financial and technical capacity required to construct, install, own, operate and maintain new natural gas distribution facilities and ancillary facilities to serve customers in the Municipalities.

New energy utilities in Ontario are rare. Where cases exist, such as Five Nations Energy Inc. and Wataynikaneyap Power (both start-up electricity transmission companies owned by First Nation communities), the OEB made preliminary findings tailored to the particular features of each proposal. The approach has proven effective in expediting delivery of a public good, without limiting the OEB's obligation and ability to make the inquiries and determinations necessary to protect the public interest.

The requested conditional orders do not require the OEB to find that the Utility will be technically and financially sound and operating in the public interest at the time. Instead, the Corporation expects that the Utility shall still undergo a rigorous investigation by the OEB, and that the OEB must find that the Utility satisfies public utility standards before receiving authority to construct facilities and provide service.

In order to obtain the OEB's approvals, the applicant is required to demonstrate that: (1) public need for the proposed service exists; (2) the applicant has or will have the technical ability to provide the service; and (3) the applicant has or will have adequate financial resources to complete the Project.

At present, the resourcing of the Utility is in progress. The Utility will meet a public need and will have the technical and financial capability to warrant its further pursuit of public utility status upon issuance of the requested conditional orders.

Public Need

There is a public need for the proposed service. This standard for approval is met by the fact that no such service is currently being provided or being offered in the Municipalities for which the Corporation is seeking approvals to serve.

Technical Capacity

In the preparation of the Application, the Corporation enlisted the assistance of Stantec Consulting Ltd. ("Stantec"), Cornerstone Energy Services ("Cornerstone") and Jenmar Concepts ("Jenmar") as engineering consultants, who are expected to provide continuing engineering and technical services to the Utility.[1]

Stantec has provided environmental services for the Project and is well suited to execute this work. It has strong experience supporting gas pipeline projects regulated by the OEB and has drawn on extremely qualified technical teams in Markham, Guelph and Thunder Bay to competently execute the environmental services scope. To date, Stantec has completed the preliminary environmental screening and the Environmental Reports in this Application. Stantec is also providing ongoing First Nations consultation support and ongoing permitting support and guidance.

Cornerstone has provided a broad range of design and engineering services to support the Project, including process, civil, mechanical and electrical engineering and project-management services. Cornerstone has extensive experience in greenfield pipeline projects, liquefied natural gas systems, system integrity, and capital cost estimating. In this Application, the results of the feasibility study and the proposed system design are provided by Cornerstone, including the Project's geography, engineering, environmental footprint and estimated costs. Cornerstone is

[1] The company profiles are enclosed at Tab 3, Schedule 1, Attachment 1.

expected to provide ongoing engineering, procurement and construction management support for the Project.

Jenmar is an expert in the application and development of natural gas and LNG industry codes in Canada and internationally. Jenmar has expert members on the CSA Z276, CSA B108 and CSA B401 committees and has been involved in a variety of projects in the natural gas industry. It has an intentional focus on the design of LNG delivery systems and their installation. To date, Jenmar has analyzed design features of the proposed distribution system, as well as the upstream LNG systems, to ensure adherence to federal and provincial construction and safety standards and requirements. Jenmar is expected to provide ongoing compliance support for the Project.

The Corporation submits that the technical experience of Stantec, Cornerstone and Jenmar support a finding that the facilities, as proposed in this Application, are technically reasonable and prudent and can be constructed and operated in a safe and responsible manner.

The Corporation is conscious that the Project is a greenfield distribution system that will provide many challenges. The Utility will be responsible for obtaining final regulatory approvals, managing construction and its associated costs, promptly attaching customers and operating the system reliably and cost-effectively, all of which will directly impact the economic viability of the Project. Success in all of these areas will require that the Utility has a strong management team, with the requisite composition of skills to deliver the desired outcomes, as well as an appropriate governance structure to oversee management.

The Corporation has retained David Charleson,[2] formerly of Enbridge Gas Distribution, to create and lead an Advisory Committee that will support the creation of the Utility's senior management team and board of directors. Mr. Charleson's past responsibilities included leading and directing the customer care, gas supply, gas control, gas storage and business process and

[2] Mr. Charleson's resume is attached (Tab 3, Schedule 1, Attachment 2).

performance functions within Enbridge. He has also served as general manager of Enbridge Gas New Brunswick, where he provided overall strategic and policy direction for a regulated greenfield natural gas distribution utility in New Brunswick that currently that serves 10 communities and approximately 12,000 customers.

As a founding member of the Advisory Committee, it is expected that Mr. Charleson will draw upon his extensive utility experience and more specifically on direct experience in the greenfield development of the New Brunswick distribution system to provide input, advice and guidance on the formation and resourcing of the Utility. With the creation of the Advisory Committee and the installation of Mr. Charleson as the lead advisor, it is expected that the Utility will possess adequate technical capacity upon issuance of conditional approvals.

Financial Capacity

The Corporation has secured conditional financial commitments to retain a management team for the Utility with substantial experience and ability in undertaking projects of similar size and complexity in order to adequately construct and operate the project.

Since the Corporation is seeking conditional approvals, the OEB must consider whether the Utility can readily obtain the necessary financing on reasonable terms when the Utility applies to the OEB for unconditional approvals, as evidenced by the letter from an investment bank (see Appendix A).

If and when the Utility seeks final unconditional approval, the Corporation expects that the OEB will fully evaluate the Utility's detailed operating and financial plans for completion of the Project. At that time, the Corporation anticipates that the requisite technical and financial resources will be unconditionally committed.

Information to allow the OEB to assess whether the Utility has the technical and financial capacity to construct, operate and maintain proposed the distribution networks may include, but is not limited to:

1. General Information
   - Full legal name of the Utility
   - Primary contact and location of primary offices
   - Description of business activities
   - Description beneficial ownership
2. Financial Capacity
   - Description of sources and uses of funds for the Utility
   - Precedent agreements and definitive documents to effect the financing for the Utility
   - Business plans relating to the Utility's proposed distribution business
   - A forecast of annual growth in terms of factors such as the amount of natural gas distributed, number of customers served, amount of distribution facilities
   - Annual pro forma financial statements including forecasts of costs, revenues and project financing indicating the underlying assumptions on which the forecasts are based
   - Estimates of net annual cash flows for 40 years
   - Acknowledgement of natural gas market rules, codes and conditions
3. Technical Capacity
   - Licence to distribute gas from the TSSA
   - Senior leadership team and resumes of key personnel
   - Organizational chart for operations personnel
   - Construction procedures
   - Operating and maintenance procedures

- Emergency response procedures (if not incorporated in operating and maintenance procedures)
- Pipeline integrity management plans
- Operator qualification plans and documentation of employee qualifications
- Public awareness plans
- Location of operations personnel to ensure prompt responses to emergencies
- Location and staffing level of the control room for the monitoring of supervisory control and data acquisition (SCADA) equipment
- Location and staffing level of the facility for the receipt of emergency calls, during all hours, and the emergency dispatching of operations personnel (if other than the control room)

The requested conditional approvals for the as-yet-to-be-formed Utility are in the public interest, reasonable and consistent with the OEB's mandate. This position is supported by several considerations. First, conditional approval will provide some regulatory certainty and confidence to lenders, potential investors, communities, potential customers and other regulatory entities as the Corporation further finalizes the technical and financial components of the Utility. Second, the risks of inaccurate projections of the Project's viability will be borne entirely by the Corporation in the interim. Finally, the proposed Utility, if fully realized, will advance the effort to provide residential, commercial and industrial availability of natural gas to a significant population in Northern Ontario, when no other party has expressed interest in doing so.

Cornerstone Energy Services

Cornerstone Energy Services, Inc. provides engineering, survey and land services to the energy infrastructure marketplace. We provide a broad range of services critical to the initial phases of projects, right through completion and documentation. These services include process, civil, mechanical and I&E engineering, project management, survey and mapping, and Right-of-Way acquisition. We have expertise and experience in both long linear projects as well as single-site facilities. Our clients are developers and operators of oil and gas pipelines and electric transmission lines.

At Cornerstone, the strength of our business is based on adherence to fundamental values:

- **Safety of the public, our employees and our clients;**
- **Advocacy** for the interests of our clients; and
- The **Integrity** of our operations.

Our staff consists of Mechanical, Electrical, Civil and Survey Engineers, Designers, Drafters, Mappers and Photogrammetrists, Land Surveyors, Right-of-Way Acquisition Specialists, Safety Professionals, and the support staff necessary to deliver high quality results in fast-paced project environments.

Our staff have decades of experience serving the Energy Infrastructure marketplace and have helped develop significant gas, oil, LNG, CNG, and electric projects all over North America.

Cornerstone is proud to list these fine companies as clients:

- AEP Energy
- Anbaric Transmission
- AvanGrid Renewables
- Bayonne Energy Center
- Black & Veatch
- Centurion Pipeline, L.P.
- Clean Energy
- Columbia Gas of Massachusetts
- Connecticut Light and Power
- Daniel O'Connell's Sons
- Direct Energy
- DTE Energy
- Enbridge
- Engie
- EPCOR
- EQT
- Eversource
- GDF Suez
- Hess Corporation
- Iroquois Transmission Pipeline
- Irving Oil
- Kleinfelder
- Liberty Utilities
- Macquarie
- Momentum
- Mountaineer Gas Company
- National Grid USA
- Newark Energy Center
- NiSource
- NSTAR
- Northeast Midstream
- Northeast Utilities
- Norwich Public Utilities
- Occidental Petroleum Corporation
- OXY Midstream Operations
- PAR Electrical
- Parsons Brinkerhoff Power
- Precision Pipeline
- Power Engineers
- Public Service of New Hampshire
- Repsol USA
- R.H. White
- Stonewall Gas Gathering, LLC.
- Spectra Energy
- Summit Utilities
- Supreme Industries
- TetraTech
- TRC
- Tri-Mont Engineering
- UGI Energy Services
- United Illuminating
- Western Mass Electric Company
- Woodland Pulp LLC
- XNG
- Yankee Gas

LNG Capabilities

Experienced Partner in LNG Fuelling Facility Engineering and Project Management

Jenmar Concepts has a demonstrated capability to execute a wide variety of LNG projects. Jenmar has been involved in LNG engineering and project management since 2007, when it was contracted to execute the engineering related to the relocation of an LNG tank, gas fired vaporizer, controls and LNG loading facility from an off-grid site in British Columbia to a new site in California. Since then, the LNG industry has developed rapidly along with Jenmar's participation in various projects. Through these activities, Jenmar has amassed a wealth of knowledge from LNG project risk assessments to detailed process and installation design.

Complementing Jenmar's LNG facility design knowhow is its leadership in the development of industry codes and standards. The company has been actively involved with the International Standards Organization's ISO/PC252 technical committee which has developed an international standard for LNG/CNG/LCNG fueling stations for vehicles (ISO 16923 & ISO 16924). Jenmar actively participates with an expert voting member on the technical committee of the Canadian Standard CSA Z276 *LNG Production Storage and Handling*. In recognition of Jenmar's capability, it was awarded a Code Champion contract from the Canadian Natural Gas Vehicle Association (CNGVA) (with funding by Natural Resources Canada) to develop a new standard for fixed and mobile LNG fueling facilities. In 2014, the new Annex D was published by CSA covering the content developed by Jenmar. In 2016, Jenmar has now been awarded a contract to act as Code Champion for the development of a new Annex B to provide new requirements for small scale LNG facilities not adequately covered in the current CSA Z276 standard. In 2018, Jenmar drafted the seed documents for various LNG components that included CSA LNG 3.2, 4.2 and 4.4. Jenmar's considerable codes and standards expertise augments its work as a regulatory consultant for the BC Oil and Gas Commission and Yukon Government.

14 TPD Liquefaction Plant

JENMAR CONCEPTS
A division of Jenmar Compressors Inc.
319, 9440 202nd Street, Langley, BC, Canada V1M 4A6
Telephone: 604-757-9082

Jenmar's expertise in LNG facility design and industry codes and standards is augmented further by a portfolio of risk assessment capabilities that includes HAZID/HAZOP facilitators, Layers of Protection Analysis (LOPA), Safety Integrity Level (SIL) Assessments, thermal radiation analyis and integral gas dispersion modeling.

With Jenmar's wide range of LNG industry capabilities and experience Jenmar is qualified to execute a range of projects including the following.

- ✓ Technical and Economic Feasibility Studies for off-grid LNG storage and regasification
- ✓ Risk Assessments for preliminary and detailed site designs
- ✓ LNG system process design, modeling and analysis
- ✓ LNG facility detailed site engineering and permitting
- ✓ LNG plant upgrades and piping design
- ✓ Design of fixed and mobile LNG fueling stations
- ✓ Design of LNG regasification and flare systems
- ✓ LNG process trouble shooting
- ✓ LNG transport equipment
- ✓ LNG marine bunkering
- ✓ LNG vehicle repair and maintenance facility upgrade and new construction design

LNG Fueling Station

LNG Plant Upgrade

Our expertise in transportation systems, LNG transfer, vaporization, storage and delivery systems allow us to provide full EPCM services for turn-key solutions.

Jenmar Concepts is among very few organizations with any significant experience in LNG infrastructure technology and is highly capable and well positioned to serve the progressive organizations developing the availability of this clean and economic fuel.

Jenmar Concepts is based in Langley, British Columbia, Canada. Inquiries should be directed to Geoff Bowering, Vice President of Business Development at 604.757.9082 or Mark Epp, President at 604.888.4431.
www.jenmarconcepts.com

JENMAR CONCEPTS
A division of Jenmar Compressors Inc.
319, 9440 202nd Street, Langley, BC, Canada V1M 4A6
Telephone: 604-757-9082

Stantec Consulting Ltd.
300W-675 Cochrane Drive, Markham ON L3R 0B8

The Stantec community collaborates across disciplines and industries to make buildings, infrastructure, and energy and resource projects happen. Our work—professional consulting in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics—begins at the intersection of community, creativity, and client relationships.

Since 1954, our local strength, knowledge, and relationships, coupled with world-class expertise, have allowed us to go anywhere to meet our clients' needs in more creative, personalized ways. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe. We're active members of those communities, which is why, at Stantec, we design with community in mind.

Stantec Inc. is a publicly traded entity listed on the New York Stock Exchange (Symbol: STN) and the Toronto Stock Exchange (Symbol: STN). We are required to be financially stable in order to maintain these listings and we are required to adhere to the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission "(2013 framework)" (the COSO criteria). We are subject to ongoing independent audits that prove our financial stability and credit worthiness. For a complete view of our audited financial statements, visit the Investors section of our web site at www.stantec.com/about-us/investors.html. Please note that Stantec Inc.'s operating subsidiaries and affiliates (e.g., Stantec Consulting Ltd., Stantec Consulting Services Inc., etc.) are not publicly traded, but are owned and/or controlled by Stantec Inc. Stantec Inc.'s financial statements are consolidated to include its subsidiaries and structured entities that are controlled, but do not necessarily include all affiliates.

Dave Charleson

A transformative executive leader with a focus on the customer and on driving changes that enhance value through improving the customer experience, while engaging employees. A diverse background that leverages sound business acumen to achieve results through collaboration, employee engagement, and team building. An inspiring and incisive communicator with a history of cultivating relationships with integrity and credibility. Thrives in complex environments that require strategic analysis and vision to achieve desired outcomes.

Leadership • Strategy • Customer Experience • Human Resources
Financial Management • Operations • General Management

PROFESSIONAL EXPERIENCE

Enbridge Gas Distribution **1988 – 2019**

Vice President, Energy Supply & Customer Care (2016 – 2019)

Responsible for leading and directing the Customer Care, Gas Supply, Gas Control, Gas Storage and Business Process & Performance functions in the utility, representing $120 million in operating spend to support Enbridge's 2.2 million customers in Ontario and over $2 Billion per year in gas purchases.

- Led a Customer Experience program that deployed technology and enhanced processes to reduce customer care costs by over $7 million per year, while improving overall customer satisfaction (NPS increase of 9)
- Accountable for over $70 million in annual contracts supporting Customer Care outsourcing.
- Evolved the relationship with an external outsource customer care service provider into a collaborative relationship that benefitted both organizations.
- Successfully negotiated a 4-party agreement to help stabilize natural gas transportation costs.
- Successful advancing of a $40 million project to improve the safety and reliability for gas storage operations.
- Leadership of 4 direct reports, 180 staff located in Ontario and Alberta.

Sr. Director, Human Resources & Facilities (2012 – 2015)

Member of the Executive Team accountable for ensuring strong Human Resources support and Facilities Services to the over 2,000 Enbridge Gas Distribution employees across Canada. Earned additional accountability for the Energy Supply functions as part of a transition to the Vice President Energy Supply & Customer Care role.

- Guided two major organization transformation initiatives, each resulting in a 5% work force reduction. Accomplished both projects without compromising the safe and reliable delivery of services to the utility's customers. The second transformation included a significant restructuring of the executive team.
- Championed an increased focus on the importance of leadership within the organization, that included the roll-out of a Leadership Development program that provided new training and tools to support leaders at all levels.
- Led a refresh of existing facilities that improved the working environment for employees, while also increasing capacity in owned facilities that allowed the elimination of over $1 million per year of lease costs.
- Leadership of 3 direct reports and 45 staff, in addition to providing local leadership to an extended team of over 30 HR professionals.

General Manager, Enbridge Gas New Brunswick (2007 – 2012)

Accountable for providing overall strategic and policy direction for the New Brunswick natural gas distribution utility that serves 10 communities and approximately 12,000 customers and for overseeing its ongoing development and operations. Was the lead in stakeholder relations with both elected and appointed government officials, regulatory bodies and media, working closely with local independent members of the Board of Directors.

- Achieved customer growth of >40% over 5 years, including the expansion to 2 new communities.
- Successfully advanced and defended the company position in nearly 20 regulatory proceedings
- Responded strategically to market challenges on two occasions by streamlining the organization and achieving a 10% reduction in FTEs while continuing to deliver on operational and customer service goals.
- Led a team of 5 direct reports and 100 staff dispersed between 3 communities across southern New Brunswick.

Director, Energy Policy and Analysis (2003 – 2007)

Responsible for establishing the gas supply strategy to ensure long term stability of the portfolio and for ensuring the effective acquisition and delivery of over $2 billion of natural gas annually to meet customer needs during a period of great market volatility and generating over $20 million per year in incremental revenue by optimizing the usage of assets used to manage the gas supply.

- Company expert witness in several regulatory proceedings that established the manner in which the natural gas market would operate in Ontario, with the outcomes generally being favourable to the company.
- Represented the natural gas industry with the IESO to ensure technical standards being developed to support the integration of natural gas fired electricity generation would align with the manner in which the natural gas markets work.
- As company spokesperson, dealt with media and editorial boards regarding significant increases in natural gas prices.
- Spoke at several conferences and seminars on natural gas storage and the role it plays in managing price volatility.

Manager, Strategic & Key Accounts (2001 – 2003)

Accountable for the effective management of relationships and contracts with over 3,000 of Enbridge Gas Distribution's largest customers and Agents, Brokers and Marketers that supplied natural gas to over 600,000 customers.

- Led the design, development and implementation of a system that enabled electronic execution of contracts with customers and facilitated the nomination and balancing of all natural gas deliveries being made on behalf of customers. This system remains in place today.
- Successfully defended the recovery of the $18 million system cost at the Ontario Energy Board.

Manager, Accounting Systems (1997 – 2001)

Responsible for the effective operations of the accounts payable, inventory accounting, payroll and plant systems departments.

- Led the work to establish the financial structure and operating budgets for 3 new organizations that resulted from the division of the utility into a pure utility operation, a natural gas services organization and a shared services provider. Defined and created service level agreements to govern the sharing of services between the 3 organizations. The format and structure of these agreements has remained the foundation for service level agreements within Enbridge almost 20 years later.
- Business Sponsor for the successful implementation of a new Inventory Accounting system and for a project to examine and review the existing Plant Accounting system.

Manager, Volume and O&M Budgets (1996 – 1997)

- Oversaw the successful preparation of all regulatory materials and testimony at the Ontario Energy Board (OEB) to receive recovery of all costs through regulated rates.

Positions of Progressive Responsibility, Information Services (1988 – 1995)

- Project Manager for the on-time and on-budget development and implementation of client-server based general ledger and online budgeting system.
- Developed, implemented and supported senior leaders using the organization's first online budget system.

EDUCATION

Queen's Executive Program, Queen's University, Kingston, ON
Honours Bachelor of Math (Coop), University of Waterloo, Waterloo, ON

Board and Other Experience

- Director, Newmarket Tay Power Distribution Limited (2017 – Present)
  (Member of Audit/Finance Committee)
- Director, Junior Achievement of Central Ontario (2014 – 2017)
  (Member of Operations and Audit Committees)
- Director, Habitat for Humanity Fredericton Area Inc. (2009 – 2012)
  (Board Chair, 2011 – 2012)
- Director, Unite Way / Centraide Central NB (2007 – 2012)
- Director, Atlantica Centre for Energy (2007 – 2011)
- Natural Gas Sector Representative, Technical Panel, Independent Electricity System Operator (IESO) (2006 – 2007)
- Director, Newmarket Hydro Limited (2005 – 2007)

PURPOSE, NEED AND TIMING

MARKET PROFILE

The Municipalities have a combined population of nearly 11,000, and are located on the North Shore of Lake Superior, either along or accessible from Highway 17 between Thunder Bay and Sault Ste. Marie (Figure 1). This development of natural gas infrastructure would expand natural gas service to 5,540 potential customers across the five communities.

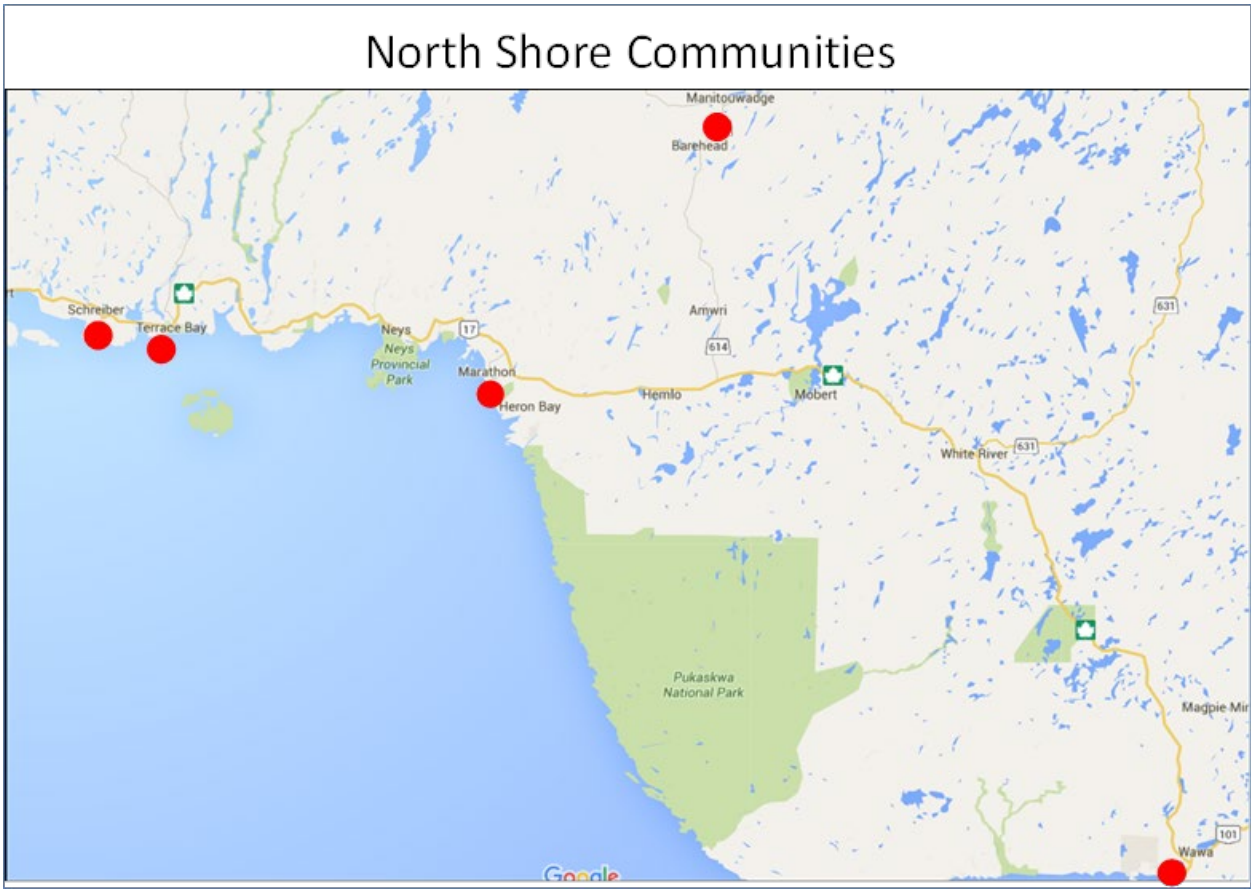


Figure 1: Municipalities

The economies of the Municipalities have been built to a large extent on the resource sector, primarily mining and forestry. Some of the Municipalities have seen a decline in the forestry

sector, dominated by large pulp and paper mills, although mining production in Northwestern Ontario has shown solid growth over the past 10 years and is forecast to keep growing in the long term.

There are over 5,500 buildings in the Municipalities made up of residential, commercial, institutional and industrial types. Of these buildings, approximately 90% are residential and 10% are commercial and institutional. The residential buildings in the Municipalities were built, on average, about 50 years ago with an average size of just less than 1,400 square feet. A community breakdown of the building stock by type can be found in Figure 2.

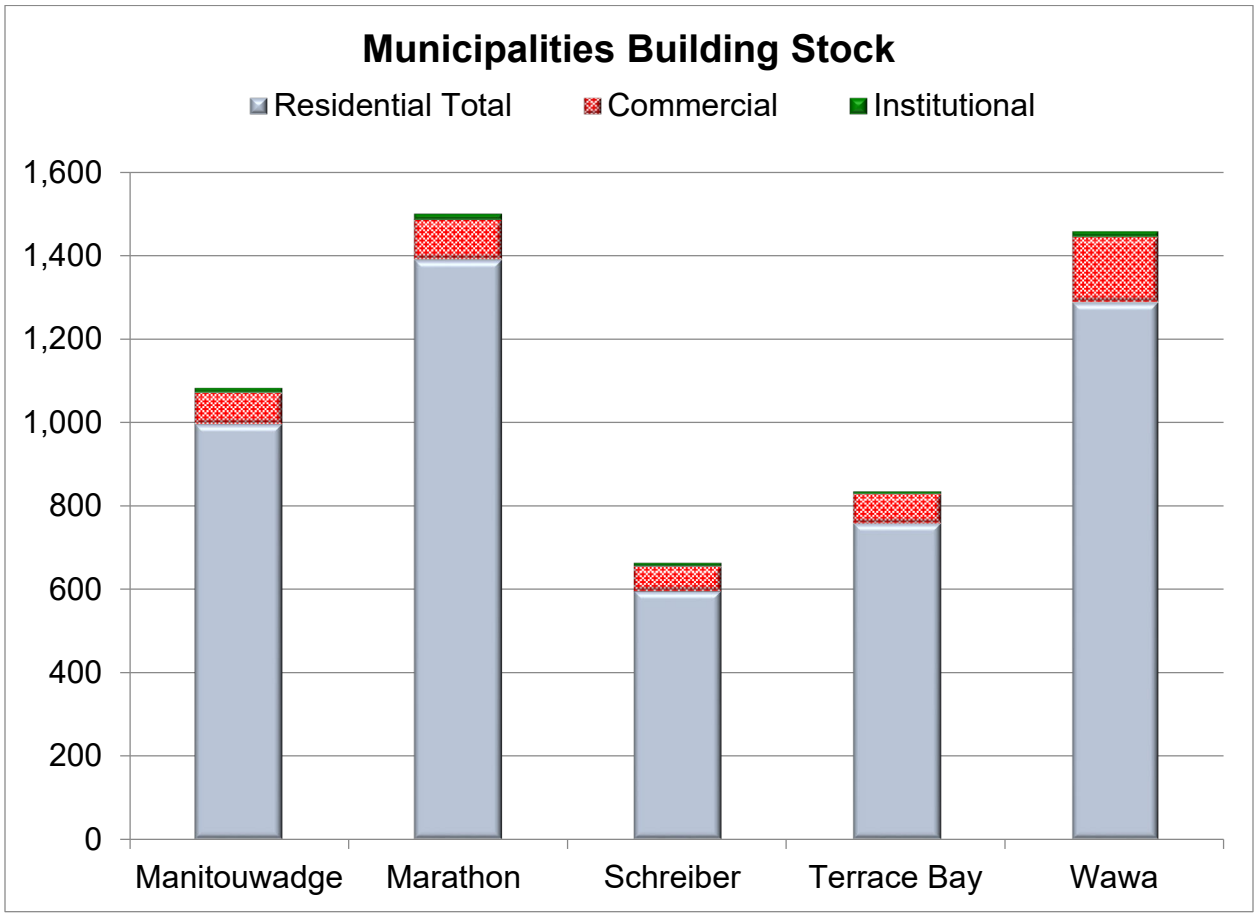


Figure 2: Building Stock

Manitouwadge

The town of Manitouwadge was founded in the early 1950's to service the mining industries and was one of the first planned communities in Northern Ontario. Municipal infrastructure services have been designed to operate with a capacity for 6,000 people, more than three times the current population.

Manitouwadge is situated in the Thunder Bay District, midway between Thunder Bay and Sault Ste. Marie on the shores of Manitouwadge Lake. The town is located at the end of Highway 614 and 55 kilometres north of Highway 17.

The local economy is focused on mining and forestry with a small tourism sector. Manitouwadge has seen a loss of local employment with closure of the GECO Mine (1995) and the Golden Giant Mine (2006). There is a retail sector, a small service sector, and public services including education (four schools—three elementary and one high school), health services (Manitouwadge General Hospital with 18 beds), Family Health Team Clinic (local office of Thunder Bay District Health Unit), Ambulance Services, local detachment of the Ontario Provincial Police, Fire Department (co-located in Municipal Office), and a Community Centre (arena, curling rink, library, fitness centre, auditorium, and outdoor swimming pool). There are three churches in the community as well as a senior's apartment residence.

After peaking at approximately 4,000 people in the 1980s, the population has declined since 1996, coincident with the mine closures in 1995 and 2006. The population declined to 1,937 by 2016. The Census of 2016 showed an aging trend, in part due to the out-migration of younger people to find work as well as seniors moving into the community to take advantage of relatively low housing costs. Despite declining population, the share of residents over 65 years of age increased by 22% from 2011 to 2016. The median age of Manitouwadge residents increased by 14 years between the 2001 and 2016 census periods to above 50 years old.

In 2016, the unemployment rate of Manitouwadge was 10.1%, an increase from the 6.5% unemployment rate in 2006. Some workers living in Manitouwadge commute to jobs in the oil and gas/mining industry outside the town and the province.

Median household income for Manitouwadge has declined in recent years to $66,048 in 2016, which is largely the result of the increase in the senior population.

In 2016, the number of residential dwellings in Manitouwadge was 895, of which 750 were single-detached houses. Housing stock has declined as older homes have been torn down. There are 86 commercial and institutional buildings in the town including several larger facilities such as the hospital, schools, a number of municipal buildings, and a neighbourhood shopping centre.

Marathon

Marathon's history as a community dates back to 1881 when the railroad community of Peninsula was founded. After the railway was completed, Peninsula's population dwindled until a pulp mill was constructed between 1944 and 1946. The population subsequently rose to 2,500 and the town's name was changed to Marathon, in honour of the Marathon Paper Mills.

Marathon is the largest town along the north shore of Lake Superior. It is located 2 kilometres south of Highway 17. The Canadian Pacific Railway (CPR) operates freight cartage out of Marathon. Marathon is located on Peninsula Harbour, a prime deep water harbour on Lake Superior.

The local economy is reliant on mining, including mineral exploration, and forestry. In the early 1980's gold was discovered at Hemlo, 40 kilometres east of Marathon. The Hemlo Gold Camp is one of the largest gold mining facilities in Canada. Forestry has been important since the construction of the pulp mill in the 1940s. Due to its location, Marathon is also a service centre for the region with financial and business services including one of only three Canadian Tire stores in the region. Marathon's public services include education with five schools (three

elementary, two secondary) and a satellite campus of Confederation College, health services including Wilson Memorial General Hospital, Marathon Family Health Team, dental offices, a local branch of Thunder Bay District Health Unit, and emergency services including a local detachment of the Ontario Provincial Police, Fire Department, and Ambulance Service. The town also has a nine-hole golf course, an indoor pool, an arena, and a curling club.

Marathon's population in 2016 was 3,273. The population is relatively young with a median age of 45 years and almost 16 percent of the population under the age of 15. The sectors of the economy accounting for the greatest number of jobs are mining and forestry, educational services, retail trade, and manufacturing. The unemployment rate in 2016 was 7.4%. Average household and family incomes in Marathon were $84,582 and $38,400, respectively; higher than the provincial average.

As of 2016, the number of residential dwellings in Marathon was 1,445, 1,075 of which were single-detached houses. Sixty dwellings were constructed between 1991 and 2001. There are 110 commercial and institutional buildings in the town including several larger facilities such as the hospital, schools, a number of municipal buildings and six neighbourhood shopping centres.

Schreiber

The township of Schreiber, established in 1883/84, has strong links to the railway. In the 1880s the area was a construction camp for the CPR. After the last spike was driven into the transcontinental railway in 1886, the first train station was built in Schreiber. The town is named after Sir Collingwood Schreiber, chief engineer of government railways.

Schreiber is located on Highway 17, 14 kilometres west of Terrace Bay and 200 kilometres east of Thunder Bay. The CPR mainline runs through the town.

Historically the economy of Schreiber has been based on the railway, forestry and mining. The proximity of Terrace Bay to Schreiber has enabled both communities to share business, social,

health and municipal services. Today the major employer in Schreiber continues to be the CPR. In 2006 and again in 2009/2010, the other major local employer, the Terrace Bay Pulp Mill, shut down. In 2012, the mill was purchased by the Aditya Birla Group. Over 360 employees resumed work with the mill's reopening. Mining exploration also supports the local economy, with gold exploration nearby at Worthington Bay and Priske Township, east of Schreiber. Tourism is also important to the local economy. Public services in Schreiber include the health services of the J.E. Stokes Medical Centre (part of the North Shore Family Health Team), dental services, an addiction centre, and counselling and speech services. The local hospital, McCausland Hospital, is located in Terrace Bay. Schreiber's protective services include Ambulance Services, a volunteer Fire Department, and a sub office of the Nipigon detachment of the Ontario Provincial Police. There are two elementary schools in Schreiber. The local library is a valued community resource. Schreiber has five churches.

Schreiber's population in 2016 was 1,059. The population has been decreasing since 1996. The population is also aging – the median age increased from 38.5 years in 2001 to 50.4 years in 2016. When the Terrace Bay Pulp Mill closed, many skilled workers left the area and it was difficult to attract young people and skilled workers to the area. Since the mill reopened, there is little unemployment in the community. The unemployment rate decreased from 19% in 2006 to 9.6% in 2016. Median income has declined in recent years to $70,528 in 2016.

There are 500 residential buildings in Schreiber; most of these dwellings were constructed prior to 1986. Schreiber also has 59 commercial buildings and 9 institutional buildings. The municipal assessment base is dominated by residential property uses.

Terrace Bay

Terrace Bay was founded in 1947 as an improvement district and became a municipality in 1959. Its name comes from the dominant land formation, a series of landward terraces formed during the last ice age. Logging began here in 1891 and there has been a pulp mill in Terrace Bay since

1927. Kimberley Clark (formerly LongLac Pulp and Paper) established a mill in 1946 and the first residence was built in Terrace Bay the same year.

Terrace Bay is located on Highway 17 and is a small urban community with a large rural area that includes the Slate Islands in Lake Superior. The Statistics Canada data provided below includes the rural area.

Kimberley Clark developed the original town site as a one-industry town; the company owned much of the real estate and town infrastructure at the time. Development has depended on the forest products industry. The pulp mill closed in 2006, re-opened and then closed again in 2009/2010. In 2012, it was purchased by the Aditya Birla Group. Employment of 360 workers at the mill resumed with the mill's reopening. The proximity of Terrace Bay to Schreiber has enabled both communities to share business, social, health, and municipal services. Terrace Bay is served by McCausland Hospital and the Aguasabon Medical Clinic, several dentists, and a local office of the Thunder Bay District Health Unit. Emergency services include Ambulance Services, a volunteer fire department, and a local detachment of the Ontario Provincial Police. There are three elementary schools in the community and one high school serving Terrace Bay and Schreiber. There is a municipal office, a recreation centre and arena, a cultural centre, and an Ontario government building located in Terrace Bay. There are four churches in the community.

The population of Terrace Bay was 1,611 in 2016 The population had declined over the past 30 years. The reinvestment in the pulp mill by Abitya Birla Group has turned the trend towards population growth as population increased from 1,471 in 2011 to 1,611 in 2016. Individual and household income were $42,138 and $75,328, respectively. Employment is based on the lumber industry and, increasingly, tourism. As well, Terrace Bay is expecting an increase in population serving employment such as retail, food service, personal service, education, health care, and professional jobs.

There are 745 residential buildings in Terrace Bay. There has been no growth in housing in the community for the past 25 years and there is a perceived housing shortage with a rise in local real estate prices. An increased population of seniors is expected to result in increased demand for smaller affordable housing and a senior's facility may be needed in the future. There are 76 commercial buildings and institutional buildings and one industrial building, the pulp mill in Terrace Bay.

Wawa

Settlement began in the early 1700s, when the French established a trading post (Michipicoton) in the area. The name Wawa, adopted in the 1890s, comes from the Ojibwa word for "wild goose" and was first applied to Wawa Lake where the community was established.

Wawa is located 225 kilometres north of Sault Ste. Marie and 470 kilometres east of Thunder Bay along Highway 17. Most of the community is built on Highway 101.

The primary industries in Wawa and the surrounding area include mining, forestry, tourism and regional services such as retail, health, and education. While the service sector has continued to grow, jobs in primary manufacturing and forestry have declined. Gold was first discovered is 1897 on the south shore of Wawa Lake and gold mining in the area continues to be strong. The local iron ore mine closed in 1998, one hundred years after iron ore was first discovered. The Weyerhauser Strandboard Mill closed in 2007. The mill was purchased by Rentech and is being converted to a pellet mill that is expected to employ 40 employees.

Public services include education (seven schools—four elementary and three high schools) and health services such as the Lady Dunn Health Centre, the Wawa Medical Centre (operated within Lady Dunn Health Centre), the Wawa Family Health Team, and a local branch of the Algoma District Health Unit (administered out of Sault Ste. Marie). Emergency services include the Superior East Detachment of the Ontario Provincial Police, Ambulance Services, and the volunteer Fire Department. The Wawa Community Centre houses an arena, curling rink, fitness

centre, dance studio, and squash courts. There is a local library and there are six churches in the community.

In 2015, Augustine Ventures, Citabar, and Red Pine Exploration created the Wawa Gold Project, a joint venture to mine gold from an area immediately southeast of Wawa.

The 2016 census shows Wawa's population at 2,905, a decrease since the 2006 census. In 2016, the following industries accounted for more than half of local employment – health and education (20%), manufacturing and construction (20%), wholesale and retail trade (12%). Median individual and household income were $34,987 and $65,824, respectively. Wawa's unemployment rate was 6.3% in 2016.

There are 1,275 residential dwellings in Wawa; 1,160 were constructed before 1986 and 135 were constructed between 1996 and 2006. There are six apartment buildings of three or more stories, one of which is a 21 unit seniors' apartment building. There are also 170 commercial and institutional buildings in Wawa.

Residential Survey

Innovative Research designed and executed a survey of the residents of the Municipalities for a Feasibility Study done by Elenchus in 2016. The survey obtained demographic and building information as well as residents' perceptions and level of interest in converting to natural gas if it were to become available. Innovative is a full service national public opinion research firm and has conducted similar surveys in the past.

Innovative conducted its telephone survey during the latter part of April and throughout May 2016. Innovative contacted residents using a random sampling approach. They screened respondents to ensure that they owned property in one of the targeted Municipalities and that they were the party that had primary or shared responsibility for paying their energy bills. The full report from Innovative is included as Tab 4, Schedule 1, Attachment 1.

Innovative's key findings were as follows:

1. Most residents of the Municipalities are aware of the proposed plan to bring natural gas to their communities, and they are favourably predisposed to natural gas.
2. 49% said they would definitely or likely convert their heating system to natural gas with an additional 25% saying "it would depend."
3. 51% are likely to convert their water heaters with an additional 25% saying "it would depend," and 38% are likely to convert both.
4. The response was not the same for all Municipalities: Residents are more likely to convert to natural gas in Municipalities where awareness of the LNG Project is highest.
5. Cost is a significant factor:
    a. It is a primary reason for not converting and the main deciding factor for those who aren't sure.
    b. A lower conversion cost often results in a greater likelihood to convert, but it is not a linear relationship as potential savings also have an impact.

Space Heating Systems

There is a wide variety of heating systems in the Municipalities, distributed as follows:

- 27% oil forced air
- 25% electric baseboard
- 21% electric forced air
- 11% propane air forced air
- 6% stove
- 5% hot water radiator
- 3% other

Propane furnaces are often the least expensive to convert at a cost of $500 to $1,000 per customer, as usually only minor modifications are required to the furnace to make it compatible with natural gas. Other forced air furnaces (oil and electric) are not convertible to natural gas and require a new furnace installation at a cost of $5,000 to $6,000 per customer. Electric baseboard systems are often the most expensive to convert. Surveyed individuals were provided a forecast cost of $10,000 to $15,000 per customer, as they require a new duct system to be installed in addition to a new furnace. The delivered cost of propane, fuel oil, and electricity is typically 1.5 to 2 times more expensive than forecast natural gas.

It is expected that the most likely customers to convert to natural gas would be customers with propane furnaces. They have the lowest cost to convert and would quickly realize the financial benefit from lower fuel costs. Customers with fuel oil furnaces and electric forced air furnaces would also be likely to convert since the cost to convert is modest compared to the benefit of switching to a much lower cost energy source. Residents with electric baseboards would receive significant savings but would incur greater conversion costs.

An added advantage of converting to natural gas from older furnaces is that a new, high-efficiency furnace would consume less energy than the older, less efficient furnace it would replace. This would help to reduce overall energy consumption.

Additionally, fuel oil systems are considered to pose a higher risk than natural gas systems, which is reflected in higher insurance premiums. Some insurers have indicated that certain oil tanks are not acceptable for insurance purposes. Service for fuel oil systems is also limited due to higher risk and insurance costs for contractors.

Customers noted that the primary barrier to conversion was cost or that their system was new or sufficient.

Water Heating Systems

The predominant source of water heating was electricity:

- 82% electric
- 10% oil
- 6% propane
- 2% other/don't know

Of these customers, roughly 30% rent their water heater and 69% own their water heater, with the balance unsure of the ownership of their water heater.

Fifty-one percent of the residents indicated that they were likely or definitely would convert to gas if it was available. A further 25% indicated that 'it would depend', with the balance unlikely or definitely would not convert.

It is likely that the final delivery rate for natural gas in the Municipalities will have a fixed monthly component similar to the practice of other LDCs in the province. On average, water heating consumption only represents about 20% of the total household natural gas usage, with the space heating representing the other 80%. If a homeowner was only interested in having a gas water heater, with the monthly fixed charge the relative benefits of installing just a water heater is less than installing a water heater as an add-on to a furnace installation. Experience in Ontario suggests it would be rare to install a water heater only.

It is expected that most homeowners who opt for a natural gas furnace will also choose to install a natural gas water heater. Installation of one is less expensive if the heating, ventilation and air conditioning (HVAC) contractor installs the other at the same time. That is, unless the homeowner has a relatively new water heater and chooses to delay installing a water heater until the existing one fails.

The findings were used to develop a 25-year overall residential market demand for natural gas in each of the Municipalities. This can be found in Tab 4, Schedule 1, Attachment 2.

Commercial Survey

The potential commercial market was identified by combining lists provided by the Municipalities and publicly available business directories. The five Municipalities were seen to have a total of 455 commercial customers. Innovative completed telephone surveys during the period April 21st to May 30th, 2016. Voice messages were left when live contact could not be made. In addition, some email requests were made where contact details were available in order to provide background information and to advise parties that the survey was being undertaken.

The survey asked questions to gather information in the following areas:

- Awareness of the LDC Facilities and efforts to bring natural gas to the Municipalities;
- Energy type(s) currently used;
- Type(s) of equipment used for each energy source (i.e. furnace, boiler, baseboard);
- Annual amount of energy consumed by energy source;
- Indication of whether or not there was volume variability from year to year;
- Interest in converting to natural gas if gas was available; and
- Any issues or concerns that customer might have.

Contact was made with 13% of the potential commercial market and survey responses were received from 8% of potential commercial market (35 of 455).

There was widespread awareness of the LDC Facilities among those surveyed. The type of energy currently used by survey respondents was distributed as follows:

- 30% propane
- 30% oil
- 40% electricity

There was significant interest in converting to natural gas, subject to being offered competitive natural gas rates at the time and the costs of conversion. Overall, 60% of respondents indicated that they were willing to consider switching. The breakdown of those interested in converting to natural gas is as follows:

- 90% propane
- 67% oil
- 36% electricity

It is expected that commercial customers will experience many of the same factors as with residential customers with respect to the conversion of heating equipment. Propane furnaces are often the least expensive to convert, as usually only minor modifications are required to the furnace to make it compatible with natural gas. Other forced air furnaces (oil and electric) are not convertible to natural gas and require new furnace installation. Electric baseboard systems are often the most expensive to convert as they require new duct system to be installed in addition to a new furnace.

Commercial customers converting from propane and fuel oils can save up to 40% by switching to natural gas. Those switching from electricity can save more than 60% with natural gas. These savings do not account for the initial costs to convert to natural gas.

It is therefore to be expected that the most likely customers to convert to natural gas would be commercial customers currently using propane, which has a low cost to convert and would financially benefit from lower operating costs. Those currently using oil or electric forced air would be next most likely to convert followed by those using electric baseboard heating. The survey results support this hypothesis.

The findings were used to develop a 25-year overall commercial market demand for natural gas in each of the Municipalities. This can be found in Tab 4, Schedule 1, Attachment 2.

Institutional Survey

Various municipal offices provided listings of institutional facilities. In addition, websites for the various municipalities, school boards, and health care organizations were used to provide source data.

The five Municipalities were seen to have a total of 55 institutional sites. Each municipality or school board could have a number of sites within their control. Elenchus completed surveys over the phone during the period April 21st to May 30th, 2016.

Contact was made with 90% of the potential institutional sites. Survey responses were received from 87% of potential institutional market (48 of 55). There was widespread awareness of project among those surveyed.

The type of energy type currently used by institutional survey respondents was distributed as follows:

- 60% propane (or combination of oil and propane)
- 33% oil
- 7% electric

There was significant interest in converting to natural gas, subject to competitive natural gas rates at the time and the costs of conversion. Overall, 96% of respondents indicated that they were willing to consider switching. A summary of the number of institutional sites interested in conversion to natural gas by current fuel type is as follows:

- 28 propane (or combination of oil and propane)
- 15 oil
- 3 electricity

These findings were used to develop a 25-year overall institutional market demand projection for natural gas in each of the Municipalities. The annual volume of gas used by each of the

respondents was incorporated into the demand forecast section of the report. This can be found in Tab 4, Schedule 1, Attachment 2.

Industrial Demand

It is expected that any industrial customer would enter into a negotiated agreement with the natural gas distributor. See Tab 4, Schedule 1, Attachment 2 for further details on the industrial demand forecast. The forecast includes one industrial customer that has expressed interest to replace some of their current fuel use with natural gas as an interruptible customer.

Customer Attachment Forecast

The results of the surveys were used to develop a 25-year demand forecast for the Municipalities by customer type. The estimates have been used as the basis for the overall facility design and ratemaking process.

A forecast assumes that with the implementation of a comprehensive marketing program additional customers could be captured above the percentage of respondents who indicated that they were likely to convert to natural gas. Forecast attachments are as follows:

- 62% of Residential (includes 50% of undecided respondents)
- 65% of Commercial (5% above the survey results to capture undecided)
- 84% of Institutional (institutional customers' capture rate would not materially change as energy managers already had a very high interest in converting to gas).

For the residential sector, the phased-in period was based on the result of the residential survey. Similarly, the phase-in periods for commercial and institutional customer connections were based on responses from individual customers.

25-Year Load Forecast

For the residential class, the phased-in period was based on the result of the residential survey. Similarly, the phase-in periods for commercial and institutional customer connections were based on responses from individual customers.

In creating a 25-year demand forecast for residential customers, Elenchus developed an average energy use per customer. This takes into account the fact that not all homes may install a water heater until a future date. The use per customer was estimated to be 84.85 GJ[1] for residential customers and 400 GJ for commercial customers. The institutional load forecast was based on direct discussions with individual customers.

The aggregate residential and General Service (the combination of commercial and institutional) customer growth in terms of the number of customers and annual volume of gas can be seen in Figure 3. The majority of the growth occurs in the first few years, indicating that customers would quickly take advantage of the natural gas opportunity.

[1] See Appendix A of the Gas Supply Plan (Tab 8, Schedule 1, Attachment 1)

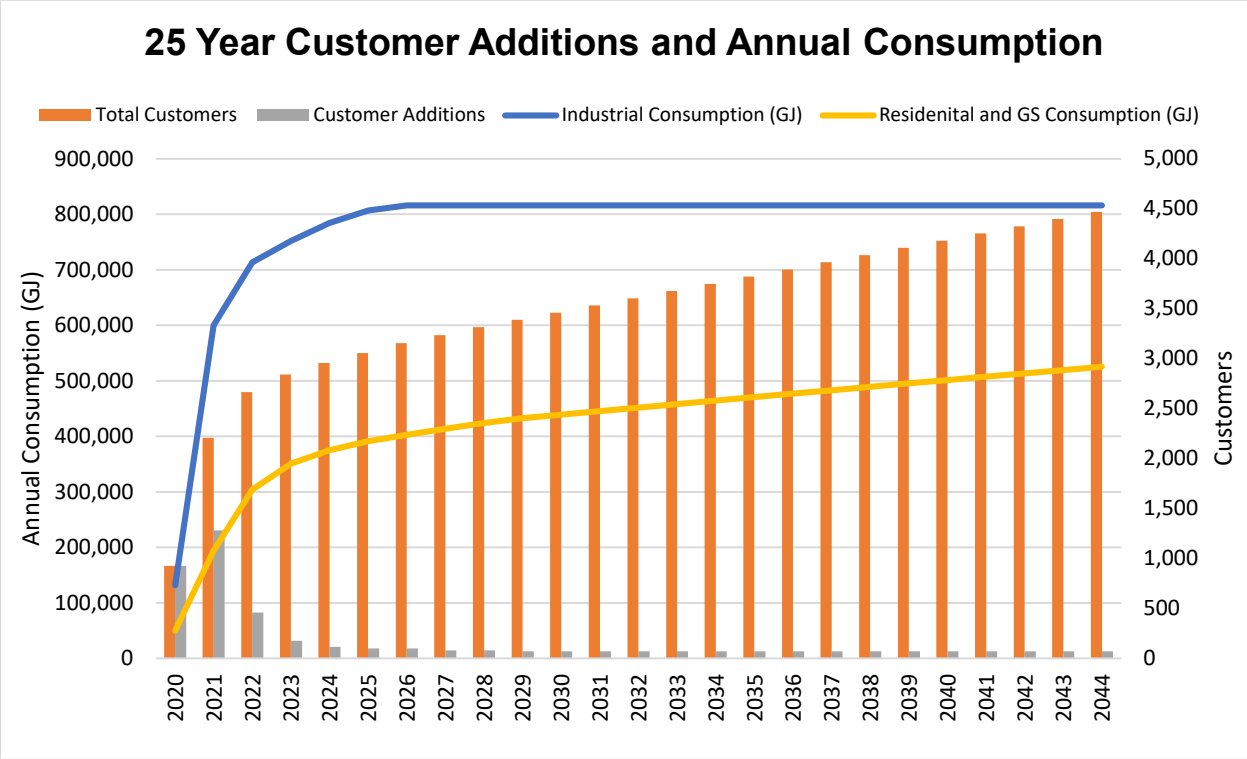


Figure 3: 25-Year Demand Forecast

Natural gas demand from Residential and General Service customers are seasonal in nature, with significant "peaks" in the winter. Natural gas distribution companies must plan to meet customers' needs during the peak demand periods, and as a result may only utilize system capacity 30% to 35% of the time.

It is intended that the upstream gas resources (i.e., LNG capacity and upstream pipeline capacity) would be procured to meet the peak day requirements for the residential and General Service customers. The majority of capacity not utilized by the residential and General Service customers would be sold and delivered to the industrial market in order to minimize the total rate for all customer classes. This approach requires the industrial market to be connected to the distribution system and to utilize other fuel types when the supply of natural gas is less than total demand.

North Shore Community NG Forecasting Survey

Summary Report

June 2016

Prepared for:
Elenchus Research Associates
34 King Street East, Suite 600
Toronto, ON M5C 2X8

Residential Telephone Survey
North Shore Community NG Forecasting

June 2016

This report has been prepared by Innovative Research Group Inc. ("INNOVATIVE") for Elenchus Research Associates.

The conclusions drawn and opinions expressed are those of the authors.

Prepared by:

Innovative Research Group Inc.
56 The Esplanade, Suite 310
Toronto ON | M5E 1A7
Tel: 416.642.6340
Fax: 416.640.5988
www.innovativeresearch.ca

Table of Contents

Introduction

Innovative Research Group Inc. (INNOVATIVE) is a full service national public opinion research firm with offices in Toronto and Vancouver. INNOVATIVE was commissioned by Elenchus Research Associates to conduct a telephone survey of residents of five North Shore municipalities in order to determine the level of interest among residents in converting to natural gas.

Research Objectives

The goal of this research was to measure market demand for natural gas line connections among residents of five North Shore communities:

- Manitouwadge;
- Marathon;
- Schreiber;
- Terrace Bay; and
- Wawa.

The survey results will be used to forecast annual demand across these five communities over a ten year period. This load forecast model will be used to support the natural gas line proponent's business case and associated filings with the Ontario Energy Board.

Key Findings

1. Most residents of the North Shore communities are aware of the proposed plan to bring natural gas to their communities, and they are favourably predisposed to natural gas.

2. 49% say they would convert their heating system to natural gas, 51% are likely to convert their water heaters, and 38% are likely to convert both.

3. Not all communities are the same: Residents are more likely to convert to natural gas where awareness of the plan is highest.

4. Cost is a significant factor:

    - It is a primary reason for not converting and the main deciding factor for those who aren't sure.
    - A lower conversion cost often results in a greater likelihood to convert, but it is not a linear relationship as potential savings also have an impact.

- A grant to help with the conversion cost increases the likelihood of conversion.

5. Perception of natural gas matters. Those who view natural gas favourably are significantly more likely to consider converting.

Methodology

The survey was conducted by telephone among residents of five North Shore communities, as determined by their six digit postal code. Residency in one of the five municipalities was confirmed in one of the initial survey screening questions.

The telephone survey was conducted from April 25th, 2016 to May 3rd, 2016 among a total of 472 area residents. Respondents qualified to complete the survey if they own a residential property within the service area for the proposed natural gas distribution system expansion, and if they have primary or shared responsibility for paying the household energy bill.

A stratified random sampling approach was employed to ensure the final sample is representative of the distribution of residents across the five municipalities, as well as household size. The final data was also weighted according to Statistics Canada 2011 census data for municipality and household size. The final, weighted sample size is 400 which carries a margin of error of ± 4.9%, 19 times out of 20. Margins of error will be larger among sub-groups.

Issue Resulting in Callbacks to Select Respondents

In the initial survey questions, respondents were asked about their home heating systems (type of system and fuel) and water heaters (fuel, owned/rented). Their responses to these questions determined which up-front cost and savings scenario respondents were presented with before being asked if they were likely to convert to NG.

A total of 93 respondents were recorded as having an "other" type of heating system based on insufficient information provided to the earlier questions. As a result, they were provided with a higher than actual up front conversion cost. Callbacks were made between May 20th and May 24th, 2016 in order to obtain the correct information and thereby provide the accurate conversion cost. These respondents were then re-asked the questions regarding their likelihood to convert their home heating system to natural gas. A total of 66 respondents were successfully re-contacted. The remaining 27 respondents were removed from the data set, resulting in a final sample of 445.

Note: tables and charts may not always total 100% due to rounding values rather than any error in data. Sums are added before rounding numbers.

Detailed Findings

This section provides the detailed results of the telephone survey conducted in Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa between April 25th and May 24th[1], 2016.

Due to small sample sizes, caution should be used when interpreting the results at the municipal level.

Respondents qualified to complete the survey if they owned a residential property within the defined service area for the proposed natural gas distribution system and if they were the person with either primary or shared responsibility for paying the energy bills of the property in question.

Conversions Analysis

Home Heating

There are a wide variety of home heating systems in use by the households in the proposed service area, and there is some variation across communities. Overall, the most common home heating systems are oil forced air (27%) or electric baseboard (25%), followed closely by electric forced air (21%). Propane forced air systems (11%) are significantly less common. Other types of heating system include stove (6%), hot water radiator (5%) and a combination of systems (3%).

In Manitouwadge, (31%) and Marathon (37%), electric forced air are the most common home heating systems, whereas in Schreiber (40%) and Terrace Bay (35%) electric baseboards are more prevalent. Half (50%) of the households surveyed in Wawa heat their homes with an oil forced air system.

Survey respondents were given a cost-benefit conversion scenario based on their heating system and heating fuel. This scenario included the estimated cost of conversion to a natural gas heating system and the estimated savings in terms of fuel costs. For example, if a home had electric baseboard heating the estimated upfront conversion cost of $10,000 to $15,000 (or financed at $100 to $150 per month over 10 years) was provided to the respondent along with the estimated fuel savings of natural gas relative to electricity (in this instance, respondents were informed that electricity was two and a half times the price of natural gas). Respondents were then asked how likely they would be to convert to natural gas if it became available.

Overall, based on their specific upfront cost and savings scenarios, almost half (49%) reported that they would be “definitely” or “likely” to convert their home heating system to natural gas if it became available in their community. One in four (25%) said “it depends”, and when we asked these individuals

[1] This end date includes the callback interviews that are described in the Methodology section of this document.

what it would depend on, a large plurality (46%) mentioned cost, followed by their current financial situation (11%) or that they simply don't know enough about natural gas (11%). It is worth noting that the types of home heating system among those who said "it depends" mirrors the entire survey sample, so there is no particular type of system that is disproportionately present among those who said "it depends". One in four (25%) respondents told us they are not likely to convert their home heating to natural gas. When asked why not, the two primary reasons were that their current system is new/sufficient (23%) or the cost involved (20%).

Across the five communities involved in the survey, respondents living in Marathon (60%) are most likely to convert their home heating system to natural gas, whereas those in Wawa (36%) are least likely to do so.

Those who currently heat their home with a propane forced air system are most likely (64%) to convert to a natural gas heating system. This is the least expensive system in terms of up front conversion cost. Least likely to convert to natural gas are households with an oil forced air (41%) or "other" (30%) heating systems. More than half (56%) who have an electric forced air system say they are likely to convert, and almost as many (55%) of those who heat with radiators. Conversion intent is slightly lower among those with electric baseboards – the most expensive type of system to convert.

Based on the results above, it follows that those heating with a propane-fuelled system (65%) are most likely to say they will convert to natural gas. Residents heating with oil (41%) or something else (mostly wood/ pellets) (29%) are least likely to say they will convert, and those with a system run on electricity fall somewhere in-between (54%).

Prior awareness of the proposed plan to bring natural gas into the area differs across the five communities, and this appears to impact the likelihood of conversion. On average, more than two thirds (68%) said they were aware of a plan to bring natural gas to their community, but this figure ranged from a low of just over half (54%) in Wawa to almost nine in ten (89%) in Terrace Bay. Likelihood to convert their home heating system to natural gas is higher than average in Marathon (60%), Schreiber (58%) and Terrace Bay (53%), where awareness of the proposed plan is also higher than average.

Table 1: Home Heating Conversion by Community

	TOTAL (n=400)	Manitou-wadge (n=78)	Marathon (n=116)	Schreiber (n=41)	Terrace Bay (n=55)	Wawa (n=110)
Sample Distribution	100%	19%	29%	10%	14%	28%
Home Heating Conversion						
Likely to Convert to NG*	49%	43%	60%	58%	53%	36%
Would Depend	25%	27%	18%	18%	25%	34%
Unlikely to Convert to NG**	25%	29%	21%	22%	20%	28%
`Don't know	1%	1%	0%	2%	2%	1%
Type of Home Heating System						
Propane Forced Air	11%	8%	22%	5%	5%	7%
Oil Forced Air	27%	22%	6%	28%	33%	50%
Electric Forced Air	21%	31%	37%	10%	16%	3%
Electric Baseboard	25%	21%	22%	40%	35%	21%
Other	16%	18%	14%	18%	11%	18%
Age of Home Heating System						
5 years old or less	28%	35%	22%	30%	34%	24%
6 to 10 years old	19%	17%	25%	15%	13%	20%
11 to 15 years old	11%	10%	6%	13%	11%	17%
16 years or older	38%	35%	44%	35%	41%	34%
% Aware of Proposed Plan						
Aware	68%	63%	70%	85%	89%	54%

* "definitely" or "likely" to convert

** "definitely would not" or "likely would not" convert

Table 2: Home Heating Conversion by System

	TOTAL (n=400)	**Propane Forced Air** (n=45)	**Oil Forced Air** (n=109)	**Electric Forced Air** (n=84)	**Hot Water Radiator** (n=22)	**Electric Baseboard** (n=100)	**Other** (n=41)
Sample Distribution	100%	11%	27%	21%	6%	25%	10%
Home Heating Conversion							
Likely to Convert to NG*	49%	64%	41%	56%	55%	51%	30%
Would Depend	26%	29%	23%	24%	41%	24%	28%
Unlikely to Convert to NG**	24%	7%	35%	19%	5%	22%	41%
Don't know	1%	0%	1%	1%	0%	3%	0%
5 years or less	28%	51%	23%	24%	30%	18%	41%
6 to 10 years	20%	29%	27%	13%	35%	11%	17%
11 to 15 years	11%	2%	18%	6%	10%	8%	15%
16 years or older	38%	18%	31%	51%	25%	54%	24%

* "definitely" or "likely" to convert

** "definitely would not" or "likely would not" convert

† Other types of heating system include stove (6%) and a combination of systems (3%).

Table 3: Home Heating Conversion by Fuel

	TOTAL (n=400)	Propane (n=48)	Oil (n=120)	Electricity (n=187)	Other (n=43)
Sample Distribution	100%	13%	32%	44%	11%
Home Heating Conversion					
Likely to Convert to NG*	49%	65%	41%	54%	29%
Would Depend	25%	29%	26%	24%	29%
Unlikely to Convert to NG**	25%	6%	33%	20%	43%
Don't know	1%	0%	1%	2%	0%
Age of Home Heating System					
5 years or less	27%	50%	23%	21%	42%
6 to 10 years	20%	29%	29%	12%	19%
11 to 15 years	11%	4%	18%	7%	14%
16 years or older	39%	17%	30%	53%	23%

* "definitely" or "likely" to convert

** "definitely would not" or "likely would not" convert

†Other fuel types include wood/pellet (8%) and other (2%).

Home Heating: Conversion Cost Sensitivity

The cost scenario presented to each respondent was dependent on their answers to questions about their hardware and fuel type. In cases where respondents said that they had another type of hardware than those listed, they necessarily faced a generic cost scenario, equivalent to a full install with no existing equipment or ductwork. The full relationship between heating system and cost scenarios is laid out in the detailed methodology at the end of this document.

At first glance, it would appear that the higher the cost of conversion, the less likely respondents are to convert to natural gas: 65% of those with an up-front cost of $500 to $1,000 are likely to convert, compared to 31% of those with an up-front cost of up to $10,000. However, the relationship between cost and conversion is not a linear one, as 51% of those with an up-front cost of converting say they are likely to convert to natural gas.

The cost of respondents' current fuel relative to natural gas is also a factor, as those whose current fuel costs about 2.5 times the cost of natural gas (53%) are more likely to convert than those whose current fuel is about 1.5 times the cost of natural gas (45%).

Also having an impact is the size of the respondents' current annual bill (based on the estimate they provided in response to a survey question). More than half (56%) of those with a current bill that is more than $3,000 are likely to convert to natural gas, compared to 42% of those whose annual bill is less than or equal to $3,000.

Before asking if they would be likely to convert their home heating system to natural gas, we provided them with the up-front cost of conversion and then asked if they would pay the full cost up front, or finance the conversion over 10 years (which, it was explained to respondents, would be secured by a lien against their house). A strong plurality (43%) indicated that they would prefer to pay the full cost up front, while less than a third (29%) would prefer to finance the conversion. In Marathon, Terrace Bay and Wawa, there was a clear preference for pay the full cost up front, whereas in Manitouwadge and Schreiber there was only a very marginal difference in the proportion who would pay up front versus those who would finance the conversion.

Almost two-thirds (63%) of those who would pay for the conversion up front say they are likely to convert to natural gas. The proportion of those who prefer to finance the conversion who are likely to convert to natural gas (59%) is only marginally lower. The difference between the two groups falls within the margin of error for these segments of the sample population, and so should not be considered a statistically significant difference.

Table 4: Home Heating Conversion by Costs and Savings

	Cost to convert to natural gas				
	TOTAL (n=400)	**$500-1,000** (n=48)	**$5,000-$6,000*** (n=212)	**Up to $10,000*** (n=41)	**$10,000-$15,000** (n=99)
	% who would likely or definitely convert				
Overall	49%	65%	47%	31%	51%
By fuel cost ratio	% who would likely or definitely convert				
1.5 times	45%	65%	42%	32%	N/A
2.5 times	53%	N/A**	54%	N/A	51%
Annual bill	% who would likely or definitely convert				
Less than or equal to $3000	42%	55%	40%	32%	45%
Greater than $3000	56%	90%	59%	30%	50%
Don't know	51%	70%	45%	33%	65%

* Cost and savings ratio statements were modified in generic scenarios to "up to $5000-$6000", "up to $10,000" and "at least one-and-a-half times". They are combined here for ease of reading.

** In three cells the combination of cost and savings were not possible. Specifically the least expensive conversion is only possible on propane systems, and the most expensive only is given under either electrical or generic scenarios.

Table 5: Home Heating Financing Options

	TOTAL (n=400)	**Manitou-wadge** (n=78)	**Marathon** (n=116)	**Schreiber** (n=41)	**Terrace Bay** (n=55)	**Wawa** (n=110)
Sample Distribution	100%	19%	29%	10%	14%	28%
Interest in Financing						
Pay the full cost up front	43%	34%	48%	31%	47%	45%
Finance the conversion	29%	32%	26%	36%	27%	28%
Not going to convert	17%	18%	17%	21%	15%	15%
Don't Know	11%	13%	8%	10%	11%	12%

Table 6: Conversion by Financing Preference

	Pay Full Cost Up Front (n=170)	Finance the Conversion (n=114)
Sample Distribution	42%	29%
Home Heating Conversion		
Likely to Convert to NG*	63%	59%
Would Depend	27%	28%
Unlikely to Convert to NG**	11%	13%
Don't know	0%	0%

* "definitely" or "likely" to convert

** "definitely would not" or "likely would not" convert

Home Water Heating

The vast majority (82%) of water heating systems are fuelled by electricity, followed distantly by oil (11%) or propane (6%). Wawa is the only one of the five communities where a sizeable portion (30%) have an oil-fuelled water heater, but still the majority (60%) use an electric system.

At the aggregate level, most (69%) respondents own their hot water heater, but this varies across the five communities. Manitouwadge is the only community where the majority (81%) rent their hot water heater. In Marathon, there is a more even split between renters (44%) and owners (56%). In Schreiber (100%), Terrace Bay (100%), and Wawa (94%) virtually everyone owns their water heater.

Survey respondents were presented a conversion scenario for their water heater that was determined by the fuel type, and whether it was owned or rented. If respondents own their water heater, they were presented with costs to switch to natural gas depending if they simply need to convert their existing heater (propane) or purchase a new one (oil or electric; quoted as "about $2,500"). Respondents who rented were give a range of typical rental rates for natural gas heaters ("$13 to $24 per month"). Respondents were then asked how likely they would be to convert to natural gas if it became available.

Overall, half (51%) say they are likely to convert their water heater to a natural gas system, one quarter (25%) say "it depends", and slightly fewer (22%) say they would not convert. Residents of Manitouwadge (61%) are most likely to say they will convert their water heaters, while fewer than two in five (39%) living in Terrace Bay would do the same.

Those who said they would not convert were asked for the main reason they would not convert. Almost a third (31%) said they wouldn't convert because of the cost involved. About one in five (18%) are happy with their current system, and another one in ten (10%) say their current system is new. Among those who said "it depends", a plurality (39%) cite cost as the main factor, followed by one in ten (10%) who say they don't know enough about natural gas.

Table 7: Water Heater Conversion by Community

	TOTAL (n=400)	Manitou-wadge (n=78)	Marathon (n=116)	Schreiber (n=41)	Terrace Bay (n=55)	Wawa (n=110)
Sample Distribution	100%	19%	29%	10%	14%	28%
Own vs. Rent						
Own Water Heater	69%	19%	56%	100%	100%	94%
Rent Water Heater	30%	81%	44%	0%	0%	4%
Water Heater Conversion						
Likely to Convert to NG*	51%	61%	56%	53%	39%	49%
Would Depend	25%	17%	21%	25%	36%	24%
Unlikely to Convert to NG**	22%	20%	23%	22%	21%	24%
Don't know	2%	3%	2%	0%	0%	3%
Water Heater Fuel Type						
Propane	6%	1%	8%	3%	4%	8%
Oil	11%	0%	2%	8%	7%	30%
Electricity	82%	97%	88%	85%	89%	60%
Other	1%	1%	2%	0%	0%	2%
Age of Water Heating System						
5 years or less	50%	69%	42%	49%	31%	54%
6 to 10 years	34%	26%	34%	32%	40%	39%
11 to 15 years	6%	3%	10%	5%	5%	3%
16 years or older	6%	0%	8%	10%	11%	3%

* "definitely" or "likely" to convert

** "definitely would not" or "likely would not" convert

NOTE: "Don't know" not shown

Natural Gas Perceptions

Generally speaking, residents of all five communities are very positively predisposed to natural gas, on the basis of it being safe, reliable, clean burning and providing the best energy value. More than nine in ten (92%) agree that natural gas is a clean burning fuel, and almost as many (88%) agree that it is reliable. Only slightly fewer agree that natural gas provides the best energy value (84%) and that it is safe (83%).

Looking at the data, it is clear that having a positive impression of natural gas leaves respondents more likely to convert to natural gas than those whose perceptions are neutral or negative. Conversion rates are very high (68% to 78%) among those who agree with positive statements about natural gas, compared to only 13% to 45% among those who disagree with the statements presented to them.

Table 8: Natural Gas Perceptions

	TOTAL (n=400)	Manitou-wadge (n=78)	Marathon (n=116)	Schreiber (n=41)	Terrace Bay (n=55)	Wawa (n=110)
Sample Distribution	100%	19%	29%	10%	14%	28%
Natural Gas Perceptions						
NG is safe: % agree*	83%	81%	82%	92%	87%	78%
NG is reliable: % agree	88%	86%	91%	91%	87%	86%
NG is clean burning: % agree	92%	90%	89%	94%	94%	93%
NG is the best value: % agree	84%	80%	82%	89%	86%	87%

* "somewhat agree" or "strongly agree"

Table 9: Effect of Natural Gas Perceptions on Conversion Rates

	% who would convert* if they:		
Natural Gas Perceptions	Agree**	Neutral	Disagree***
NG is safe	72%	33%	13%
NG is reliable	71%	20%	13%
NG is clean burning	68%	18%	45%
NG is the best value	78%	25%	13%

* "definitely" or "likely" to convert either home heating or water heating.
** "somewhat agree" or "strongly agree"
*** "somewhat disagree" or "strongly disagree"

Impact of a Grant

The availability of a grant to help pay for the cost of converting to natural gas has the impact of shifting some respondents from “it depends” to “definitely” or “likely” to convert. Overall, there is a six point gain in the proportion who would convert either their home heating system or their water heater once a grant is introduced.

Table 10: Impact of Grant on Conversion

Scenario	Without a Grant	With a Grant	Difference
Conversion Intent			
Likely to Convert to NG*	60%	66%	+6%
Would Depend	21%	14%	-7%
Unlikely to Convert to NG**	18%	18%	-

* “definitely” or “likely” to convert either home heating or water heater

** “definitely would not” or “likely would not” convert either home heating or water heater

Methodology and Approach

This section details in full the methodological approach undertaken by INNOVATIVE to sampling the proposed service area and designing an appropriate survey instrument.

Defining the Sampling Region

As the purpose of these surveys was to identify interest in conversion to natural gas, it was important to develop a sampling region that matched, as closely as possible, the likely service area of the proposed distribution system. INNOVATIVE's understanding is that a proposed distribution system would provide service in the following five communities:

1. Manitouwadge
2. Marathon
3. Schreiber
4. Terrace Bay
5. Wawa

Each landline respondent's municipality was identified from their phone number and confirmed in the survey. If the respondent no longer resided in that municipality, their new residence was confirmed and they continued the survey if they still live in the sample area. Each cell phone respondent was asked which municipality they reside in and they continued the survey if they live in the sample area.

Figure M1: Map of the Communities

Sampling and Weights

The residential survey was conducted from April 25th to May 24th (including callbacks). The goal of the residential survey was to provide a representative sample of homes in the area. Stratified random sampling was employed to ensure representativeness across the five municipalities in the service area, as well as household size. The strata of residents were weighted according to Statistics Canada 2011 census data for municipality and household size. The total weighted sample size is 400 which equates to a margin of error of +/-4.9% 19 times out of 20. Margins of error will be larger among sub-groups.

Weighting

In order to accurately represent the population, within the strata of permanent residents results were weighted according to household size for each municipality. The full breakdown of the weighted proportion of residents per municipality and by household size is shown below.

	Household size			Total Households
	1 person	2 people	3+ people	
Manitouwadge	6%	8%	6%	*19%*
Marathon	8%	11%	10%	*29%*
Schreiber	3%	4%	3%	*10%*
Terrace Bay	5%	6%	4%	*14%*
Wawa	9%	11%	9%	*28%*
Total	*30%*	*39%*	*32%*	**100%**

Conversion Costs and Savings Estimates

Conversion Costs

In order to ensure that estimates of interest in conversion were as accurate as possible, respondents were presented with up-front conversion costs and cost ratios (of their current fuel relative to natural gas) specific to their current hardware and fuel source.

For residential customers a financing option was also discussed. This is in keeping with the fact that it is common practice to finance potentially expensive home renovations with a bank loan or line of credit. The financed costs listed were given as monthly payments with a 10 year term and a 4% annual interest rate.

In cases where the respondent did not know the type of heating system or fuel used, or used a system such as a wood stove, the generic cost scenario presented was equivalent to that of installing a full system from no existing base. All respondents who didn't select one of the types of heating system presented to them in the survey were asked to specify the details of their heating system. These open-ended responses were coded after the fact, and for the purposes of analysis these respondents are counted under the actual system they use. However the cost estimate they faced in the survey remains the generic one.

Table M2: Cost Estimates for Hardware and Fuel Type

Heating System	Up Front Cost	Financed Cost (Monthly Payment)
Propane Forced Air	$500 to $1,000	$5 to $10
Oil Forced Air	$5,000 to $6,000	$50 to $60
Electric Forced Air	$5,000 to $6,000	$50 to $60
Forced Air, Don't Know Fuel	As much as $5,000 to $6,000	$50 to $60
Propane Boiler	$500 to $1,000	$5 to $10
Oil Boiler	$5,000 to $6,000	$50 to $60
Electric Boiler	$5,000 to $6,000	$50 to $60
Boiler, Don't Know Fuel	$5,000 to $6,000	$50 to $60
Electric Baseboard	$10,000 to $15,000	$100 to $150
Other System	As much as $10,000	As much as $100
Water Heater	**Total Cost**	
Propane Water Heater (owned)	If a liner is needed, up to $1,000	
Oil Water Heater (owned)	$2,500	
Electric Water Heater (owned)	$2,500	
Rented Water Heater	$13 to $24 per month	

Savings from Conversion

Respondents were also presented with potential savings from converting to natural gas. Savings were specific to the fuel type they were using. They were expressed in the form of a ratio of costs between their current fuel type and natural gas. Ratios were calculated to represent the 5 year historical average

cost ratio based on the amount of fuel required for equivalent output of heat energy. The ratios used in the survey were the low-end estimates from these calculations, in order to represent a conservative view of future prices and not overstate the savings from conversion. The ratios are detailed in Table M3 below.

Table M3: Fuel Cost Ratios

Fuel	Cost Ratio
Propane	One and a half times the cost of natural gas
Electricity	Two and a half times the cost of natural gas
Heating Oil	One and a half times the cost of natural gas
Don’t Know/Other	At least one and a half times the cost of natural gas

25-Year Market Demand Forecast

Table 1 – Residential Market Forecast

Year		Residential			
		Customer Additions	Total Customers	Annual Consumption (GJ)	Design Day (GJ)
1	2020	857	857	24,215	590
2	2021	1,199	2,056	106,328	1,416
3	2022	400	2,456	184,826	1,691
4	2023	132	2,588	210,534	1,782
5	2024	85	2,673	219,782	1,841
6	2025	85	2,758	226,355	1,899
7	2026	85	2,843	232,894	1,958
8	2027	67	2,910	238,899	2,004
9	2028	67	2,977	243,874	2,050
10	2029	67	3,044	248,822	2,096
11	2030	67	3,111	253,745	2,142
12	2031	67	3,178	258,641	2,189
13	2032	67	3,245	263,511	2,235
14	2033	67	3,312	268,355	2,281
15	2034	67	3,379	273,174	2,327
16	2035	67	3,446	277,966	2,373
17	2036	67	3,513	282,733	2,419
18	2037	67	3,580	287,474	2,465
19	2038	67	3,647	292,190	2,512
20	2039	67	3,714	296,880	2,558
21	2040	67	3,781	301,546	2,604
22	2041	67	3,848	306,186	2,650
23	2042	67	3,915	310,800	2,696
24	2043	67	3,982	315,390	2,742
25	2044	67	4,049	319,955	2,788

Table 2 – Commercial Market Forecast

Year		Commercial			
		Customer Additions	Total Customers	Annual Consumption (GJ)	Design Day (GJ)
1	2020	44	44	5,861	143
2	2021	59	103	25,395	334
3	2022	59	162	48,814	526
4	2023	44	206	70,132	669
5	2024	30	236	85,535	766
6	2025	14	250	95,067	812
7	2026	14	264	100,346	857
8	2027	14	278	105,598	903
9	2028	14	292	110,823	948
10	2029	5	297	114,849	964
11	2030	5	302	116,513	980
12	2031	5	307	118,167	997
13	2032	5	312	119,813	1,013
14	2033	5	317	121,449	1,029
15	2034	5	322	123,076	1,045
16	2035	5	327	124,695	1,062
17	2036	5	332	126,305	1,078
18	2037	5	337	127,906	1,094
19	2038	5	342	129,498	1,110
20	2039	5	347	131,081	1,127
21	2040	5	352	132,656	1,143
22	2041	5	357	134,222	1,159
23	2042	5	362	135,779	1,175
24	2043	5	367	137,328	1,191
25	2044	5	372	138,868	1,208

Table 3 – Institutional Market Forecast

Year		Institutional			
		Customer Additions	Total Customers	Annual Consumption (GJ)	Design Day (GJ)
1	2020	24	24	19,695	298
2	2021	22	46	62,558	570
3	2022	0	46	70,270	570
4	2023	0	46	70,095	570
5	2024	0	46	69,919	570
6	2025	0	46	69,745	570
7	2026	0	46	69,570	570
8	2027	0	46	69,396	570
9	2028	0	46	69,223	570
10	2029	0	46	69,050	570
11	2030	0	46	68,877	570
12	2031	0	46	68,705	570
13	2032	0	46	68,533	570
14	2033	0	46	68,362	570
15	2034	0	46	68,191	570
16	2035	0	46	68,020	570
17	2036	0	46	67,850	570
18	2037	0	46	67,681	570
19	2038	0	46	67,512	570
20	2039	0	46	67,343	570
21	2040	0	46	67,174	570
22	2041	0	46	67,007	570
23	2042	0	46	66,839	570
24	2043	0	46	66,672	570
25	2044	0	46	66,505	570

Table 4 – Industrial Market Forecast

Year		Industrial			
		Customer Additions	Total Customers	Annual Consumption (GJ)	Design Day (GJ)
1	2020	1	1	132,000	0
2	2021	0	1	600,000	0
3	2022	0	1	816,000	0
4	2023	0	1	816,000	0
5	2024	0	1	816,000	0
6	2025	0	1	816,000	0
7	2026	0	1	816,000	0
8	2027	0	1	816,000	0
9	2028	0	1	816,000	0
10	2029	0	1	816,000	0
11	2030	0	1	816,000	0
12	2031	0	1	816,000	0
13	2032	0	1	816,000	0
14	2033	0	1	816,000	0
15	2034	0	1	816,000	0
16	2035	0	1	816,000	0
17	2036	0	1	816,000	0
18	2037	0	1	816,000	0
19	2038	0	1	816,000	0
20	2039	0	1	816,000	0
21	2040	0	1	816,000	0
22	2041	0	1	816,000	0
23	2042	0	1	816,000	0
24	2043	0	1	816,000	0
25	2044	0	1	816,000	0

Table 5 – Total Market Forecast

Year		Residential			
		Customer Additions	Total Customers	Annual Consumption (GJ)	Design Day (GJ)
1	2020	926	926	181,770	1,031
2	2021	1,280	2,206	794,280	2,321
3	2022	459	2,665	1,119,910	2,788
4	2023	176	2,841	1,166,761	3,021
5	2024	115	2,956	1,191,237	3,177
6	2025	99	3,055	1,207,167	3,281
7	2026	99	3,154	1,218,810	3,385
8	2027	81	3,235	1,229,893	3,477
9	2028	81	3,316	1,239,920	3,569
10	2029	72	3,388	1,248,721	3,631
11	2030	72	3,460	1,255,135	3,693
12	2031	72	3,532	1,261,513	3,756
13	2032	72	3,604	1,267,857	3,818
14	2033	72	3,676	1,274,166	3,880
15	2034	72	3,748	1,280,441	3,943
16	2035	72	3,820	1,286,682	4,005
17	2036	72	3,892	1,292,888	4,068
18	2037	72	3,964	1,299,061	4,130
19	2038	72	4,036	1,305,199	4,192
20	2039	72	4,108	1,311,304	4,255
21	2040	72	4,180	1,317,376	4,317
22	2041	72	4,252	1,323,414	4,379
23	2042	72	4,324	1,329,419	4,442
24	2043	72	4,396	1,335,390	4,504
25	2044	72	4,468	1,341,328	4,567

FORECAST RATES

Projected Rates by Class

Elenchus developed rate forecasts for each class based on the consumption forecast, forecast capital, operations and financing costs. The rates presented below were determined with no fixed monthly customer charge and include all pass-throughs, including natural gas, midstream LNG liquefaction and vaporization costs and the carbon charge. The revenue requirement is presented as being recovered entirely from variable rates in order to more easily compare the cost of natural gas to other fuels. In practice, however, it is expected that the Utility will incorporate a fixed monthly customer charge, as is typical in among natural gas distribution utilities.

Revenue Requirement Levelization

The total required revenue for over the first 20 years of operation was considered in the structure of rates over time. The annual distribution revenue requirements are levelized over the 20-year period, allowing introductory rates to be as low as possible and escalate steadily at an inflationary rate consistent with the escalation of other expected costs. The distribution rates are set to recover the NPV of the revenue requirement in the first 20 years of operations while increasing at a rate of 1.5% per year.

Figure 1 shows forecast revenue requirements in absence of levelization, proposed levelized revenue requirements, and the cumulative revenue requirement deficiency until 2040.

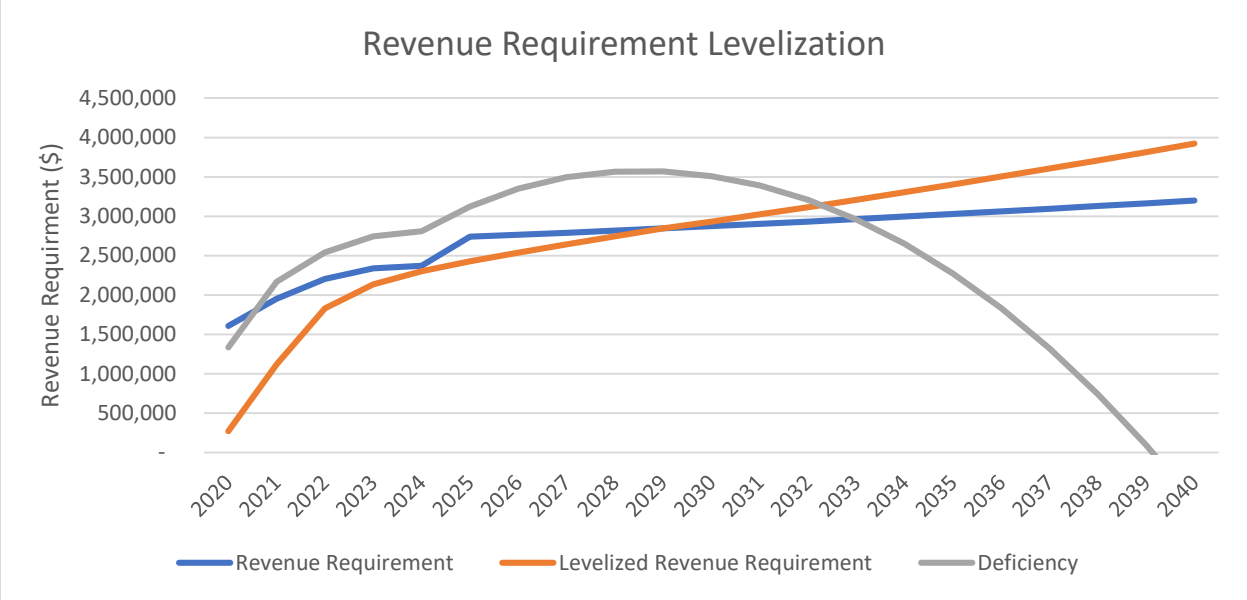


Figure 1: Revenue Requirement Levelization

Forecast Rates

In the first year of operation, 2020, the residential rate is projected to be $19.95/GJ including all pass-throughs. The residential delivery rate is $6.68/GJ and the remaining $13.27/GJ is cumulative pass-throughs. This cost is considerably lower than the cost of alternative fuels. Annual fuel costs for Municipalities' residential customers consuming 84.85 GJ of natural gas would be $1,693. The annual cost excluding the carbon tax is $1,582, which is 1.2% higher than the preliminary estimate of $1,563 used in Innovative's 2016 residential survey. The survey results concerning conversion rates should therefore be considered reliable.

In the first year of operation, the Small General Service (Commercial) rate is projected to be $17.63/GJ ($0.6566/m3). The Large General Service (Institutional) rate is projected to be $17.12/GJ ($0.6375/m3). Table 1 details the rate schedules for these three classes in the first 20 years of operation.

Year	Residential		Small General Service		Large General Service	
	$/GJ	$/M³	$/GJ	$/M³	$/GJ	$/M³
2020	19.95	0.7431	17.63	0.6566	17.12	0.6375
2021	20.75	0.7726	18.39	0.6848	17.87	0.6655
2022	21.56	0.8030	19.17	0.7139	18.64	0.6943
2023	22.12	0.8238	19.69	0.7334	19.16	0.7135
2024	22.42	0.8350	19.96	0.7432	19.41	0.7230
2025	22.73	0.8463	20.22	0.7531	19.67	0.7326
2026	23.04	0.8579	20.50	0.7633	19.94	0.7425
2027	23.35	0.8696	20.77	0.7736	20.21	0.7525
2028	23.67	0.8815	21.05	0.7841	20.48	0.7626
2029	24.00	0.8936	21.34	0.7947	20.76	0.7729
2030	24.33	0.9059	21.63	0.8055	21.04	0.7834
2031	24.66	0.9184	21.93	0.8165	21.32	0.7941
2032	25.00	0.9312	22.23	0.8277	21.62	0.8050
2033	25.35	0.9441	22.53	0.8391	21.91	0.8160
2034	25.70	0.9572	22.84	0.8507	22.21	0.8272
2035	26.06	0.9706	23.16	0.8624	22.52	0.8386
2036	26.43	0.9841	23.48	0.8744	22.83	0.8502
2037	26.80	0.9979	23.81	0.8865	23.15	0.8620
2038	27.17	1.0120	24.14	0.8989	23.47	0.8740
2039	27.56	1.0262	24.48	0.9115	23.80	0.8862
2040	27.95	1.0407	24.82	0.9242	24.13	0.8986

Table 1: Projected Rate Schedule Including Pass-Throughs

Distribution rates by class are provided in the Table 2.

Year	Residential		Small General Service		Large General Service	
	$/GJ	$/M³	$/GJ	$/M³	$/GJ	$/M³
2020	6.68	0.2489	4.36	0.1624	3.85	0.1433
2021	6.78	0.2526	4.43	0.1648	3.91	0.1455
2022	6.89	0.2564	4.49	0.1673	3.97	0.1477
2023	6.99	0.2603	4.56	0.1698	4.03	0.1499
2024	7.09	0.2642	4.63	0.1723	4.09	0.1521
2025	7.20	0.2681	4.70	0.1749	4.15	0.1544
2026	7.31	0.2721	4.77	0.1776	4.21	0.1567
2027	7.42	0.2762	4.84	0.1802	4.27	0.1591
2028	7.53	0.2804	4.91	0.1829	4.34	0.1615
2029	7.64	0.2846	4.99	0.1857	4.40	0.1639
2030	7.76	0.2888	5.06	0.1885	4.47	0.1664
2031	7.87	0.2932	5.14	0.1913	4.53	0.1689
2032	7.99	0.2976	5.21	0.1941	4.60	0.1714
2033	8.11	0.3020	5.29	0.1971	4.67	0.1740
2034	8.23	0.3066	5.37	0.2000	4.74	0.1766
2035	8.36	0.3112	5.45	0.2030	4.81	0.1792
2036	8.48	0.3158	5.53	0.2061	4.88	0.1819
2037	8.61	0.3206	5.62	0.2092	4.96	0.1846
2038	8.74	0.3254	5.70	0.2123	5.03	0.1874
2039	8.87	0.3303	5.79	0.2155	5.11	0.1902
2040	9.00	0.3352	5.87	0.2187	5.18	0.1931

Table 2: Projected Distribution Rate Schedule

The distribution rates are based on capital and operations costs detailed in Tab 9.

Pass-Through Rates

The majority of the total bill paid by customers will be for pass-throughs. These pass-throughs include upstream costs, LNG services, and the carbon tax. The pass-through rates will be the same for all Residential, Small General Service and Large General Service customers.

Pass-Throughs	$/GJ	$/m^3
Upstream Costs		
Commodity Price (Empress)	$2.6600	$0.0991
TransCanada Empress-Nipigon	$0.9200	$0.0343
TransCanada Fuel	$0.0713	$0.0027
LNG Service		
LNG Service Charge	$7.0300	$0.2618
Variable Charges	$0.4382	$0.0163
Delivery to Municipalities		
Trucking	$0.8380	$0.0312
Total Landed Cost of Gas	$11.9574	$0.4453
Carbon Charge	$1.3131	$0.0489
Total Pass-Through	$13.2706	$0.4942

Table 3: Projected 2020 Pass-Throughs

The commodity price is the average GJ price of gas at Empress between November 2016 and January 2019. This price reflects the recent trend of higher natural gas costs at Empress relative to AECO. Increased transportation capacity may reduce this price differential in the near future so this forecast price can be considered conservative. The TransCanada Empress-Nipigon rate was provided by TCPL and the associated fuel rate is 2.68% of the commodity price. LNG service

charges were provided by Nipigon LNG. The trucking rate is based on a forecast cost of $2.54/km per shipment of LNG and average delivery distance of 200 km. The carbon charge rate is the marketable natural gas charge rate as per the Greenhouse Gas Pollution Pricing Act.[1] The carbon charge rate in 2020 provided above is the average of the April 1, 2019 to March 31, 2020 rate and the April 1, 2020 to March 31, 2021 rate. Nearly half of annual heating degree days in the region occur within the first three months of the year so the average charge is used to approximate the rate that is applicable when the energy is consumed.

The rates in Table 1 include the distribution rate and fixed LNG service rates escalating at 1.5% per year; commodity, variable LNG, and trucking rates increasing by 2% per year; fixed TCPL charges; and increasing carbon charges consistent with the carbon rate of charge schedule until 2022, at which point it remains at the 2022 level.

[1] See Schedule 2, https://laws-lois.justice.gc.ca/eng/acts/G-11.55/page-41.html#h-247111. The Schedule 2 rate is the approved charge for Enbridge Gas Inc. as per the decision in EB-2018-0205 "2019 Federal Carbon Pricing Program Application."

CUSTOMER BENEFITS

Natural gas is more cost-effective than the heating options currently available to customers in the Municipalities. The most commonly used alternative fuels available to the region are propane, fuel oil, and electricity. Results from the Residential Survey, Commercial Survey, and Institutional Survey were used to calculate projected annual savings.

Residential

Table 1 compares the cost of natural gas to the existing alternative fuels.

Fuel	Unit Cost	Fuel Units	Unit Cost/GJ	Equipment Efficiency	Efficiency Adjusted Annual Usage in GJ	Annual Cost	Annual Savings with NG	Cost Ratio Relative to NG
Natural Gas	$19.954	/GJ	$19.95	95%	84.85	$1,693.08		
Propane	$0.803	/L	$31.48	86.5%	93.19	$2,933.77	$1,240.69	173%
Fuel Oil	$1.270	/L	$34.62	86.5%	93.19	$3,225.77	$1,532.69	191%
Electricity	$0.143	/kWh	$39.59	100%	80.61	$3,191.39	$1,498.30	188%

Table 1: Projected Annual Savings Compared with Other Fuels

The annual cost for natural gas in the region is considerably lower than the annual cost for the alternative fuels. Expected annual savings with natural gas heating are $1,241 for residents that currently use propane, $1,533 for current fuel oil users, and $1,498 for residents currently using some form of electric heating. It is assumed that fuel cost inflation will be the same among fuel types so the cost ratio relative to natural gas will be consistent over time[1].

The unit cost of propane and fuel oil are the average retail prices of those fuels in Thunder Bay from June 2018 to June 2019 as per the Natural Resources Canada average retail fuel prices in

[1] It is probable that electricity and alternative fuel prices will rise more rapidly than the utility's rates. Reported annual savings relative to other fuels can be considered conservative.

Canada tables.[2] Applicable carbon charges are also included.[3] The unit cost of electricity is based on time-of-use RPP prices in absence of the Ontario Fair Hydro Plan[4] and variable transmission and regulatory rates for a medium density (R1) Hydro One customer.[5]

The RPP rates in absence of the Fair Hydro Plan and the delivery charge without variable distribution rates were used to reflect costs potential customers will typically pay in the long run. The Fair Hydro Plan and the Fixing the Hydro Mess Act create uncertainty in the RPP rates over the next few decades. It is assumed that RPP rates in the long run will be sufficient to recover long-run generation costs of RPP customers so current RPP rates do not accurately reflect future electricity costs that would be paid by potential Utility customers in the medium to long term. The RPP rates in the absence of the Fair Hydro Plan, as determined by the OEB, are calculated to recover current generation costs of RPP customers. For this reason, the RPP rates in absence of the Fair Hydro Plan are more reflective of electricity costs potential customers will pay in the long run and is the relevant unit cost to compare with this natural gas project. The current variable distribution rate for residential medium density Hydro One customers is not included because Hydro One will complete the transition to fully fixed rates in 2023.[6]

Table 2 details the total annual regional savings with natural gas with the expected eventual total of 3,111 residential attachments, not including conversion costs, at the 2020 residential rate.

[2] Natural Resources Canada – http://www2.nrcan.gc.ca/eneene/sources/pripri/prices_byfuel_e.cfm
[3] Greenhouse Gas Pollution Pricing Act, Schedule 2 (Propane and Light Fuel Oil)
[4] Ontario Energy Board Regulated Price Plan Supply Cost Report, April 17, 2019
https://www.oeb.ca/sites/default/files/RPP-Supply-Cost-Report-20190501-20200430.pdf
[5] Hydro One Interim Rate Order – EB-2017-0049, dated June 11, 2019.
[6] Current RPP and distribution rates faced by Hydro One R1 residential customers is $0.124/kWh. Under these rates, forecast average annual savings is $1,086. Forecast annual savings under current RPP rates, but excluding the variable distribution rate, is $570.

Fuel	% of Residents Currently Using Each Fuel	% Responded Definitely or Likely to Convert	% of Total Customers to Convert from Each Fuel	Estimated Conversions from Each Fuel	Annual Savings with NG	Total Annual Savings
Propane	12.1%	65%	16.09%	501	$ 1,241	$ 621,230
Fuel Oil	30.2%	41%	25.38%	790	$ 1,533	$ 1,210,191
Electricity	47.0%	54%	52.09%	1,620	$ 1,498	$ 2,428,117
Other	10.8%	29%	6.43%	200	$ 1,463*	$ 292,846
Total	**100%**		**100%**	**3,111**		**$ 4,552,385**
*Weighted-average annual savings for electricity, propane and fuel oil included for "Other" estimate						

Table 2: Projected Total Annual Savings for Residential Customers Compared with Other Fuels

Annual residential energy savings will be $4.55 million as the utility reaches its expected total of 3,111 residential customers in its tenth year of operation. Most of the savings come from converting to natural gas from electricity heating, the most expensive alternative, although conversion costs from electricity to natural gas are higher than for other fuels. To estimate the annual savings from converting to natural gas from "Other" heating, weighted-average annual savings for electricity, propane, and fuel oil were used. This figure, $1,463, is equivalent to the combined total annual savings of the other fuels divided by the number of customers. It is likely that these alternative heating methods are more expensive so overall regional savings estimates may be considered conservative.

With many elderly residents and an ageing population, a large number of residents in the Municipalities are on fixed incomes. Reducing energy costs in the region would be especially beneficial to these residents. Additionally, there are plans for assisted living facilities in the communities. These facilities represent new construction opportunities in which residents would benefit from access to natural gas.

Payback Period

Table 3 details the projected payback period for the residents that convert in the first year. The midpoints of conversion cost estimates were used as the initial cost. It is assumed that the customer does not require financing and a 5% discount rate is applied.

Current System	Initial Cost	End-of-Year Conversion Cost Balance Remaining ($)					Payback Period (years)
		1	2	3	4	5	
Propane – Forced Air	$750	0	0	0	0	0	0.60
Fuel Oil – Forced Air	$5,500	-4,040	-2,650	-1,326	-65	0	4.04
Electricity – Forced Air	$5,500	-4,073	-2,714	-1,420	-187	0	4.12
Electricity – Baseboard	$12,500	-11,073	-9,714	-8,420	-7,187	-6,013	11.04

Table 3: Projected Payback Period

Propane's low initial cost allows its conversion costs to be recovered within the first year. Fuel oil's high initial costs cause it to have a longer conversion payback period at a little over 4 years. Electric forced air and baseboard heating also have high up-front costs. Electric forced air heating conversion can be recovered after the fourth year, and electric baseboard heating is recovered during the eleventh year.[7] The Utility will explore third-party on-bill financing to help customers realize the potential savings earlier and reduce the payback period.

Commercial

As explained in Tab 4, Schedule 1, commercial customers are expected to save 40% by converting from propane to natural gas, 45% by converting from fuel oil to natural gas, and 60% by switching from electricity to natural gas. The relative cost difference between natural gas and

[7] The electric baseboard heating figure assumes that the residence is a two-story home. The cost of converting a single-story home would be less, because of the reduced requirement for forced air ducting.

electricity is more substantial for commercial and institutional customers because those customers continue to incur a variable distribution charge. Table 4 shows the projected total annual savings that can be expected by the region's commercial customers by converting to natural gas. The total number of commercial customers by year 10 and 2020 rates were used in the calculations. The table details how much natural gas would cost for customers that are expected to convert and how much it currently costs to use the alternate fuels.

Fuel	Current Annual Fuel Cost of Expected Customers	% of Customers Converting from Each Fuel	Annual Cost of Equivalent Energy in Natural Gas	Annual Savings with Natural Gas
Propane	$1,506,445	44%	$903,867	$602,578
Oil	$1,232,546	33%	$677,900	$554,646
Electricity	$1,181,190	23%	$472,476	$708,714
Total	$3,920,180	100%	$2,054,243	$1,865,937

Table 4: Projected Annual Savings for Commercial Customers

Commercial customers in the Municipalities are expected to save $1.87 million annually by converting to natural gas.

Institutional

Institutional customers are expected to save 25% by converting from propane, 40% by converting from oil, and 60% by converting from electricity. Though annual savings is highest for those converting from electricity, there are few institutional customers that are expected to convert from electricity to natural gas. Using the total expected number of institutional customers, at 2020 rates, Table 5 details the total annual savings for the region by converting from an alternate fuel.

Fuel	Current Annual Fuel Cost of Expected Customers	% of Customers Converting from Each Fuel	Annual Cost of Equivalent Energy in Natural Gas	Annual Savings with Natural Gas
Propane	$943,328	60%	$707,496	$235,832
Oil	$648,538	33%	$389,123	$259,415
Electricity	$206,353	7%	$82,541	$123,812
Total	$1,798,219	100%	$1,179,160	$619,059

Table 5: Projected Annual Savings for Institutional Customers

Cumulatively, institutional customers are expected to save over $619,000 each year by converting to natural gas.

Industrial

The industrial customer is expected to utilize natural gas for a portion of its energy needs. This customer's current cost of fuel is indexed to oil prices.

Typically, industrial customers use natural gas continuously as a feedstock or to generate large quantities of high pressure steam, or other industrial processes, and have minimal space heating demand. There is one large industrial facility currently in the proposed service area located in Terrace Bay.

It is expected that any industrial customer would enter into a negotiated agreement with the Utility.

It is assumed that the upstream gas resources (i.e., LNG capacity and upstream pipeline capacity) would be procured to meet the peak day requirements for the residential and General Service customers. Any capacity not utilized by the residential and General Service customers would be sold and delivered to the industrial market in order to minimize the total rate for all customer classes. This approach requires the industrial market to be connected to the distribution system and to utilize other fuel types when the supply of natural gas is less than total demand.

NATURAL GAS RATE COMPARISON

The OEB has expressed interest in a comparison of the rates of other natural gas distributors in Ontario. The rates are provided for illustrative purposes but do not provide a meaningful comparison as service at those rates is not available to potential Utility customers.

Table 1 shows the estimated average monthly total bill for a residential customer consuming 7.07 GJ[1] (189.9m^3), which is the forecast average monthly consumption of a potential North Shore Utility residential customer. The average monthly bills for Union (North West), Enbridge and EPCOR come from the OEB Bill Calculator as of July 2019. The carbon charge is not yet included in the OEB Bill Calculator[2] so it is also excluded from the Utility's rate.

Distributor	Total Bill				Delivery & Customer Charges	Commodity and Upstream Pass-Through Charges
	Average Monthly Bill	$/GJ	$/m3			
Utility	$131.81	$18.64	$0.694		$47.26	$84.55
Union (North West)	$70.84	$10.02	$0.373		$38.00	$32.84
Enbridge	$70.46	$9.96	$0.371		$40.81	$29.65
EPCOR	$78.86	$11.15	$0.415		$46.78	$32.08

Table 1: Average Residential Natural Gas Bills in Ontario

The total bill for the Utility is greater than the total bills of other Ontario distributors primarily due to pass-throughs that make up the bulk of the Utility's bill. The liquefaction, trucking, and gasification costs to serve customers in this region are greater than typical transportation and storage costs charged to Union, Enbridge and EPCOR customers. The combined delivery and customer charge, the charges that are within the Utility's control, are reasonably similar to the charges recovered by the other Ontario natural gas utilities.

[1] Average forecast annual consumption for a residential customer is 84.85 GJ (2,278.5 m^3)
[2] https://www.oeb.ca/consumer-protection/energy-contracts/bill-calculator – Natural gas for residential

COMMUNITY CONSULTATIONS

An extensive consultation program was undertaken for the Project, including the development and maintenance of a stakeholder and Indigenous contact list. The contact list was used to identify distribution lists for notices, newspaper advertisements, agency meetings and the information session. The contact list also facilitated the feedback to stakeholders who had questions, issues, concerns or positive feedback about the Project. The communication and consultation activities are described in Sections 3.2–3.4 of the Environmental Report for each Municipality (Tab 10, Schedule 1, Attachment 1).

Consultation is an important component of the Ontario Energy Board Environmental Guidelines, Seventh Edition (2016). Consultation is the process of identifying interested and potentially affected parties and informing them about the Project, soliciting information about their values and local environmental and socio-economic circumstances, and receiving advice about key Project decisions before those decisions are finalized.

The consultation program for this Project included the following objectives:

- Identify interested and potentially affected parties early in the process.
- Inform and educate interested parties about the nature of the Project, potential impacts, proposed mitigation measures and how to participate in the consultation program in a clear, concise, relevant and timely manner.
- Provide a forum for the identification of issues.
- Identify how input will be used in the planning stages of the Project.
- Summarize issues for resolution and resolve as many issues as feasible.
- Revise the program to meet the needs of those being consulted, as feasible.
- Develop a framework for ongoing communication during the construction and operation phase of the Project.

PROPOSED FACILITIES

FACILITIES OVERVIEW

The Corporation is proposing to develop a gas distribution system to serve the communities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa, including industrial service to a pulp mill. Each community will have a localized distribution system to directly serve homes and businesses in the community. The distribution pipeline will also be connected to a local LNG depot providing the natural gas. The facilities proposed by the Corporation were determined with input from Nipigon LNG LP, Stantec Consulting Ltd., Cornerstone Energy Services and local municipalities and agencies.

The proposed distribution systems within each community will consist of 15 to 35 kilometres of NPS 2 to 6 MDPE pipe. Through a combined 115 kilometres of distribution piping, natural gas service will be provided to customer connections including residential, commercial and industrial customers. In accordance with CSA Z662-15, each service connection will consist of a customer meter and a pressure regulator. Additionally, sectional valves will be installed within each system to isolate specific areas for maintenance or repair work as well as odorization and overpressure protection.

A supervisory control and data acquisition ("SCADA") system will also be installed as part of the Project in order to continuously monitor the operating pressure of the distribution systems and ensure reliability.

Below is an overview of the proposed distribution main routing for each of the communities. NPS 2 to 6 PE will travel along public rights-of-way to each customer to complete the overall system.

- Manitouwadge: Low-pressure NPS 4 MDPE would travel north along Station Road, turn west onto Ohsweken Road, turn south onto Adjala Avenue and then southwest to Graham Drive.
- Marathon: Low-pressure NPS 6 MDPE would travel along Peninsula Road and Stevens Avenue.
- Schreiber: Low-pressure NPS 4 MDPE would start at the TransCanada Highway, turn onto Simon Street and then east to Langworthy Street, turn south onto Peary Street and move south until the end of Winnipeg Street.
- Terrace Bay: Low-pressure NPS 4 MDPE would travel along the TransCanada Highway and Mill Road.
- Wawa: Low-pressure NPS 4 MDPE would travel north along the TransCanada Highway and Route 101 and turn west onto Government Road.

The following table summarizes the distribution pipeline proposed for this project.

Community	Approximate Length (km)				Material
	2" Pipe	4" Pipe	6" Pipe	Total Pipe	
Manitouwadge	17	3.5	-	20.5	MDPE NPS 2 & 4
Marathon	30	-	5	35	MDPE NPS 2 & 6
Schreiber	11.5	4.5	-	16	MDPE NPS 2 & 4
Terrace Bay	13	5	-	18	MDPE NPS 2 & 4
Wawa	20	7	-	27	MDPE NPS 2 & 4

Table 1: Proposed Distribution Pipe Length

stronger business together

Thunder Bay Chamber of Commerce

July 3, 2019

Ontario Energy Board
2300 Yonge Street, 27th floor
P.O. Box 2319
Toronto, ON M4P 1E4

To Whom It May Concern:

SUPPORT FOR NORTH SHORE LNG PROJECT

The Thunder Bay Chamber of Commerce welcomes this opportunity to express our support for the proposed North Shore LNG Project that will bring a safe and reliable natural gas supply to homes and businesses along the North Shore of Lake Superior.

The lack of affordable and reliable energy is a significant barrier to economic development and a deterrent to community success in attracting and retaining residents. This collaborative partnership between 5 municipalities and Northeast Midstream LP is focused on making natural gas available to address high energy costs and expand growth opportunities across the region.

The project provides immediate benefits through the investment of $65 million in local distribution infrastructure and the creation of construction related jobs. Once completed the project will create long term employment opportunities and is expected to save residents and businesses $247 million and contribute approximately $73 million to Ontario's GDP over the next 40 years. The successful implementation of this project has the potential to breathe new life into these communities and inspire the development of new and existing business opportunities.

The Thunder Bay Chamber of Commerce fully supports the North Shore LNG Project and the positive economic, environmental and social impacts that this significant investment will have for the entire region.

Sincerely,

Charla Robinson
President

THUNDER BAY CEDC
COMMUNITY ECONOMIC DEVELOPMENT COMMISSION

P.O. Box 800
Suite 201, 34 Cumberland St. N.
Thunder Bay, ON Canada
P7C 5K4

Phone: 807.625.3960
Toll Free: 1.800.668.9360
Fax: 807.623.3962
develop@thunderbay.ca

Wednesday, July 3, 2019

To Whom It May Concern,

Thunder Bay Community Economic Development Corporation (CEDC) is an arm's length corporation of the City of Thunder Bay. We support projects that contribute to economic development and pursue new opportunities to attract direct financial involvement from government and private sectors.

On behalf of the Thunder Bay CEDC, please accept this letter of support for the North Shore LNG Project. We commend the work of the five North Shore municipalities who are collaborating to bring natural gas to rural Northwestern Ontario communities.

As the largest economic development entity in Northwestern Ontario, Thunder Bay CEDC understands the financial challenges facing business operators across the region and specifically related to energy costs. These challenges hinder businesses of all sizes, and also present barriers to attracting and retaining new investors.

The North Shore LNG Project is an innovative approach to supplying rural municipalities, their residents, institutions and businesses, with a safe and affordable source of natural gas. This is a business model that has tremendous opportunity for expansion to other municipalities and Indigenous communities, and we fully endorse this application to the Ontario Energy Board.

Sincerely,

Doug Murray
CEO
Thunder Bay Community Economic Development Commission

RED ROCK INDIAN BAND
Strength. Tradition. Empowerment.

Lake Helen Reserve # 53A
P.O. Box 1030
Nipigon, Ontario P0T 2J0
Tel. (807) 887-2510
Fax (807) 887-3446
Toll Free (877) 887-2510

July 19, 2019

Daryl Skworchinski
Chief Administrative Officer/Clerk and
Director of Economic Development
Town of Marathon
P.O. Box "TM" 4 Hemlo Drive
Marathon, ON, P0T 2E0

Dear Mr. Skworchinski,

On behalf of the Red Rock Indian Band, I am writing to reiterate our community's support for this project and the five North Short Municipalities who are working to bring a new natural gas supply to homes and businesses in Marathon, Terrace Bay, Manitouwadge and Wawa.

Like other communities in our territory, we recognize the need for a reliable natural gas supply to support the energy needs of residents and businesses in this region. Energy costs are a critical issue for all our people and the prospect of accessing natural gas presents new opportunities. We agree that the potential socio-economic and environmental benefits connected to this project are significant and encourage improved community prosperity along the North Shore.

Based on the information we have received to date; the North Shore LNG Project is an innovative model that has been well planned. Red Rock Indian Band therefore supports your application to the Ontario Energy Board (OEB), and we look forward receiving updates as the project unfolds.

Sincerely,

Chief Matthew Dupuis
Red Rock Indian Band

Cc'd: Mayor Jody Davis, Terrace Bay
Mayor Dave Hamilton, Schreiber
Mayor Jon MacEachern, Manitouwadge
Mayor Ron Rody, Wawa

BIIGTIGONG
NISHNAABEG

June 26, 2019

Daryl Skworchinski
Chief Administrative Officer/Clerk and
Director of Economic Development
Town of Marathon
P.O. Box "TM" 4 Hemlo Drive
Marathon, ON, P0T 2E0

Dear Mr. Skworchinski,

Thank you for your recent presentation to our First Nation regarding the proposed North Shore LNG Project.

On behalf of the Biigtigong Nishnaabeg, I am writing to reiterate our community's support for this project and the five North Shore municipalities who are working to bring a new natural gas supply to homes and businesses in Marathon, Terrace Bay, Schreiber, Manitouwadge and Wawa.

Like other communities in our territory, we recognize the need for a reliable natural gas supply to support the energy needs of residents and businesses in this region. Energy costs are a critical issue for all our people and the opportunity of accessing natural gas presents new opportunities. We agree that the potential socio-economic and environmental benefits connected to this project are significant, and encourage improved community prosperity along the North Shore.

Based on your presentation and the information we have received to date; the North Shore LNG Project is an innovative model that has been well planned. Biigtigong Nishnaabeg therefore supports your application to the Ontario Energy Board (OEB) and we look forward to collaborating further with your municipalities as the project unfolds.

Sincerely,

Chief Duncan Michano
Biigtigong Nishnaabeg

BIIGTIGONG NISHNAABEG

VIA HERON BAY, ONTARIO P0T 1R0 PHONE (807) 229-1749 FAX (807) 229-1944 http://www.picriver.com

BINGWI NEYAASHI ANISHINAABEK
1 Copper Thunderbird Road, Sandpoint FN, Ontario POT 2B0
Phone: (807) 623-2724 Fax: (807) 623-2764

June 27, 2019

Daryl Skworchinski
Chief Administrative Officer/Clerk and
Director of Economic Development
Town of Marathon
P.O. Box "TM" 4 Hemlo Drive
Marathon, ON P0T 2E0

Dear Mr. Skworchinski,

On behalf of Bingwi Neyaashi Anishinaabek (Sand Point First Nation), I am writing to express our community's support for the five North Shore municipalities who are working to bring a new natural gas supply to homes and businesses in Marathon, Terrace Bay, Schreiber, Manitouwadge and Wawa through the North Shore LNG Project.

Like other communities in our territory, we recognize the need for a reliable natural gas supply to support the energy needs of residents and businesses in this region. Energy costs are a critical issue for all our people and the opportunity of accessing natural gas presents new opportunities to these north shore municipalities. We agree that the potential socio-economic and environmental benefits connected to this project are significant, and encourage improved community prosperity along the North Shore.

The North Shore LNG Project is an innovative model that appears to be well planned. Bingwi Neyaashi Anishinaabek therefore supports your application to the Ontario Energy Board (OEB) and we look forward to collaborating further with your municipalities as the project unfolds.

Sincerely,

Chief Joe Ladouceur
Bingwi Neyaashi Anishinaabek

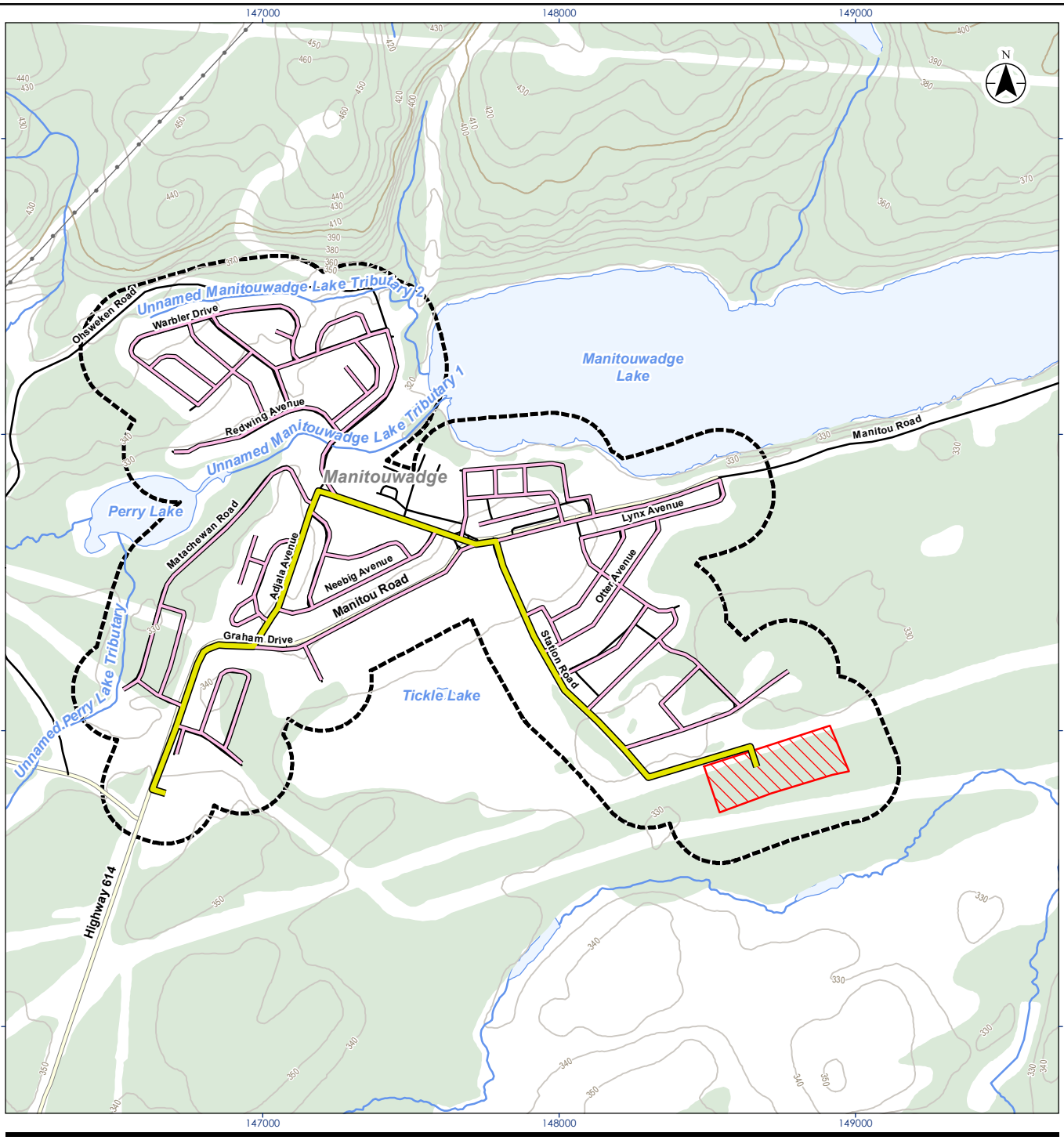
FRANCHISE AGREEMENTS AND CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

INTRODUCTION

In accordance with the *Municipal Franchises Act*, the Town of Marathon, Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay and Municipality of Wawa (collectively the "Municipalities") acting on their own behalf, have resolved to sign Municipal Franchise Agreements with the Marathon Economic Development Corporation (the "MEDC") on behalf of a gas distributor to be incorporated (the "Utility") for the distribution of natural gas within the Municipalities, using the model agreement developed by OEB and which the OEB finds reasonable under the *Municipal Franchises Act*.

In compliance with Section 8(2) of the *Municipal Franchises Act*, the Corporation, acting on behalf of the Municipalities, is requesting that the OEB grant a Certificate of Public Convenience and Necessity for each of the five Municipalities so that the gas works can be built. The exact locations of the proposed gas works are shown on the attached site maps (see Tab 6, Schedule 1, Attachment 1).

The Corporation is also requesting approval of the Municipal Franchise Agreements that each of the five municipalities has agreed to in principle. The Municipal Franchise Agreements are based on the model agreement developed by the OEB. The model agreement to be used by the Town of Marathon is attached (see Tab 6, Schedule 1, Attachment 2). The model agreements to be used by the Township of Manitouwadge, Township of Schreiber, Township of Terrace Bay, and Municipality of Wawa are identical. The five Municipal Franchise Agreements will be signed and executed after OEB approval is obtained. Each municipality has indicated its agreement with the terms of, and its intention to enter into, the proposed Municipal Franchise Agreements by way of by-laws (see Tab 6, Schedule 1, Attachment 3).



Legend

- Study Area
- Lateral Pipeline
- Main Pipeline
- Proposed Storage Area Development Area
- Major Road
- Local Road
- Hydro Line
- Watercourse
- Waterbody

0 250 500 metres

1:20,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.

Stantec

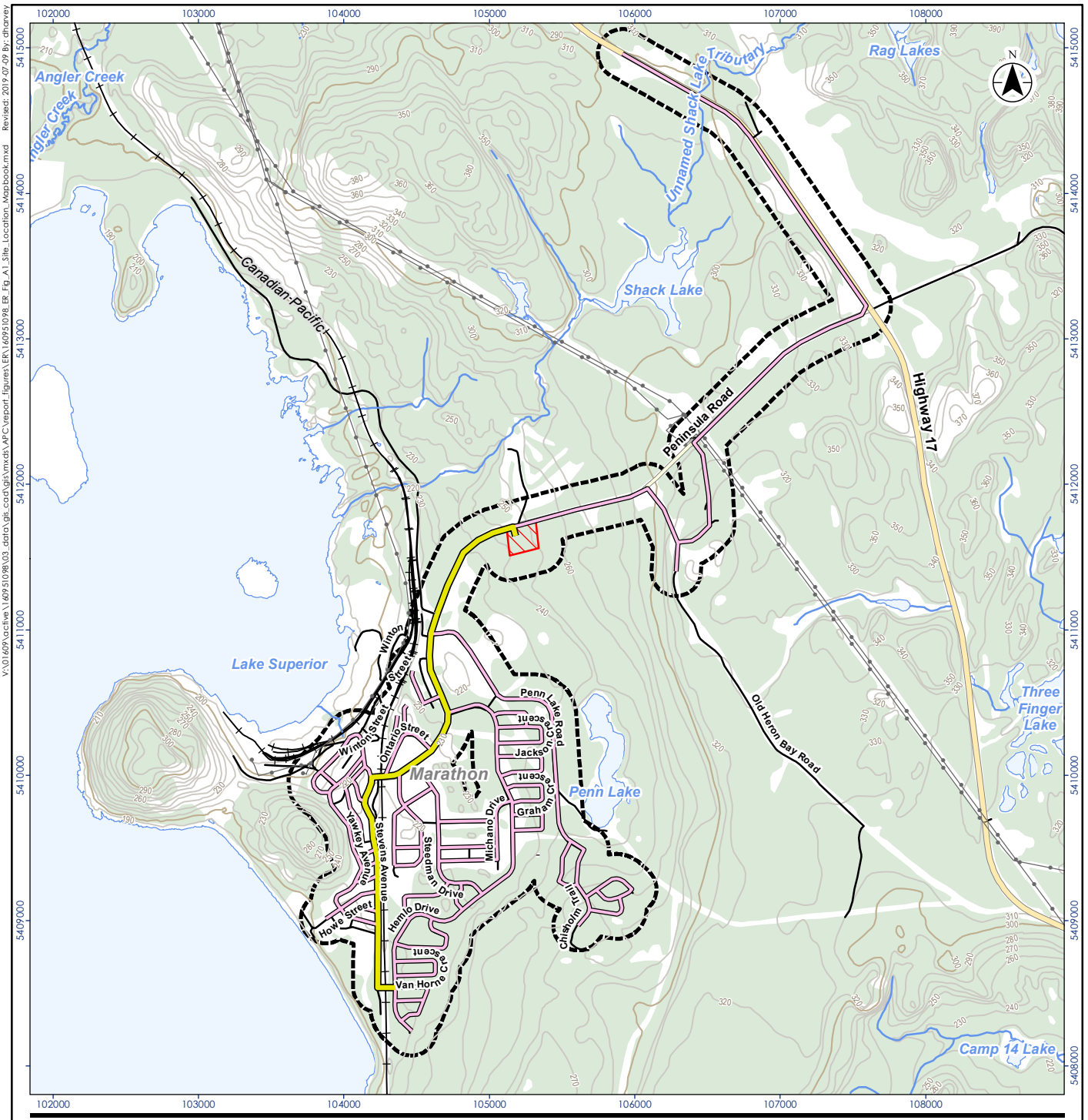
Project Location
Manitouwadge, ON

160951098
Prepared by DH on 2019-07-09
Technical Review by RG on 2019-03-15

Client/Project
TOWNSHIP OF MANITOUWADGE
NORTH SHORE LNG PROJECT

Figure No.
A1

Title
Project Location- Manitouwadge



Legend

- Study Area
- Lateral Pipeline
- Main Pipeline
- Proposed Storage Area Development Area
- Highway
- Major Road
- Local Road
- Hydro Line
- Railway
- Watercourse
- Waterbody

0 250 500 metres

1:40,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.

Stantec

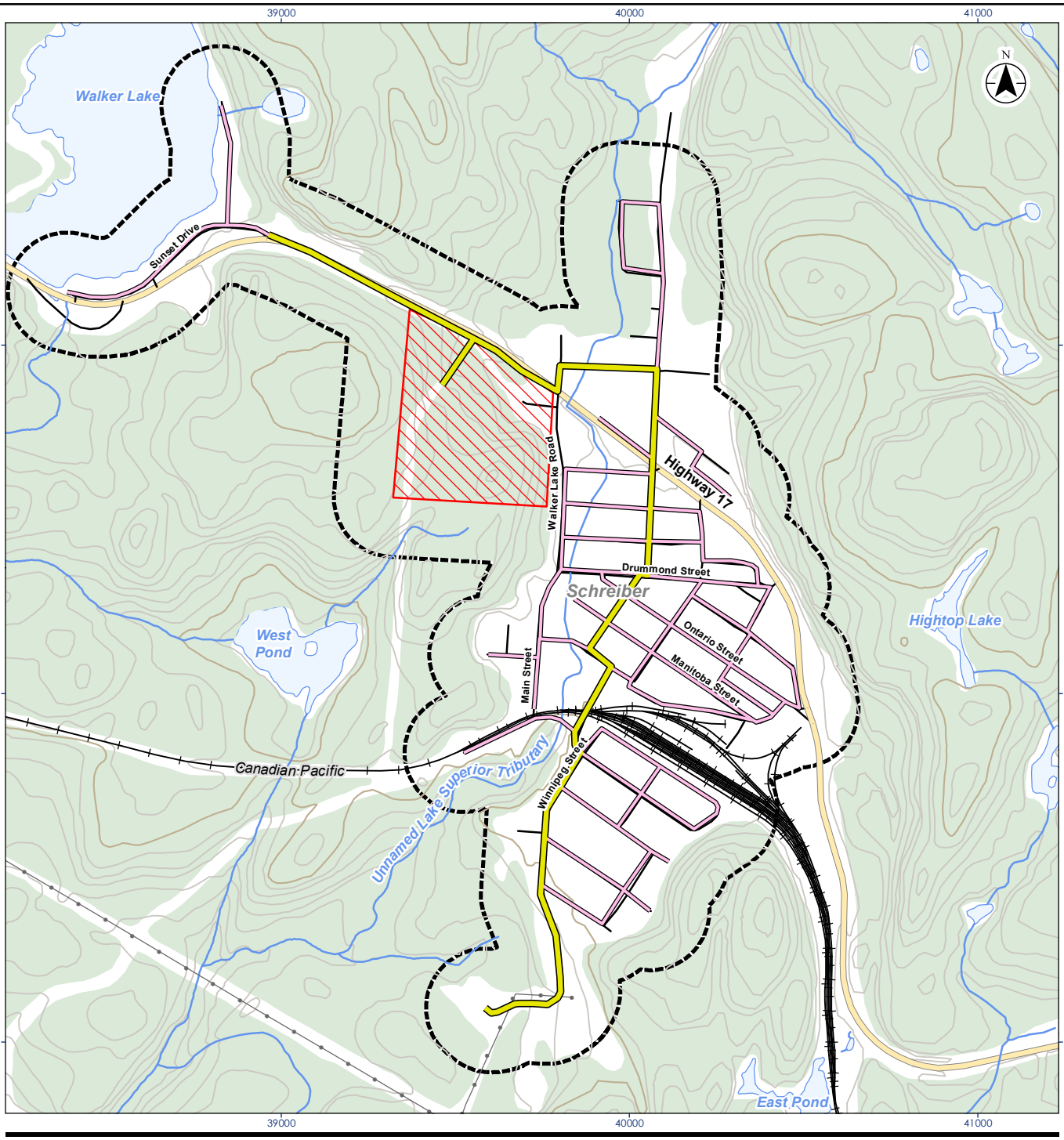
Project Location
Marathon, ON

160951098
Prepared by DH on 2019-07-09
Technical Review by RG on 2019-03-15

Client/Project
TOWN OF MARATHON
NORTH SHORE LNG PROJECT

Figure No.
A1

Title
Project Location- Marathon



Legend

- Study Area
- Lateral Pipeline
- Main Pipeline
- Proposed Storage Area Development Area
- Highway
- Local Road
- Hydro Line
- Railway
- Watercourse
- Waterbody

0 250 500 metres

1:17,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.

Stantec

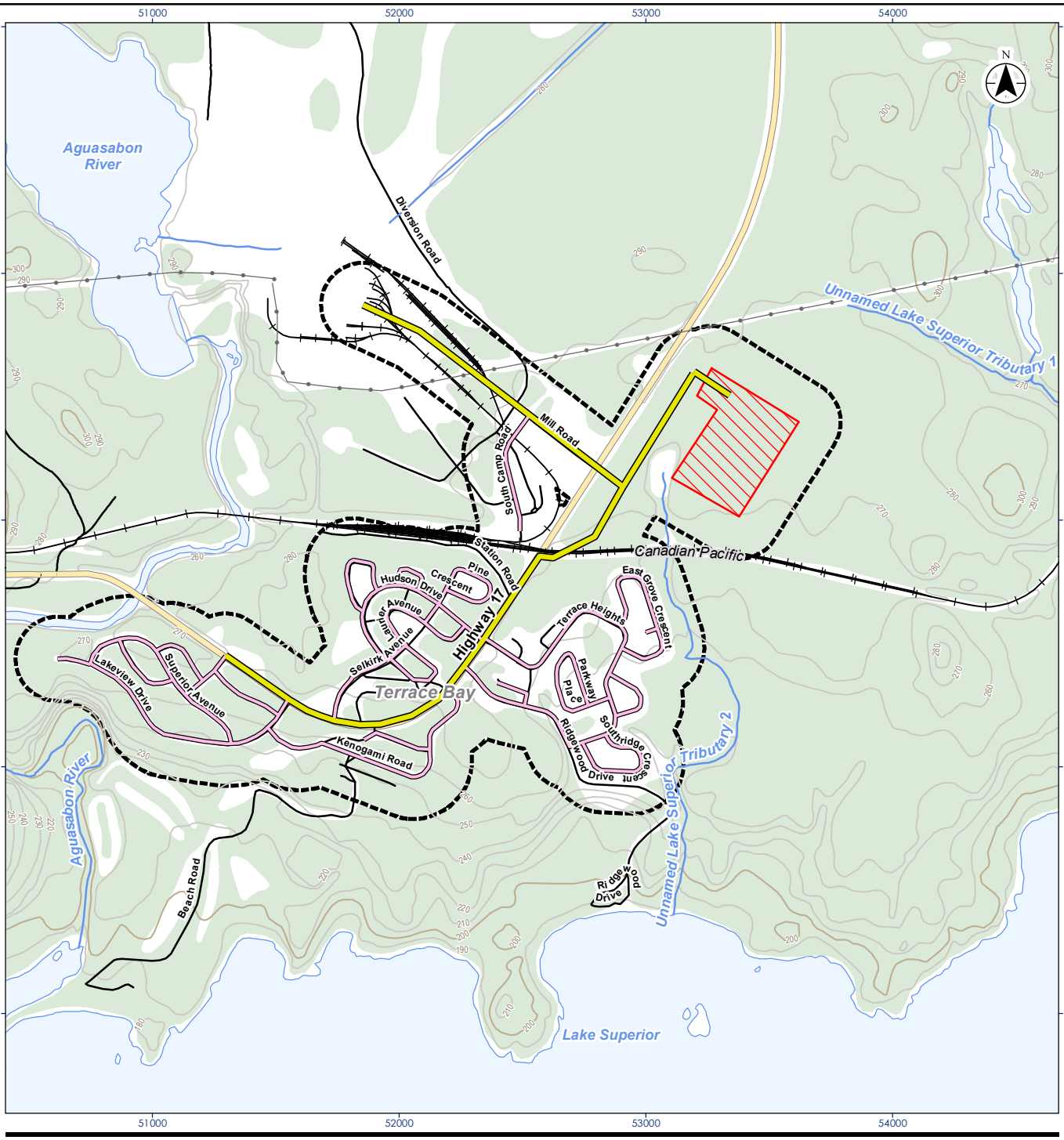
Project Location
Schreiber, ON

160951098
Prepared by DH on 2019-07-09
Technical Review by RG on 2019-03-15

Client/Project
TOWNSHIP OF SCHREIBER
NORTH SHORE LNG PROJECT

Figure No.
A1

Title
Project Location- Schreiber



Legend

- Study Area
- Lateral Pipeline
- Main Pipeline
- Proposed Storage Area Development Area
- Highway
- Local Road
- Hydro Line
- Railway
- Watercourse
- Waterbody

0 250 500 metres

1:24,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.

Stantec

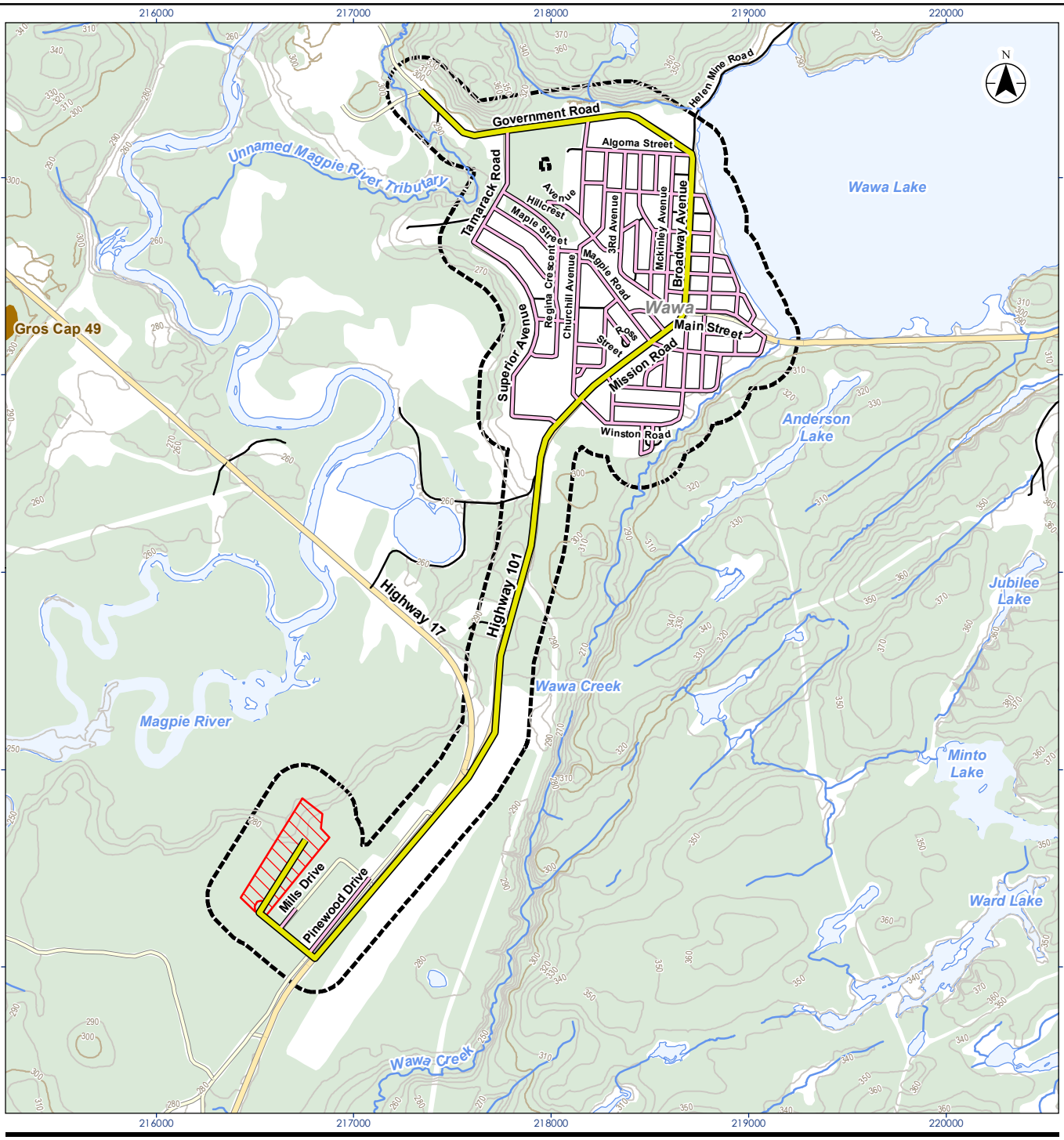
Project Location
Terrace Bay, ON

160951098
Prepared by DH on 2019-07-09
Technical Review by RG on 2019-03-15

Client/Project
TOWNSHIP OF TERRACE BAY
NORTH SHORE LNG PROJECT

Figure No.
A1

Title
Project Location- Terrace Bay



Legend

- Study Area
- Lateral Pipeline
- Main Pipeline
- Proposed Storage Area Development Area
- Highway
- Major Road
- Local Road
- Watercourse
- First Nation Reserve
- Waterbody

0 250 500 metres

1:30,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.

Stantec

Project Location
Wawa, ON

160951098
Prepared by DH on 2019-07-09
Technical Review by RG on 2019-03-15

Client/Project
MUNICIPALITY OF WAWA
NORTH SHORE LNG PROJECT

Figure No.
A1

Title
Project Location- Wawa

Ontario Energy Board Ontario

Model Franchise Agreement

THIS AGREEMENT effective this day of May, 2019

BETWEEN:

Town of Marathon

hereinafter called the "Corporation"

- and -

Marathon Economic Development Corporation, for and on behalf of an entity to be formed or corporation to be incorporated

hereinafter called the "Gas Company"

WHEREAS the Gas Company desires to distribute, store and transmit gas in the Municipality upon the terms and conditions of this Agreement;

AND WHEREAS by by-law passed by the Council of the Corporation (the "By-law"), the duly authorized officers have been authorized and directed to execute this Agreement on behalf of the Corporation;

THEREFORE the Corporation and the Gas Company agree as follows:

Part I - Definitions

1. In this Agreement:
    a. "decommissioned" and "decommissions" when used in connection with parts of the gas system, mean any parts of the gas system taken out of active use and purged in accordance with the applicable CSA standards and in no way affects the use of the term 'abandoned' pipeline for the purposes of the *Assessment Act;*

    b. "Engineer/Road Superintendent" means the most senior individual employed by the Corporation with responsibilities for highways within the Municipality or the person designated by such senior employee or such other person as may from time to time be designated by the Council of the Corporation;

c. "gas" means natural gas, manufactured gas, synthetic natural gas, liquefied petroleum gas or propane-air gas, or a mixture of any of them, but does not include a liquefied petroleum gas that is distributed by means other than a pipeline;

d. "gas system" means such mains, plants, pipes, conduits, services, valves, regulators, curb boxes, stations, drips or such other equipment as the Gas Company may require or deem desirable for the distribution, storage and transmission of gas in or through the Municipality;

e. "highway" means all common and public highways and shall include any bridge, viaduct or structure forming part of a highway, and any public square, road allowance or walkway and shall include not only the travelled portion of such highway, but also ditches, driveways, sidewalks, and sodded areas forming part of the road allowance now or at any time during the term hereof under the jurisdiction of the Corporation;

f. "Model Franchise Agreement" means the form of agreement which the Ontario Energy Board uses as a standard when considering applications under the *Municipal Franchises Act*. The Model Franchise Agreement may be changed from time to time by the Ontario Energy Board;

g. "Municipality" means the territorial limits of the Corporation on the date when this Agreement takes effect, and any territory which may thereafter be brought within the jurisdiction of the Corporation;

h. "Plan" means the plan described in Paragraph 5 of this Agreement required to be filed by the Gas Company with the Engineer/Road Superintendent prior to commencement of work on the gas system; and

i. whenever the singular, masculine or feminine is used in this Agreement, it shall be considered as if the plural, feminine or masculine has been used where the context of the Agreement so requires.

Part II - Rights Granted

2. To provide gas service:

   The consent of the Corporation is hereby given and granted to the Gas Company to distribute, store and transmit gas in and through the Municipality to the Corporation and to the inhabitants of the Municipality.

3. To Use Highways.

   Subject to the terms and conditions of this Agreement the consent of the Corporation is hereby given and granted to the Gas Company to enter upon all highways now or at any time hereafter under the jurisdiction of the Corporation and to lay, construct, maintain, replace, remove, operate and repair a gas system for the distribution, storage and transmission of gas in and through the Municipality.

4. Duration of Agreement and Renewal Procedures.

    a. If the Corporation has not previously received gas distribution services, the rights hereby given and granted shall be for a term of 20 years from the date of final passing of the By-law.

    b. At any time within two years prior to the expiration of this Agreement, either party may give notice to the other that it desires to enter into negotiations for a renewed franchise upon such terms and conditions as may be agreed upon. Until such renewal has been settled, the terms and conditions of this Agreement shall continue, notwithstanding the expiration of this Agreement. This shall not preclude either party from applying to the Ontario Energy Board for a renewal of the Agreement pursuant to section 10 of the *Municipal Franchises Act*.

Part III - Conditions

5. Approval of Construction

    a. The Gas Company shall not undertake any excavation, opening or work which will disturb or interfere with the surface of the travelled portion of any highway unless a permit therefor has first been obtained from the Engineer/Road Superintendent and all work done by the Gas Company shall be to his satisfaction.

    b. Prior to the commencement of work on the gas system, or any extensions or changes to it (except service laterals which do not interfere with municipal works in the highway), the Gas Company shall file with the Engineer/Road Superintendent a Plan, satisfactory to the Engineer/Road Superintendent, drawn to scale and of sufficient detail considering the complexity of the specific locations involved, showing the highways in which it proposes to lay its gas system and the particular parts thereof it proposes to occupy.

    c. The Plan filed by the Gas Company shall include geodetic information for a particular location:

        i. where circumstances are complex, in order to facilitate known projects, including projects which are reasonably anticipated by the Engineer/Road Superintendent, or

        ii. when requested, where the Corporation has geodetic information for its own services and all others at the same location.

    d. The Engineer/Road Superintendent may require sections of the gas system to be laid at greater depth than required by the latest CSA standard for gas pipeline systems to facilitate known projects or to correct known highway deficiencies.

    e. Prior to the commencement of work on the gas system, the Engineer/Road Superintendent must approve the location of the work as shown on the Plan filed by the Gas Company, the timing of the work and any terms and conditions relating to the installation of the work.

f. In addition to the requirements of this Agreement, if the Gas Company proposes to affix any part of the gas system to a bridge, viaduct or other structure, if the Engineer/Road Superintendent approves this proposal, he may require the Gas Company to comply with special conditions or to enter into a separate agreement as a condition of the approval of this part of the construction of the gas system.

g. Where the gas system may affect a municipal drain, the Gas Company shall also file a copy of the Plan with the Corporation's Drainage Superintendent for purposes of the *Drainage Act,* or such other person designated by the Corporation as responsible for the drain.

h. The Gas Company shall not deviate from the approved location for any part of the gas system unless the prior approval of the Engineer/Road Superintendent to do so is received.

i. The Engineer/Road Superintendent's approval, where required throughout this Paragraph, shall not be unreasonably withheld.

j. The approval of the Engineer/Road Superintendent is not a representation or warranty as to the state of repair of the highway or the suitability of the highway for the gas system.

6. As Built Drawings.

The Gas Company shall, within six months of completing the installation of any part of the gas system, provide two copies of "as built" drawings to the Engineer/Road Superintendent. These drawings must be sufficient to accurately establish the location, depth (measurement between the top of the gas system and the ground surface at the time of installation) and distance of the gas system. The "as built" drawings shall be of the same quality as the Plan and, if the approved pre-construction plan included elevations that were geodetically referenced, the "as built" drawings shall similarly include elevations that are geodetically referenced. Upon the request of the Engineer/Road Superintendent, the Gas Company shall provide one copy of the drawings in an electronic format and one copy as a hard copy drawing.

7. Emergencies

In the event of an emergency involving the gas system, the Gas Company shall proceed with the work required to deal with the emergency, and in any instance where prior approval of the Engineer/Road Superintendent is normally required for the work, the Gas Company shall use its best efforts to immediately notify the Engineer/Road Superintendent of the location and nature of the emergency and the work being done and, if it deems appropriate, notify the police force, fire or other emergency services having jurisdiction. The Gas Company shall provide the Engineer/Road Superintendent with at least one 24 hour emergency contact for the Gas Company and shall ensure the contacts are current.

8. Restoration

The Gas Company shall well and sufficiently restore, to the reasonable satisfaction of the Engineer/Road Superintendent, all highways, municipal works or improvements which it may excavate or interfere with in the course of laying, constructing, repairing or

removing its gas system, and shall make good any settling or subsidence thereafter caused by such excavation or interference. If the Gas Company fails at any time to do any work required by this Paragraph within a reasonable period of time, the Corporation may do or cause such work to be done and the Gas Company shall, on demand, pay the Corporation's reasonably incurred costs, as certified by the Engineer/Road Superintendent.

9. Indemnification

The Gas Company shall, at all times, indemnify and save harmless the Corporation from and against all claims, including costs related thereto, for all damages or injuries including death to any person or persons and for damage to any property, arising out of the Gas Company operating, constructing, and maintaining its gas system in the Municipality, or utilizing its gas system for the carriage of gas owned by others. Provided that the Gas Company shall not be required to indemnify or save harmless the Corporation from and against claims, including costs related thereto, which it may incur by reason of damages or injuries including death to any person or persons and for damage to any property, resulting from the negligence or wrongful act of the Corporation, its servants, agents or employees.

10. Insurance

a. The Gas Company shall maintain Comprehensive General Liability Insurance in sufficient amount and description as shall protect the Gas Company and the Corporation from claims for which the Gas Company is obliged to indemnify the Corporation under Paragraph 9. The insurance policy shall identify the Corporation as an additional named insured, but only with respect to the operation of the named insured (the Gas Company). The insurance policy shall not lapse or be cancelled without sixty (60) days' prior written notice to the Corporation by the Gas Company.

b. The issuance of an insurance policy as provided in this Paragraph shall not be construed as relieving the Gas Company of liability not covered by such insurance or in excess of the policy limits of such insurance.

c. Upon request by the Corporation, the Gas Company shall confirm that premiums for such insurance have been paid and that such insurance is in full force and effect.

11. Alternative Easement

The Corporation agrees, in the event of the proposed sale or closing of any highway or any part of a highway where there is a gas line in existence, to give the Gas Company reasonable notice of such proposed sale or closing and, if is feasible, to provide the Gas Company with easements over that part of the highway proposed to be sold or closed sufficient to allow the Gas Company to preserve any part of the gas system in its then existing location. In the event that such easements cannot be provided, the Corporation and the Gas Company shall share the cost of relocating or altering the gas system to facilitate continuity of gas service, as provided for in Paragraph 12 of this Agreement.

12. Pipeline Relocation

a. If in the course of constructing, reconstructing, changing, altering or improving any highway or any municipal works, the Corporation deems that it is necessary to take up, remove or change the location of any part of the gas system, the Gas Company shall, upon notice to do so, remove and/or relocate within a reasonable period of time such part of the gas system to a location approved by the Engineer/Road Superintendent.

b. Where any part of the gas system relocated in accordance with this Paragraph is located on a bridge, viaduct or structure, the Gas Company shall alter or relocate that part of the gas system at its sole expense.

c. Where any part of the gas system relocated in accordance with this Paragraph is located other than on a bridge, viaduct or structure, the costs of relocation shall be shared between the Corporation and the Gas Company on the basis of the total relocation costs, excluding the value of any upgrading of the gas system, and deducting any contribution paid to the Gas Company by others in respect to such relocation; and for these purposes, the total relocation costs shall be the aggregate of the following:

   i. the amount paid to Gas Company employees up to and including field supervisors for the hours worked on the project plus the current cost of fringe benefits for these employees,

   ii. the amount paid for rental equipment while in use on the project and an amount, charged at the unit rate, for Gas Company equipment while in use on the project,

   iii. the amount paid by the Gas Company to contractors for work related to the project,

   iv. the cost to the Gas Company for materials used in connection with the project, and

   v. a reasonable amount for project engineering and project administrative costs which shall be 22.5% of the aggregate of the amounts determined in items (i), (ii), (iii) and (iv) above.

d. The total relocation costs as calculated above shall be paid 35% by the Corporation and 65% by the Gas Company, except where the part of the gas system required to be moved is located in an unassumed road or in an unopened road allowance and the Corporation has not approved its location, in which case the Gas Company shall pay 100% of the relocation costs.

Part IV - Procedural And Other Matters

13. Municipal By-laws of General Application

The Agreement is subject to the provisions of all regulating statutes and all municipal by- laws of general application, except by-laws which have the effect of amending this Agreement.

14. Giving Notice

Notices may be delivered to, sent by facsimile or mailed by prepaid registered post to the Gas Company at its head office or to the authorized officers of the Corporation at its municipal offices, as the case may be.

15. Disposition of Gas System

a. If the Gas Company decommissions part of its gas system affixed to a bridge, viaduct or structure, the Gas Company shall, at its sole expense, remove the part of its gas system affixed to the bridge, viaduct or structure.

b. If the Gas Company decommissions any other part of its gas system, it shall have the right, but is not required, to remove that part of its gas system. It may exercise its right to remove the decommissioned parts of its gas system by giving notice of its intention to do so by filing a Plan as required by Paragraph 5 of this Agreement for approval by the Engineer/Road Superintendent. If the Gas Company does not remove the part of the gas system it has decommissioned and the Corporation requires the removal of all or any part of the decommissioned gas system for the purpose of altering or improving a highway or in order to facilitate the construction of utility or other works in any highway, the Corporation may remove and dispose of so much of the decommissioned gas system as the Corporation may require for such purposes and neither party shall have recourse against the other for any loss, cost, expense or damage occasioned thereby. If the Gas Company has not removed the part of the gas system it has decommissioned and the Corporation requires the removal of all or any part of the decommissioned gas system for the purpose of altering or improving a highway or in order to facilitate the construction of utility or other works in a highway, the Gas Company may elect to relocate the decommissioned gas system and in that event

Paragraph 12 applies to the cost of relocation.

16. Use of Decommissioned Gas System

a. The Gas Company shall provide promptly to the Corporation, to the extent such information is known:

i. the names and addresses of all third parties who use decommissioned parts of the gas system for purposes other than the transmission or distribution of gas; and

ii. the location of all proposed and existing decommissioned parts of the gas system used for purposes other than the transmission or distribution of gas.

b. The Gas Company may allow a third party to use a decommissioned part of the gas system for purposes other than the transmission or distribution of gas and may charge a fee for that third party use, provided

   i. the third party has entered into a municipal access agreement with the Corporation; and

   ii. the Gas Company does not charge a fee for the third party's right of access to the highways.

c. Decommissioned parts of the gas system used for purposes other than the transmission or distribution of gas are not subject to the provisions of this Agreement. For decommissioned parts of the gas system used for purposes other than the transmission and distribution of gas, issues such as relocation costs will be governed by the relevant municipal access agreement.

17. Franchise Handbook

The Parties acknowledge that operating decisions sometimes require a greater level of detail than that which is appropriately included in this Agreement. The Parties agree to look for guidance on such matters to the Franchise Handbook prepared by the Association of Municipalities of Ontario and the gas utility companies, as may be amended from time to time.

18. Other Conditions

The Gas Company shall be entitled to assign this Franchise Agreement to any other corporation that shall have acquired all right, title, and interest in and to the gas system concurrently with the assignment of this Agreement, provided that of the assignor shall enter into an assignment agreement with the Corporation, wherein it shall agree to be bound by the provisions of this Agreement and all obligations of the Gas Company as if an original party hereto.

19. Agreement Binding Parties

This Agreement shall extend to, benefit and bind the parties thereto, their successors and assigns, respectively.

IN WITNESS WHEREOF the parties have executed this Agreement effective from the date written above.

THE CORPORATION OF THE TOWN OF MARATHON

By: _____

By: _____

We have authority to bind the corporation

MARATHON ECONOMIC DEVELOPMENT CORPORATION,
for and on behalf of an entity to be formed
or corporation to be incorporated

By: _____

By: _____

We have authority to bind the corporation.

THE CORPORATION OF THE TOWNSHIP OF MANITOUWADGE

BY-LAW NO. 2019 - 10

Being a By-Law to Enter into a Model Franchise Agreement with Marathon Economic Development Corporation and The Corporation of the Township of Manitouwadge

WHEREAS pursuant to Section 9 of the *Municipal Act, 2001*, S.O. 2001, c.25 states that a municipality has the capacity, rights, powers and privileges of a natural person for purpose of exercising its authority under this or any other *Act;*

AND WHEREAS the Council for The Corporation of the Township of Manitouwadge wishes to enter into a Model Franchise Agreement with Marathon Economic Development Corporation for the Northshore Liquid Natural Gas (LNG) Project;

NOW THEREFORE the Council of The Corporation of the Township of Manitouwadge enacts as follows:

1. Council enters into a Model Franchise Agreement with Marathon Economic Development Corporation in the form attached hereto as Schedule "A";

2. The Mayor and CAO/Clerk-Treasurer are hereby authorized and directed to execute and seal under the corporate seal of the Corporation the agreement attached hereto as Schedule "A";

3. The CAO/Clerk-Treasurer is hereby authorized to do such things as are required under the agreement;

4. This By-law comes into force and takes effect on the date of its final passing.

READ A 1ST AND 2ND TIME this 10th day of July, 2019 and
READ A THIRD TIME AND FINALLY ENACTED this 10th day of July, 2019.

Mayor John MacEachern

Margaret Hartling, CAO/Clerk-Treasurer

"Certified True Copy"
Joleen Keough
Deputy Clerk
Township of Manitouwadge

THE CORPORATION OF THE TOWN OF MARATHON

****

BY-LAW NO. 1956

A by-law to authorize The Corporation of the Town of Marathon to enter into a Model Franchise Agreement with the Marathon Economic Development Corporation for the Liquefied Natural Gas (LNG) Project.

WHEREAS Section 8 of the Municipal Act, S.O. 2001, c. 25, as amended, states that the powers of a municipality under this or any other Act shall be interpreted broadly as to confer broad authority on the municipality to enable the municipality to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues;

AND WHEREAS Section 10 (1) states that a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

NOW, THEREFORE, THE COUNCIL OF THE CORPORATION OF THE TOWN OF MARATHON ENACTS AS FOLLOWS:

1) THAT the Mayor and Clerk are hereby authorized to execute the Model Franchise Agreement between the Corporation of the Town of Marathon and the Marathon Economic Development Corporation, as attached hereto and marked as Schedule "A" to this by-law.

2) THAT this by-law shall come into effect on the final day of its passing.

READ A FIRST AND SECOND TIME THIS 10TH DAY OF JUNE, A.D., 2019.

.....
Mayor

(SEAL)

.....
Clerk

READ A THIRD TIME AND FINALLY PASSED THIS 10TH DAY OF JUNE, A.D., 2019.

.....
Mayor

(SEAL)

.....
Clerk

THE CORPORATION OF THE TOWNSHIP OF SCHREIBER
BYLAW 24-2019

BEING A BYLAW TO AUTHORIZE THE EXECUTION OF A FRANCHISE AGREEMENT BETWEEN THE TOWNSHIP OF SCHREIBER AND MARATHON ECONOMIC DEVELOPMENT CORPORATION

WHEREAS, Part II of the Municipal Act, 2001 empowers municipalities to enter into agreements to enable them to govern as they consider appropriate;

AND WHEREAS, The Township of Schreiber deems it advisable to enter into a franchise agreement with the Marathon Economic Development Corporation;

NOW THEREFORE, THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF SCHREIBER ENACTS AS FOLLOWS:

1. The Mayor and Clerk are hereby authorized to enter into an agreement with the Marathon Economic Development Corporation for the purpose of pursuing the distribution of liquefied natural gas in the Township of Schreiber;

2. The terms and conditions of the franchise agreement shall be as set out in Schedule "A", attached hereto and forming part of this Bylaw;

3. This Bylaw shall come into force and effect upon enactment;

4. This Bylaw may be cited for all purposes as "Township of Schreiber and Marathon Economic Development Corporation Franchise Agreement Bylaw".

READ A FIRST AND SECOND TIME this 11th day of June, 2019.

READ A THIRD TIME AND FINALLY PASSED this 11th day of June, 2019.

Mayor

Clerk

THE CORPORATION OF THE TOWNSHIP OF TERRACE BAY

BY-LAW NO. 15 - 2019

A bylaw to enter into a Model Franchise Agreement with Marathon Economic Development Corporation
and The Corporation of the Township of Terrace Bay

The Council of the Corporation of the Township of Terrace Bay **ENACTS AS FOLLOWS:**

1. The Corporation of the Township of Terrace Bay is hereby authorized to enter into a Model Franchise Agreement with Marathon Economic Development Corporation in the form attached hereto as Schedule "A".

2. The Mayor and CAO/Clerk shall sign the agreement on behalf of the Corporation of the Township of Terrace Bay and the seal of the Corporation shall be affixed to it.

3. The CAO/Clerk is hereby authorized to do such things as are required under the agreement.

4. This by-law comes into force upon adoption by Council of the Corporation of the Township of Terrace Bay.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS 27TH DAY OF MAY, 2019.

Mayor

Chief Administrative Officer/Clerk

e:\bylaws – Franchise Agreement with Marathon Economic Development Corp. (LNG)

THE CORPORATION OF THE MUNICIPALITY OF WAWA

BY-LAW NO. 3199-19

BEING A BY-LAW to authorize The Corporation of the Municipality of Wawa to enter into a Model Franchise Agreement with Marathon Economic Development Corporation (for and on behalf of an entity to be formed or corporation to be incorporated) to distribute, store and transmit natural gas in the Municipality of Wawa.

WHEREAS the Municipal Act 2001, S.O. 2001, Chapter 25, Section 9, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS Section 10 of the Municipal Act 2001, provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for health, safety and well-being of persons;

AND WHEREAS Council of the Municipality of Wawa accepted the staff recommendation to enter into a Model Franchise Agreement with Marathon Economic Development Corporation (for and on behalf of an entity to be formed or corporation to be incorporated) to distribute, store and transmit natural gas in the Municipality of Wawa through Staff Report No. CAO 2019-01;

NOWTHEREFORE the Council of The Corporation of the Municipality of Wawa enacts the following as a by-law:

1. **THAT** The Corporation of the Municipality of Wawa does hereby enter into an agreement with Marathon Economic Development Corporation, Marathon, 4 Hemlo Drive, Marathon, ON P0T 2E0, in accordance with the terms and conditions set out in Schedule "A", a copy of which is attached hereto and forming an integral part of this By-Law.

2. **THAT** the Mayor and Acting Clerk be and are hereby authorized to execute the by-law on behalf of The Corporation and to affix thereto the Official Seal of The Corporation.

3. **THAT** the Mayor and Acting Clerk be and are hereby authorized to sign the Model Franchise Agreement on behalf of The Corporation.

READ a first, second and third time and be finally passed this 21st day of May, 2019.

RON RODY, MAYOR

MAURY O'NEILL, ACTING CLERK

ENGINEERING, DESIGN AND CONSTRUCTION

DESIGN AND PIPELINE SPECIFICATION

Design specifications for the proposed Project are in accordance with the *Technical Standards and Safety Act, 2000*,[1] and its regulations, including Ontario Regulation 210/01, Oil and Gas Pipeline Systems ("Oil and Gas Pipeline Systems Regulation") and applicable Canadian Standards Association ("CSA") standards, specifically including CSA Z662-15. The distribution systems will consist of piping ranging in size from NPS 2 to NPS 6. All distribution piping will be MDPE in accordance with CSA Z662-15. The following tables contain the design and pipeline specifications for the mainline and distribution piping for the Project.

Pipe	Pipe–NPS 6	Units
Material	Medium Density Polyethylene	
Diameter	168.3	mm
Wall Thickness	15.3	mm
Grade	SDR 11	MPa
Specification	CSA B137.4	
Material Toughness	N/A	
Pipe coating specification	N/A	
Cathodic protection	N/A	
Class Location	3	
Design Pressure	690	kPa
Hoop Stress at Design Pressure	N/A	
Maximum Operating Pressure (MOP)	690	kPa
Hoop Stress at MOP	N/A	
Minimum Cover	0.75	
Fittings	CSA B137.4	
Flanges	N/A	
Valves	CSA B137.4	
Testing Medium	Nitrogen or Air	
Strength Test Hydrostatic Pressure	970	kPa
Hoop Stress at Strength Test Pressure	N/A	
Leak Test Hydrostatic Pressure	N/A	

Table 1: NPS 6 Pipe Specifications

[1] Technical Standards and Safety Act, 2000, S.O. 2000, c. 16

Pipe	Pipe–NPS 4	Units
Material	Medium Density Polyethylene	
Diameter	114.3	mm
Wall Thickness	10.4	mm
Grade	SDR 11	MPa
Specification	CSA B137.4	
Material Toughness	N/A	
Pipe coating specification	N/A	
Cathodic protection	N/A	
Class Location	3	
Design Pressure	690	kPa
Hoop Stress at Design Pressure	N/A	
Maximum Operating Pressure (MOP)	690	kPa
Hoop Stress at MOP	N/A	
Minimum Cover	0.75	
Fittings	CSA B137.4	
Flanges	N/A	
Valves	CSA B137.4	
Testing Medium	Nitrogen or Air	
Strength Test Hydrostatic Pressure	970	kPa
Hoop Stress at Strength Test Pressure	N/A	
Leak Test Hydrostatic Pressure	N/A	

Table 2: NPS 4 Pipe Specifications

Pipe	Pipe–NPS 2	Units
Material	Medium Density Polyethylene	
Diameter	60.3	mm
Wall Thickness	5.5	mm
Grade	SDR 11	MPa
Specification	CSA B137.4	
Material Toughness	N/A	
Pipe coating specification	N/A	
Cathodic protection	N/A	
Class Location	3	
Design Pressure	690	kPa
Hoop Stress at Design Pressure	N/A	
Maximum Operating Pressure (MOP)	690	kPa
Hoop Stress at MOP	N/A	
Minimum Cover	0.75	
Fittings	CSA B137.4	
Flanges	N/A	
Valves	CSA B137.4	
Testing Medium	Nitrogen or Air	
Strength Test Hydrostatic Pressure	970	kPa
Hoop Stress at Strength Test Pressure	N/A	
Leak Test Hydrostatic Pressure	N/A	

Table 3: NPS 2 Pipe Specifications

Pneumatic Testing Procedures

All pneumatic testing will be completed in accordance with the requirements of the CSA Z662-15 and the Oil and Gas Pipeline Systems Regulation. The proposed NPS 2, NPS 4 and NPS 6 polyethylene pipeline will be pneumatically tested with nitrogen or air. The test pressure and duration will be in accordance with CSA Z662-15.

Depths of Cover

All buried pipe will be covered following Table 12.2 Cover and Clearance as found in CSA Z662-15. Each specific section of pipe is detailed in the design specifications tables above.

Construction Procedures

The Corporation will solicit the services of a reputable construction company to complete the construction and installation of the distribution systems. The construction standards and practices will conform with all relevant codes and regulations for gas systems construction in the Province of Ontario including the CSA and TSSA standards, requirements and practices.

It is expected that the entire system will be installed within the existing public right-of-way.

The Utility will develop an Environmental Protection Plan ("EPP") that will incorporate the mitigating measures recommended in the Environmental Reports and will also incorporate comments provided during the OPCC review process. This plan will help minimize the impact of construction activities on the surrounding environment and communities.

The Corporation will provide its own inspection team to ensure the contractor meets all contractual obligations including but not limited to: complying with the Utility's health and safety standards, upholding environmental mitigating measures as specified in the EPP, meeting all code requirements, quality control/quality assurance procedures, and safeguarding public safety, during construction.

The contractor will utilize several crews with specific tasks which will create a finished pipeline when combined.

The major tasks are surveying, trenching, stringing, boring (as needed for Horizontal Directional Drilling), fusing (MDPE pipe), tie-in, backfilling, testing and clean-up.

The clearing crews will start by accessing the rights-of-way and easement lands to remove fencing, clearing small bushes and objects, crops and establishing temporary working areas by erecting gates and fences as required. All easements and temporary working areas will be safely secured and closed off outside of construction working hours.

After major construction is complete along the Preferred Route, the clean-up crew will ensure that the site conditions are returned to pre-construction conditions as required. When clean-up is completed, the Utility will seek the approval of landowners or the municipal Public Works authority.

The Utility will conduct ongoing monitoring and inspection to ensure successful environmental mitigation as per the recommendations in the Environmental Reports. A post-construction report will be issued to the OEB upon final completing of all construction activities.

TSSA COMPLIANCE

The Utility will comply with all applicable regulatory requirements including those related to safety and integrity under the Technical Safety Standards Authority (TSSA) mandate and legislation. The Utility will obtain a licence to transmit natural gas by pipeline under Ontario's *Technical Standards and Safety Act* and Oil and Gas Pipeline Systems Regulation. Jenmar Concepts, acting on behalf of the Municipalities, has already engaged with TSSA on this project to ensure all project requirements are understood and met. As part of this licence, the system will comply with the following standards:

- CSA Z662-15 Oil and Gas Pipeline Systems; and
- CSA Z247-15 Damage Prevention for the Protection of Underground Facilities.

In addition, the upstream LNG Depots will comply with CSA Z276-15 Liquefied Natural Gas (LNG) – Production, Storage and Handling, Annex B.

PROJECT SCHEDULE OVERVIEW

The proposed schedule for the Project is as follows:

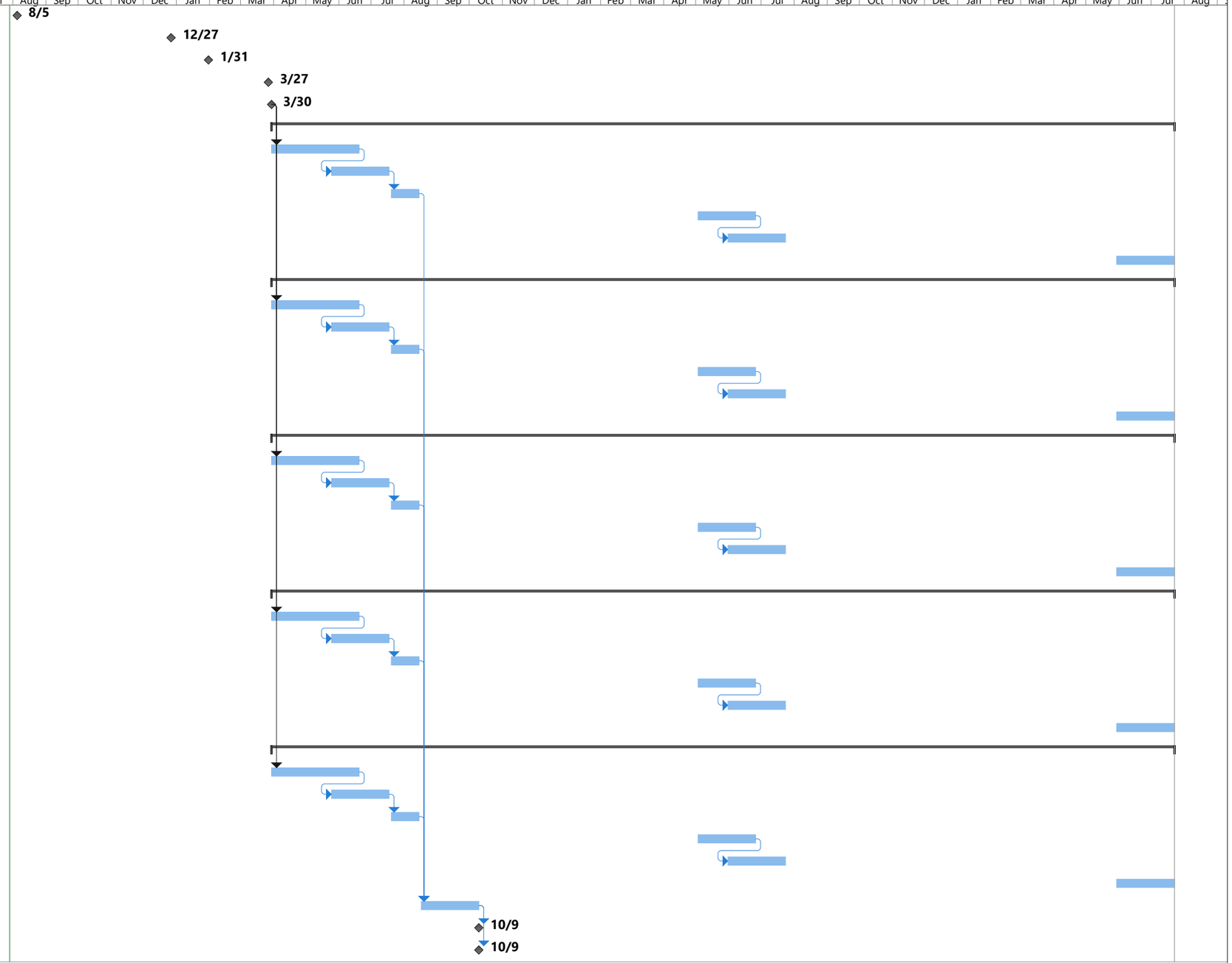
- Application submitted to OEB: August 2019
- Receipt of conditional approvals by OEB: December 2019
- Receipt of final approvals by OEB: March 2020
- Commence system construction: April 2020
- Commercial operation date: October 2020 (the system buildout will continue in subsequent years)

For more details, see Tab 7, Schedule 3, Attachment 1.

The Project is proposed to be in service for the 2020-2021 heating season. To meet this schedule, construction must commence by April 2020 to meet this in-service date and avoid winter construction. Therefore, the Corporation is requesting that the Board issue a decision for this proceeding by the end of December 2019.

North Shore Project

ID	Task Name	Duration	Start	Finish
1	Application Submitted to OEB	0 days	Mon 8/5/19	Mon 8/5/19
2	Receipt of conditional approval by OEB	0 days	Fri 12/27/19	Fri 12/27/19
3	Order long lead equipment	0 days	Fri 1/31/20	Fri 1/31/20
4	Receipt of final approvals by OEB	0 days	Fri 3/27/20	Fri 3/27/20
5	Construction commencement	0 days	Mon 3/30/20	Mon 3/30/20
6	**Marathon Distribution System**	**605 days**	**Mon 3/30/20**	**Fri 7/22/22**
7	Install backbone/main	3 mons	Mon 3/30/20	Fri 6/19/20
8	Install balance of 2020 mains	2 mons	Mon 5/25/20	Fri 7/17/20
9	Install 2020 services	1 mon	Mon 7/20/20	Fri 8/14/20
10	Install balance of 2021 mains	2 mons	Mon 5/3/21	Fri 6/25/21
11	Install 2021 services	2 mons	Mon 5/31/21	Fri 7/23/21
12	Install 2022 services	2 mons	Mon 5/30/22	Fri 7/22/22
13	**Schreiber Distribution System**	**605 days**	**Mon 3/30/20**	**Fri 7/22/22**
14	Install backbone/main	3 mons	Mon 3/30/20	Fri 6/19/20
15	Install balance of 2020 mains	2 mons	Mon 5/25/20	Fri 7/17/20
16	Install 2020 services	1 mon	Mon 7/20/20	Fri 8/14/20
17	Install balance of 2021 mains	2 mons	Mon 5/3/21	Fri 6/25/21
18	Install 2021 services	2 mons	Mon 5/31/21	Fri 7/23/21
19	Install 2022 services	2 mons	Mon 5/30/22	Fri 7/22/22
20	**Manitouwadge Distribution System**	**605 days**	**Mon 3/30/20**	**Fri 7/22/22**
21	Install backbone/main	3 mons	Mon 3/30/20	Fri 6/19/20
22	Install balance of 2020 mains	2 mons	Mon 5/25/20	Fri 7/17/20
23	Install 2020 services	1 mon	Mon 7/20/20	Fri 8/14/20
24	Install balance of 2021 mains	2 mons	Mon 5/3/21	Fri 6/25/21
25	Install 2021 services	2 mons	Mon 5/31/21	Fri 7/23/21
26	Install 2022 services	2 mons	Mon 5/30/22	Fri 7/22/22
27	**Terrace Bay Distribution System**	**605 days**	**Mon 3/30/20**	**Fri 7/22/22**
28	Install backbone/main	3 mons	Mon 3/30/20	Fri 6/19/20
29	Install balance of 2020 mains	2 mons	Mon 5/25/20	Fri 7/17/20
30	Install 2020 services	1 mon	Mon 7/20/20	Fri 8/14/20
31	Install balance of 2021 mains	2 mons	Mon 5/3/21	Fri 6/25/21
32	Install 2021 services	2 mons	Mon 5/31/21	Fri 7/23/21
33	Install 2022 services	2 mons	Mon 5/30/22	Fri 7/22/22
34	**Wawa Distribution System**	**605 days**	**Mon 3/30/20**	**Fri 7/22/22**
35	Install backbone/main	3 mons	Mon 3/30/20	Fri 6/19/20
36	Install balance of 2020 mains	2 mons	Mon 5/25/20	Fri 7/17/20
37	Install 2020 services	1 mon	Mon 7/20/20	Fri 8/14/20
38	Install balance of 2021 mains	2 mons	Mon 5/3/21	Fri 6/25/21
39	Install 2021 services	2 mons	Mon 5/31/21	Fri 7/23/21
40	Install 2022 services	2 mons	Mon 5/30/22	Fri 7/22/22
41	Commissioning 2020 services	2 mons	Mon 8/17/20	Fri 10/9/20
42	System operational for 2020 customers	0 days	Fri 10/9/20	Fri 10/9/20
43	2020 Construction Complete	0 days	Fri 10/9/20	Fri 10/9/20



Project: North Shore Project
Date: Mon 7/29/19

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

GAS SUPPLY

GAS SUPPLY INTRODUCTION

Gas supply will be the responsibility of the Utility. The LNG supply will be sourced from the LNG Facility near Nipigon, Ont. The Nipigon LNG Facility will cool natural gas to -162°C, converting it into a liquid for cost-effective and safe transportation to the Municipalities by truck. LNG for each municipality will be stored locally at LNG Depots in above-ground cryogenic tanks and converted back into natural gas for distribution to local homes and businesses.

To view the initial Gas Supply Plan, see Tab 8, Schedule 1, Attachment 1.

34 King Street East, Suite 600
Toronto, Ontario, M5C 2X8
elenchus.ca

Initial Gas Supply Plan

North Shore Municipalities

Report prepared by:
Elenchus Research Associates Inc.

July 2019

Page Intentionally Blank

Table of Contents

Page Intentionally Blank

1 ADMINISTRATIVE INFORMATION

1.1 INTRODUCTION

The Towns of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa ("**North Shore Municipalities**") are situated along the northern shore of Lake Superior generally along the Highway 17 corridor as illustrated in **Figure 1**.

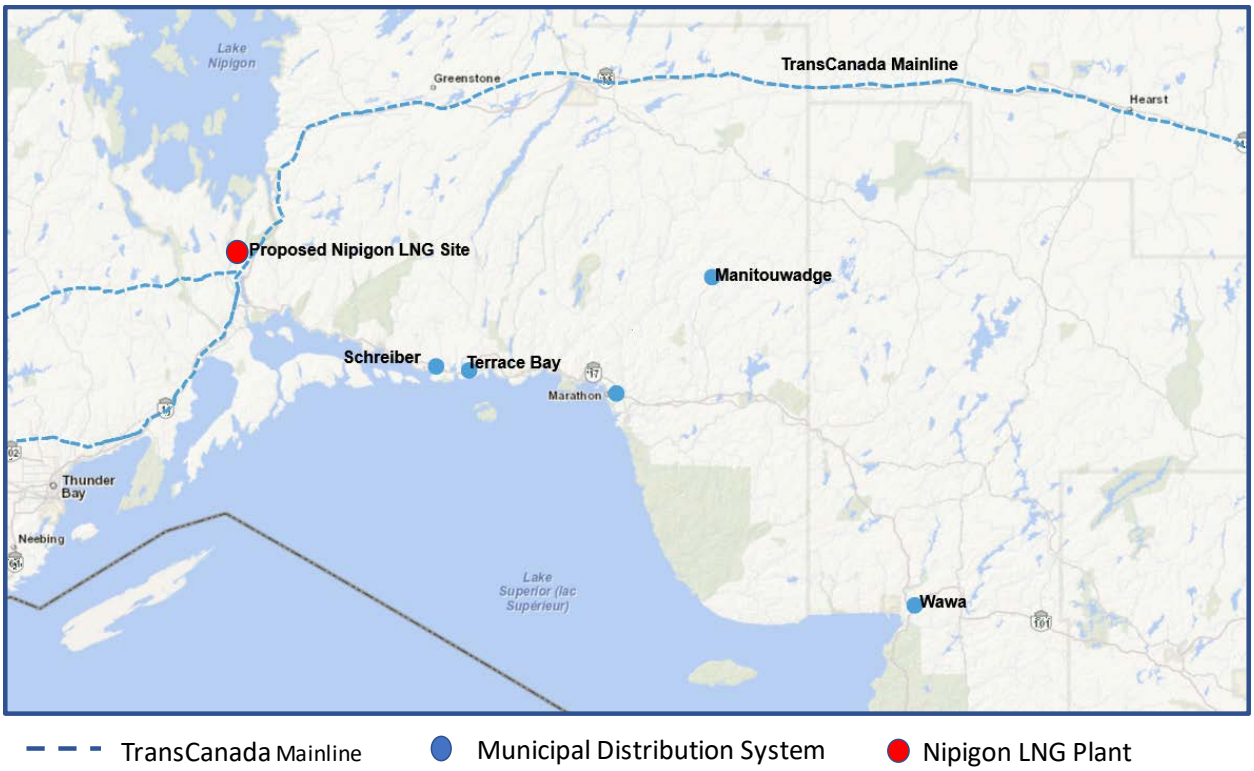


Figure 1 North Shore Municipalities

The North Shore Municipalities are proposing to develop a traditional piped natural gas distribution system within the boundaries of each of the towns which would be served by liquified natural gas ("**LNG**") as their supply source without the need to construct a prohibitively expensive pipeline from the TransCanada Mainline. Natural gas would be purchased from Western Canada and transported on the TransCanada Mainline for delivery to the Nipigon LNG Plant. The Nipigon LNG Plant is a proposed facility to be constructed to receive gas from TransCanada, to condition and to liquefy the natural gas. The LNG would be transported in specialized trailers to each community, and will be stored in cryogenic storage tanks at the outskirts of each town. As the demand dictates,

the LNG will be warmed and converted back to traditional natural gas for distribution throughout the distribution system.

Subject to receiving all the necessary approvals in a timely fashion, and the construction of the necessary facilities, the North Shore Municipalities anticipate commencing service in September 2020.

1.2 GAS SUPPLY PLAN GUIDING PRINCIPLES

This Gas Supply Plan ("**Plan**") was developed following the Ontario Energy Board's ("**OEB**") Framework for the Assessment of Distributor Gas Supply Plan EB-2017-0129 ("**Framework**"). The Framework requires distributors to submit a comprehensive gas supply plan every 5 years and submit an annual update.

The guiding principles of the Plan are:

1. Cost-Effectiveness. Ensure that the delivered cost of gas is cost-effective and of value to consumers. The delivered cost of gas includes the required upstream costs, including the commodity cost of gas, upstream transportation, LNG liquefaction and the necessary trucking costs to deliver the required supply to the Depots. Cost-Effectiveness also includes potential mitigation measures to offset any upstream fixed costs where economical to do so.
2. Reliability and Security of Supply. Reliability or security of supply must be considered for each element of the supply chain as well as for the system as a whole. LNG storage facilities will be constructed at each municipal LNG receipt location ("**Depot**") and at the LNG Plant. These storage facilities are intended to meet the operational demands on the system and provide security of supply for the firm customers. This storage is not intended to provide seasonal storage as is more common in Southern Ontario, due to the cost of LNG storage relative to other strategies to meet seasonal demands.
3. Public Policy Initiatives. The primary public policy initiative at this time is the ability to incorporate renewable natural gas ("**RNG**") into the mix. The North Shore Municipalities support the use of RNG if economically feasible and will evaluate the potential to use RNG within each municipality. The Municipalities will evaluate future public policy initiatives and implement where appropriate.

1.3 SUMMARY OF HOW THE GUIDING PRINCIPLES HAVE BEEN MET

The Plan represents a balance of the gas supply planning principles of cost-effectiveness, reliability and security of supply and public policy. These principles have been reasonably met as illustrated by the following:

- Cost-Effectiveness

- Assessing alternative supply and transportation options to supply natural gas to each of the Municipalities,
- Acquiring firm transportation and gas supply from a liquid hub that results in the lowest practical delivered cost of gas, considering other principles,
- Purchasing gas at a hub to ensure liquidity and price transparency and to minimize price volatility during periods of increased demand,
- Phasing in of contracted pipeline capacity, LNG Plant capacity and trucking transportation services during the development period, taking into account the security-of-supply objective,
- Entering into a demand response arrangement with an industrial customer to effectively mitigate both the underutilized upstream transportation and LNG fixed costs, and
- Employing additional mitigation measures where practical to minimize any remaining impact of the fixed costs of underutilized upstream arrangements should these arrangements not be otherwise fully utilized (e.g. assign underutilized upstream pipeline capacity where practical).

- Reliability and Security of Supply
  - Acquiring sufficient firm upstream transportation or firm delivered third-party services to meet the forecasted design day demand,
  - Acquiring other forms of shorter-term firm transportation services or secondary third-party services as required, to meet any unplanned increase in market demand,
  - Evaluating the ongoing market demands and assessing alternative firm supply options to meet the demand, and
  - Developing sufficient LNG storage at the municipal Depots and at the LNG Plant to mitigate potential short-term upstream supply and transportation risks.
- Meeting Public Policy Objectives
  - Evaluating the potential for renewable natural gas ("**RNG**") within each municipality. North Shore Municipalities understands that the current public policy objective of the Province is to seek out RNG opportunities to help decarbonize the gas supplies. The Municipalities will investigate potential RNG sources within their respective communities to determine if any of these sources are feasible prior to the next 5-year comprehensive natural gas plan update and will report any feasible supplies in the annual Plan updates.

1.4 SIGNIFICANT CHANGES

This is the initial Plan for this new region to be served with natural gas; there are no changes to any previous plan to report.

1.5 PROCESS RESOURCES AND GOVERNANCE

Elenchus Research Associates Inc. has developed this Plan for the North Shore Municipalities.

The gas supply planning process is an ongoing process as illustrated in **Figure 2**. This process starts with a demand forecast. As this is a new distribution area never serviced before, a rigorous process was developed to first inventory the building stock in each municipality and then to identify the market demand potential using telephone surveys for residential and commercial customers and one-on-one discussions with institutional and industrial customers. These surveys are more fully detailed in this report. The results of these surveys form the basis of the market demand forecast. This demand forecast forms the market demand that is the basis for the Gas Supply Plan. Since this is a new distribution area, it is recognized that the demand for gas could occur in a different pattern than what has been assumed from the surveys. The Plan therefore needs to be sufficiently flexible to manage variations in demand while still meeting the needs of the customers in a cost-effective and reliable manner. This situation is unique to new distribution areas, as existing distributors' demand for gas typically only grows at 1–2% annually, whereas in the first year of operation, demand will increase from 0 to the final first year demand. Therefore, there is much more likelihood of variability of this Plan in the first few years than variability of the plan of a mature utility. Where possible the Plan includes flexibility to accommodate this need.

Once the demand forecast was developed, the supply, transportation and storage options were then assessed. The assessment of the options is done within the context of the gas supply planning principles of cost-effectiveness, reliability and public policy. The selection of the best options under the Plan has been achieved to recognize the balance among these objectives.

The Plan will be submitted to the OEB for approval. Once approved, and when the distribution system is operational, the Plan will go into the execution phase.

The planning process will continue each year. The actual demands will be assessed by customer type. In the first few years, customer attachment rates will be monitored very closely. Additional connections will be forecast for the upcoming year and the new demand forecast will be updated. To the extent required, additional upstream options will be assessed, and new arrangements will be put in place that maintain the cost-

effectiveness–reliability–public policy balance. The annual Plan update will then be submitted to the OEB.

Figure 2 Initial Gas Supply Planning Process

2 THE GAS SUPPLY PLAN

Elenchus was retained in 2016 to prepare a natural gas demand forecast. Since this is a new service area, with no operating history, a "grassroots" approach was used to develop a long-term forecast. In order to develop the demand forecast, the following steps were taken:

- Inventoried the building stock within each municipality by building type[1]
- Surveyed each grouping of customers (e.g., residential, commercial, institutional and industrial) to assess their interest in converting to natural gas based on indicative savings as compared to other fuels
- Developed average-use information by customer type
- Aggregated the demand across all customer types and municipalities, including a sensitivity analysis
- Assessed supply, storage and transportation options
- Developed rates by customer type based on survey results
- Confirmed that delivered cost of gas is consistent with initial indicative cost assumptions

2.1 NORTH SHORE MUNICIPALITIES MARKET DEMAND

2.1.1 BUILDING STOCK

The North Shore Municipalities collectively have approximately 5,028 residential buildings, 455 commercial buildings, 55 institutional buildings and 1 industrial facility, for a total of 5,539, as illustrated in **Figure 3**.

[1] MPAC records, strategic plans, and local information

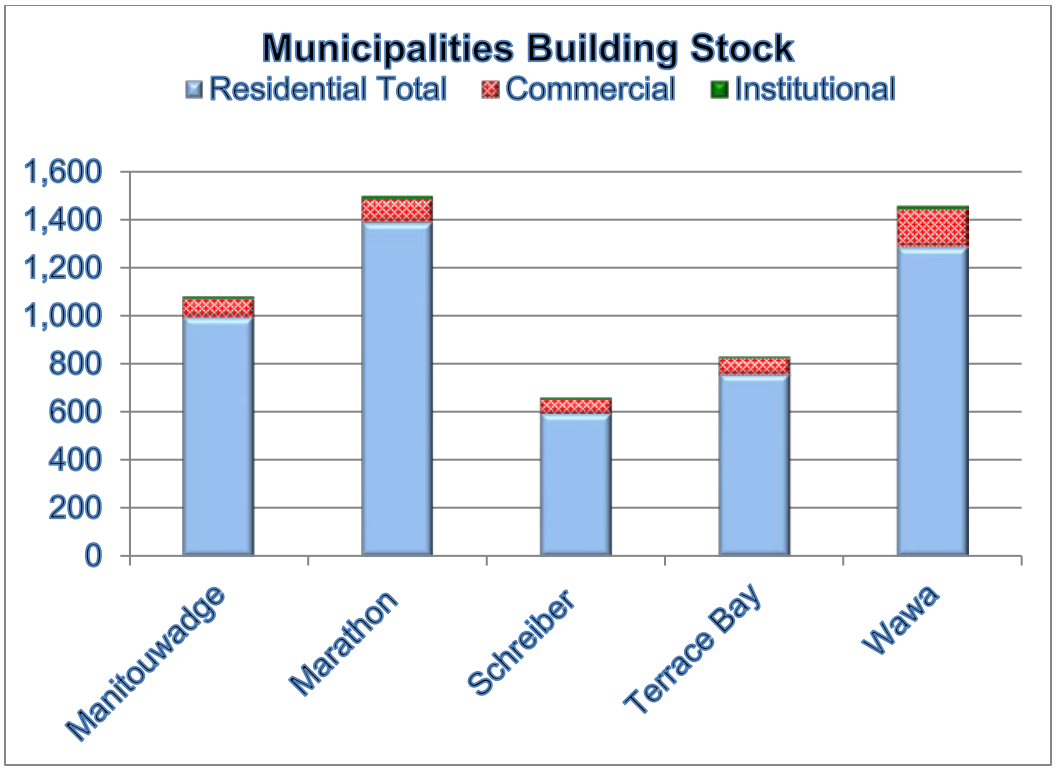


Figure 3 Building Stock

Most of the residential, commercial and institutional load is temperature-sensitive heating load, along with water heating and minor amounts of other non-temperature-sensitive base loads. The demand for natural gas from these customers will fluctuate daily and seasonally with temperature, the same as it would in other parts of Ontario. The typical load factor[2] for heat-sensitive loads is approximately 30–35%.

The industrial customer currently uses No. 6 residual fuel oil for its steam and other process loads on a relatively constant basis year-round.

[2] The ratio of average load to peak load during a specific period of time (usually 1 year), expressed as a percent.

2.2 DEMAND FORECAST

2.2.1 RESIDENTIAL SURVEY

Elenchus retained the services of Innovative Research ("**Innovative**") to design and execute a survey of the residents of the Municipalities. The survey obtained demographic and building information as well as residents' perceptions and level of interest in converting to natural gas if it were to become available. Innovative is a full-service national public-opinion research firm and has conducted similar surveys in the past.

In advance of Innovative conducting its survey, Elenchus developed preliminary information related to indicative costs to supply natural gas, the upfront costs to convert to natural gas in the area (**Table 1**) and the cost of natural gas compared to current fuel costs (**Table 2**). Elenchus also contacted local heating, ventilating and air conditioning (HVAC) contractors to seek their input on the indicative cost to convert various existing heating and water-heating systems to natural gas. This information was then shared with Innovative.

Existing Heating System/Fuel	Estimated Conversion Cost
Propane Forced Air	$500 to $1,000
Oil Forced Air	$5,000 to $6,000
Electric Forced Air	$5,000 to $6,000
Electric Baseboard	$10,000 to $15,000

Table 1 Estimated Conversion Costs

Current Fuel Type	Annual Costs	Annual Cost Relative to Natural Gas (Rounded)
Natural Gas	$1,563[3]	—
Propane	$2,457	150%
Oil	$2,261	150%
Electricity	$3,740	250%

Table 2 Indicative Cost of Alternate Fuels Relative to Natural Gas

Innovative conducted its telephone survey during the latter part of April and throughout May 2016. Innovative contacted residents using a random-sampling approach. They screened respondents to ensure that they owned property in one of the targeted Municipalities and that they were the party that had primary or shared responsibility for paying their energy bills.

Innovative's key findings were as follows:

1. Most residents of the Municipalities are aware of the proposed plan to bring natural gas to their communities, and they are favourably predisposed to natural gas.
2. 49% said they would definitely or would likely convert their heating system to natural gas with an additional 25% saying "it would depend."
3. 51% are likely to convert their water heaters with an additional 25% saying "it would depend," and 38% are likely to convert both.
4. The response was not the same for all Municipalities: residents are more likely to convert to natural gas in Municipalities where awareness of the Project is highest.
5. Cost is a significant factor:
   - It is a primary reason for not converting and the main deciding factor for those who aren't sure.
   - A lower conversion cost often results in a greater likelihood to convert, but potential annual savings also have an impact on customer decisions.

Results relating specifically to the types of space and water heating systems are summarized and discussed below.

[3] Indicative cost based on initial assumed rates.

2.2.2 RESIDENTIAL SPACE HEATING SYSTEMS

There is a wide variety of heating systems in the Municipalities, distributed as follows[4]:

- 27% oil forced air
- 25% electric baseboard
- 21% electric forced air
- 11% propane forced air
- 6% stove
- 5% hot water radiator
- 3% other

Propane furnaces are often the least expensive to convert at a cost of $500 to $1,000 per customer, as usually only minor modifications are required to the furnace to make it compatible with natural gas. Other forced air furnaces (oil and electric) are not convertible to natural gas and require a new furnace installation at a cost of $5,000 to $6,000 per customer. Electric baseboard systems are often the most expensive to convert at a cost of $10,000 to $15,000 per customer, as they require a new duct system to be installed in addition to a new furnace.

The delivered cost of propane and oil fuel is typically 1.5 times more expensive than natural gas. Electricity is typically 2.5 times more expensive than natural gas.

It is expected that the most likely customers to convert to natural gas would be customers with propane furnaces. They have a lowest cost to convert and would quickly realize the financial benefit from lower fuel costs. Customers with electric forced air furnaces would also be likely to convert since the cost to convert is modest compared to the benefit of switching to a much lower energy source. Residents with oil furnaces could also convert for a modest cost relative to annual savings from cheaper natural gas. Residents with electric baseboards would receive significant savings but would incur greater conversion costs.

An added advantage of converting to natural gas from older furnaces is that a new, high-efficiency furnace would consume less energy than the older, less efficient furnace it would replace. This would help to reduce overall energy consumption.

Customers noted that the primary barrier to conversion was cost or that their existing system was new or was sufficient to meet their needs.

[4] Percentages have been rounded

2.2.3 RESIDENTIAL HEATING SURVEY RESULTS

While the results varied by municipality, Innovative found that on average 49% of the residential customers would readily convert to natural gas if available as illustrated in **Figure 4**. A further 25% responded that "it would depend." In Elenchus' experience, some customers may not always have sufficient information to make an informed decision on a telephone survey and want to better understand the relative benefits of converting to natural gas prior to making such decisions. Elenchus believes that with the appropriate information and tools available to help prospective customers understand the relative benefits of converting to natural gas, one-half of the "it would depend" residents would in fact make the conversion decision. This would result in a conversion rate of 62% by the end of year 11.

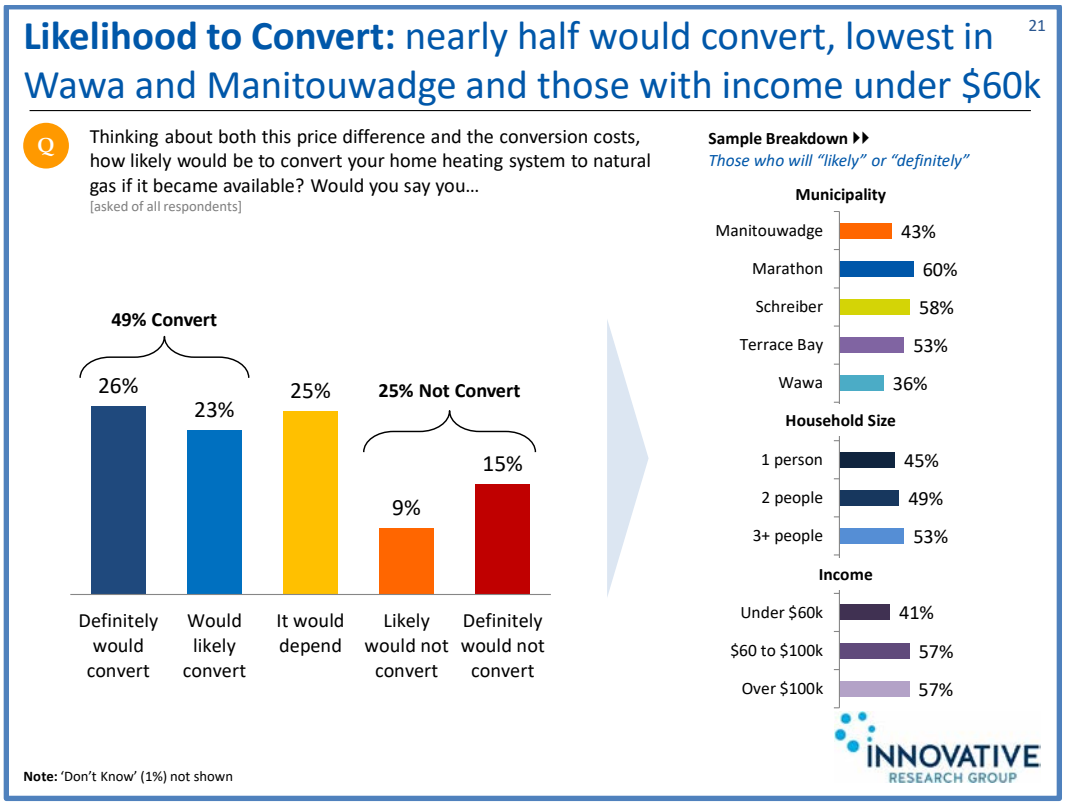


Figure 4 Survey Results for Conversion of Heating System to Natural Gas

2.2.4 WATER HEATING SYSTEMS

The predominant source of water heating was electricity:

- 82% electric
- 10% oil
- 6% propane

- 2% other/don't know

Of these customers roughly 30% rent their water heater and 69% own their water heater, with the balance unsure of the ownership of their water heater.

2.2.5 WATER HEATING SURVEY RESULTS

Fifty-one percent of the residents indicated that they were likely to or definitely would convert to gas if it was available. A further 25% indicated that "it would depend," with the balance indicating that they were unlikely to or definitely would not convert.

At least some portion of those residents who are undecided will convert their water heating to natural gas once they better understand the value proposition. Experience in Ontario suggests it would be rare to install a water heater only. It is Elenchus' experience that most homeowners who opt for a natural gas furnace will also choose to install a natural gas water heater at the same time, because installation is less expensive if the HVAC contractor installs the water heater at the same time as the furnace.

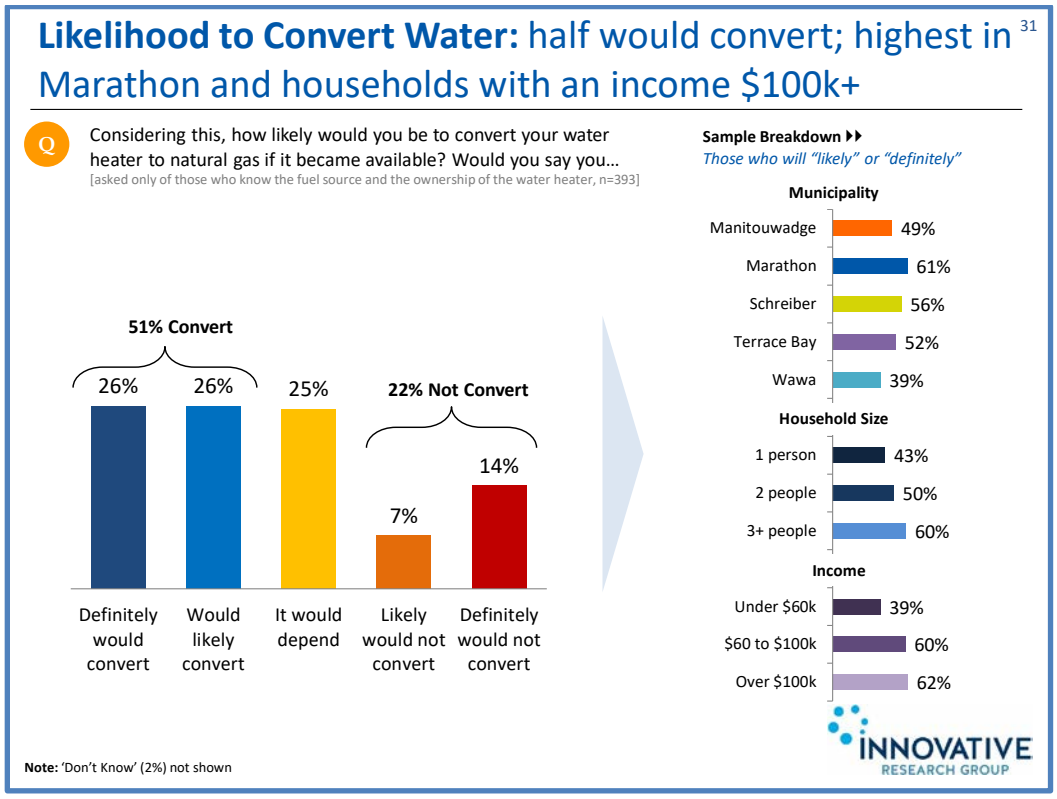


Figure 5 Likelihood of Converting Water Heating to Natural Gas

2.2.6 RESIDENTIAL DEMAND FORECAST

In creating an 11-year demand forecast for residential customers, Elenchus developed an average energy use per customer metric. The starting point for this analysis was Enbridge's (formerly Union Gas Limited's) average use per customer for its Northern region[5]. Several adjustments were necessary to recognize the differences in demographics in the market. These adjustments included:

- HDD Adjustment. Since Enbridge's Northern Region covers the area from the Manitoba border to the Quebec border, the average heating degree days (HDDs) was then adjusted, for the heat-sensitive portion of the demand, to recognize that the Municipalities have a different expected average HDD than the average HDD across Enbridge's Northern region. The HDD in Thunder Bay was used as a proxy for this market area, as it had the best historical data and is in reasonable proximity to the market. The average HDD over the last 25 years was 5,502, as illustrated in **Figure 6**. This HDD history further indicates that the potential fluctuation in heating demand can vary year to year due to HDDs. The minimum observed seasonal HDDs are approximately 14% less than average and the observed maximum HDDs are approximately 12% more than average. These potential variations in HDDs will affect annual consumption estimates.

[5] Enbridge's Northern Region average use per customer was 2,160 m3 (EB-2011-0210 Exhibit C Tab 1 page 24 Table 5)

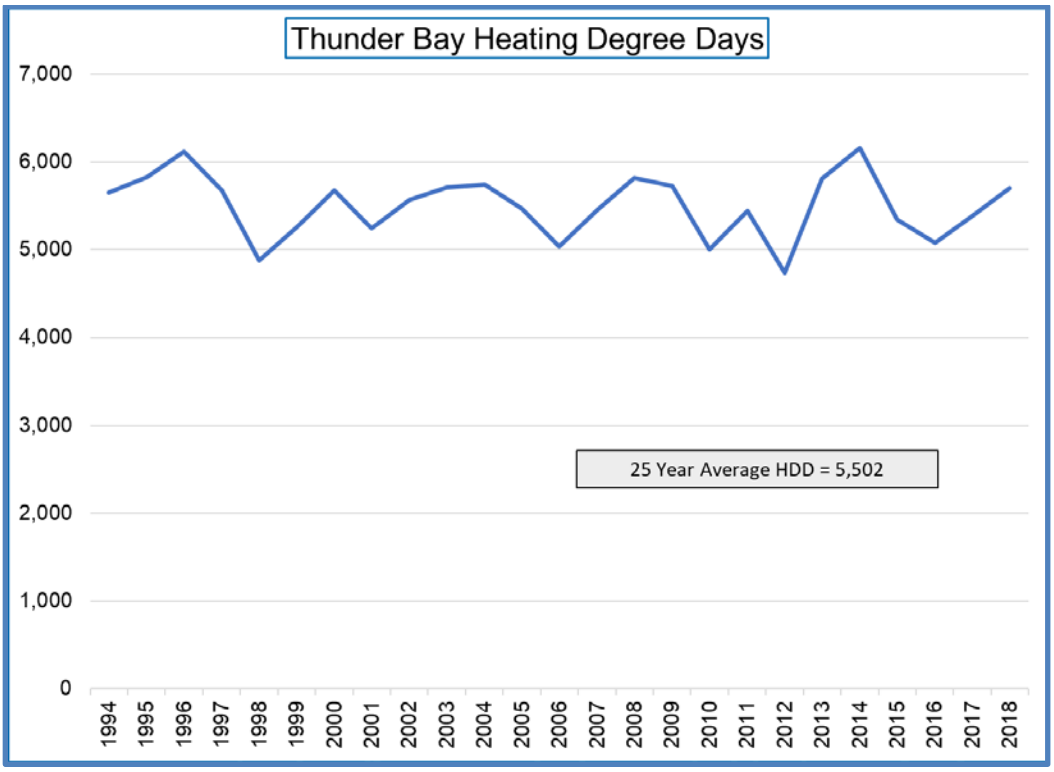


Figure 6 Thunder Bay Heating Degree Days

- Equipment Efficiency Adjustment. The average use per customer from Enbridge was based on the then current average equipment efficiency of 86.5%[6]. Customers converting to natural gas will use less gas, as they are expected to either install a new high-efficiency furnace or convert a relatively new high-efficiency propane furnace.
- Heat Content Adjustment. As illustrated in **Figure 7**, the heat content of the natural gas has been steadily increasing by about 0.34% per year. The volumetric conversion to energy reflected the associated heat content in 2010; the year that the average use per customer was based on.

[6] EB-2011-0210 Ex C Tab 1 page 15 Figure 2

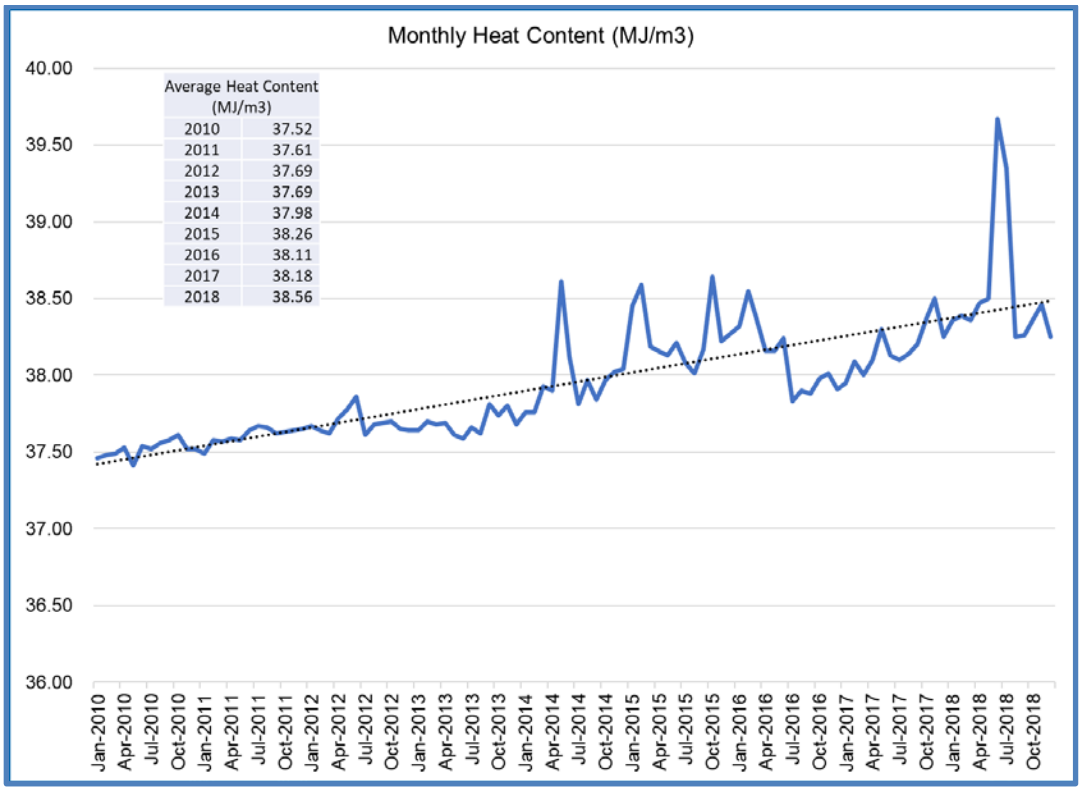


Figure 7 TransCanada Mainline Heat Content at Empress[7]

Adjusting for these factors results in a projected average use per customer of 84.85 GJ. The derivation of this estimate can be found in Appendix 1.

The average use per customer was then applied to the number of customers that were expected to convert to gas each year.

2.3 COMMERCIAL SURVEY

2.3.1 COMMERCIAL SURVEY METHODOLOGY

The potential commercial market was identified by combining lists provided by the Municipalities and publicly available business directories. The five Municipalities were seen to have a total of 455 commercial customers. Elenchus completed telephone surveys during the period April 21 to May 30, 2016. Voice messages were left when live contact could not be made. In addition, some email requests were made where contact

[7] http://www.tccustomerexpress.com/assets/emprs_hv_forecast.pdf

details were available in order to provide background information and to advise parties that the survey was being undertaken.

The survey asked questions to gather information in the following areas:

- Awareness of the Project and efforts to bring natural gas to the Municipalities;
- Energy type(s) currently used;
- Type(s) of equipment used for each energy source (i.e., furnace, boiler, baseboard);
- Annual amount of energy consumed by energy source;
- Indication of whether there was volume variability from year to year;
- Interest in converting to natural gas if gas was available; and
- Any issues or concerns that the customer might have.

2.3.2 COMMERCIAL SURVEY RESULTS

Contact was made with 13% of the potential commercial market (61 of 455). Survey responses were received from 8% of potential commercial market (35 of 455). There was widespread awareness of the Project among those surveyed. The type of energy currently used by survey respondents was distributed as follows:

- 30% propane
- 30% oil
- 40% electricity

There was significant interest in converting to natural gas, subject to being offered competitive natural gas rates at the time and the costs of conversion. Overall, 60% of respondents indicated that they were willing to consider switching. The breakdown of those interested in converting to natural gas is as follows:

- 90% propane users
- 67% oil users
- 36% electricity users

Like residential customers, some commercial customers were “undecided” whether they would convert to gas or not. Elenchus believes that once they have had the opportunity to fully evaluate the benefits to convert to natural gas that the conversion rate will increase from 60% to 65%.

It is expected that commercial customers will need to consider many of the same factors as residential customers with respect to the conversion of heating equipment. Propane furnaces are often the least expensive to convert, as usually only minor modifications are required to the furnace to make it compatible with natural gas. Other forced air furnaces (oil and electric) are not convertible to natural gas and require a new furnace installation.

Electric baseboard systems are often the most expensive to convert, as they require a new duct system to be installed in addition to a new furnace.

Commercial customers converting from propane and oil fuels can save up to 35% by switching to natural gas. Those switching from electricity can save more than 50% with natural gas. These savings do not account for the initial costs to convert to natural gas.

It is therefore to be expected that the most likely customers to convert to natural gas would be commercial customers currently using propane, because these customers have a low cost to convert and would financially benefit from lower operating costs. Those currently using oil would be next most likely to convert, followed by those using electricity. The survey results support this hypothesis.

Based on discussions with customers, an initial average use per commercial customer of 400 GJ was used. It was also assumed that ongoing energy efficiency measures would reduce this average use by 0.25% annually.

2.4 INSTITUTIONAL SURVEY

2.4.1 INSTITUTIONAL SURVEY METHODOLOGY

Elenchus received listings of institutional facilities from the various municipal offices. In addition, websites for the various municipalities, school boards and health care organizations were used to provide source data.

The five Municipalities were seen to have a total of 55 institutional sites. Each municipality or school board could have a number of sites within their control. Elenchus completed surveys over the phone during the period April 21st to May 30th, 2016. Telephone calls were made to contact managers with responsibility for energy issues. Voice messages were left when live contact could not be made. In addition, some email requests were made where contact details available in order to provide background information and to advise parties that the survey was being undertaken.

The survey asked questions to gather information in the following areas:

- Awareness of the Project and efforts to bring natural gas to the Municipalities;
- Energy type(s) currently used;
- Type(s) of equipment were used for each energy source (i.e. furnace, boiler, baseboard);
- Annual volume of energy consumed by type of energy;
- Indication of whether or not there was volume variability year to year;
- Additional historical data, and where possible more than one year of consumption data to account for volume anomalies due to weather;
- Interest in converting to natural gas if gas was available; and

- Any issues or concerns the institutional contact person might have.

2.4.2 INSTITUTIONAL SURVEY RESULTS

Contact was made with 90% of the potential institutional sites (50 of 55). Survey responses were received from 87% of potential institutional market (48 of 55). There was widespread awareness of project among those surveyed. The type of energy type currently used by institutional survey respondents was distributed as follows:

- 60% propane (or combination of oil and propane)
- 33% oil
- 7% electric

There was significant interest in converting to natural gas, subject to competitive natural gas rates at the time and the costs of conversion. Overall, 84% of respondents indicated that they were willing to consider switching. A summary of the number of institutional sites interested in conversion to natural gas by current fuel type is as follows:

- 28 propane (or combination of oil and propane)
- 15 oil
- 3 electricity

These findings were used to develop a 10-year overall institutional market demand projection for natural gas in each of the Municipalities.

2.5 INDUSTRIAL DEMAND

There is one large industrial customer in the region that uses No. 6 residual fuel as its energy source. This customer is interested in using natural gas.

The industrial customer has agreed in principle to a demand response program, where this customer would not be served on a firm basis. Under this arrangement, the industrial customer would increase its use of natural gas when gas supply resources were not required by firm customers, and reduce its consumption of No. 6 residual fuel oil; provided that the delivered cost of gas was competitive. Similarly, as firm customers require increased natural gas supply, the industrial customer would reduce its dependence on natural gas and increase its use of No. 6 residual fuel oil.

Utilization of the transportation on TransCanada Mainline, the Nipigon LNG facilities and the LNG trucking facilities is expected to be much higher than without the demand response customer. This unique arrangement will minimize the unutilized demand charge ("**UDC**") risk of the upstream delivery components to the firm customers thereby increasing the cost effectiveness of the supply arrangements for firm customers.

In the event of an unexpected interruption of upstream supply, the demand response customer would fuel switch back to No.6 residual fuel oil to preserve the gas supply available for firm customers, thereby increasing the reliability for firm customers. The demand response customer offers improved cost effectiveness and increases the reliability of supply to firm customers.

This demand response customer is expected to phase in its usage of natural gas over a three-year period to provide time to make the necessary equipment changes to accommodate natural gas.

2.6 11 YEAR DEMAND FORECAST

Elenchus used the results of these surveys to develop a 11-year demand forecast (the first year - which is a partial first year and 10 other full years of service) for the Municipalities by customer type. The estimates have been used as the basis for the overall facility design and ratemaking process.

Two different demand scenarios were developed:

1. A Base Case recognizes only the percentage of respondents who indicated that they were likely to convert to natural gas:
    - 49% of Residential,
    - 60% of Commercial; and
    - 84% of Institutional.
2. A Reference Case assumes that with the implementation of a comprehensive marketing program targeted to undecided customers, additional customers could be captured above the Base Case. Attachments for the Reference Case are as follows:
    - 62% of Residential, (13% points above the Base Case or about 1/2 of undecided respondents, these would be captured by assisting the customer assess the benefits of converting to natural gas);
    - 65% of Commercial (5% points above the Base Case, to capture the undecided)
    - 84% of Institutional (institutional customers' capture rate would not materially change as energy managers already had a very high interest in converting to gas).

The Reference Case is the more realistic case; as the marketing efforts of the utility will effectively help customers assess the benefits of conversion to natural gas.

For the residential sector, the phased-in period was based on the result of the residential survey. Similarly, the phase-in periods for commercial and institutional customer connections were based on responses from individual customers.

The initial average annual use per customer was estimated to be 84.85 GJ for residential customers and 400 GJ for commercial customers. Institutional and industrial load forecasts were based on direct discussions with individual customers and their specific energy requirements.

The 11-year Reference Case Demand Forecast by customer type is illustrated in **Table 3**. While the table includes 11 years (10 full years plus a partial first year), it is anticipated that a customer is unlikely to convert to gas in the January – April timeframe (unless their furnace must be replaced) and most new customers will convert to gas during the late summer or in early fall. Winter construction conditions are a significant impediment to installing new services; as a result, if a customer does require a furnace replacement, it is often better to temporarily run on propane and convert it as soon as gas becomes available.

It has been assumed that in the first year of service, a new customer will only consume 1/3 of the annual load. This is consistent with the proportion of HDDs remaining in the year assuming that on average a customer converts to gas in September.

It has been assumed that customers will continue to reduce their demand for energy over time by 0.25% annually. This reduction is expected from a combination of energy efficiency measures to improve the efficiency of the building envelopes and climate change. This annual reduction in annual consumption is an estimate. It is substantially less than the 1.6% annual decline in average use experienced by residential customers in Union North[8] from 2007-2013. The reasons for a lower annual reduction in average use than the reductions experienced by Union include the following:

- It is expected that a number of customers would have already improved their building envelope over the same time period, and
- Reduction in average use per customer and increases in the energy content of the gas have already been reflected in the projected average-use estimates.

Table 3 provides an annual forecast demand by year by customer type through to the end of year 11.

Table 4 illustrates the natural gas demand by municipality through to the end of year 11.

Figure 8 illustrates the same annual forecast demand as found in **Table 3**, in graphical form.

Figure 9 illustrates the cumulative customer connections by customer type.

[8] EB-2011-0210 Exhibit C Tab 1 Page 12 Table 4

North Shore Forecasted 11 Year Natural Gas Demand Forecast - By Customer Type

9-Apr-19		1	2	3	4	5	6	7	8	9	10	11
Year		**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
	Building Count											
Residential	5,028											
Customer Additions		857	1,199	400	132	85	85	85	67	67	67	67
Total Customers		857	2,056	2,456	2,588	2,673	2,758	2,843	2,910	2,977	3,044	3,111
Annual Consumption (GJ)		24,215	106,328	184,826	210,534	219,782	226,355	232,894	238,899	243,874	248,822	253,745
Design Day (GJ)		590	1,416	1,691	1,782	1,841	1,899	1,958	2,004	2,050	2,096	2,142
Commercial	455											
Customer Additions		44	59	59	44	30	14	14	14	14	5	5
Total Customers		44	103	162	206	236	250	264	278	292	297	302
Annual Consumption (GJ)		5,861	25,395	48,814	70,132	85,535	95,067	100,346	105,598	110,823	114,849	116,513
Design Day (GJ)		143	334	526	669	766	812	857	903	948	964	980
Institutional	55											
Customer Additions		24	22	0	0	0	0	0	0	0	0	0
Total Customers		24	46	46	46	46	46	46	46	46	46	46
Annual Consumption (GJ)		19,695	62,558	70,270	70,095	69,919	69,745	69,570	69,396	69,223	69,050	68,877
Design Day (GJ)		298	570	570	570	570	570	570	570	570	570	570
Industrial	1											
Customer Additions		1	0	0	0	0	0	0	0	0	0	0
Total Customers		1	1	1	1	1	1	1	1	1	1	1
Annual Consumption (GJ)		132,000	600,000	816,000	816,000	816,000	816,000	816,000	816,000	816,000	816,000	816,000
Design Day (GJ)		0	0	0	0	0	0	0	0	0	0	0
Total	5,539											
Customer Additions		926	1,280	459	176	115	99	99	81	81	72	72
Total Customers		926	2,206	2,665	2,841	2,956	3,055	3,154	3,235	3,316	3,388	3,460
Annual Consumption (GJ)		181,770	794,280	1,119,910	1,166,761	1,191,237	1,207,167	1,218,810	1,229,893	1,239,920	1,248,721	1,255,135
Design Day (GJ)		1,031	2,321	2,788	3,021	3,177	3,281	3,385	3,477	3,569	3,631	3,693

Table 3 11-Year Natural Gas Demand Forecast by Customer Type

Forecasted 11 Year Natural Gas Demand Forecast - By Municipality

9-Apr-19		1	2	3	4	5	6	7	8	9	10	11
Year		**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
	Building Count											
Manitouwadge	1,082											
Customer Additions		167	229	82	28	18	15	15	15	15	14	14
Total Customers		167	396	478	506	524	539	554	569	584	598	612
Annual Consumption (GJ)		11,429	41,850	60,342	68,398	72,276	74,765	76,452	78,131	79,801	81,332	82,595
Design Day (GJ)		203	422	504	541	566	581	597	612	628	640	652
Marathon	1,499											
Customer Additions		290	402	140	64	34	31	31	23	23	21	21
Total Customers		290	692	832	896	930	961	992	1,015	1,038	1,059	1,080
Annual Consumption (GJ)		13,912	55,187	88,002	100,882	107,663	111,716	114,959	117,963	120,508	122,779	124,517
Design Day (GJ)		293	659	786	853	892	921	950	974	997	1,014	1,031
Schreiber	665											
Customer Additions		123	176	62	21	16	14	14	11	11	10	10
Total Customers		123	299	361	382	398	412	426	437	448	458	468
Annual Consumption (GJ)		5,178	22,112	37,739	44,010	47,188	49,393	51,060	52,636	54,037	55,301	56,297
Design Day (GJ)		123	347	410	440	461	476	491	504	516	526	535
Terrace Bay	836											
Customer Additions		152	202	73	25	19	16	16	13	13	12	12
Total Customers		152	354	427	452	471	487	503	516	529	541	553
Annual Consumption (GJ)		142,079	637,061	869,715	876,989	880,746	883,337	885,127	886,824	888,346	889,730	890,846
Design Day (GJ)		204	389	463	498	524	540	556	570	584	595	606
Wawa	1,457											
Customer Additions		194	271	102	38	28	23	23	19	19	15	15
Total Customers		194	465	567	605	633	656	679	698	717	732	747
Annual Consumption (GJ)		9,172	38,070	64,112	76,482	83,364	87,956	91,211	94,338	97,227	99,580	100,879
Design Day (GJ)		207	503	625	689	734	763	792	817	843	856	869
Total Customers	5,539											
Customer Additions		926	1,280	459	176	115	99	99	81	81	72	72
Total Customers		926	2,206	2,665	2,841	2,956	3,055	3,154	3,235	3,316	3,388	3,460
Annual Consumption (GJ)		181,770	794,280	1,119,910	1,166,761	1,191,237	1,207,167	1,218,810	1,229,893	1,239,920	1,248,721	1,255,135
Design Day (GJ)		1,031	2,321	2,788	3,021	3,177	3,281	3,385	3,477	3,569	3,631	3,693

Table 4 11-Year Natural Gas Demand by Municipality

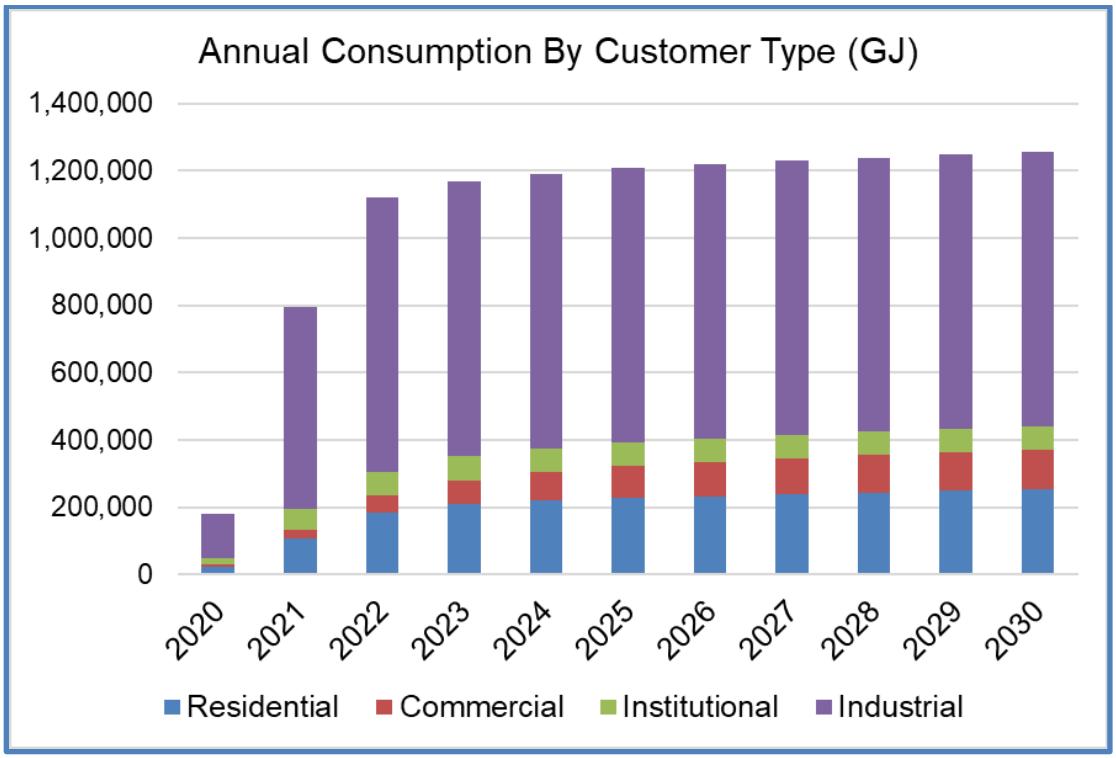


Figure 8 Annual Consumption by Customer Type

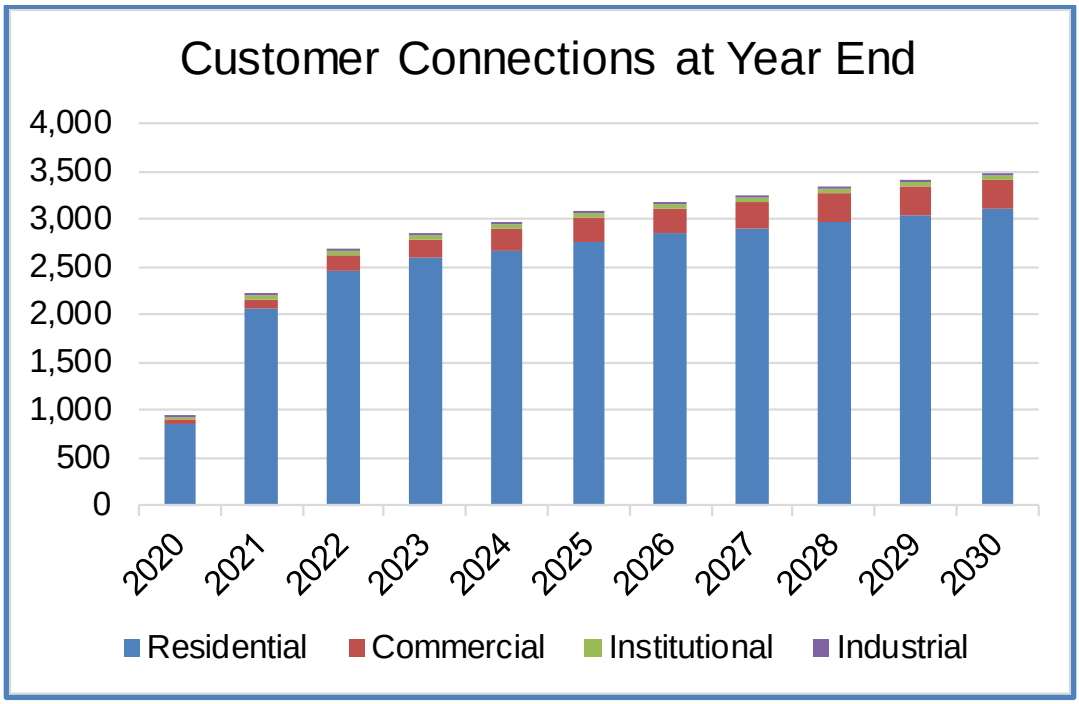


Figure 9 Customer Connections by Type

2.7 SUPPLY OPTION ANALYSIS

All the Municipalities will be served from common assets upstream of their respective Depots. This includes common utilization of gas supplies, the use of TransCanada transportation capacity, utilization of the Nipigon LNG Plant and trucking to the Depots. Supply alternatives are considered for each element of the supply plan to ensure that customers get the optimum balance between cost-effectiveness and reliability.

2.7.1 ALTERNATIVE LNG SUPPLIES

Other firm LNG sources were evaluated as an alternative to Nipigon LNG production. These alternatives were judged impractical as a base supply for the Municipalities. Énergir, situated in Montreal, supplies LNG; however, the delivered costs would be more expensive, as the natural gas costs would reflect the cost for transportation to Montreal and then the LNG would have to be trucked 1,400 kilometres to the Municipalities. This is at least a 16-hour journey, adding to the number of LNG trailers, trucks, drivers and costs per kilometer required to deliver the same volume. This compares to an average delivery distance of about 225 kilometres and an average 2.7-hour travel time for supplies from Nipigon. The longer delivery time for LNG shipments increases the risk of delays which reduces the security of supply.

LNG supplies are also available from Minneapolis Minnesota. This would require a 900 kilometer trip to deliver LNG. In addition to the long driving time and the attendant costs, there is also the increased risk of delayed deliveries in crossing an international border

The delivered cost of LNG from Montreal or Minneapolis are expected to be in the $16-18/GJ range or about 30-50% more than the costs of local LNG production from Nipigon.

Enbridge has an LNG facility at Hagar, Ontario. However, the capacity from this facility is required to meet system integrity requirements of the Union North system[9]. Enbridge did consider selling limited additional LNG volume to the transportation market[10]; however, Enbridge would only sell this additional volume on a fully interruptible basis. Interruptible supplies do not meet the reliability requirements for this market.

Locally produced LNG from Nipigon LNG is most cost-effective and most reliable natural gas supply option for local communities.

[9] EB-2014-0012

[10] Ibid.

2.7.2 SUPPLY OPTIONS VIA TRANSCANADA – ALBERTA VS DAWN VS DELIVERED

TransCanada is the only pipeline transporter of gas to Nipigon LNG. North Shore Municipalities may have the option of arranging for supplies from Enbridge's Dawn Hub in southwestern Ontario, Empress situated at the Alberta/Saskatchewan border or at AECO, a hub within Alberta.

If the supply is arranged and transported from Dawn, the landed price to Nipigon LNG will include the Dawn price for gas and the related transport costs on the Mainline (which includes Enbridge transport costs) to Nipigon. Similarly, if the supply originates in Western Canada, landed cost to Nipigon LNG will include the commodity price plus transportation costs. Acquiring gas at Empress would allow receipt of these supplies into the TransCanada Mainline, whereas purchasing gas at AECO would also require upstream transportation on the TransCanada NGTL system to deliver the gas to Empress.

If supplies were to originate at Dawn, then some modification of TransCanada's facilities would be required to backhaul volumes to Nipigon on a firm basis, as the system today is not bidirectional to this area. It is expected that Interruptible supplies from Dawn would be available in the secondary market through some form of displacement or exchange commercial transaction

An analysis was performed to assess the cost-effectiveness of Alberta and Dawn-based supplies. **Figure 10** illustrates the pricing history of AECO, and Dawn pricing for last 10 years for AECO, and for the last 2.5 years for the Empress data.

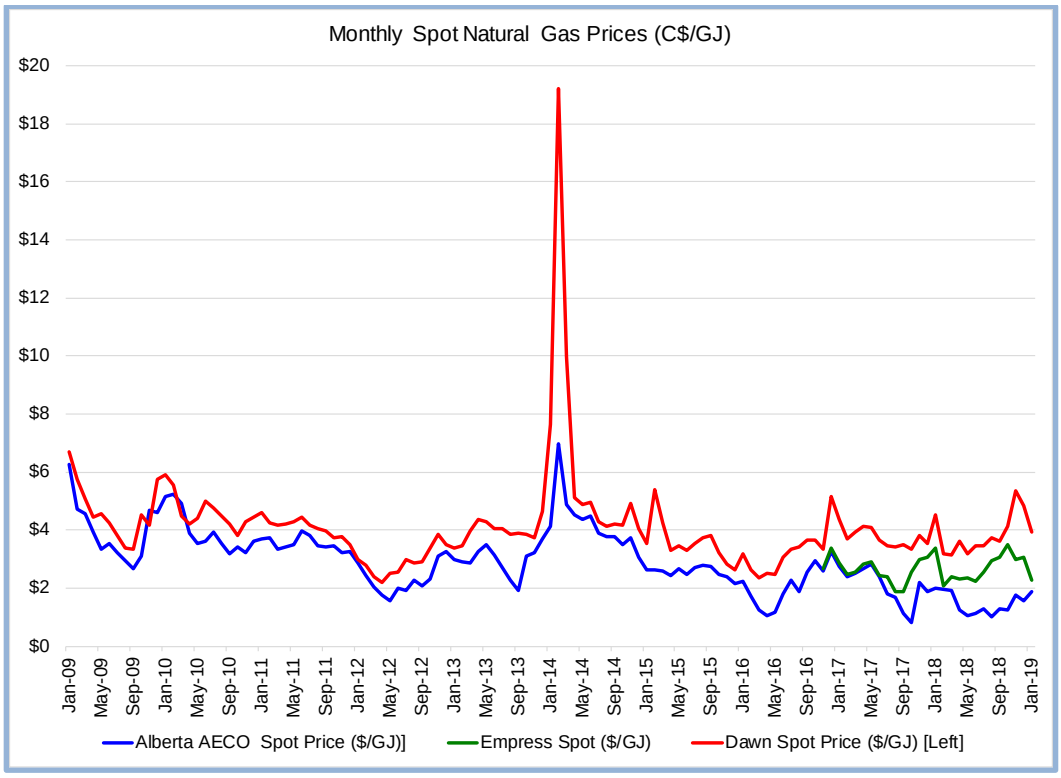


Figure 10 AECO, Empress and Dawn Historical Pricing

Table 5 illustrates the average monthly prices of natural gas at AECO, Empress and Dawn for various time periods. These prices for the last 2.5 years are $1.90/GJ, $2.66/GJ and $3.38/GJ respectively. This table also shows the standard deviation of these monthly prices over the same time period. Standard deviation is a measure of price volatility. It is evident from this table that the standard deviation of Empress pricing is the least volatile at $0.43/GJ, compared to $0.51/GJ for AECO and $0.63 for Dawn.

Time Period (Years)	Average ($/GJ)			Std Deviation ($/GJ)		
	AECO	Empress	Dawn	AECO	Empress	Dawn
10	$ 2.88		$ 4.09	$ 1.06		$ 1.70
5	$ 2.46		$ 4.10	$ 0.95		$ 1.06
2.5	$ 1.90	$ 2.66	$ 3.83	$ 0.51	$ 0.43	$ 0.63

Table 5 Natural Gas Pricing Statistics at AECO, Empress and Dawn

2.7.2.1 *AECO VS EMPRESS*

While AECO pricing is lower than Empress pricing, access to firm capacity in the primary market is impractical at this time as all available firm export capacity has been contracted and this capacity is only available in the secondary market at market rates. The Empress–AECO basis is trading higher than historical averages reflecting this fully contracted route. Much of this demand is coupled with short-term downstream transportation on the TransCanada to Emerson Manitoba route serving the daily spot market opportunities at this location. Parties currently purchasing gas at Empress will have to pay the market price for supplies.

TransCanada is in the process of expanding its export capacity to Empress for 2021, and the value of transportation capacity that is currently trading above the posted toll is expected to revert to historical levels (approximately $0.20/GJ) once the transportation bottleneck is eliminated.

Given the current lack of firm available export capacity to Empress, it is therefore impractical to purchase gas at AECO, but AECO may be an option in the future if upstream transportation becomes less constrained.

2.7.2.2 *EMPRESS VS DAWN*

Significant unutilized capacity exists on the TransCanada Mainline between Empress and Nipigon. Whereas, if gas were purchased at Dawn to flow to Nipigon, it would require an incremental expansion of the Enbridge Dawn-Parkway system[11] as well as some modifications to the TransCanada system to accommodate backhaul flows to the Nipigon location. Given the relatively small design day demand for this load, the threshold expansion requirements for the Dawn-Parkway system, and the modifications to the TransCanada Mainline; purchasing gas at Dawn and transporting under firm transportation is not a practical option at this time.

Further, if incremental capacity was added, the additional infrastructure costs would incrementally raise tolls for all shippers on both the Enbridge and TransCanada systems; whereas better utilization of the existing TransCanada infrastructure, as proposed, will incrementally lower the tolls for all shippers using this part of the system over time.

Although accessing gas from Dawn is not practical at this time, the following analysis compares the delivered cost of gas from Empress and Dawn to Nipigon.

100% Load Factor Delivered Cost of Gas to Nipigon via Empress	$/GJ
Average Empress commodity (prior 2.5 years)	$2.66
Firm 100% load factor transportation on the Mainline to Nipigon WDA	$0.92

[11] EB-2018-0305 Ex B1 Tab 1 Schedule 1 page 24

2.68% Fuel @ $2.66/GJ	$0.07
Total	$3.66
100% Load Factor Delivered Cost of Gas to Nipigon via Dawn	**$/GJ**
Average Dawn Commodity (prior 2.5 years)	$3.83
Firm 100% load factor transportation on the Dawn to Nipigon WDA	$0.92
2.52% Fuel @ $3.83/GJ	$0.10
Total	$4.85
Net benefit of buying gas at Empress vs Dawn	$1.19

Buying gas in Alberta is expected to be approximately $1.19/GJ cheaper than buying gas at Dawn (even if firm capacity were available, which it is not).

In summary, the benefits of buying gas at Empress as compared to Dawn are:

- The delivered cost of gas at 100% load factor is expected to be $1.19/GJ cheaper,
- Price volatility at Empress is about $0.20/ GJ less than at Dawn,
- Upstream firm capacity is currently available whereas it is unknown when firm capacity would be available from Dawn, and
- There are public interest benefits to the shippers on TransCanada and Enbridge from utilizing existing infrastructure rather than expanding infrastructure.

Nipigon is not currently an interconnection point on the TransCanada system. TransCanada will have to apply to the National Energy Board ("**NEB**") for approval to construct the interconnection and metering facilities. TransCanada's economic test that is applied in these circumstances is to ensure that the net present value ("NPV") of the contractual arrangements over the primary term (i.e., 10 years) at least recovers the incremental costs of providing the necessary incremental facilities. This ensures that existing shippers are not harmed. In the long run the continued use of the TransCanada Mainline will add to the revenue received by TransCanada, thereby marginally lowering the tolls for all shippers.

Empress is therefore not only a more cost-effective location to purchase gas than Dawn, but the only practical option to transport firm gas to Nipigon on the TransCanada Mainline.

2.7.2.3 *EMPRESS VS A DELIVERED SERVICE*

It is possible to acquire services in the secondary market on a delivered basis at Nipigon. However, since TransCanada requires a long-term capacity contract to Nipigon to offset the interconnection costs, this option would be limited to incremental capacity requirements above the expected contract amounts.

Purchasing gas at Empress and contracting for firm capacity on the TransCanada Mainline is the most cost-effective practical solution available to meet the market demand.

2.7.3 LANDED COST ANALYSIS

The results of optimizing the supply for both cost-effectiveness and reliability results in a current projected landed cost of $11.80/GJ as illustrate in **Table 6**

2020 Landed Cost of Gas Into Distribution Systems	($/GJ)
Upstream Costs	
Empress Commodity Price	$ 2.66
TransCanada Empress-Nipigon (100% LF)	$ 0.92
TransCanada Fuel @2.68%	$ 0.07
Delivered Price to Nipigon	$ 3.65
LNG Service	
LNG Service Charge	$ 7.03
Variable Charges	$ 0.44
Trucking	$ 0.84
LNG Service Costs	$ 8.31
Delivered Cost into Distribution System	**$11.96**

Table 6 Forecasted 100% LF Landed Cost of Gas into the Distribution Systems

2.7.3.1 *NATURAL GAS COMMODITY*

The price of $2.66/GJ reflects the previous 2 ½ year average cost of buying gas at Empress as illustrated in **Table 5**. The upstream commodity costs are market-based and will therefore change based on broad supply and demand factors.

2.7.3.2 *TRANSCANADA TOLLS*

The illustrated toll of $0.92/GJ is the 100% load factor landed toll at Nipigon. This will require a new delivery point off the TransCanada Mainline and currently does not have a published toll. The $0.92/GJ has been provided by TransCanada as an estimate of the final unitized daily demand charge. The TransCanada tolls are regulated by the National Energy Board and are also subject to periodic changes. The average annual fuel percentage of 2.68% is an estimate of the TransCanada fuel charges for a further $0.07/GJ.

2.7.3.3 *LNG SERVICE*

The LNG service consists of receiving the gas from TransCanada, liquifying the gas, providing short term storage at the LNG Plant, providing the trailers and the trucking services necessary to transport the LNG to each of the Depots, and providing the necessary LNG storage, and vapourization capacity at each of the Depots within each

Municipality. The Municipalities would enter into a long-term contract with Nipigon for these LNG services. This would be paid for as a combination of a demand and variable charges. Variable charges represent consumables (e.g. electricity and natural gas) to produce the LNG and will vary with throughput.

LNG Depot capacity and trucking services will be phased in over time to match the overall projected demand.

2.7.3.4 *TRUCKING COSTS*

Trucking charges are a volumetric charge and related to the variable cost of transporting the LNG from the LNG Plant to each of the Depots. These could vary over time with changes to the costs of fuel, labour and other trucking costs.

2.8 RISKS AND RISK MITIGATION ANALYSIS

A detailed risk analysis is provided in Appendix 2. The more common risks, if they were to materialize, are discussed below.

2.8.1 GAS SUPPLY

2.8.1.1 *GAS SUPPLY RISKS*

It can be seen from **Figure 11** that the Western Canadian Marketable production continues to be very robust and that marketable production has been increasing, despite a decline in pricing. Given the extensive nature of the size and scope of the natural gas industry in Western Canada, the risk of a broad outage that would materially affect supplies to the Municipalities is extremely low. **Figure 11** illustrates that over the last two decades a material production failure has not occurred.

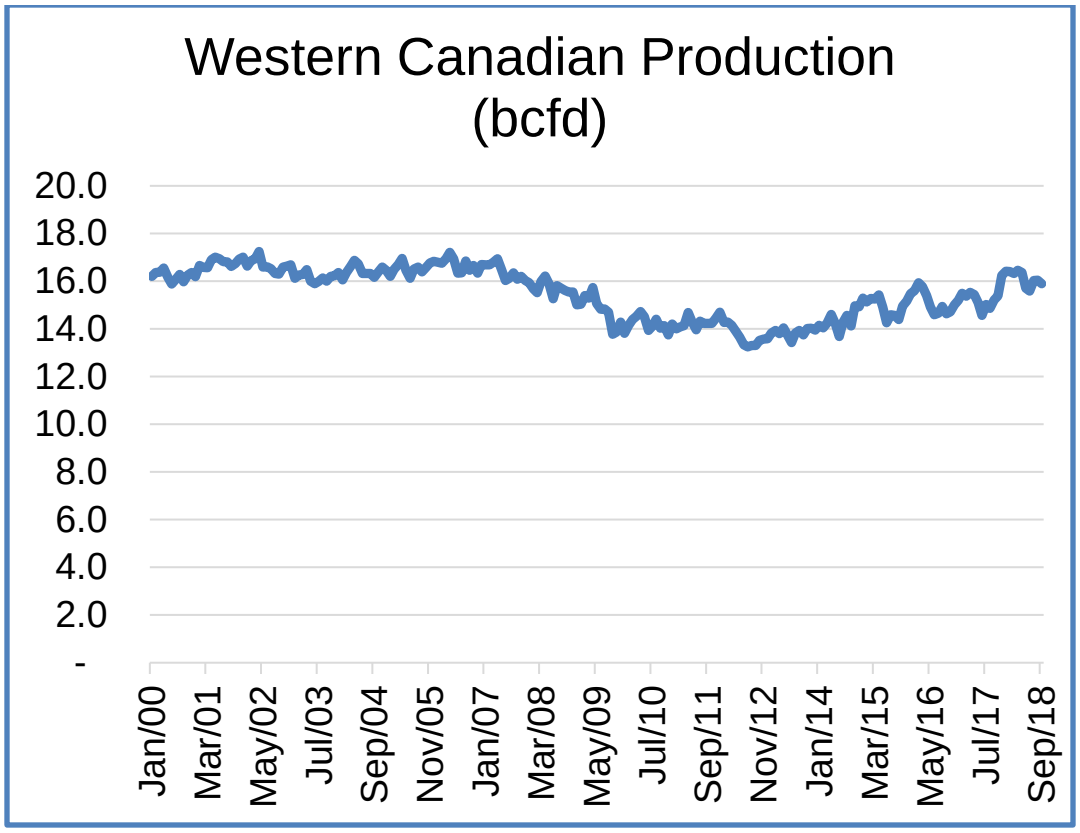


Figure 11 Western Canadian Marketable Production

2.8.1.2 *GAS SUPPLY RISK MITIGATION*

Acquiring physical supply at Empress is seen as low risk. In the event that supply was temporarily unavailable, North Shore Municipalities could curtail deliveries to its demand response customer in favour of firm customers, utilize storage situated at both the LNG Plant and the Depots, secure supplies in the secondary markets delivered to the Nipigon plant, or secure alternative delivered LNG supplies. Supply risks at this time are not seen as material and do not require any further mitigation measures.

2.8.2 TRANSPORTATION

TransCanada's connection policy requires a new customer to enter into a new long-term firm contract to provide sufficient revenue to cover the cost of the connection. A new long-term contract for 3,000 GJ/d will be entered into with the capacity being phased equally over the first 3 years. This phasing reasonably matches the anticipated firm demand forecast. If demands are higher than forecast; given the significant surplus in TransCanada Mainline capacity, it will be possible to either advance the phasing in of the firm transportation commitment level, increase the overall transportation contract volumes, or to sign up for a short-term delivered service in the secondary market to meet

the increased demands. These decisions are best made once the attachment rates are known and taking into account current market conditions.

In the event that attachment rates are phased in at a slower pace than projected, the demand response customer's ability to increase its use of natural gas and reduce its dependence on oil, provides a hedge against the fixed costs associated with the phasing in of upstream capacity. If the demand response customer is not fully able to utilize the underutilized capacity at all times, then other mitigation measures would be used to deploy the capacity to meet other market requirements.

2.8.3 TRANSPORTATION RISKS

The TransCanada Mainline has been a very reliable system. The TransCanada Mainline utilization through the Prairies Line and the Northern Ontario Line ("**NOL**") is significantly less than the available capacity. This excess capacity should help ensure that firm capacity ought to be readily available by the North Shore Municipalities even if there was a limitation on one of the TransCanada lines. This can be seen in **Figure 12** and **Figure 13**. It appears that the Prairies Line has in excess of 75,000 $10^3m^3/d$ (over 2.5 PJ/d) of unutilized capacity, and the NOL line has in excess of 40,000 $10^3m^3/d$ (over 1.5 PJ/d) of unutilized capacity. TransCanada also has a "critical unit out" design standard. This standard provides that, if the most critical component of each section of its system (e.g., a compressor unit) is unavailable, the system must have sufficient capacity remaining in the system to accommodate the loss of that component and still meet all firm contractual loads. This design standard is specifically intended to increase the reliability of the system. Given this design standard and the current excess capacity in the system, even if an unplanned event occurred, it is highly unlikely to have a material impact on firm deliveries to North Shore Municipalities.

This level of unutilized Mainline capacity also allows access to additional capacity in the future should it be required to accommodate additional growth.

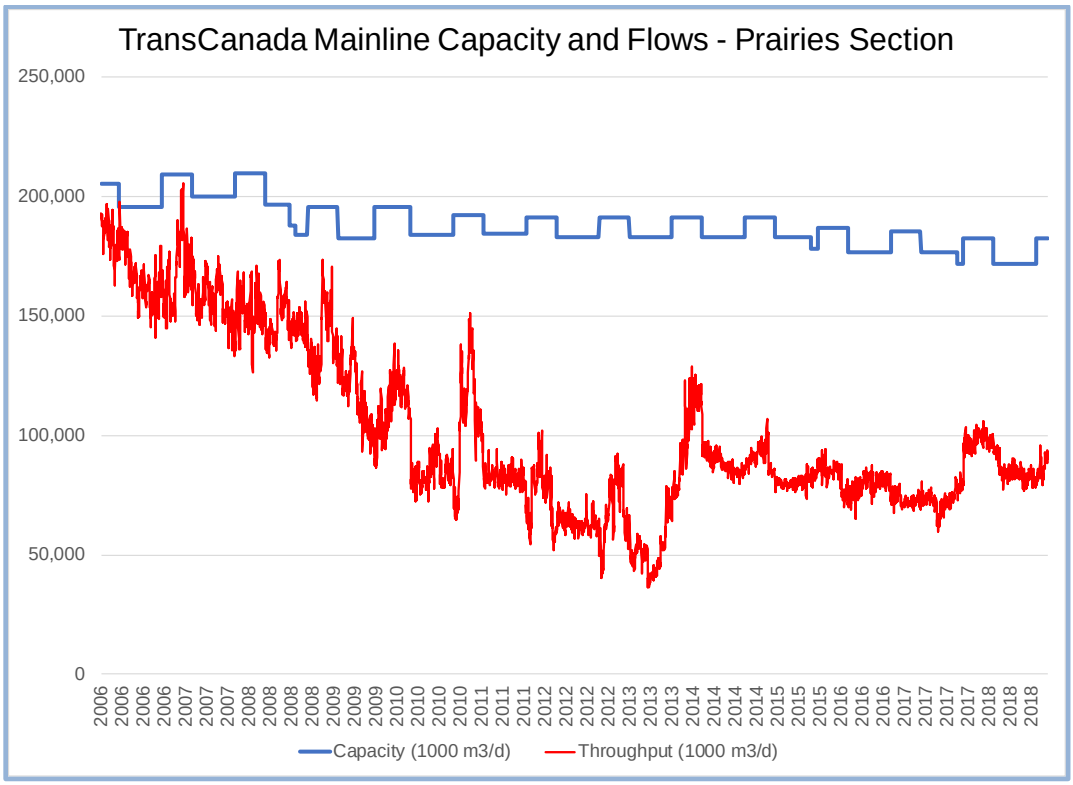


Figure 12 TransCanada Mainline Prairies Capacity and Throughput

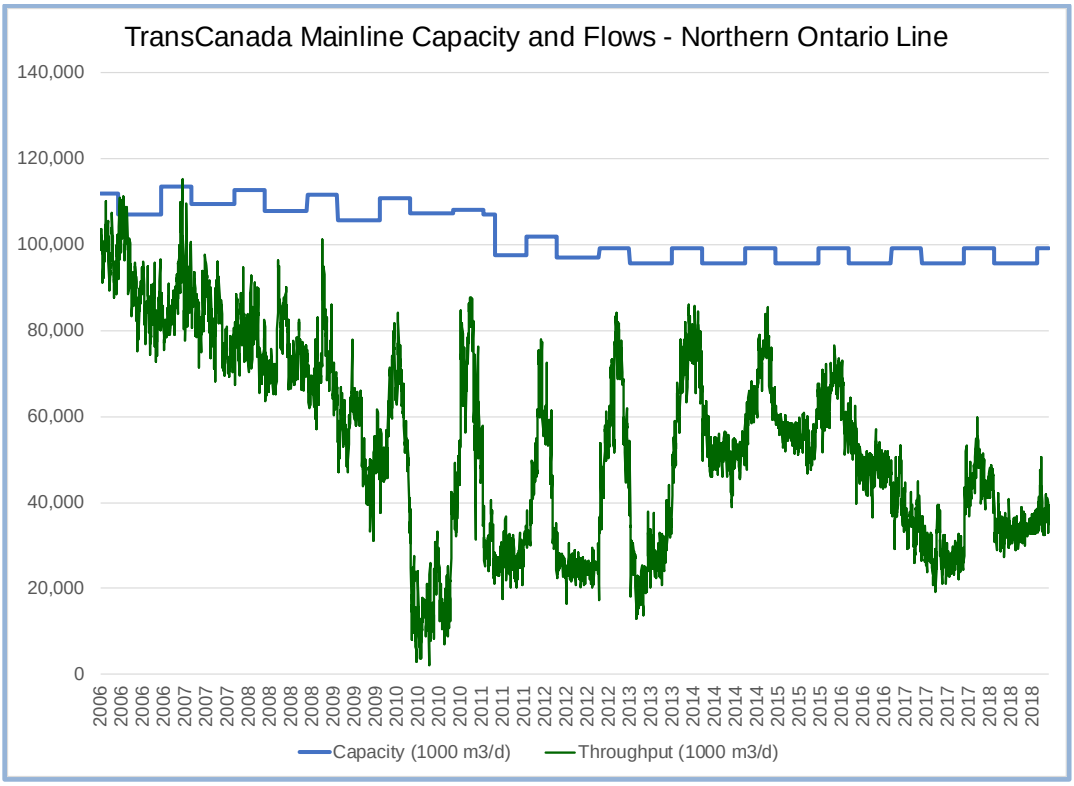


Figure 13 TransCanada Northern Ontario Capacity and Utilization

2.8.3.1 *TRANSPORTATION RISK MITIGATION*

While an interruption of firm transportation from Western Canada is highly unlikely, if it were to occur, capacity would not be curtailed in entirety. Instead, the curtailed volumes would be prorated across all firm contracts due to the multiple pipelines employed by TransCanada. If partial curtailment did occur, the demand response customer would be curtailed; further, storage at the LNG Plant and at the Depots could continue to serve firm customers. Replacement LNG supplies may also be available from alternate sources and trucked in.

2.8.4 LNG PLANT, TRUCKING AND DEPOT STORAGE

The North Shore Municipalities will contract with Nipigon LNG to provide the required LNG capacity, trucking and Depot storage to meet the forecasted design day load. This capacity will be phased on over time to meet the projected design day demand of the Municipalities.[12]

2.8.4.1 *LNG PLANT RISKS*

The main risks associated with the operation of the LNG Plant relate to the need for periodic planned and potentially unplanned maintenance. The plant will need to be completely shut down for 2–3 days at a time twice each year for planned maintenance.

The LNG Plant will also generate all of its own power, as grid power is not as economically feasible. The power generation unit is also subject to planned and unplanned maintenance. This maintenance would be completed at the same time as the main plant maintenance.

2.8.4.2 *LNG PLANT MITIGATION*

The mitigation measure that would be employed would be highly dependent on the trigger event requiring the mitigation, as well as the duration of the event. The following are mitigation measures that could be employed:

- During an interruption of the LNG Plant, delivery to the demand response customer would be curtailed if it appeared that the plant interruption was not expected to be a very short-term interruption.
- Depot LNG storage could continue to maintain design day loads for 5 days (7 days for Wawa).

[12] See Exhibit A, Tab 13, Schedule 1 – Long-Term Gas Service Contracts

- The LNG Plant will have approximately 18,000 GJ of onsite storage, sufficient supply to meet approximately 6 days of design day demand (5th year). Storage would of course last longer during periods of lower demand. Critical spare parts will be kept on site for unplanned maintenance events.
- In the event of an emergency power failure, emergency backup generation can be sourced, and the plant can be back on line in approximately 48 hours.
- In the event of an extended interruption, replacement LNG supplies could also be sourced from Montreal or Minneapolis.

Although it is not viewed as necessary at this time, additional storage could be added at the LNG Plant in 7,500 GJ increments at a capital cost of approximately $2 million. The cost to install additional storage would need to be recovered from end use customers.

2.8.5 TRUCKING LNG

There will initially be two LNG trailers used in the first year to deliver LNG supplies. These trailers each contain approximately 1,100 GJ. This is forecast to increase to 3 trailers in year 2 and 4 trailers in year 6. These assume a single daily shift to transport LNG to the Depots. The phasing of these trailers can be adjusted to meet the actual demand requirements. Additional trucking capacity can be added almost immediately by operating one or more trucks for a second shift during periods of higher demand.

2.8.5.1 *TRUCKING LNG RISKS*

The highly reliable trucking industry is a critical component of the Canadian economy, and many industries rely on “just in time” deliveries to feed their plants. Weather events, such as snowstorms, and heavy fog can prevent trucks from delivering LNG to the Depots. Of these, snowstorms are the events that potentially have an extended impact on road closures and are often widespread, which could prevent deliveries along alternative routes. Depot storage should therefore be sized to accommodate an interruption of deliveries due to snowstorm road closures.

Physical events such as washouts and road accidents can also close roads. Washouts can generally be repaired, and accidents cleared in a relatively short time. Since the events are localized, there are usually alternative delivery routes to accommodate LNG deliveries, although LNG delivery times would be increased. These other events that could cause a road closure are expected to be shorter term in nature than a snowstorm event, therefore designing the Depot storage for a snowstorm event would also cover these shorter term events that would disrupt trucking operations.

2.8.5.2 *TRUCKING LNG RISK MITIGATION*

Highway 17 is a federally owned highway which is maintained provincially, and LNG trailer deliveries will use this highway as their primary route to deliver LNG from the Nipigon LNG Plant to each municipality. In order to assess the reliability of this highway to calculate the level of storage that should be provided to accommodate road closures due to snowstorms, statistical information was sought from Statistics Canada, Transport Canada and the Ministry of Transportation of Ontario ("**MTO**"). This kind of specific Information was not available from any of these sources; however, the MTO did have some statistical information on the average annual road closure events. This can be found in **Figure 14** below.

This MTO information does not include the duration of a road closures, nor does it distinguish the reasons for the roads being closed. It includes closures due to events such as traffic accidents and roadway repairs, as well as weather-related events. While this information does not specifically provide snowstorm-related closures, it does show that the frequency of road closures south of Wawa is greater than for the rest of the areas between Nipigon and Wawa. Anecdotal information confirms that the area to the south of Wawa is more prone to snow events as a result of winds off the lake in winter.

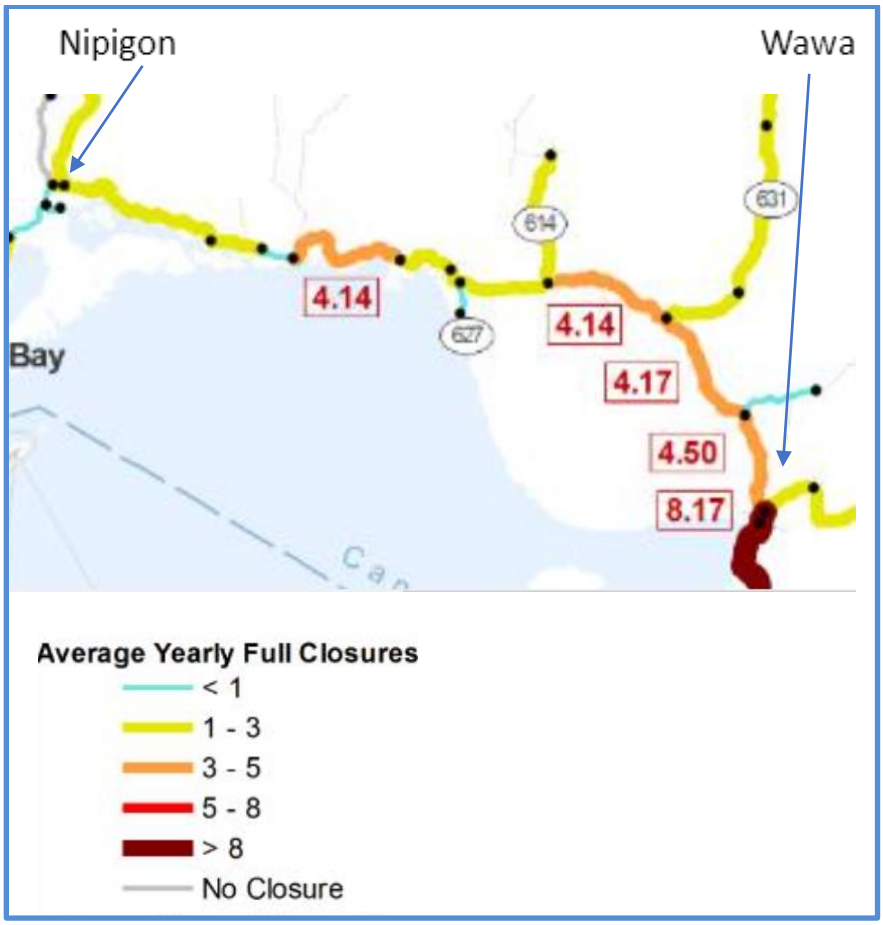


Figure 14 MTO Road Closures

Since detailed statistical information was not available from the MTO on the maximum number of consecutive days of road closure due to snowstorms, anecdotal information was sought from various municipal officials, truckers regularly using this route and area residents. The results range from 1 to 3 days as the maximum number of consecutive days that anyone could remember that the highway was closed due to snowstorms. The highest number of 3 days was therefore used as the maximum number of consecutive days that the road was closed. To further increase the factor of safety, it was assumed that for the day prior to the closure and the day after the road reopened that travel times during these days may be longer than normal, and for purposes of designing the storage capacity, that these days should be also considered as “non-delivery” days. Therefore, the Depot storage should be designed to accommodate a total of 5 days of supply when trailers are unable to deliver LNG to the Depots. In calculating the 5 days of supply, it was assumed that the supply was being consumed at the design day rate for each of the 5 days for each of the Municipalities. Since design days flows are based on the highest number of degree days in the past 25 years, it is highly unlikely that 5 design days will occur in a row, which further increases the factor of safety of this design standard.

While 5 days is considered to be sufficient for all Municipalities, as noted earlier the area south of Wawa had a greater potential to be closed for local snowstorms due to the proximity to the lake and the westerly winds off the lake. While Wawa is further inland and appears to be more sheltered from direct westerly winds off the lake, an additional 2 days of storage is being provided for Wawa to increase the reliability of supply, to cover the risk of winds from the southwest potentially affecting the last several kilometres of the trip to deliver LNG to Wawa.

The derivation of the total storage required for each Municipality can be found in **Table 7** and **Table 8**.

Risk	All Communities Except for Wawa	Wawa
Reduced Deliveries Prior to a Weather Event	1	1
Consecutive Days of Road Closure	3	5
Reduced Deliveries After a Weather Event	1	1
Total Days of Storage	**5**	**7**

Table 7 Days of Storage to Cover Weather Risks

Estimated Depot Storage Sizes

Days of Peak On-site Storage											
Wawa	7										
All Other Commities	5										
	1	2	3	4	5	6	7	8	9	10	11
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Municipality											
Manitouwadge											
Annual Consumption (GJ)	11,429	41,850	60,342	68,398	72,276	74,765	76,452	78,131	79,801	81,332	82,595
Design Day (GJ)	203	422	504	541	566	581	597	612	628	640	652
Depot Storage (GJ)	1,016	2,108	2,518	2,704	2,830	2,907	2,985	3,062	3,139	3,200	3,261
No. of 20,000 Gal Tanks	1	2	2	2	2	2	2	2	2	3	3
Marathon											
Annual Consumption (GJ)	13,912	55,187	88,002	100,882	107,663	111,716	114,959	117,963	120,508	122,779	124,517
Design Day (GJ)	293	659	786	853	892	921	950	974	997	1,014	1,031
Depot Storage (GJ)	1,465	3,295	3,931	4,266	4,460	4,605	4,751	4,868	4,986	5,071	5,156
No. of 20,000 Gal Tanks	1	3	3	3	3	3	4	4	4	4	4
Schreiber											
Annual Consumption (GJ)	5,178	22,112	37,739	44,010	47,188	49,393	51,060	52,636	54,037	55,301	56,297
Design Day (GJ)	123	347	410	440	461	476	491	504	516	526	535
Depot Storage (GJ)	617	1,736	2,051	2,200	2,307	2,380	2,454	2,518	2,581	2,628	2,676
No. of 20,000 Gal Tanks	1	2	2	2	2	2	2	2	2	2	2
Terrace Bay											
Annual Consumption (GJ)	142,079	637,061	869,715	876,989	880,746	883,337	885,127	886,824	888,346	889,730	890,846
Design Day (GJ)	204	389	463	498	524	540	556	570	584	595	606
Depot Storage (GJ)	1,019	1,947	2,314	2,489	2,619	2,699	2,780	2,850	2,921	2,975	3,029
No. of 20,000 Gal Tanks	1	2	2	2	2	2	2	2	2	2	2
Wawa											
Annual Consumption (GJ)	9,172	38,070	64,112	76,482	83,364	87,956	91,211	94,338	97,227	99,580	100,879
Design Day (GJ)	207	503	625	689	734	763	792	817	843	856	869
Depot Storage (GJ)	1,450	3,524	4,374	4,826	5,140	5,340	5,541	5,722	5,903	5,993	6,083
No. of 20,000 Gal Tanks	1	3	3	4	4	4	4	4	4	4	4
Total Customers											
Annual Consumption (GJ)	181,770	794,280	1,119,910	1,166,761	1,191,237	1,207,167	1,218,810	1,229,893	1,239,920	1,248,721	1,255,135
Design Day (GJ)	1,031	2,321	2,788	3,021	3,177	3,281	3,385	3,477	3,569	3,631	3,693

Note		
	Tank Size (US Gal)	20,000
	GJ/gal	0.0787
	Tank Size (GJ)	1574

Table 8 Minimum Storage Requirements by Municipality

The amount of Depot storage will be based on the design day requirements of each municipality. The initial storage installed at each Depot will at least meet the near-term needs (the first 2–3 years) of the municipality. The amount of storage that is required to meet this design standard is illustrated in **Table 8**. The amount of Depot storage will be re-evaluated on an ongoing basis. If demand is occurring faster than forecast, then more storage can be added. If demand is growing more slowly than expected, then additional storage can be phased in over a longer period.

While it is not viewed as necessary at this time, storage is modular and can be added in the future if required. The typical size of the storage tanks used in the Depots is 20,000 gallons. Each tank will contain approximately 1,575 GJ. The installed cost with vapourizors is approximately C$ 1 million. The additional cost to facilitate additional storage would be recovered from end use customers.

2.8.6 Depot Storage

2.8.6.1 *Depot Storage Risks*

Depot storage is a relatively simple operation and not prone to mechanical breakdown. The predominant Depot storage risk is power interruption from the grid. Power is required for pumping of the LNG through the vapourizors and ultimately into the distribution system, instrumentation and surveillance within the Depot. Power outages will be accommodated in the design.

2.8.6.2 *Depot Storage Risk Mitigation*

In order to accommodate the Depot storage risks, sensors will continuously monitor many operating characteristics. In addition, full backup power generation will automatically commence operation should there be a failure of the primary power supply.

2.9 Performance Metrics

The performance of the Plan can be assessed on several key performance indicators, including:

1. Landed unit cost of gas delivered to the distribution system
2. Utilization rate on upstream transportation and LNG contracts
3. Additional demand served over forecast amount
4. Curtailments

2.9.1 Unit Delivered Cost of Gas to the Depots

This metric includes the landed unit cost of gas for all the upstream costs inclusive of the commodity costs, upstream transportation, LNG Plant costs, trucking, fuel and unaccounted-for gas.

2.9.2 Utilization Rate

This metric will include the overall utilization rate on upstream transportation capacity and LNG capacity. It should be noted, however that weather can greatly influence the utilization of the capacity in any year.

2.9.3 Additional Demand Served Over the Forecast Amount

While is anticipated that sufficient long-term transportation capacity will be contracted to meet the forecasted demand, should attachment rates increase faster than anticipated,

incremental transportation capacity or delivered services may be needed to accommodate the increased demand. Higher attachment rates early in the development period can reduce the unit costs for all customers. This metric will track the normalized annual demand compared to the original forecast.

2.9.4 CURTAILMENTS

Reliability is one of the guiding principles of the Gas Supply Plan. The number of outages due to gas-supply-related events will be tracked as a measure to ensure that this principle is achieved.

2.9.5 PERFORMANCE METRIC TARGETS

2020 Performance Metrics	Target
1. Unit delivered cost of gas into the distribution systems	$11.96/GJ[13]
2. Utilization rate on upstream transportation and LNG contracts	100%
3. Additional demand served over the forecast amount	To be determined
4. Curtailments	**0** Customers

Table 9 Performance Metrics and Performance Target for the First Year

2.10 ACHIEVING PUBLIC POLICY

The North Shore Municipalities understand that Ontario public policy indicates that renewable natural Gas ("**RNG**") options should be evaluated as potential supply sources for the natural gas distribution system. While there may be potential for RNG options from sewage treatment plants, landfill and other potential locations in each of the Municipalities, at this time the North Shore Municipalities have not done a feasibility analysis for the potential to collect, treat and compress the RNG into the natural gas distribution systems.

The North Shore Municipalities commit to evaluate these potential options over the next several years, and no later than the next 5-year comprehensive natural gas plan. Updates on any viable sources will be included in the annual updates.

[13] See Table 6

2.11 PROCUREMENT PROCESS AND POLICY

Natural gas and upstream transportation arrangements will be procured with the assistance of an agent that is knowledgeable with regard to the markets at Empress as well as the local markets and the markets at Emerson and TransCanada transportation.

Working with the Municipalities, the agent will acquire the amount of gas required for delivery from reputable creditworthy suppliers, nominate for the necessary transportation quantities and manage any imbalances on the TransCanada Mainline, and provide invoice verification services. The agent will act in a manner consistent with the Gas Supply Plan.

The agent will acquire natural gas at competitive prices, in one or more tranches, on a monthly or daily basis, based on the current market demands and market conditions on an index price or at a competitive fixed price, at the inlet to TransCanada transportation or on a delivered basis.

If there is excess transportation on any day, the agent will evaluate the opportunities to mitigate the unused capacity and enter into the necessary assignment contracts or other arrangements necessary to obtain value from the unused capacity. To the extent additional transportation capacity is required, the agent with identify the best alternatives and seek authorization from the Municipalities to secure the transportation.

The agent will work within pre-approved authority limits. If a proposed transaction exceeds the limit of these authorities, the agent will require specific pre-approval to enter into the arrangement.

Since the North Share is a new delivery area, it is expected that there will be high growth rates in the first few years of operation. Where possible upstream gas supply assets are proposed to be phased in to match the increasing market demands to “right-size” the portfolio. This phasing in of assets helps to balance the costs and risks to customers. In order to ensure that the incremental assets are acquired in an effective and timely basis to meet market demands, a gas supply planning process will be completed each year. This planning process will update the demand forecast by evaluating the current normalized customer demands already attached to the system and forecast additional demands from new customer attachments each year for the remaining term in the Plan. This updated demand will then be compared to the current combination of gas supply assets already under contract to determine if these are sufficient to meet the projected demand. To the extent that every element of the supply delivery chain does not meet the new projected demand requirements, an incremental supply option analysis will be completed in conjunction with the natural gas agent. New gas supply asset arrangements will be entered into, as necessary. These new assets will be selected to maintain the balance of cost-effectiveness, reliability/security of supply and the need to meet public policy.

3 GAS SUPPLY PLAN OUTLOOK

Since this is the initial Plan, there is the potential for higher variability in demand in the early years as compared to a mature utility where the vast majority of the demand is already connected and it only has to deal with the impact of marginal increases or decreases in total demand. The Gas Supply Plan where practical, needs to be flexible enough to accommodate both a slower phase-in of the expected demand as well as an accelerated demand scenario.

The proposed Plan fulfils the guiding principles of cost-effectiveness, reliability and public policy, while at the same time provides the necessary flexibility to accommodate variations in demand, without compromising these principles.

Although the demand response customer represents an incremental non-firm demand on the system, it is important to also consider this customer as an integral tool to mitigate upstream costs and create the necessary flexibility required to accommodate potential variations in demand.

The specific nature of the upstream services and the annual outlook for the cost of natural delivered to the Municipalities over the 5 year period can be found in the Leave to Construct Application, Section 9 – Economic Feasibility.

4 DESCRIPTION OF CONTINUOUS IMPROVEMENT

In the formative years of the utility, continuous improvement will include:

- Refining demand forecasts, to meet both design day loads and annual demands
- Securing the required firm transportation and delivered services to meet the market requirements
- Mitigating any unutilized contracted firm upstream transportation and/or LNG Plant capacity

5 LINK TO OTHER APPLICATIONS

This Plan will also help to inform other OEB applications including:

- Leave to Construct Application
- Annual rate cases (in determining certain asset costs, and upstream supply costs)
- QRAM applications (in determining near-term cost forecasts)
- Approval to enter into long-term LNG contracts (LNG, trucking and Depot storage)

Appendix 1: Derivation of Average Use/Residential Customer

Derivation of Average Use/Residential Customer

CONCLUSION: The average use per residential customer is estimated to be 2,200 m^3/yr (84.85 GJ).

1. Methodology:

   Since detailed information for the Municipalities' housing stock and their heating and space heating energy usage is not available, the average use per customer will be estimated based on a comparison of Union Gas's residential customers' average use per customer, with adjustments to reflect differences in HDD[14] and equipment efficiencies and changing heat content of the natural gas stream. Note: Other differences such as building size, multi-unit vs single family dwellings and level of insulation may also influence actual consumption. The 10 year peak observed HDDs in this area was 49.8.

2. Union Residential Usage Factors
   - 2013 Forecast Annual Residential Consumption[15] 2,160 m^3
     - Equivalent Energy at 37.52 MJ/GJ[16] 81.0 GJ
     - Base load at 20% 16.2 GJ
     - Heat sensitive portion at 80% 64.8 GJ
   - 2013 Forecasted Average Furnace Efficiency Index[17] 0.865
   - Union North Average HDD[18] 4,626
3. Municipalities Residential Usage Factors
   - 25 Year Average HDD for Thunder Bay[19] 5502
   - Expected Furnace Efficiency Index[20] 0.950
4. Calculation
   - Adjustment for HDD (assuming 20% is base load) 5,502/4,626 = 1.189
   - Adjustment for Average Equipment Efficiency[21] 0.865/0.950 = 0.91
   - Average Use/Customer (64.8 x 1.189 + 16.2) x 0.91 = **84.85** GJ
   - Average Use at 2018 Heat Rate of 38.56 MJ/m3 2,200 m3

[14] Heating Degree Days
[15] EB-2011-0210 Ex C Tab 1 Page 24 Table 6
[16] http://www.tccustomerexpress.com/2881.html
[17] Ibid. page 15 Figure 2
[18] Ibid page 13 Table 5
[19] https://thunderbay.weatherstats.ca/charts/hdd-yearly.html (1994-2018)
[20] It is expected that conversions will either require the installation of a new state of the art high efficiency furnace or the conversion of an existing high efficiency furnace
[21] Assume that water heaters experience similar efficiency improvements

- This average use could range from 1,727 m^3 (65 GJ) for an average multi-unit dwelling to 2,303 m^3 (87 GJ) for a single family detached dwelling[22].

[22] Assuming 15% of the residential stock is multi-unit and that a multi-unit building uses about 75% of the gas a single family dwelling uses.

Appendix 2: Risk Analysis

Gas Supply Risk Analysis for North Shore Municipalities

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
1. Commodity Risk			
a. Price risk/Moderate	• Volatility in sales rates.	• QRAM proceedings naturally smooth out short-term volatility. The need for mitigation may be further obviated if the OEB moves to an annual rate adjustment mechanism (ARAM) for the cost of gas (EB-2017-0257), and • Work with natural gas agents to optimize pricing arrangements.	• Alberta natural gas prices have been much lower and much less volatile than at Dawn over the last decade. • The OEB has concluded in the past that hedging provided no material net benefit for customers.
b. Failure to deliver/Low	• Need to acquire replacement supplies.	• Purchase gas at a liquid hub to reduce the potential for failure as well as for ease of acquiring replacement supply if necessary, • Purchase from reputable sellers, • Downstream LNG storage at the LNG Plant and at the Depots could mitigate multiple days of interruption to allow time to acquire replacement supplies,	• Purchasing gas at a liquid hub reduces the risk as replacement supplies should be available. • Western Canadian production has been increasing, reducing supply risk. • Alberta storage is not seen as warranted at this time due to the added cost with limited benefits.

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
		• Reduce deliveries to demand response customer, and • Potential use of storage in Alberta.	
2. Pipeline Risk			
a. Pipeline failure/Low	• Low impact, as there are multiple parallel pipeline on the TransCanada system, as well as significant unutilized capacity. A failure of one line is expected to have little or no impact on firm deliveries.	• Utilize storage at the LNG Plant and at the Depots, which could mitigate several days of interruption to allow time to acquire replacement supplies, • Reduce deliveries to demand response customer, and • Replace supplies via Dawn.	• The TransCanada Mainline has experienced several failures over the last several decades, but there was little, if any, impact on customers.
b. TransCanada toll increase/Moderate	• An increase to distribution delivery rates.	• Participate in TransCanada tolls task force to influence toll changes.	• The TransCanada 100% load factor toll represents a small percentage of the burner tip cost of gas; therefore, a modest increase in tolls will not have a material impact.
c. Pipeline balancing fees	• Higher transportation costs if balancing costs are imposed.	• Monitor closely daily production against nominated volumes and either adjust production to match nomination or	

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
		re-nominate to minimize balancing costs.	
d. Unutilized demand charge (UDC)/Low	• Distribution delivery rates increase.	• Increase deliveries to demand response customer to extent possible, • Mitigated unused capacity to the extent possible by selling into the secondary market, and • Work with natural gas agents to facilitate UDC mitigation.	• The value of secondary capacity will vary throughout the year.
3. LNG Plant			
a. Extended Plant failure/Low	• Production curtailed.	• Utilize LNG Plant storage, • Utilize Depot storage, • Seek out the potential for replacement LNG supplies from alternate suppliers, • Reduce deliveries to demand response customer, and • Key replacement parts for critical items to be readily available.	• Utilize LNG Plant and Depot storage to bridge outages up to about 10 days. • Purchase replacement supplies for longer-term outages.
b. Power generator failure/Low	• Production curtailed.	• Utilize LNG Plant storage, • Utilize Depot storage,	• Turbine-powered generation is highly reliable; most failures

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
		• Reduce deliveries to demand response customer, • Identify potential sources of emergency replacement generation in event of prolonged failure, and • Seek out the potential for replacement LNG supplies from alternate suppliers if outage is prolonged.	can be remedied within 24 hours. • Emergency replacement power supplies can be accessed and be operational within 48 hours.
c. Price risk/Low		• Long-term liquefaction contract will establish price mechanism.	
d. Sabotage/Low	• Potential to interrupt production of LNG.	• Implement comprehensive security measures, • Utilize LNG Plant storage, • Utilize Depot storage, • Seek out the potential for replacement LNG supplies from alternate suppliers, and • Security sensors and video surveillance monitored 24x7.	• Plant is staffed 24x7

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
4. LNG Trucking			
a. Weather-related road closure/Moderate	• Unlikely able to deliver supplies until road opens.	• Utilize Depot storage, • Reduce deliveries to demand response customer, and • Reroute deliveries to Depots on alternate roads if available.	• No detailed road closure statistics available, but anecdotal information indicates that 3 days is maximum number of days of road closure for weather events. Wawa is however just north of an area where closures are more frequent, therefore assume the closures could be up to 5 days for Wawa. • Increase storage to account for a 1-day delay in deteriorating road conditions and a further 1 day after roads reopen to provide for full resumption of delivery schedule. • The total minimum Depot storage should be 7 days for Wawa and 5 days the other communities. The volume of a day's supply should be based on each community's

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
			respective design day requirements.
b. Road closure due to localized events (e.g., washouts)/Moderate	• Increased delivery time.	• Utilize Depot storage, • Reduce deliveries to demand response customer, and • Reroute deliveries to Depots on alternate roads if available.	
c. Mechanical failure on trucks/Moderate	• Temporary delivery reduction.	• Utilize Depot storage until replacement tractor available, • Reduce deliveries to demand response customer, and • Ensure contracting arrangements with shipping company provides for replacement tractors on short notice.	• Replacement tractors are readily available; any delays should be short term.
d. Incapacitation of trailer/Moderate		• Utilize Depot storage. • Reduce deliveries to demand response customer, and • Increase the number of trucking shifts to make up capacity shortfall.	

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
5. **Depot Storage**			
Mechanical failure/Low		• Have readily available replacement parts for critical items, and • Reduce deliveries to demand response customer.	
Sabotage/Low		• Reduce deliveries to demand response customer, • Ensure physical security at Depots, • Full remote monitoring, • Reduce visibility of sites with landscaping, and • Educating law enforcement agencies.	
6. Demand Forecast			
Demand less than forecast/Moderate	• Less LNG and upstream transportation required.	• Increase sales to demand response customer, and • Seek to assign upstream transportation to mitigate UDC.	• Demand less than forecast can arise due to warmer than normal weather or fewer attachments than expected.
Demand more than forecast/Low	• Higher peak day and annual load requirements.	• Existing supply chain is sufficient to manage greater than forecasted demands.	• Initial Depot storage that will be installed will be sufficient to meet the long-term community requirements. During the development period (first

Risk Factor/Probability	Impact of Risk Occurring	Risk Mitigation Measures	Comment
			11 years), it is expected that there will be Depot storage in excess of the market requirements. This excess storage will be sufficient to meet demands in excess of the forecast in the mid-term.

ECONOMIC FEASIBILITY

PROJECT COSTS

Total projected cost to construct the distribution network, including other project costs and contingency, is $40.5 million net of grants. The cost for the distribution piping was sourced from an Ontario supplier for polyethylene pipe as of July 2019.

The budgetary construction cost of the distribution system, including the service connections, were sourced from LTL Group and NPL Canada. These costs were then discussed with Cornerstone and refined based on their experience with these facilities.

Project costs for each community by category are presented in Table 1.

	Project Costs (in thousands of dollars)	**Column**					
		A	**B**	**C**	**D**	**E**	**F**
Row	**Description of Cost**	**Marathon**	**Schreiber**	**Terrace Bay**	**Wawa**	**Manitouwadge**	**Total**
1	Material Costs	315	183	200	245	190	1,134
2	Construction Costs	6,533	2,844	3,305	4,659	3,667	21,009
3	External Costs (e.g., Engineering, Environmental, Surveying, Inspection)	883	883	883	883	883	4,414
4	Other Project Costs (e.g., Project Management, Land, Approvals)	1,299	1,299	1,299	1,299	1,299	6,494
5	Contingency	3,057	1,547	1,735	2,289	1,875	10,502
6	Interest During Construction	80	80	80	80	80	400
7	**Total Project Costs**	12,167	6,836	7,503	9,454	7,993	43,954
8	Less NOHFC Grant	(691)	(691)	(691)	(691)	(691)	(3,454)
9	**Total Project Costs (Less Grant)**	11,476	6,145	6,812	8,764	7,303	40,500
	Note: Due to rounding, numbers presented may not add up precisely to the totals provided						

Table 1: Project Costs by Community Net of Grants

The construction costs of the distribution system reflect a full build-out of the distribution system to potential customers within the Municipalities. Annual additions of capital assets are assumed to be 0.1% of their initial asset value. Beginning in the fourth year once the initial construction phases are complete, the annual cost of all capital additions is $40,500. The cost of annual capital additions is expected to increase by 2% per year. The projected requirement for distribution pipe and services may be added in phases to accommodate load growth over several years.

ENERGY COST SAVINGS

Residential Energy Savings

As detailed in Tab 4, Schedule 3, the region's residents can reduce heating costs by converting from current alternative fuels to natural gas.

Table 1 summarizes total regional savings over 10-year and 40-year periods. The 10-year period is from September 2020 to August 2030 and the 40-year period is from September 2020 to August 2060. New attachments each year are assumed to come on-line during the summer construction season and the first-year loads are calculated as using one-third of typical annual consumption. The first year accounts for only the last 4 months of 2020 and the last year in the table, 2030, includes only the first 8 months of the year. It is presumed that average annual consumption will be 84.85 GJ and will fall over time with building efficiency improvements.[1] Total savings is based on 2020 rates and is not adjusted for inflation.

[1] The same rate of building efficiency improvements is assumed for each fuel type.

Year	Customers at Start of Year	New Customers	Average GJ/Year	Total Savings* (2020 Dollars)
2020		857	84.85	$ 418,021
2021	857	1,199	84.64	$ 1,834,307
2022	2,056	400	84.43	$ 3,187,694
2023	2,456	132	84.22	$ 3,630,928
2024	2,588	85	84.00	$ 3,790,388
2025	2,673	85	83.79	$ 3,903,747
2026	2,758	85	83.59	$ 4,016,515
2027	2,843	67	83.38	$ 4,120,068
2028	2,910	67	83.17	$ 4,205,867
2029	2,977	67	82.96	$ 4,291,210
2030	3,044	67	82.75	$ 2,917,401
			Total 10-Year Savings =	**$ 36,316,146**
			Total 40-Year Savings =	**$ 193,316,064**

*All savings are in 2020 dollars using the savings expected in the first year of service
**Only 2/3 of the 2030 total is included in Total 10-Year Savings

Table 1: 10-Year and 40-Year Total Savings for Residential Customers

After 40 years, residential customers in the five Municipalities are expected to have saved a total of $193.3 million in energy costs, in 2020 dollars. Total savings by community is broken down in Table 2.

Community	Conversions	10-Year Total Savings (2020 Dollars)	40-Year Total Savings (2020 Dollars)
Manitouwadge	554	$ 6,493,815	$ 34,567,511
Marathon	1007	$ 11,420,488	$ 60,792,899
Terrace Bay	417	$ 4,954,329	$ 26,372,607
Schreiber	496	$ 5,890,370	$ 31,355,285
Wawa	637	$ 7,557,144	$ 40,227,761
Total	**3111**	**$ 36,316,146**	**$ 193,316,064**

Table 2: 10-Year and 40-Year Residential Savings in Each Community

Total residential conversion costs are detailed in Table 3. It is assumed that those currently using "other" fuel will require installation of a new furnace and duct system so their conversion cost is assumed to be $12,500, the same as electric baseboard heating.

Current System	Average Conversion Cost	Number of Conversions	Total Conversion Cost (2020 Dollars)
Propane – Forced Air	$ 750	501	$ 375,750
Fuel Oil – Forced Air	$ 5,500	790	$ 4,345,000
Electricity – Forced Air	$ 5,500	881	$ 4,845,500
Electricity – Baseboard	$ 12,500	739	$ 9,237,500
Other	$ 12,500	200	$ 2,500,000
Total		**3,111**	**$ 21,303,750**

Table 3: Conversion Costs for Residential Customers

Accounting for conversion costs, residential customers can expect to spend about $21.3 million on conversion costs, in 2020 dollars, in the first 10 years. This results in a total net savings of $15 million for the residents of the Municipalities in the first 10 years. The total cost of conversions in the first 40 years is expected to be $27.7 million resulting in a total net savings of $165.6 million in the first 40 years for residential customers. Much of this money, which would have otherwise been spent on energy, will be saved or spent within the communities. The increased economic activity of this spending will benefit businesses across the region.

Commercial and Institutional Energy Savings

Commercial and Institutional customers can save a significant share of their energy costs by converting to natural gas, as explained in Tab 4, Schedule 3. Table 4 summarizes the total regional savings for commercial and institutional customers over the first 10 years and first 40 years of operation.

Year	Customers at Start of Year	New Customers	Total Savings (2020 Dollars)*
2020		68	$ 338,546
2021	68	81	$ 1,167,192
2022	149	59	$ 1,585,996
2023	208	44	$ 1,872,551
2024	252	30	$ 2,078,959
2025	282	14	$ 2,205,822
2026	296	14	$ 2,275,057
2027	310	14	$ 2,343,932
2028	324	14	$ 2,412,449
2029	338	5	$ 2,464,726
2030	343	5	$ 1,656,663
		10-Year Total Savings =	$ 20,401,894
		40-Year Total Savings =	$ 100,643,696

*All savings are in nominal dollars using the savings expected in the first year of service
**Only 2/3 of the 2030 total is included in 10-Year Total Savings

Table 4: 10-Year and 40-Year Savings for Commercial and Institutional Customers

Over the first 40 years of operation, the Municipalities' commercial and institutional customers are expected to save approximately $100.6 million in their energy costs, in 2020 dollars. Commercial and Institutional conversion costs would vary greatly based on the current fuel use and building specifications of each customer. These costs are not forecast here, but it is expected that energy cost savings would materially outweigh conversion costs.

Converting to natural gas would help the Municipalities' businesses and institutions reduce overall costs. This would make the commercial customers more competitive and could attract new businesses to the region.

Total Combined Energy Savings

Table 5 summarizes total 10-year and 40-year projected energy savings for the Municipalities for residential and General Service customers, not including conversion costs.

Year	10-Year Total Savings	40-Year Total Savings*
Residential	$ 36,316,146	$ 193,316,064
General Service	$ 20,401,894	$ 100,643,696
Total	**$ 56,718,040**	**$ 293,959,760**
*All savings are in nominal dollars using the savings expected in the first year of service.		

Table 5: 10-Year and 40-Year Total Savings Summary

OPERATIONS, MAINTENANCE AND ADMINISTRATIVE COSTS

The following table presents the projected annual operations, maintenance and administration (OM&A) costs for the Project for the first year of operation.

Operations, Maintenance and Administration	
Expenses	
Integrity Management	$ 29,000
Meter Reading	$ 10,600
Billing and Accounting	$ 15,000
Marketing & Sales	$ 26,530
Fleet & Maintenance	$ 27,700
Insurance	$ 131,000
Office Supplies	$ 28,000
Rent	$ 39,000
OnCall System	$ 2,100
Donations	$ 5,300
Regulatory Commission Expense	$ 106,000
Professional Fees	$ 53,000
Management Fees	$ 106,000
Locates	$ 10,777
Warehouse	$ 13,4458
Bad Debts	$ 10,000
SCADA Assistance	$ 10,600
Heaters	$ 9,089
Subtotal	**$ 633,144**
Employee Expenses	
General Management	$ 160,000
Gas Technicians	$ 331,000
Office Managers	$ 61,500
Customer Service	$ 47,500
Benefits	$ 94,200
Incentive	$ 23,771
Contingency	$ 74,000
Subtotal	**$ 791,971**
Total OM&A	**$ 1,425,115**

Table 1: Projected Annual OM&A Costs for Year 1

Annual OM&A costs are expected to total $1,425,115 during the first year of operation. This total includes salaries and benefits for six employees: a general manager, an office manager, three gas technicians and a customer service representative. Salaries and benefits account for $791,971 of total OM&A costs.

NORTHERN ONTARIO HERITAGE FUND CORPORATION SUPPORT

The mandate of the Northern Ontario Heritage Fund Corporation (NOHFC) is to promote and stimulate economic development initiatives in Northern Ontario by providing financial assistance to projects that stabilize, diversify and foster the economic growth and diversification of the region.

In 2016, the Municipalities obtained funding from the NOHFC to help complete a feasibility study to assess the tangible economic and social benefits and capacity building opportunities that would result if the North Shore had expanded access to natural gas. This study concluded that access to natural gas would bring significant benefits to the North Shore communities. The study is included as Tab 9, Schedule 4, Attachment 1.

Based on the positive results of this study, the Municipalities applied for a grant under the NOHFC Strategic Economic Infrastructure Program, which helps a region or community advance economic development opportunities and support investment through strategic infrastructure. The Municipalities applied for this grant to fund the following activities for the North Shore LNG Project:

- Detailed Engineering and Design
- Regulatory approvals
- Project Management and Administration

In March 2018, the NOHFC approved a grant of $3.45 million to the Municipalities (see letter, Tab 9, Schedule 4, Attachment 2).

NORTH SHORE NATURAL GAS DISTRIBUTION PLAN

Providing significant economic and environmental benefits for Northern Ontario residents and businesses

Marathon — Built on Paper • Laced with Gold — Ontario • Canada

Schreiber — Est. 1901

Manitouwadge — Ontario • Canada

Terrace Bay

The Corporation of the Municipality of Wawa

WHY NATURAL GAS?

Natural gas is North America's lowest cost and cleanest fossil fuel. While customers in more urban and more populated parts of Ontario can count on natural gas for heating needs, less than 20% of Ontario's rural and Northern homes and businesses have the same opportunity.

Primary space heating and water heating sources in communities located on the North Shore of Lake Superior are limited to propane, fuel oil, wood and electricity. The high capital cost of constructing pipelines has prevented thousands of homes and businesses from accessing the benefits of natural gas.

The North Shore communities of Marathon, Schreiber, Terrace Bay, Wawa and Manitouwadge (the Municipalities) have partnered with the *Northern Ontario Heritage Fund Corporation (NOHFC) and Northeast Midstream* to assess the engineering, environmental and economic feasibility of developing a regional natural gas delivery system.

Cornerstone Engineering Services, Inc., based in Massachusetts, and *Elenchus Research Associates* of Toronto were selected as lead consultants, following a request for proposals. •

WHAT ARE THE BENEFITS?[1]

Expanding natural gas service to the North Shore will:

- **Mobilize a capital investment of $65 million in local distribution infrastructure, plus upstream investments to supply natural gas to the Municipalities**
- **Save Northern residents and businesses $247 million on energy bills over 40 years (2018 dollars)**
- **Cut greenhouse gas (GHG) emissions by 17,000 tonnes CO2e per year, equivalent to removing 3,591 passenger vehicles from the road**
- **Contribute $73 million towards the GDP of Ontario, comparable to creating 704 full-time equivalent (FTE) positions**

Financial support from the Province of Ontario's Natural Gas Access Loan program is required to provide the lowest possible rates to consumers and maximize energy savings.

Direct-to-consumer incentives from the Natural Gas Economic Development Grant program will accelerate and improve the economic and environmental benefits for North Shore residents and businesses. •

[1] All figures are estimates only and correspond to the Reference Case developed by Cornerstone Engineering Services and Elenchus Research Associates. Capital costs do not include the upstream costs to supply natural gas to the Municipalities (i.e., upstream pipeline charges, liquefaction and trucking). Comparative benefits are based on current commodity prices. Forecasted rates are dependent on obtaining financial support from the Province of Ontario and approval from the Ontario Energy Board.

ECONOMIC & ENVIRONMENTAL BENEFITS

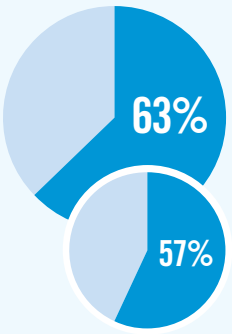
Elenchus Research Associates evaluated the potential for customers in the region to convert to natural gas, determined the potential aggregate demand for the Project, and quantified the economic and environmental feasibility of developing the Project.

Telephone market surveys were completed in April and May 2016, finding widespread support for the Project.

Residential customers are expected to save on average 36% to 61% annually before the cost of converting their space heating and water heating equipment, while commercial and institutional customers are expected to save on average 35% to 50% annually.

The expected savings is $247 million for residential, commercial and institutional customers over 40 years.[2] •

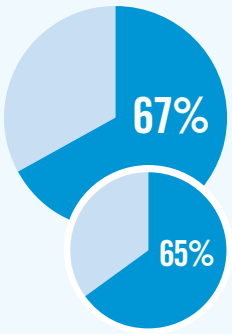
RESIDENTIAL



57% expected to convert

63% expected to convert (with grant available to assist with conversion)

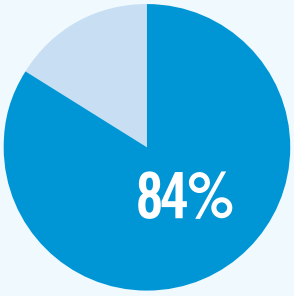
COMMERCIAL



65% expected to convert

67% expected to convert (with grant available to assist with conversion)

INSTITUTIONAL



84% expected to convert

NUMBER OF POTENTIAL CUSTOMERS

5,028 RESIDENTIAL CUSTOMERS

551 COMMERCIAL / INSTITUTIONAL CUSTOMERS

1 LARGE INDUSTRIAL CUSTOMER

AVERAGE EXPECTED SAVINGS PER RESIDENTIAL CUSTOMER

Propane Users	$1,023/yr
Fuel Oil Users	$827/yr
Electricity Users	$2,305/yr

[2] Energy savings for the one industrial customer are not included in this analysis, and would therefore be incremental to the values stated herein.

EXPECTED ENERGY SAVINGS OVER 40 YEARS[3]

Expected Energy Savings by Municipality	Savings ($ Millions)
Manitouwadge	$34.5
Marathon	$62.5
Terrace Bay	$29.4
Schreiber	$25.4
Wawa	$29.6
Subtotal (Residential)	**$181.4**
Commercial & Institutional	**$65.3**
Total	**$246.7**

Net savings to the residential customers is estimated to be $161 million over 40 years, as $20 million of the $181 million is expected to be spent locally on contractors and service providers related to energy conversion. Conversion costs for commercial and institutional customers requires further study and would be unique to each customer.

Typical Residential Conversion Costs

Heating Type	$ Per Customer
Propane	$500 to $1,000
Fuel Oil & Electric Forced Air	$5,000 to $6,000
Electric Baseboard	$10,000 to $15,000
Water Heater	$2,000 to $2,500

Conversion to natural gas is expected to reduce overall GHG emissions by 17,000 tonnes of CO2e per year from the Municipalities. This is equivalent to removing 3,591 passenger vehicles from the road.

Cap and trade legislation recently passed by the Ontario government will impact the price that customers pay for all fossil fuels across the province. As of January 1, 2017, natural gas rates will increase to cover the cost of acquiring emission allowances. However, these increases will be less than the anticipated cost increases for propane and fuel oil because of the lower carbon intensity of natural gas, making natural gas even more economical.

The Project is expected to contribute $73 million towards the GDP of the Province of Ontario. This is equivalent to 704 full-time equivalent (FTE) positions, with 276 FTEs located within the North Shore region and 428 FTEs located elsewhere in the province.[4] •

Full-Time Equivalent (FTE) Positions Created by the Project

	North Shore	Ontario	Total
Direct	96	128	224
Indirect	112	190	302
Induced	68	110	178
Total	**276**	**428**	**704**

[3] Energy savings are in 2018 dollars and reflect the financial benefit based on the recent price differential between the weighted average cost of alternate fuels and natural gas, assuming the proposed 2018 natural gas distribution rate.
[4] Direct economic impacts of the Project will come from wages and revenues; indirect impacts will be derived from the economic activity of other industries, such as companies selling materials and equipment used for the Project; and the induced impacts will result from overall increased spending in the Municipalities.

HOW WILL IT WORK?

Cornerstone Engineering Services, Inc. developed the system designs and capital cost estimates for the local natural gas distribution system for each of the Municipalities.

Liquefied natural gas (LNG) was chosen as the optimal gas supply solution for the Municipalities, replacing the need for a costly lateral pipeline from the TransCanada Mainline to the Municipalities. LNG will be sourced from a regional facility that will cool natural gas to -162°C, converting it into a liquid for safe and efficient transportation to the Municipalities by truck.

When there is demand for energy, locally stored LNG will be converted to natural gas and sent through an underground distribution system at a desired pipeline temperature and pressure to homes and businesses within the service area.

The proposed system design is the same for all five Municipalities, and features high-density polyethylene distribution mains, service pipes and customer meters as well as on-system LNG storage tanks and associated vaporization systems.

Gas delivery within the Municipalities will utilize the most modern materials, construction techniques and safety protocols, providing a level of reliable gas service comparable to that of communities supplied by lateral pipelines.

Representatives of the Municipalities were engaged to collect information related to appropriate land use, development patterns, growth projections, traffic concerns, local permitting, and land availability.

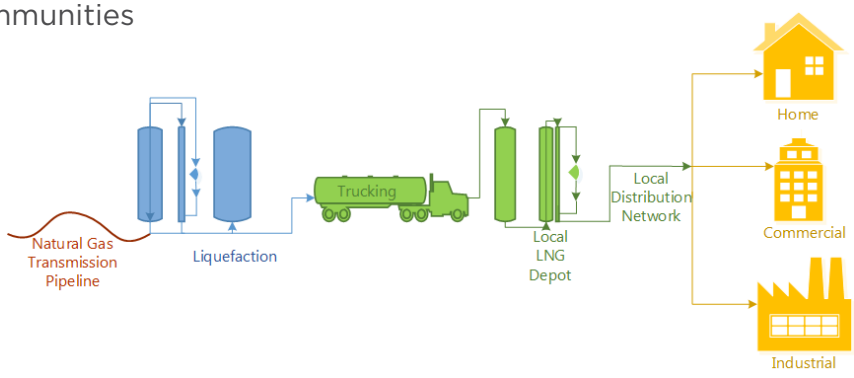
A full Environmental Constraints Analysis was completed by *Stantec Consulting Limited* to characterize critical issues associated with the project and to identify potential permitting and authorization requirements.

A First Nations Engagement Background Study was undertaken by *AMICK Consultants Limited* as a preliminary step prior to approaching potentially interested parties.

No engineering, environmental or economic limitations were found that would preclude the development of the Project within the Municipalities.

A preliminary project schedule was established. Residential, commercial and institutional customers in the Municipalities could begin accessing natural gas by the winter heating season of 2018-19. To achieve this in-service date, it is critical that detailed engineering design begin by January 2017 and all necessary permits and approvals, including a leave-to-construct order from the Ontario Energy Board, are received by December 2017. •

Proposed natural gas delivery model for the Municipalities located on the North Shore of Lake Superior



NORTH SHORE
NATURAL GAS DISTRIBUTION PLAN

The Northern Ontario municipalities of Marathon, Schreiber, Terrace Bay, Wawa and Manitouwadge have a combined population of 11,000, and are located on the North Shore of Lake Superior, along the Highway 17 corridor between Thunder Bay and Sault Ste. Marie.

Ontario
Northern Ontario Heritage Fund Corporation
Société de gestion du Fonds du patrimoine du Nord de l'Ontario

The Northern Ontario Heritage Fund Corporation (NOHFC) is a crown corporation and development agency of the Ontario government. Since 2003, Ontario has committed nearly $1.1 billion through the NOHFC to 7,207 projects, leveraging more than $3.8 billion in direct economic activity and creating or sustaining over 27,600 jobs in Northern Ontario.

Northeast Midstream

Northeast Midstream LP is an Ontario-based energy partnership focused on expanding natural gas service to communities and industries not currently served by the traditional pipeline delivery model.

CONTACT

Daryl Skworchinski
Chief Administrative Officer/Clerk
Town of Marathon
Email: cao@marathon.ca
Tel: +1 (807) 229-1340 x2222

Joshua Samuel
President and CEO of the General Partner
Northeast Midstream LP
Email: info@northeastmidstream.com
Tel: +1 (416) 848-1165

nohfc

Suite 200, Roberta Bondar Place, 70 Foster Drive, Sault Ste. Marie, Ontario P6A 6V8
Tel: 1 705 945-6700 or 1 800 461-8329 @nohfc nohfc.ca

sgfpno

Place Roberta Bondar, 70, promenade Foster, bureau 200, Sault Ste. Marie (Ontario) P6A 6V8
Tél: 1 705 945-6700 ou 1 800 461-8329 @sgfpno sgfpno.ca

NOHFC File # 8100372

March 23, 2018

Daryl Skworchinski
CAO/Clerk
Town of Marathon
4 Hemlo Drive
PO Box TM
Marathon ON P0T 2E0

Dear Daryl Skworchinski,

I am pleased to advise that the Northern Ontario Heritage Fund Corporation (NOHFC) has approved a conditional contribution in an amount not to exceed three million four hundred and fifty three thousand four hundred and forty three dollars ($3,453,443) to assist with the development of your project – North Shore Gas Distribution – FEED+.

This funding is conditional upon meeting NOHFC's legal and contractual requirements. NOHFC staff will contact you in the near future regarding those matters.

Ministry staff will contact you in the near future to arrange the details for the official announcement. Until then, we ask that you refrain from publicly referencing or announcing your project approval.

On behalf of the Board of Directors, please accept my best wishes.

Sincerely,

Michael Gravelle, MPP
Chair, Northern Ontario Heritage Fund
Minister of Northern Development and Mines

ENVIRONMENTAL MATTERS

INTRODUCTION

Stantec Consulting Ltd. ("Stantec") was retained by the Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa ("the Municipalities") to undertake a route and liquefied natural gas ("LNG") storage depot evaluation and environmental and socio-economic impact study, which included a cumulative effects assessment. The purpose of the study and route and LNG storage depot evaluation is to help aid in the selection of the preferred pipeline route and preferred LNG storage depot location that minimizes the potential environmental and socio-economic impacts that the Project could have on the environment.

Mitigation measures designed to minimize environmental and community impacts were also developed as part of the study. The study results have been documented in the Environmental Reports ("ERs"), one for each Municipality, included in this exhibit. The ERs conform to the Ontario Energy Board Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (Seventh Edition, 2016).

The ERs are provided in Tab 10, Schedule 1, Attachment 1 and have been filed with the Ontario Energy Board under separate cover due to the size of the reports.

For ease of reference, the ERs by Stantec can be found at the following link:
https://northshorenaturalgas.com/environmental-reports

The ERs were submitted to the Ontario Pipeline Coordinating Committee (OPCC) on 2 August 2019. Committee members are listed in Tab 10, Schedule 1, Attachment 2. The letters sent to OPCC members about the ERs are found at Tab 10, Schedule 1, Attachment 3.

ENVIRONMENTAL REPORTS

BY STANTEC CONSULTING LTD.

The Environmental Reports (ERs) prepared by Stantec Consulting Ltd. for each of the five Municipalities have been filed with the Ontario Energy Board under separate cover due to the size of the reports.

For ease of reference, the ERs can be found at the following link:

https://northshorenaturalgas.com/environmental-reports

The five reports are as follows:

- Attachment 1a – Marathon ER
- Attachment 1b – Manitouwadge ER
- Attachment 1c – Schreiber ER
- Attachment 1d – Terrace Bay ER
- Attachment 1e – Wawa ER

LIST OF OPCC MEMBERS- July 30, 2019

Ms. Zora Crnojacki Ontario Energy Board P.O. Box 2319 2300 Yonge Street, 26th Floor Toronto, ON M4P 1E4 Tel: 416-440-8104 Fax: 416-440-7656 Zora.Crnojacki@oeb.ca	**Mr. Arthur Churchyard** **Ministry of Agriculture, Food and Rural Affairs** 1 Stone Road West, 3rd floor SE Guelph ON N1G 4Y2 Tel: 519-826-3380 Arthur.Churchyard@ontario.ca
Ms. Laura Hatcher **Team Lead, Heritage** **Ministry of Tourism, Culture & Sports** 401 Bay Street Toronto ON M7A 0A7 Tel:416-314-3108 Laura.e.hatcher@ontario.ca	**Mr. Tony Difabio** **Ministry of Transportation** 301 St. Paul Street, 2nd floor St. Catharines ON L2R 7R4 Tel: (905) 704-2656 Tony.difabio@ontario.ca
Mr. Kourosh Manouchehri **Technical Standards and Safety Authority** 345 Carlingview Drive Toronto, ON M9W 6N9 Tel: (416) 734-3539 Fax: (416) 231-7525 kmanouchehri@tssa.org	**Ms. Sally Renwick** Team Lead, Environmental Planning **Ministry of Natural Resources and Forestry** Land Use and Environmental Planning Section Policy and Planning Coordination Branch 300 Water Street, Peterborough ON K9J 8M5 Tel: 705-755-5195 Fax: 705-755-1971 sally.renwick@ontario.ca
Mr. Ross Lashbrok Manager, Community Planning and Development **Ministry of Municipal Affairs and Housing** 777 Bay Street, 13th floor Toronto ON M5G 2E5 Tel: 416-585-6063 ross.lashbrok@ontario.ca **Responsible for Halton, York, Durham, Toronto, the Region of Niagara, City of Hamilton, Dufferin County, and the District of Muskoka.**	Manager, Planning Projects, Ministry of Municipal Affairs and Housing **Central Municipal Services Office**, 777 Bay St, 13th Floor Toronto ON M5G 2E5, Tel:416-585-6583 **Responsible for County of Simcoe, Region of Peel and Parkway Belt.**

Mr. Scott Oliver **Western Municipal Services Office** **Ministry of Municipal Affairs and Housing** 659 Exeter Rd 2nd Floor London ON N6E 1L3 Tel: 519-873-4033 scott.oliver@ontario.ca	**Mr. Michael Elms** Manager, Community Planning and Development, **Ministry of Municipal Affairs and Housing** **Eastern Municipal Services Office** Rockwood House, 8 Estate Lane Kingston ON K7M 9A8 Tel: 613-545-2132 michael.elms@ontario.ca
Ms. Bridget Schulte-Hostedde Manager, Community Planning and Development **Ministry of Municipal Affairs and Housing, Municipal Services Office – North (Sudbury)** 159 Cedar St, Suite 401 Sudbury ON P3E 6A5 Tel: 705-564-681 bridget.schulte-hostedde@ontario.ca	Manager, Community Planning and Development **Ministry of Municipal Affairs and Housing** **Municipal Services Office – North (Thunder Bay)** 435 James St S, Suite 223 Thunder Bay ON P7E 6S7 Tel: 807-475-1665
	Ms. Shannon McCabe Senior Advisor Indigenous Energy Policy Unit Ministry of Energy Northern Development and MInes 6th Floor, 77 Grenville Street Toronto, Ontario M7A 2C1 Tel.:416-212-6704 shannonmccabe@ontario.ca
	Ministry of Environment, Conservation and Parks (MECP) **Regional Contact – Northern** **Ms. Paula Allen** Supervisor, APEP 199 Larch Street, Suite 1101 Sudbury ON P3E 5P9 Tel: (705) 564-3273 Fax: (705) 564-4180 email: paula.allen@ontario.ca

MECP **Regional Contact – Eastern** **Ms. Ruth Orwin** Supervisor, APEP P.O. Box 820 133 Dalton Ave. Kingston ON K7L 4X6 Tel: (613) 549-4000 Fax: (613) 548-6908 email: ruth.orwin@ontario.ca	**MECP** **Regional Contact – Southwestern** **Ms. Crystal Lafrance** Air, Pesticides and Environmental Planning Supervisor 733 Exeter Road, London ON N6E 1L3 Tel: (519) 873-5055 Fax: (519) 873-5020 crystal.lafrance@ontario.ca
MECP **Regional Contact – West Central** Ms. Natalie Stacey Supervisor, APEP 119 King St. West, 12th Floor Hamilton ON L8P 4Y7 Tel: (905) 521-7639 Fax: (905) 521-7820 email Natalie.Stacey@ontario.ca	**MECP** **Regional Contact – Central** **Mr. Paul Martin** Supervisor, APEP Ministry of the Environment 5775 Yonge Street, 8th Floor North York ON M2M 4J1 Tel: (416) 326-4835 Fax: (416) 325-6345 email: Paul.Martin@ontario.ca
Infrastructure Ontario **Mr. Patrick Grace** 1 Dundas Street West Suite 2000 Toronto, ON M5G 2L5 Patrick.Grace@infrastructureontario.ca	**Ministry of Economic Development, Job Creation and Trade** **Mr. Joseph Vecchiolla** Joseph.Vecchiolla@ontario.ca 777 Bay Street, 4th Floor, Suite 425 Toronto, Ontario, M5G 2E5 Tel: 416-325-1561 Fax 416-212-4941

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Zora Crnojacki, Ontario Pipeline Coordinating Committee
Project Advisor, Applications and Regulatory Audit
2300 Yonge Street, 26th Floor, PO Box 2319
Toronto ON M4P 1E4
zora.crnojacki@ontarioenergyboard.ca

Dear Zora Crnojacki,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Arthur Churchyard, Ontario Pipeline Coordinating Committee
1 Stone Road West, 3rd Floor SE
Guelph ON N1G 4Y2
arthur.churchyard@ontario.ca

Dear Arthur Churchyard,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Laura Hatcher, Ontario Pipeline Coordinating Committee
Team Lead, Heritage
401 Bay St, Suite 1700
Toronto ON M7A 0A7
laura.e.hatcher@ontario.ca

Dear Laura Hatcher,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Tony DiFabio, Ontario Pipeline Coordinating Committee
Senior Planner and Policy Advisor, Corridor Management and Property Office
301 St Paul Street, 2nd Floor
St. Catharines ON L2R 7R4
tony.difabio@ontario.ca

Dear Tony DiFabio,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Kourosh Manouchehri, Ontario Pipeline Coordinating Committee
345 Carlingview Drive
Toronto ON M9W 6N9
kmanouchehri@tssa.org

Dear Kourosh Manouchehri,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Sally Renwick, Ontario Pipeline Coordinating Committee
Team Lead, Environmental Planning
300 Water Street
Peterorough ON K9J 8M5
Sally.Renwick@ontario.ca

Dear Sally Renwick,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Bridget Schulte-Hostedde, Ontario Pipeline Coordinating Committee
Manager, Community Planning and Development, Municipal Services Office - North (Sudbury)
159 Cedar Street, Suite 401
Sudbury ON P3E 6A5
bridget.schulte-hostedde@ontario.ca

Dear Bridget Schulte-Hostedde,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Paula Allen, Ontario Pipeline Coordinating Committee
Supervisor, Air, Pesticides and Environmental Planning - Northern
199 Larch Street, Suite 1101
Sudbury ON P3E 5P9
paula.allen@ontario.ca

Dear Paula Allen,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Shannon McCabe, Ontario Pipeline Coordinating Committee
Senior Advisor, Indigenous Energy Policy Unit
77 Grenville Street, 6th Floor
Toronto ON M7A 2C1
shannon.mccabe@ontario.ca

Dear Shannon McCabe,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Patrick Grace, Ontario Pipeline Coordinating Committee
1 Dundas Street West, Suite 2000
Toronto ON M5G 2L5
patrick.grace@infrastructureontario.ca

Dear Patrick Grace,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

August 2, 2019
File: 160951098

Joseph Vecchiolla, Ontario Pipeline Coordinating Committee
Policy Lead, Realty Policy Branch
777 Bay Street, 4th Floor, Suite 425
Toronto ON M5G 2E5
joseph.vecchiolla@ontario.ca

Dear Joseph Vecchiolla,

Reference: The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa – Environmental Report: The North Shore LNG Project

The Municipalities of Manitouwadge, Marathon, Schreiber, Terrace Bay and Wawa (the Municipalities) are proposing to construct natural gas storage facilities (above ground storage tanks and associated vaporization systems), as well as local natural gas distribution systems (gas mains and laterals) to service businesses and residents in each community for the five municipalities of the North Shore. The North Shore LNG Project ("the Project") will include the construction of an LNG storage depot and natural gas distribution networks (made up of small mains/laterals ranging in Nominal Pipe Size 2" to 6" in size, depending on specific loads).

The Municipalities have retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the proposed LNG storage depot and local gas distribution systems. The environmental study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*. If requested, a hard copy of the Environmental Report (ER), summarizing the results of the environmental study, can be sent for your review.

Please forward any comments you may have regarding the ER and project to Ms. Zora Crnojacki, Chairperson, Ontario Pipeline Coordination Committee, Ontario Energy Board, 2300 Yonge Street, 26th Floor, P.O. Box 2319, Toronto, ON M4P 1E4, Zora.Crnojacki@oeb.ca and the undersigned. Your comments would be appreciated by October 1, 2019.

Regards,

Stantec Consulting Ltd.

Rooly Georgopoulos
Senior Associate, Senior Project Manager
Assessment and Permitting
Phone: 905-415-6367
Rooly.Georgopoulos@stantec.com

Attachment: North Shore LNG Pipeline Project: Township of Manitouwadge, Environmental Report
North Shore LNG Pipeline Project: Town of Marathon, Environmental Report
North Shore LNG Pipeline Project: Township of Schreiber, Environmental Report
North Shore LNG Pipeline Project: Township of Terrace Bay, Environmental Report
North Shore LNG Pipeline Project: Municipality of Wawa, Environmental Report

LAND MATTERS

INTRODUCTION TO LAND MATTERS

The location of the LNG Depots and distribution piping for the five Municipalities are shown in Tab 13, Schedule 1, Attachment 3. The Municipalities have resolved to sell or lease the required land for the LNG Depots to the Utility, which will then sell or lease the land to Nipigon LNG. Nipigon LNG will then build the LNG Depots on the acquired land. To view the related by-laws, resolutions or letters of intent, see Tab 11, Schedule 1, Attachment 1. The standard land-sale agreement is shown in Tab 11, Schedule 1, Attachment 2, and the standard land-lease agreement is shown in Tab 11, Schedule 1, Attachment 3.

The distribution piping follows the public road allowance. If easements are determined to be required, they will be obtained using the standard easement agreement shown in Tab 11, Schedule 1, Attachment 4.

Temporary working areas may be required along the route where the road allowance is too narrow or confined to facilitate construction. These areas will be identified with the assistance of the contractor that will perform the construction. Agreements for temporary working rights will be negotiated where required. The standard Working Area Agreement can be found in Tab 11, Schedule 1, Attachment 5, and will be used for securing temporary working agreements.

Public consultations regarding land matters are addressed in Tab 11, Schedule 2.

The Corporation of the Town of Marathon
4 Hemlo Drive, P.O. Bag TM
Marathon, Ontario P0T 2E0
cao@marathon.ca
Phone: (807) 229-1341
Fax: (807) 229-1999
www.marathon.ca

OFFICE OF THE MAYOR
OFFICE OF THE CAO/CLERK
File No. Northshore LNG

July 29, 2019

Attention: The Ontario Energy Board (OEB)

To whom it may concern,

Re: Lease of Property for the North Shore LNG Project

On behalf of the Corporation of the Town of Marathon, this letter confirms the intent of the Town of Marathon to lease municipally-owned Property for the purposes of constructing a re-gasification plant and distribution system as part of our plan to construct a liquid natural gas distribution business (the "North Shore LNG Project").

Please accept this letter of intent with respect to the provision of Property in the Municipality of Marathon surveyed on May 28, 2018 and registered with the Ontario Land Registrar on June 21, 2018, described as follows:

Plan 55R-14451
Parts of Lots 19 & 20
Concession 10
PINS 62448-2009 & 62448-2011

A legally enforceable definitive lease agreement will be completed in 2019.

Yours Truly,

The Town of Marathon
Per:

Rick Dumas
Mayor

Daryl Skworchinski
CAO/Clerk/Director of Economic Development

We have authority to bind the Corporation

THE CORPORATION OF THE TOWNSHIP OF SCHREIBER

BYLAW 23-2019

BEING A BYLAW TO AUTHORIZE THE LEASE OF PROPERTY, SPECIFICALLY, 321 WALKER LAKE RD. PRISKE PT MC TB37565 AND TB37566 AND RP 55R14312 PART 1

WHEREAS The Municipal Act, S.O. 2001, c. 25, Section 8 states that the power of a municipality under this or any other Act shall be interpreted broadly so as to confer broad authority on the municipality to enable the municipality to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues;

AND WHEREAS Section 9 of the Act states that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS subsection 5 (1) of the Municipal Act, S.O. 2001, c. 25, as amended, provides that the powers of a municipality shall be exercised by Council; and,

AND WHEREAS subsection 5 (3) of the Municipal Act, S.O. 2001, c. 25, as amended, requires that all municipal powers, including natural person powers shall be exercised by Bylaw;

NOW THEREFORE the Council of the Corporation of the Township of Schreiber enacts as follows:

1. THAT the Mayor and Clerk of the Corporation of the Township of Schreiber are hereby authorized and empowered to sign all legal documents for the lease of the land located at 321 Walker Lake Rd. PRISKE PT MC TB37565 AND TB37566 AND RP 55R14312 PART 1.

2. THAT this Bylaw shall come into force and take effect upon the final passing hereof.

READ A FIRST AND SECOND TIME THIS 28th DAY OF MAY, 2019.

READ A THIRD TIME AND FINALLY PASSED THIS 11th DAY OF JUNE, 2019.

Mayor

Clerk

3. (a). C.A.O. Update – LNG Project – Letter of Intent
The Corporation of the Township of Terrace Bay
July 22, 2019
Resolution CR ____- 2019

Moved by: Councillor Rick St Louis

Seconded by: Councillor _____

BE IT RESOLVED THAT the purchase of a piece of property for the purposes of constructing a re-gasification plant and distribution system as part of our plan to construct a liquid natural gas distribution business (the "North Shore LNG Project") is currently being negotiated with a private landowner. In the event an agreement cannot be reached, this letter will be an expression of intent on behalf of the Township of Terrace Bay to authorize the lease of municipal property for the purposes of constructing a liquified natural gas depot and the associated distribution system.

Carried: ✓

Defeated: _____

Mayor: _____

The Corporation of the Township of Terrace Bay
P.O. Box 40, 1 Selkirk Avenue, Terrace Bay, ON, P0T 2W0
Phone: (807) 825-3315 **Fax:** (807) 825-9576

July 22, 2019

Attention: The Ontario Energy Board (OEB)

To whom it may concern:

Re: Purchase/Lease of Property for the North Shore LNG Project

On behalf of the Township of Terrace Bay, I confirm that the Township is currently in negotiations with a private land owner regarding the purchase of a piece of property for the purposes of constructing a re-gasification plant and distribution system as part of our plan to construct a liquid natural gas distribution business (the "North Shore LNG Project"). This letter confirms our intent to finalize the land purchase/lease agreement between our parties in the coming months for the purposes of executing this project.

In the event that an agreement with the private landowner cannot be reached, this letter is an expression of intent on behalf of the Township of Terrace Bay to authorize the lease of municipal property for the purposes of constructing a liquified natural gas depot and the associated distribution system.

Please accept this letter of intent with respect to the provision of Property in the Municipality of Terrace Bay to support the application for the North Shore LNG Project. A legally enforceable definitive agreement will be completed once negotiations are finalized in 2019.

Yours truly,

THE CORPORATION OF THE
TOWNSHIP OF TERRACE BAY

Per:

George "Jody" Davis
Mayor

Jonathan Hall
Chief Administrative Officer/Clerk

The Corporation of the Municipality of Wawa

REGULAR COUNCIL MEETING

RESOLUTION

Tuesday, May 21, 2019

Resolution # RC19137	**Meeting Order: 12**
Moved by: Bill Chiasson	**Seconded by:** Pat Tait

RESOLVED THAT the Council of The Corporation of the Municipality of Wawa does hereby confirm its intent to sell or lease lands in the Wawa Industrial Park, Phase 3, being proposed Lots H and I (see attached diagram), to Marathon Economic Development Corporation (for and on behalf of an entity to be formed or corporation to be incorporated) for a Liquefied Natural Gas depot;

AND BE IT FURTHER RESOLVED that staff be directed to prepare a by-law for the sale of land for the next Regular meeting of Council of Tuesday, June 4, 2019.

RESOLUTION RESULT	RECORDED VOTE			PECUNIARY INTEREST
☑ CARRIED	MAYOR AND COUNCIL	YES	NO	
☐ DEFEATED	Ron Rody			
☐ TABLED	Bill Chiasson			
☐ RECORDED VOTE (SEE RIGHT)	Mitch Hatfield			
☐ PECUNIARY INTEREST DECLARED	Robert Reece			
☐ WITHDRAWN	Pat Tait			

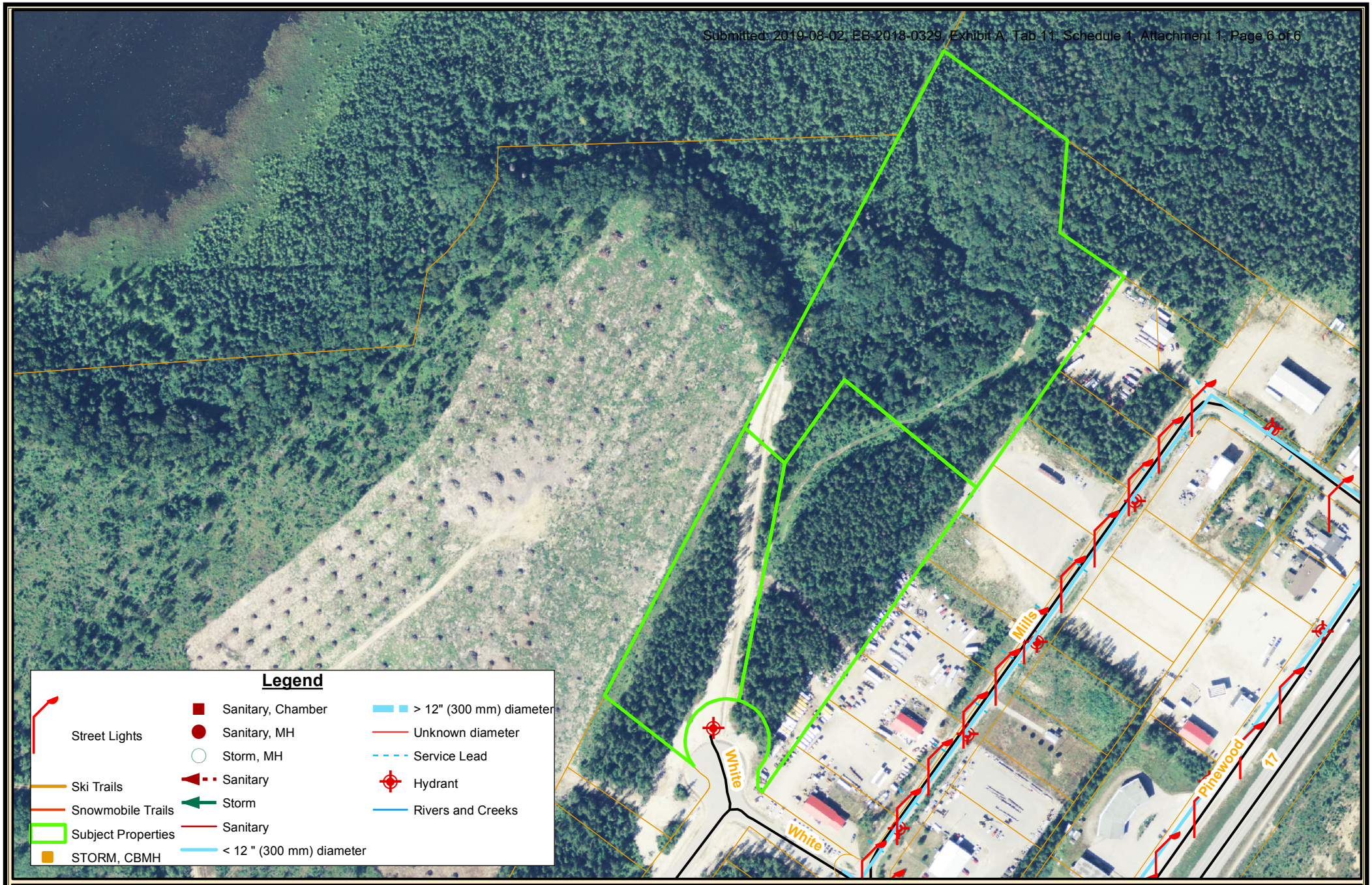
Disclosure of Pecuniary Interest and the general nature thereof.

☐ Disclosed the pecuniary interest and general name thereof and abstained from the discussion, vote and influence.

Clerk:_____

MAYOR – RON RODY	ACTING CLERK – MAURY O'NEILL
L Rody	Maury O'Neill

This document is available in alternate formats.



Legend

- Street Lights
- Ski Trails
- Snowmobile Trails
- Subject Properties
- STORM, CBMH
- Sanitary, Chamber
- Sanitary, MH
- Storm, MH
- Sanitary
- Storm
- Sanitary
- < 12 " (300 mm) diameter
- > 12" (300 mm) diameter
- Unknown diameter
- Service Lead
- Hydrant
- Rivers and Creeks

0 30 60 120 180

Meters

LNG Proposed Sites
Municipality of Wawa

NITGC
NORTHERN INFORMATION TECHNOLOGY AND GEOMATICS COOPERATIVE

Maps are provided as a courtesy only and the Municipality of Wawa makes no warranties as to the accuracy of this information. This map is not intended to be used for conveyance, authoritative definition of the legal boundary, or property title. This is not a survey product.

AGREEMENT OF PURCHASE AND SALE

TO: _____ (the **"Vendor"**)

1. _____(the **"Purchaser"**) hereby agrees to purchase from the Vendor through _____(the **"Agent"**), agent for the Vendor, and the Vendor agrees to sell to the Purchaser, the real property described as _____ (the **"Lands"**).

2. (a) **Purchase Price**

The purchase price shall be the sum of **_____($_____) DOLLARS** of lawful money of Canada payable as follows:

(i) The sum of **_____($_____) DOLLARS** shall be paid in cash or by cheque two (2) business days following the Effective Date (as defined in paragraph 16 of this Agreement), to the Agent, as a deposit pending completion or other termination of this transaction and to be credited towards the purchase price on completion. The Purchaser shall pay a further sum of _____($_____) Dollars to the Agent as an additional deposit to be held pending completion or termination of this transaction, to be paid upon the satisfaction or waiver of the condition contained in paragraph 5 of this Agreement. The Agent shall place the deposits in an interest bearing form with a chartered bank, and interest earned shall form part of the deposit. In the event the transaction fails to close solely as a result of default by the Purchaser then the interest accruing on the deposits shall be paid to the Vendor. Otherwise the said interest shall belong to the Purchaser and shall be paid to it forthwith following Closing / credited to it on the statement of adjustments.

(ii) The Purchaser shall give and the Vendor shall take back a first mortgage (the **"VTB Mortgage"**) for _____% of the purchase price, interest free for _____(____) year(s) and thereafter bearing interest at _____% per annum calculated quarterly and payable interest only quarterly and maturing in _____(____) years. The VTB Mortgage shall be fully open permitting the mortgagor to prepay the whole or any part of the principal outstanding at any time or times without notice or bonus. The VTB Mortgage shall contain those clauses set out in Schedule "B" hereto.

(iii) The balance of the purchase price shall be payable to the Vendor by certified cheque on Closing, subject to the adjustments hereinafter described.

(b) **Purchase Price Adjustment**

The parties acknowledge that the purchase price has been calculated at the rate of $_____per acre for _____acres. At least _____days prior to Closing the Vendor shall deliver to the Purchaser an up-to-date survey of the Lands together with a certificate from an Ontario Land Surveyor certifying the acreage of the Lands and the purchase price, balance due on Closing and VTB Mortgage shall be adjusted proportionately based on the acreage certified in such certificate.

3. Vendor's Representations and Warranties

The Vendor represents and warrants to the Purchaser and hereby acknowledges and confirms that the Purchaser is relying on such representations and warranties in connection with the purchase by it of the Lands, that:

(a) Title

the Vendor is the registered and sole beneficial owner of the Lands and has good and marketable title to the Lands in fee simple, and on Closing the Lands will be free and clear of any interests, liens, mortgages, charges, debentures, security interests, easements, encumbrances and clouds whatsoever;

(b) Disclosure

neither this Agreement, nor any other documents or statements referred to in this Agreement nor any written statement, schedule, documentation or certificate furnished or to be furnished to the Purchaser by the Vendor and in connection with the transaction contemplated by this Agreement contains any untrue statements in any respect or omits to state a material fact;

(c) Residency

the Vendor is not and does not intend to become a non-resident of Canada for the purposes of Section 116 of the *Income Tax Act (Canada)*;

(d) Expropriation/Conservation Authority

no notice has been received by the Vendor, its agents or employees relating to any: (i) threatened or impending condemnation or expropriation affecting the Lands; and (ii) requirement or restriction by any conservation authority relating to the Lands;

(e) No Other Agreements

no other person, other than the Purchaser has any written or oral agreement, option, understanding or commitment for the purchase from the Vendor of any interest in the Lands or any part thereof and the Vendor has full right, power and authority to enter into this Agreement. All agreements affecting the Lands of which the Vendor is aware, have been disclosed to the Purchaser;

(f) Access

there now exists free and uninterrupted egress and ingress from and to the Lands to a public highway or highways;

(g) Litigation

there are no actions, suits or proceedings to the knowledge of the Vendor or its servants, agents or any of them, threatened against or affecting the Lands or the Vendor relating to the Lands, at law or in equity;

(h) Environmental Matters

(i) there has not been placed or deposited upon or in the Lands any contaminant or litter (as those terms are defined in accordance with the provisions of the *Environmental Protection Act (Ontario)* (the "EPAO") or any toxic substance (as that term is defined in accordance with the *Canadian Environmental Protection Act* (the "CEPA");

(ii) no use has been made of the Lands for the disposal of waste pursuant to

Section 45 of the EPAO;

(iii) no hazardous waste or substance has been stored, treated or disposed of on the Lands and no underground storage tanks or other containers exist on the Lands;

(iv) the Lands are not contaminated by any deleterious, noxious or gaseous substances;

(v) the Vendor has no notice of any existing, pending or threatened action or proceeding arising out of the condition of the Lands or the violation of any environmental, health or safety statutes, regulations, by-laws or rules of any Authority;

(vi) the Vendor has now made full disclosure in writing to the Purchaser of all facts with respect to environmental conditions pertaining to the Lands and such disclosure states that there are not any environmental conditions which in any way may affect or impede the future use or development of the Lands or result in the imposition of any legal obligation on the Purchaser to prevent, ameliorate, or eliminate adverse environmental effects or to restore the natural environment. The Vendor further represents and warrants to the Purchaser that no facts exist which would breach the aforesaid representation, warranty and disclosure and that the Vendor agrees to deliver on the Closing Date an affidavit of an officer of the Vendor confirming that the foregoing representations and warranties contained in this paragraph 3(h) are true and correct as of the Date of Closing; and

(vii) the Vendor is not negotiating or dealing with any authority including without limitation the Ministry of the Environment in connection with or pursuant to any possible work orders relating to the Lands;

(i) Historical Designation, etc.

The Lands:

(i) are not designated property as defined pursuant to the *Ontario Heritage Act* and there are no notices of intention to designate pursuant to the said Act;

(ii) have not been used as a cemetery within the meaning of the *Cemeteries Act (Ontario)*; and

(iii) do not contain any archaeological or historical artifacts; and

(j) Services and Systems

The Lands are served by municipal water and sewers (both storm and sanitary) and all required utilities including without limitation gas, hydro and telephone, which comply with all existing statutes, by-laws, ordinances, rules or regulations of any Authority, and are functional and operational and paid for (and not charged as a local improvement) and are in good working order and condition, in a good state of repair and free from any defects.

4. Vendor's Covenants

The Vendor covenants and agrees with the Purchaser that:

(a) as of the Date of Closing, the provisions of the *Family Law Act (Ontario)* shall be complied with in order to ensure the proper conveyance of the Lands to the Purchaser;

(b) the Vendor shall discharge by the Date of Closing any and all mortgages, charges, security interests, debentures, liens, easements, rights-of-way, licenses, leases, tenancies, restrictions, options or any other encumbrance or cloud of any nature or kind whatsoever relating to or registered against the Lands and the Vendor shall furthermore pay all realty taxes, rates and assessments relating to the Lands;

(c) if the Lands are currently farmed then the Vendor will complete and provide to the Purchaser on Closing a completed Farmland Class Property Tax Application form for _____and _____;

(d) it will deliver to the Purchaser within five (5) business days from the Effective Date all studies, environmental audits and reports, soil or other tests and all other written materials which relate to the Lands and which are in the possession of the Vendor or its solicitors or its or their consultants; and

(e) each of the representations and warranties of the Vendor made pursuant to this Agreement shall be true and correct and complied with fully in all respects at Closing and such representations and warranties as well as the conditions contained herein shall survive and not merge on Closing, shall remain in full force and effect and shall enure to the benefit of the Purchaser and its successors and assigns.

5. Approval Period

The Purchaser, its agents, employees and advisors, shall be permitted _____(_____) days from the Effective Date (which period of time is referred to as the "**Approval Period**") to conduct such physical and other inspections and tests, studies and investigations of the Lands or relating to the Lands as it deems necessary including without limitation investigating the economic feasibility of the Lands and the viability and suitableness of the Lands for development, by such agents, consultants, accountants, engineers, surveyors or other persons as it deems necessary including without limitation environmental and soil tests, the Vendor hereby giving the Purchaser and its agents, consultants, accountants, engineers, surveyors or other persons it deems necessary, permission to enter upon the Lands to conduct such tests and inspections. If the Purchaser, in its sole, absolute and arbitrary discretion, is satisfied with the condition of the Lands and its investigation and studies of the Lands including without limitation the economic feasibility of the Lands and the viability and suitableness of the Lands for development, the Purchaser shall give written notice of such satisfaction to the Vendor prior to the expiry of the Approval Period and in such event this Agreement shall be firm and binding upon the Purchaser and Vendor, subject to the terms and conditions hereof. If the Purchaser has not given such written notice to the Vendor by the expiration of the Approval Period, then this Agreement shall thereupon become null and void and the deposit shall be returned to the Purchaser together with interest and without deduction and the Vendor and the Purchaser shall have no liabilities or obligations with respect hereto. The Purchaser shall repair at its expense any damages to the Lands caused by such testing.

6. Title

Provided the title to the Lands is and will be on Closing good and marketable, in fee simple, and free and clear of all encroachments, mortgages, charges, debentures, liens, easements, rights-of-way, licences, leases, tenancies, restrictions, options or any other encumbrance or cloud of any nature or kind whatsoever, said title to be examined by the Purchaser at its own expense and the Purchaser not to call for the production of any title deed, abstract of title, survey, proof or evidence of title other than those in the Vendor's possession or under its control or as provided herein. If by _____(_____) days prior to the Closing Date (the "**Requisition Date**"), the Purchaser shall furnish the Vendor or its solicitors in writing with any valid objection to the title to the Lands which the Vendor shall be unable to remove or correct and which the Purchaser will not waive,

this Agreement shall, notwithstanding any intermediate acts or negotiations, be null and void and the deposit monies returned to the Purchaser immediately together with all interest earned thereon, and the Vendor and Purchaser shall not be liable one to the other for any costs or damages or other liabilities in connection with this Agreement. Save as to any valid objections so made within such time or any objection going to the root of title or any objection to title to the Lands which the Purchaser's search of title would not have disclosed if carried out prior to the Requisition Date, the Purchaser shall be conclusively deemed to have accepted the title of the Vendor to the Lands.

7. Closing Documentation

On the Day of Closing, the Vendor agrees to deliver to the Purchaser, in addition to any other closing documentation which may be required, the following:

(a) Deed or Transfer in registrable form of the Lands being conveyed.

(b) An undertaking by the Vendor to readjust any errors, omissions or changes in the Statement of Adjustments. The Purchaser shall deliver a corresponding undertaking to the Vendor.

(c) A Statutory Declaration of an officer of the Vendor in form and content satisfactory to the Purchaser declaring as to the extent and length of possession of the Lands by the Vendor and such other matters relative to this transaction that the Purchaser may require as are to the best of the knowledge of the declarant and as would customarily be included in transactions of a similar size and nature.

(d) A certificate and affirmation from the Vendor that all covenants, warranties and representations made by it in this Agreement are true and correct as set out in this Agreement and to further provide a non-merger agreement in connection with same.

8. Adjustments

Adjustments shall be made as of the Day of Closing with respect to taxes. The Day of Closing shall be for the Purchaser's account both as to revenue and expense.

9. Planning Act

This Agreement is subject to the express condition that it shall not be effective to create or convey an interest in the Lands until the subdivision or severance control provisions of any applicable legislation have been complied with, and this Agreement shall be conditional upon the Vendor, at its own expense, complying therewith. The Vendor shall use its best efforts to cause such provisions to be complied with. The Vendor shall cause the statements by the Vendor and the Vendor's solicitor referred to in clauses (a) and (b) of Subsection 50(22) of the *Planning Act*, R.S.O. 1990, c.P.13, as amended, to be included in the deed or transfer to the Purchaser.

10. Miscellaneous

It is agreed that there is no representation, warranty, collateral agreement or condition affecting this Agreement or the Lands and supported hereby other than as is expressed herein in writing. The solicitors acting for the Vendor or the Purchaser are hereby authorized on behalf of their respective clients, to give or receive any monies, notices, approvals, waivers or other documentation in connection with the transaction contemplated herein, or to agree to any variation of the provisions hereof. Any monies payable or tendered hereunder shall be by negotiable cheque certified by a Canadian chartered bank. Notwithstanding any rule or maxim of construction to the contrary, any ambiguity or uncertainty will not be construed against either the Purchaser or the Vendor by reason of the authorship of any of the provisions hereof. Any tender of documents or

monies herein may be made upon the Vendor or the Purchaser or their respective solicitors on the Day of Closing. Preparation of closing documentation and payment of taxes and legal, notarial and registration fees relating to this transaction shall be in accordance with the normal practice in the City of Toronto.

11. Time

Time shall be in all respects of the essence hereof. References herein to the "Agreement" shall mean this Agreement consisting of this Offer executed by the Purchaser and accepted by the Vendor with any changes initialled by both parties and all schedules hereto. This Agreement shall extend to and be binding upon and enure to the benefit of the parties hereto and their respective successors and assigns.

12. Assignment

The Purchaser shall be entitled to assign its rights and obligations under this Agreement to another person or corporation which assignment shall operate to release the Purchaser from all liabilities and obligations under this Agreement, and the assignee shall thereafter be deemed for all purposes to have been the Purchaser named herein and shall have the full right to enforce this Agreement as if it were the Purchaser named herein. In the event of an assignment as aforesaid, Laurier Estates Inc. shall not be liable for any obligations under the VTB Mortgage. As an alternative to assignment as aforesaid, the Purchaser shall be entitled to direct the Vendor to have title to the Lands drawn to and in favour of any third party so designated by the Purchaser, and the Vendor covenants and agrees to honour and comply with such written direction of the Purchaser.

13. H.S.T.

Harmonized Sales Tax ("**HST**") is not included in the purchase price. The Purchaser shall be permitted to self-assess for HST provided that the Purchaser provides the Vendor on Closing with its HST registration number and an indemnity whereby the Purchaser indemnifies the Vendor with respect to HST payable resulting from the sale of the Lands.

14. Notice

Any notice required or permitted to be given hereunder shall be made in writing and any such notice shall be given only by personal delivery or delivery bonded courier or by sending the same by facsimile transmission to the Purchaser at the following address:

_____
_____ Ontario

Attention:
Facsimile:

and with a copy to:

Attention:
Facsimile: d to the Vendor at the following address:

c/o

Attention:
Facsimile:

with a copy to:

Attention:
Facsimile:

Any notice or other document so delivered shall be deemed to have been given on the day of delivery. By giving to either party hereto at least ten (10) days notice thereof, any party, may at any time and from time to time, change its address for deliveries for purposes of this paragraph. The Vendor and Purchaser agree that reproductions of signatures by telecommunications will be treated as originals. The Vendor and the Purchaser hereby appoint their respective solicitors as agents for the purpose of giving and receiving notices.

15. Day of Closing

The day of closing (the **"Closing Date"** or **"Closing"** or **"Day of Closing"**), unless otherwise agreed by the parties, for the purchase and sale of the Lands shall be sixty (60) days following the removal of the condition referred to in paragraph 5 provided that in the event such date falls on a non-registry office date, Closing shall take place on the next following registry day.

16. Acceptance (Effective Date)

This Agreement shall be null and void and of no effect unless it shall have been executed by both parties hereto on or before 5:00 p.m. on the ____ day of _____ , 2019, which shall be the Effective Date of this Agreement.

17. Commission

The Vendor shall be solely responsible for all real estate commission owing with respect to the transaction contemplated herein. The Purchaser represents and warrants that it has not been introduced to the Lands by any real estate agent other than the Agent.

18. Condition

This Agreement is conditional that on Closing there will be no legislation (whether by statute, regulation, order-in-council, notice of ways and means motion, by-law or otherwise) having been enacted, introduced or tabled which, in the opinion of the Purchaser acting reasonably, materially adversely affects or may materially adversely affect the Lands.

19. Limitation of Liability

The rights, remedies and recourses of the Vendor and the Purchaser in connection with this Agreement and in connection with the VTB Mortgage (and whether arising in contract or tort) are limited to the Purchaser or Vendor respectively notwithstanding that the Purchaser or Vendor may be, or deemed to be by law, acting as an agent, trustee or otherwise on behalf of some other person, firm, entity or corporation and each of the Vendor and Purchaser hereby agrees that with respect to this Agreement and the VTB Mortgage it shall not have any rights, remedies or recourses against such other person, firm, entity or corporation nor against any officer, director, shareholder or employee of the Purchaser or Vendor as the case may be, whether at law or otherwise. With respect to the VTB Mortgage, the word “Purchaser” in this section shall be deemed to be “Chargor” and “Vendor” shall be deemed to be “Chargee” and shall be reflected that way in the VTB Mortgage. The provisions of this section shall be deemed to survive Closing and shall not merge at that time and shall be incorporated into the VTB Mortgage.

20. Calculating Time Periods

When calculating any period of time within which, or failing which, any act is to be done, or any steps are to be taken pursuant to the provisions of this Agreement, the day which is the reference date in computing such period of time shall be excluded from the calculation. When computing or calculating a particular time period pursuant to this Agreement, whenever the last day of such period would fall on a Saturday, Sunday, statutory holiday or civic holiday, such last day shall then be deemed to end on the next succeeding business day.

IN WITNESS WHEREOF we have executed this Agreement.

DATED this _____ day of April, 2019.

Per: _____
Name:
Title:
I have authority to bind the Corporation.

We accept the terms and conditions of this Agreement and agree to carry it out in accordance with its terms. In witness whereof we have executed this Agreement.

DATED this _____ day of April, 2019.

Per: _____
Name:
Title:
I have authority to bind the Corporation.

SCHEDULE "B"

Terms and conditions of VTB Mortgage:

(a) The Purchaser shall be permitted to undertake construction on the Lands including excavation without the same being deemed acts of waste.

(b) The Mortgagee agrees to co-operate with the Mortgagor, and to execute, without payment of any principal and/or interest, any and all plans, documents and agreements whatsoever which may be necessary or desirable in order to facilitate the development of the mortgaged property including the registration of a plan or plans of subdivision or condominium, or the construction of any building or dwelling unit upon the mortgaged property and it shall consent in writing to any subdivision plan application, site plan agreement, official or district plan amendments, rezoning application or applications or to any severance or minor variance application or applications which the Mortgagor may make including the execution of any and all agreements or documents required by the appropriate municipality or by any governing authority or public agency as a condition of permitting or completing any such site plan, official or district plan amendment, rezoning, severance or minor variance, provided only that the Mortgagee incurs no costs, expenses or financial obligation in connection therewith.

(c) The Mortgagee shall execute and deliver without payment of any principal and/or interest, such partial discharge or discharges or other assurances as may be required to convey to any municipality, public authority, other governmental body or authority, railway company, utility, or conservation authority, any lands required for municipal, public or any other purpose, in order to permit an official or district plan amendment, zoning, severance or minor variance application to proceed or the approval of any site plan agreement or the registration of a plan of subdivision or plan of condominium, or for any other municipal or other public purpose, including but without limiting in any way the generality of the foregoing, such public or private purposes as roads, road widenings, highways, walkways, reserves and parks.

(d) The Mortgagee agrees to grant partial discharges of any portion of the mortgaged property upon payment in reduction of principal, of a sum prorated as based on the area of the lands to be discharged against the total area of the mortgaged property, provided that the Mortgagor shall comply with the provisions of the *Planning Act* and provided the undischarged lands are not landlocked.

(e) The Mortgagee agrees to execute and deliver without any payment of principal and/or interest such partial discharge or discharges and any consents, subordinations or postponements required in order to create and grant easements, rights-of-way, licences or reserves for utilities whether public, quasi public or private and whether for gas, water, electricity, telephone, sewer (sanitary and storm), cable television or similar services. Furthermore, the Mortgagee agrees to consent to and execute in writing any document required by the Mortgagor in connection with the entering into of any subdivision, condominium, development, site plan, engineering or similar development agreement with the relevant municipality, regional municipality, public or private utility or other governmental authority. The Mortgagor shall have the right to construct roads, install water mains, sewers and other services within the mortgaged

property and to remove any buildings and/or trees on the mortgaged property and to grade the mortgaged property without being in default herein or without creating waste.

(f) The Mortgagee agrees to consent in writing to any application or document that may be required to register the mortgaged property as a plan of subdivision pursuant to the *Planning Act (Ontario)* or under *the Land Titles Act* or the *Condominium Act of Ontario* and any amendments thereto.

(g) The Mortgagee shall upon written request execute any of the documentation as provided for in this mortgage or do any other matter or thing as may be provided for or as the Mortgagee may have agreed to pursuant to this mortgage within fifteen (15) days of written request therefor.

THIS AGREEMENT OF LEASE dated for reference this [•] day of [•], 20[•]. BETWEEN:

[•]

(the "**Landlord**")

AND:

[•]

(the "**Tenant**")

WITNESSES that in consideration of the rents, covenants, provisos and conditions hereinafter reserved and contained, the Landlord leases to the Tenant that certain parcel of land situate in [•], which parcel of land is comprised of an area of [•] square metres, more or less, and is more particularly described as:

[•]

(the "**Premises**")

AND THE PARTIES HERETO COVENANT AND AGREE AS FOLLOWS:

ARTICLE 1: PURPOSE

1.01 Purpose

The Premises shall be used as a site for the Tenant's building and facilities (the **"Building**"), and the Premises and the Building shall only be used for purposes conforming to the permitted uses under all applicable bylaws. Without limiting the foregoing, it is expressly agreed that the Premises may be used for the storage or dispensing of fuel.

ARTICLE 2: TERM

2.01 LENGTH OF TERM

This lease shall commence on the_____day of _____, 20 , for a term of [•] years, and expire on the____day of_____, 20 (the **"Term"**).

2.02 OVERHOLDING TENANCY

If the Tenant holds over after the expiration of the Term, and the Landlord accepts rent, the new tenancy created shall be a tenancy at will and not a tenancy from year to year. The Tenant shall pay as rent during the time of such occupancy, a rent to be determined at the reasonable discretion of the Landlord, but in no event less than the rent payable in the last year of the Term, and shall be subject to the covenants and conditions contained in this Lease so far as the same are applicable to a tenancy at will, with either party able to terminate such tenancy with ninety (90) days prior written notice to the other.

2.03 CANCELLATION PRIVILEGE

If by reason of fire, flood, lightning, tempest, earthquake, impact of aircraft, explosion, or Acts of God, or war or civil disturbance the Premises, at any time during the Term or any renewal of the Term, is destroyed or so damaged as to render the Premises unfit for occupancy, the Tenant will then have a period of ninety (90) days after such damage or destruction within which to decide whether or not it will repair or rebuild the Premises. If the Tenant decides not to rebuild or repair, it may terminate this lease by notice, in writing, given to the Landlord within the said ninety (90) day period; provided, that in the event of such notice being given to the Landlord pursuant to this clause, the rent reserved to the Landlord under this lease shall be due and payable up to the date of clearance and levelling of the Premises to the satisfaction of the Landlord.

2.04 SURRENDER OF PREMISES

At the expiration or sooner determination of this lease, the Tenant shall peaceably surrender and yield to the Landlord, in a condition satisfactory to the Landlord, the Premises. The Tenant shall immediately remove from the Premises all chattels, goods, supplies, articles, equipment, materials, effects or things and shall also, to the satisfaction of the Landlord, repair all damage and injury occasioned to the Premises by reason of the removal or in the performance of the removal, but the Tenant shall not, by reason of any action taken or things performed or required under this clause, be entitled to any compensation whatsoever. Unless removal is required by the Landlord, no chattels, goods, supplies, articles, equipment, materials, effects or things shall be removed from the Premises until all rent due or to become due under this lease is fully paid. The Landlord may, at its option, remove at the risk of and at the cost and expense of the Tenant, the chattels, goods, supplies, articles, equipment, materials, effects or things from the Premises and the Tenant shall reimburse the Landlord immediately upon receipt of appropriate accounts for the removal and for any storage charges which may have been or will be incurred by the Landlord as a result of such removal. Subject to section 4.14, where not removed by the Tenant, the Landlord may consider the chattels, goods, supplies, articles, equipment, materials, effects, or things to be abandoned, and take title thereto in the name of the Landlord. It is agreed between the parties, that, subject to section 4.18, six (6) months prior to the expiration of the Term, the Tenant shall inform the Landlord of any improvements it wishes to remove from the site. Any such removal shall be done in accordance with this lease and at the sole cost of the Tenant.

2.05 QUIET ENJOYMENT

The Landlord covenants with the Tenant that the Tenant, paying the rent reserved in this lease, and performing the covenants of the Tenant under this lease, shall and may, subject to the terms of this lease, peaceably possess and enjoy the Premises for the Term, without any interruption or disturbance from the Landlord or any other person or persons lawfully claiming by, or under, the Landlord.

ARTICLE 3: RENT

3.01 RENT

The Tenant shall pay during the first [•] years of the Term to the Landlord, in lawful money of Canada, the rent according to the following schedule:

From	To	Payment of Rent

Rental rates for each subsequent [•] year period during the term of the lease shall be established by an appraisal of market value conducted by a member of the Appraisal Institute of Canada on behalf of the Landlord.

The Tenant shall pay all rent reserved at the time and in the manner set out in this lease, without any abatement or deduction whatsoever. The annual rent is due and payable, in advance, on [MONTH] [DAY], corresponding to the year in the Term for which the annual rent is due and owing. The Tenant shall pay annual rent to the Landlord without prior demand by the Landlord, and shall deliver the rent to the Landlord at the following address, or such other address as the Landlord may direct in writing from time to time:

[•]

Attention: [•]

3.02 DEFAULT ON PAYMENT OF RENT

If the Tenant defaults in the payment of any sums required to be paid by it pursuant to the terms of this lease, or fails to fulfill any of its obligations under this lease, the Landlord may, at its option but without being obligated to do so, pay such sums or fulfill such obligations on behalf of the Tenant, and any reasonable losses, costs, charges and expenses suffered or incurred by the Landlord as a result, including sums payable by way of indemnity, whether or not expressed in this lease to be rent, may at the option of the Landlord be treated as and deemed to be additional rent, in which event the Landlord will have all remedies for the collection of such sums, costs, expenses or other amounts when in arrears as are available to the Landlord for the collection of rent in arrears.

3.03 INTEREST ON RENT IN DEFAULT

Without waiving any other right of action of the Landlord in the event of default of payment of rent under this lease, in the event that the Tenant is delinquent in making the payments required hereunder, the Tenant shall pay interest thereon at the rate of 0.5 percent per month (6 percent per annum), compounded monthly, from the date any such amount is due and payable until and including the date upon which it is paid.

ARTICLE 4: LEASED LAND, SERVICES, AND IMPROVEMENTS

4.01 "AS IS" CONDITION

The Tenant accepts the Premises in an "as is" condition and any improvements made to the Premises by the Tenant at any time during the Term, or at any prior time, to make the Premises suitable for the operations of the Tenant under this lease, shall be at the risk, cost and expense of the Tenant.

4.02 ACCESS

The Landlord, its officers, employees, agents or contractors, shall have full and free access for inspection purposes during normal business hours and in the presence of the Tenant or a representative of the Tenant to any and every part of the Premises, it being expressly understood and agreed that in cases of emergency, as determined by the Landlord, the Landlord, its officers,

employees, agents or contractors shall at all times and for all purposes have full and free access to the Premises, and the exercise of such rights of access shall not constitute a breach of this lease or any covenant in it including, without limitation, the covenant for quiet enjoyment.

4.03 MAINTENANCE OF PREMISES

The Tenant shall, at the cost and expense of the Tenant, maintain in good order the landscaping and paved areas on the Premises and shall keep the Premises free of debris and neat and tidy at all times, all to the satisfaction of the Landlord. Without limiting the foregoing, the Tenant shall, at its sole cost, provide complete and proper arrangements for the adequate sanitary handling and disposal away from the Premises of all trash, garbage and other refuse on or in connection with the Tenant's operations under this lease, all to the satisfaction of the Landlord.

4.04 UTILITIES

The Landlord shall, at the cost and expense of the Landlord, be responsible for the installation and maintenance of the connecting system to the Landlord's water, sanitary sewage and storm sewage system, and to any third party's hydroelectric, telecommunications or other utility system, where available, to the point of connection at the boundary of the Premises. The Tenant shall approve the plans and specifications for connecting to such services, in writing, before work is commenced and the work shall be performed under the supervision of a designated officer of the Tenant. Where applicable, a water meter shall be installed by the Landlord to measure the Tenant's water consumption and the Tenant will be charged a separate rate based on cost recovery of the water consumed for domestic purposes.

The Tenant shall pay as they become due all charges for utilities used on the Premises, including without limitation charges for all water, electrical and telecommunications used on the Premises.

4.05 TEMPORARY SUSPENSION OF SERVICES

Without limiting section 6.01 of this lease, the Tenant shall not have nor make any claim or demand, nor bring any action or suit or petition, against the Landlord for any damage which the Tenant may sustain by reason of any temporary suspension, interruption or discontinuance lasting less than 24 hours, in whole or in part, from any cause whatsoever, arising in the operations of any services supplied by the Landlord under this Lease. Any suspension, interruption or discontinuance greater than 24 hours shall entitle the Tenant to a rebate of rent for the period of suspension, interruption or discontinuance beyond 24 hours.

4.06 REASONABLE USE

The Tenant shall not during the term of this lease, do, suffer nor permit to be done any act or thing which may impair, damage or injure the Premises, or any part thereof, beyond reasonable wear and tear, and shall, at the cost and expense of the Tenant, repair and renew in a good, sufficient and workmanlike manner all portions of the Premises which may at any time by the Tenant be damaged (reasonable wear and tear only excepted), and in the event of the failure on the part of the Tenant to so repair and renew, the Landlord may at its option, repair such damage or injury and the Tenant shall indemnify and save harmless the Landlord from all damages, cost and expenses suffered or incurred by the Landlord by reason of such impairment, damage or injury to the Premises, or by reason of the Landlord carrying out repairs, and the Tenant shall pay such damages, costs and expenses to the Landlord upon demand.

4.07 NUISANCE

The Tenant shall not do, suffer nor permit to be done any act or thing upon or above the Premises which is or would constitute a nuisance to the occupiers of any leased lands or premises adjoining or in the vicinity of the Premises, or to the public.

4.08 ENVIRONMENTAL MATTERS

Definitions for the purposes of this section:

a) "**Contaminants**" means any pollutants, contaminants, deleterious substances, asbestos materials, urea formaldehyde, dangerous substances or goods, hazardous, corrosive or toxic substances, special waste or waste of any kind or any other substance which is now or hereafter prohibited, controlled or regulated under Environmental Laws; and

b) "**Environmental Laws**" means any statutes, laws, regulations, orders, bylaws, standards, guidelines, permits and other lawful requirements of any governmental authority having jurisdiction over the Premises now or hereafter in force relating in any way to the environment, health, occupational health and safety, product liability or transportation of dangerous goods, including the principle of common law and equity;

The Tenant covenants and agrees as follows:

a) not to use or permit to be used all or any part of the Premises for the sale, storage, manufacture, disposal, handling, treatment, use or any other dealing with any Contaminants, without the prior written consent of the Landlord, which may not be unreasonably withheld. Without limiting the generality of the foregoing, the Tenant shall in no event use, and warrants and represents that it does not plan or intend to use, the Premises to dispose of, handle or treat any Contaminants in a manner that, in whole or part, would cause the Premises, or any adjacent property to become a contaminated site under Environmental Laws;

b) to strictly comply, and cause any person for whom it is in law responsible to comply, with all Environmental Laws regarding the use and occupancy of the Premises;

c) to promptly provide to the Landlord a copy of any environmental site investigation, assessment, audit or report relating to the Premises conducted by or for the Tenant at any time before, during or after the Term (or any renewal thereof). The Tenant shall, at its own cost at the Landlord's request from time to time but no more than once every five (5) years, obtain from an independent environmental consultant approved by the Landlord an environmental site investigation of the Premises or an environmental audit of the operations at the Premises, the scope of which shall be satisfactory to the Landlord and shall include any additional investigations that the environmental consultant may recommend;

d) to maintain all environmental site investigations, assessments, audits and reports relating to the Premises in strict confidence and not to disclose their terms or existence to any third party (including without limitation, any governmental authority) except as required by law, to the Tenant's professional advisers and lenders on a need to know basis or with the prior written consent of the Landlord, which consent may be unreasonably withheld;

e) to promptly provide to the Landlord on request such written authorizations as the Landlord may require from time to time to make inquiries of any governmental authorities regarding the Tenant's compliance with Environmental Laws;

f) to promptly notify the Landlord in writing of any release of a Contaminant or any other occurrence or condition at the Premises or any adjacent property which could contaminate the Premises or subject the Landlord to any fines, penalties, orders, investigationsor proceedings under Environmental Laws;

g) on the expiry or earlier termination of this lease or at any time if requested by the Landlord or required by any governmental authority pursuant to Environmental Laws, to remove from the Premises all Contaminants, and to remediate any contamination of the Premises or adjacent property resulting from Contaminants, in either case brought onto, used at or released from the Premises by the Tenant or any person for whom it is in law responsible. The Tenant shall perform these obligations promptly at its own cost and in accordance with Environmental Laws. All such Contaminants remain the property of the Tenant, notwithstanding any rule of law or other provisions of this lease to the contrary and notwithstanding the degree of their affixation to the Premises; and

h) to indemnify the Landlord, its elected and appointed officials, officers, employees, agents, contractors, successors and assigns, from any and all liabilities, actions, damages, claims remediation cost recovery claims, losses, costs, orders, fines, penalties and expenses whatsoever (including all consulting and legal fees and expenses on a solicitor-client basis) and the cost of remediation of the Premises and any adjacent property arising from or in connection with:

   i. any breach of or non-compliance with the provisions of this section by the Tenant; or

   ii. any release or alleged release of any Contaminants at or from the Premises related to or as a result of the use and occupation of the Premises or any act or omission of the Tenant or any person for whom it is in law responsible.

The obligations of the Tenant under this section shall survive the expiry or earlier termination of this lease. The obligations of the Tenant under this section are in addition to, and shall not limit, the obligations of the Tenant contained in other provisions of this Lease. Notwithstanding the foregoing, it is expressly agreed that the Premises may be used for the storage or dispensing of fuel, as indicated in Section 1.01.

4.09 POLICE AND FIRE PROTECTION

The Landlord shall not be responsible for providing fire protection to nor policing of, the Premises, the Building and any improvements.

4.10 STORAGE OF DANGEROUS GOODS

No goods or equipment of an explosive, dangerous, inflammable or noxious nature or character shall be stored by the Tenant in or upon the Premises or any building on the Premises except with the prior written consent of the Landlord. It shall be a condition of any such consent that the Tenant, at its sole cost, obtain the necessary insurance for the storage of such goods, which must include the Landlord as an additional insured.

4.11 FIRE PREVENTION

The Tenant shall, at its own expense, take all precautions to prevent fire from occurring in or about the Premises, and shall observe and comply with all laws and regulations in force respecting fires, and with all instructions given from time to time by the Landlord with respect

to fires and extinguishing of fires. The Tenant agrees that the Premises shall be deemed to be zoned Commercial/Industrial within the municipality for the purpose of determining the necessary standard for a sprinkler system required for any buildings erected on the Premises pursuant to the Building Bylaw. The cost of the sprinkler system, if required, shall be at the Tenant's sole expense.

4.12 DRAINAGE AND DISCHARGE OF MATERIAL

Storm water drainage from the Premises must be carried out by the Tenant in accordance with all applicable bylaws. The Tenant shall not discharge, cause or permit to be discharged or howsoever to pass into the sewer systems, storm drains or surface drainage facilities any deleterious material, noxious, contaminated or poisonous substances, all as determined by the Landlord, whose decision shall be final and conclusive. In the event of a discharge or escape of such deleterious material, noxious, contaminated, or poisonous substances in and under the control of the Tenant, the Tenant must at its sole cost and expense clean up such material or substances and remediate the affected lands to the satisfaction of the Landlord, and if the Tenant fails to do so, the Landlord may at its option, carry out such clean up and remediation, and all costs and expenses incurred by the Landlord shall constitute a debt due from the Tenant to the Landlord, and may be added to the rent.

4.13 INTERCEPTORS

If required by the Landlord, grease, oil and sand/silt interceptors (catch basins) shall be provided on the Premises by the Tenant at its cost. All interceptors shall be of a type and approved by the Landlord and shall be readily accessible for cleaning and inspection. Such interceptors shall be maintained by the Tenant, at the expense of the Tenant, in continuous, efficient operation at all times.

4.14 REPAIR OF DAMAGE

If, at any time or times hereafter, any damage or injury (reasonable wear and tear only excepted) should be occasioned to the Premises, or any part thereof, or to any works of the Landlord by reason of or on account of the operations of the Tenant under this lease, or any action taken or things done or maintained by virtue thereof, then, and in every such case, the Tenant shall, within a reasonable time upon notice from the Landlord given in writing, repair, rebuild and restore the same in good, sufficient and workmanlike manner. In the event of failure on the part of the Tenant to so repair the Landlord may at its option, repair such damage or injury, in which case the Tenant shall repay and reimburse the Landlord for all costs and expenses connected there within or incidental thereto to the extent the Tenant is liable for the same in law plus such additional charge as may be applicable in accordance with the policies of the Landlord for administration and overhead immediately upon receipt by the Tenant of the accounts of the Landlord.

4.15 ERECTION AND MAINTENANCE OF BUILDINGS OR STRUCTURES

The Tenant shall not construct or erect any building or other improvements on the Premises without first obtaining a building permit and all necessary inspections from the authority having jurisdiction, and the prior written approval of the Landlord, of plans

showing the design and nature of construction of building or improvements and their proposed location, and all such buildings or improvements shall be constructed and thereafter maintained, by and at the cost and expense of the Tenant, to the satisfaction of the Landlord.

The Tenant shall not make any alterations to the Premises, including any improvements, or services connected therewith or add any facilities or services, without first obtaining a building permit and all necessary inspections from the authority having jurisdiction and the prior written approval of the Landlord. Upon receipt of the approval of the Landlord, the Tenant agrees to make the alterations at the Tenant's cost, in accordance with the requirements, terms and conditions specified, and thereafter maintain the alterations at the cost of the Tenant and to the satisfaction of the Landlord.

If, at any time during the term of this lease, the Tenant defaults in its obligation of maintaining the Premises, in accordance with the requirements of this lease, the Landlord may give written notice, specifying in what manner the maintenance is deficient, to the Tenant. If, within thirty (30) days from the giving of such notice the default specified in such notice has not been remedied or (if the nature of such default reasonably requires more than thirty (30) days to remedy and make right) the Tenant has not commenced, or, having commenced, is not diligently completing the remedying of such default, or if such maintenance is not of a type satisfactory to the Landlord, the Landlord may enter upon the Premises and perform such maintenance, at the cost and expense of the Tenant**,** plus such additional charge as may then be applicable, in accordance with the policies of the Landlord for administration and overhead, it being expressly understood and agreed that the Landlord shall not be under any obligation to perform any maintenance during the term of this lease.

4.16 VESTING OF REPAIRS, ALTERATIONS, IMPROVEMENTS OR REPLACEMENTS

Any repairs, alterations, improvements or replacements made by the Tenant to or upon the Premises or any building or structure on the Premises which by their nature are determined to be fixtures shall upon termination of this lease, except and subject as in this lease otherwise specifically provided, be vested in title to the Landlord without any payment of compensation to the Tenant in respect of the repairs, alterations, improvements or replacements; nevertheless, the Landlord shall have the option of requiring or compelling the Tenant upon written notice, to remove such repairs, alterations, improvements or replacements, and the Tenant shall be so bound to remove and shall restore the Premises to its original condition at its sole cost and without any right on the part of the Tenant to seek compensation for any reason whatsoever.

Notwithstanding the above, and provided the Tenant is not in default under this Lease, the Tenant may opt, by providing notice no later than six (6) months prior to the expiry of the term, of its intent to remove one or more buildings on the Premises. Such work to be done at the Tenant’s sole cost and in accordance with the Lease.

4.17 COMPLIANCE WITH REGULATIONS

Without limiting any other provision in this lease, the Tenant shall in all respects abide by and comply with all applicable laws, rules, regulations and bylaws of the Government of Canada, the Government of Ontario or any other governing body whatsoever and with all local police, health, or fire regulations or bylaws, in any manner affecting the Premises or the Tenant’s use of the Premises. The Tenant hereby irrevocably attorns to the jurisdiction of the Landlord in respect of all matters concerning the

use and occupation of the Premises by the Tenant, including all applicable bylaws whether relating to building, subdivision, utilities, works, services, taxation or otherwise, notwithstanding that the Premises are used for purposes of aeronautics.

The Tenant shall abide by and comply with all regulations and directives of the Landlord regarding traffic control, security, sanitation and all other regulations and directives.

4.18 PAYMENT OF TAXES

The Tenant shall pay or cause to be paid all rates, taxes, assessments and charges of whatsoever description, that may at any time during the existence of this lease be lawfully imposed, and become due and payable, upon, or in respect of the Premises, a building or structure on the Premises, or any part of the Premises, a building or structure.

The Tenant shall pay any business tax, value-added tax, multi-stage sales tax, sales tax, goods and services tax or any other tax lawfully imposed on any rent receivable by the Landlord hereunder by any governmental or other taxing authority having jurisdiction, whether known as business transfer tax, value added tax, goods and services, or by any other name.

4.19 EASEMENT

The Landlord hereby grants to the Tenant a non-exclusive easement, appurtenant to and for the benefit of the Premises, during the subsisting term of this lease and any renewal of it, in common with all others so entitled, to pass and re-pass over that part of Lot A, Sections 7, 8 and 18, Township 1, and Sections 13 and 24, Township 2, Comox District, Plan VIP74726 shown as "Area_" on Plan EPP35390 with or without vehicles and equipment.

ARTICLE 5: ASSIGNMENT

5.01 ASSIGNMENT

The Tenant shall not make any assignment of this lease, nor any transfer or sublease of the whole or any portion of the Premises, without obtaining the prior written consent of the Landlord to such assignment, transfer or sublease, which consent may not be unreasonably withheld by the Landlord.

ARTICLE 6: LIABILITY AND INDEMNITY

6.01 LIMITATION OF LIABILITY AND RELEASE

The Landlord, its elected officials, officers, employees, agents and contractors shall not be liable for, and the Tenant hereby releases the Landlord, its elected officials, officers, employees, agents and contractors from all liabilities, actions, statutory or other proceedings, judgments, investigations, claims, losses, damages, orders, fines, penalties, expenses, professional and other fees and disbursements (including legal fees on a solicitor and own client basis), and costs whatsoever resulting or arising from:

(a) any bodily injury or death, however caused, suffered or sustained in or about the Premises; or

(b) any property damage or other loss or damage of any nature whatsoever, however caused, to the Premises, or to any property belonging to the Tenant or to any other person on or about the Premises, including without limitation any structures,

erections, aircraft, equipment, materials, supplies, motor or other vehicles, fixtures and articles, effects and things erected, brought, placed, made or being on or about the Premises;

unless arising or resulting directly from the negligence of the Landlord, its officers, employees, agents or contractors.

6.02 EXCLUSION OF LIABILITY

Despite section 6.01, the Landlord, its elected officials, officers, employees, agents and contractors will not be liable for any loss or damage against which the Tenant is obligated to insure or has insured.

6.03 INDEMNITY

The Tenant shall at all times indemnify and save harmless the Landlord, its elected officials, officers, employees, agents and contractors from and against all liabilities, actions, statutory or other proceedings, judgments, investigations, claims, losses, damages, orders, fines, penalties, expenses, professional and other fees and disbursements (including legal fees on a solicitor and own client basis), and costs whatsoever which the Landlord, its elected officials, officers, employees, agents or contractors may suffer or incur arising out of or in connection with, or that would not or could not be made or incurred but for this lease, except to the extent that such liabilities, actions, statutory or other proceedings, judgments, investigations, claims, losses, damages, orders, fines, penalties, expenses, professional and other fees and disbursements (including legal fees on a solicitor and own client basis), and costs arise or result directly from the negligence of the Landlord, its elected officials, officers, employees, agents and contractors while acting in the course of their duties. Without limiting the foregoing, the Tenant shall at all times indemnify and save harmless the Landlord, its elected officials, officers, employees, agents and contractors from and against all liabilities, actions, statutory or other proceedings, judgments, investigations, claims, losses, damages, orders, fines, penalties, expenses, professional and other fees and disbursements (including legal fees on a solicitor and own client basis), and costs whatsoever:

(a) as a result of bodily injury or death, property damage or other damage arising from the conduct of any work by or any act or omission of or relating to or arising from the occupation or possession of the Premises by the Tenant, its directors, officers, employees, agents, contractors, invitees, subtenants or assignees; or

(b) suffered or incurred by the Landlord, its elected officials, officers, employees, agents and contractors that arise, directly or indirectly, from any breach by the Tenant, its directors, officers, employees, agents, contractors, invitees, subtenants or assignees, or any other person for whom the Tenant is responsible in law, of any of its covenants and obligations under this lease.

6.04 SURVIVAL OF INDEMNITY

The obligations of the Tenant under this lease to indemnify the Landlord, its elected officials, officer, employees, agents and contractors shall survive the expiry or sooner determination of this lease.

ARTICLE 7: INSURANCE

7.01 COMMERCIAL GENERAL LIABILITY INSURANCE

Without limiting any of the Tenant's obligations or liabilities under this lease, the Tenant shall at its expense and throughout the Term secure, maintain and pay for a policy of commercial general liability insurance covering the use and occupation of the Premises by the Tenant and all activities and operations necessary or incidental to the performance of the Tenant's obligations under this lease or the exercise by the Tenant of any of its rights under this lease, on the following terms:

(a) a limit of not less than THREE MILLION ($3,000,000.00) DOLLARS inclusive per occurrence for bodily injury, death and property damage;

(b) a provision naming the Landlord as an additional insured;

(c) a provision requiring the insurer to give the Landlord thirty (30) days written notice prior to any material change or cancellation of the policy;

(d) a cross liability clause and waiver of subrogation clause in favour of the Landlord;

(e) a clause providing that the policy is primary and non-contributing with respect to any policy or self-insurance fund held or established by the Landlord.

7.02 ALL RISK PROPERTY INSURANCE

Without limiting any of the Tenant's obligations or liabilities under this lease, the Tenant shall at its expense and throughout the Term secure, maintain and pay for a policy of property insurance insuring any fixtures on the Premises to their full replacement value, protecting them against all risks of loss or damage including, without limitation, fire, flood, sewer backup and earthquake.

7.03 GENERAL INSURANCE REQUIREMENTS

The following provisions apply to all insurance required of the Tenant under this lease:

(a) all policies of insurance must be underwritten by a responsible insurance company or companies licensed to do business in the province of Ontario;

(b) prior to commencement of the Term, and at any time thereafter promptly upon demand, the Tenant must deliver to the Landlord a detailed certificate or certificates of insurance, in form and content satisfactory to the Landlord, as evidence that such insurance is in force, including evidence of any insurance renewal policy or policies, and every certificate or certificates of insurance shall include certification by the insurer that the certificate or certificates of insurance specifically conform to all of the applicable requirements set out in this lease;

(c) promptly upon demand at any time during the Term, the Tenant must deliver to the Landlord a certified and complete copy of any insurance policy required under this lease.

7.04 ADDITIONAL INSURANCE AND WORKERS COMPENSATION COVERAGE

The Tenant is solely responsible to determine its own additional insurance coverage, if any, including without limitation Workers Compensation coverage, contents insurance, tenant's legal liability insurance and aviation insurance, that may be necessary or advisable for its own

protection or to fulfill its obligations under this lease. Any such additional insurance or coverage shall be provided and maintained by the Tenant at its own expense. None of the insurance required of the Tenant under this lease shall be construed as a representation by the Landlord that the types and amounts of such insurance are sufficient to protect the interests of the Tenant.

ARTICLE 8: DEFAULT AND RE-ENTRY

8.01 DEFAULT AND RE-ENTRY

If:

(a) the Tenant is in default in the payment of rent or amounts payable as rent under this lease, and such default continues for a period of thirty (30) days after the rent has become due and payable; or

(b) the Tenant is in default of any of its covenants or agreements under this lease (other than its covenant to pay rent or amounts payable as rent) and such default continues for a period of thirty (30) days (or such longer period as may be reasonably necessary to cure such default considering its nature) after notice by the Landlord to the Tenant specifying with reasonable particularity the nature of such default and requiring the same to be remedied; or

(c) the default set out in the notice given to the Tenant by the Landlord under subsection (b) reasonably requires more time to cure than the thirty (30) day period referred to in that subsection and the Tenant has not commenced remedying or curing the same within the thirty (30) day period or, in the opinion of the Landlord fails to diligently complete the same within a reasonable time;

then the balance of rent owing under this lease shall immediately become due and payable, and at the option of the Landlord the Term shall become forfeited and void, and the Landlord may forthwith re-enter upon the Premises or any part thereof in the name of the whole and repossess and enjoy the same as of its former estate, anything contained in any statute or law to the contrary notwithstanding.

Forfeiture of this lease by the Tenant shall be wholly without prejudice to the right of the Landlord to recover arrears of rent or damages for any antecedent breach of covenant on the part of the Tenant.

ARTICLE 9: GENERAL

9.01 INFLUENCE

The Tenant hereby confirms that it has not, nor has any person on its behalf, given, promised or offered to any official or employee of the Landlord for or with a view to obtaining this lease any bribe, gift or other inducement and that it has not, nor has any person on its behalf, employed any person to solicit or secure this lease upon any agreement for a commission, percentage, brokerage or contingent fee.

9.02 GOOD FAITH

The Landlord, and each Person acting for the Landlord, in making a determination, designation,

calculation, estimate, decision, conversion, or allocation under this Lease, will act reasonably and in good faith and each accountant, architect, engineer or surveyor, or other professional Person employed or retained by the Landlord will act in accordance with the applicable principles and standards of the Person's profession.

9.03 HEADINGS

Any note appearing as a heading in this lease has been inserted for convenience and reference only, and of itself shall not define, limit, or expand the scope or meaning of the present lease or any of its provisions.

9.04 DISPUTE RESOLUTION

All disputes arising between the Landlord and the Tenant in any matter connected with or arising out of this lease whether as to interpretation or otherwise, shall be determined by arbitration pursuant to the *Arbitration Act* of Ontario.

9.05 EFFECT OF LEASE

This lease and everything herein contained shall enure to the benefit of and be binding upon the parties to this lease, their successors and assigns, as the case may be, subject to granting of consent by the Landlord as provided in this lease to any assignment, transfer or sublease of this lease, and where there is a male, female or corporate party**,** the provisions of this lease shall be read with all grammatical changes to gender and number required by the context, and where the Tenant consists of more than one person, all covenants and obligations of the Tenant under this lease shall be deemed joint and several.

9.06 PROVISIONS SEPARATELY VALID

If any covenant, obligation, agreement, term or condition of this lease shall, to any extent, be invalid or unenforceable, the remainder of this lease or the application of such covenant, obligation, agreement, term or condition to any persons or circumstances other than those in respect of which it is held invalid or unenforceable, shall not be affected and each covenant, obligation, agreement, term or condition of this lease shall be separately valid and enforceable to the fullest extent permitted by law.

9.07 WAIVER NEGATED

The failure by the Landlord or its authorized representative, as the case may be, to require the fulfillment of the obligations, or to exercise any rights herein contained shall not constitute a waiver, a renunciation or a surrender of those obligations or rights.

9.08 NO IMPLIED OBLIGATIONS

No implied terms or obligations of any kind by or on behalf of the Landlord shall arise from anything in this lease and the express covenants and agreements contained in this Agreement and made by the Landlord are the only covenants and agreements upon which any rights against the Landlord may be founded.

9.09 ENTIRE AGREEMENT

This lease shall be deemed to constitute the entire agreement between the Landlord and the Tenant with respect to the subject matter of this lease and shall supersede all previous negotiations, representations, and documents made by any party to this lease.

9.10 REGISTRATION

This lease shall run with the land and the Tenant will be responsible, upon execution, for ensuring this lease is registered as appropriate at the Tenant's expense.

ARTICLE 10: NOTICES

10.01 NOTICES

Whenever in this lease it is required or permitted that notice or demand be given or served by either party of this lease to or on the other, such notice or demand will be in writing and will be validly given or sufficiently communicated if forwarded by registered mail, priority post mail, or facsimile as follows:

To the Landlord: [•]

To the Tenant: [•]

Such addresses may be changed from time to time by either party giving written notice as above provided. If any question arises as to whether any notice was or was not communicated by one party to the other, it shall be deemed to have been effectively communicated or given on the day received or on the fifth day after it was mailed, faxed or otherwise sent, whichever is the earlier.

[Remainder of page intentionally left blank – Signature page follows]

IN WITNESS WHEREOF the parties hereto have executed this lease the day and year first above written.

SIGNED ON BEHALF OF

[•]

Landlord

_____
Authorized Signatory Date:

_____
Witness Signature Date:

[•]

Tenant

_____
Authorized Signatory Date:

_____
Witness Signature Date:

AGREEMENT TO GRANT EASEMENT

THIS AGREEMENT dated the day of , 20

BETWEEN:

(hereinafter called the “Transferor”)

Of The First Part

- and –

UTILITY
(hereinafter called the “Transferee”)

Of The Second Part

WHEREAS the Transferor is the registered owner in fee simple in possession, of the lands described herein hereinafter called the "Transferor's Lands").

AND WHEREAS the Transferor has agreed to grant to the Transferee an easement over a part of the Transferor's Lands, such part being_____metre(s) in width and being hereinafter called the "Easement Lands".

WITNESSETH that in consideration of the sum of_____Dollars($_____) of lawful money of Canada now paid by the Transferee to the Transferor, the receipt whereof is hereby acknowledged, the Transferor does hereby agree to sell, transfer, grant and convey in perpetuity to the Transferee an unencumbered easement in, over, upon, under and/or through the Easement Lands, to survey, lay, construct, install, operate, use, inspect, remove, renew, replace, alter, enlarge, reconstruct, repair, expand and maintain a pipeline(s) including all works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment (hereinafter collectively referred to as "Works") which the Transferee may deem necessary or convenient thereto and the transfer of easement shall include the right of the Transferee, its successors, assigns, servants and agents to use the surface of the Easement Lands for ingress and egress on foot and/or with vehicles, supplies, machinery and equipment at any time and from time to time for the sum of Dollars_____($_____).

The parties hereto mutually covenant and agree each with the other as follows:

1. The location of the Easement Lands shall be selected by the Transferee, provided that the location shall not unreasonably interfere with the use by the Transferor of the remainder of the Transferor's Lands during the construction of any Works or at any time thereafter.

2. The Transferor shall, forthwith upon the request of the Transferee, execute and deliver a grant or transfer of easement in favour of the Transferee in the form attached hereto as Schedule "B" together with such other and further documents of title in respect of the Transferor's Lands as may be reasonably required by the Transferee in order to complete the transaction contemplated by this agreement.

3. The Transferee shall pay the purchase price of the said transfer of easement to the Transferor as soon as reasonably possible after the registration thereof in the appropriate Land Registry Office provided that the amount paid to the Transferor as consideration for this agreement shall be applied as part payment of the said purchase price.

4. Forthwith upon the execution of this agreement, the Transferee, its servants and agents shall be entitled to enter upon the Easement Lands and the transferor's Lands to survey, lay, construct, operate, use, inspect, remove, renew, replace, alter, enlarge, reconstruct, repair, expand and maintain the Works which the Transferee may deem necessary or convenient with the right to the Transferee to remove any boulder or rock, and to sever, fell, remove or control the growth of any roots, trees, stumps, brush or other vegetation on or under the Transferor's Lands which may be encountered during such construction.

5. As soon as reasonably possible after the construction of the Works, the Transferee shall remove all surplus soil and debris from the Transferor's Lands and restore them to their former state so far as is reasonably practicable.

6. The Transferor shall have the right to use and enjoy the surface of the Easement Lands except that such use and enjoyment shall not interfere with the rights of the Transferee hereunder. Without limiting the generality of the foregoing, the Transferor shall not without prior written consent of the
Transferee place or erect, or cause to be placed or erected, on the Easement Lands any building, structure or fence and shall not excavate, drill, alter the grading, install thereon any pit, well, foundation and/or pavement which will obstruct or prevent the exercise and enjoyment by the Transferee of the easement which the Transferor hereby agrees to sell, grant and convey to the Transferee.

7. The Transferor represents and warrants that the Easement Lands have not been used for the storage of and do not contain any toxic, hazardous, dangerous, noxious or waste substances or contaminants (collectively the "Hazardous substances"). If the Transferee encounters any Hazardous Substances in undertaking any work on the Easement Lands, it shall give notice to the Transferor. At the expense of the Transferor, the Transferee (or, at the Transferee's option, the Transferor) shall effect the removal of such Hazardous Substances in accordance with the laws, rules and regulations of all applicable public authorities. The Transferee shall not bring any Hazardous Substances on the Easement Lands. In acquiring its interests in the Easement Lands pursuant to this Easement, the Transferee shall be deemed not to acquire the care or control of the Easement Lands or any component thereof.

8. Notwithstanding any rule of law or equity, any Works constructed by the Transferee hereunder shall be deemed to be the property of the Transferee, even though the same may have become annexed or affixed to the Transferor's Lands.

9. This agreement shall be conditional upon compliance with the provisions of the Planning Act and the Ontario Energy Board Act. The Transferor agrees to execute such consents or authorizations as may be necessary for the Transferee to obtain any necessary consents from the local Land Division Committee and agrees to co-operate in any such applications for consent.

10. This agreement shall be of the same force and effect as a covenant running with the Transferor's Lands and the rights hereunder shall be appurtenant to the lands of the Transferee more particularly described in the attached Schedule “A".

11. The Spouse consents to the transaction evidenced by this instrument and releases all interest in the within lands pursuant to the provisions of the Family Law Act, R.S.O. 1990, as amended and hereby agrees to execute for such purpose the grant or transfer of easement contemplated hereby.

The Transferor, spouses of each other, consent to the transaction evidenced by this instrument and release all interest in the within lands pursuant to the provisions of the Family Law Act, R.S.O. 1990, as amended.

12. Whenever the singular or neuter is used it shall, where necessary, be construed as if the plural or feminine or masculine had been used and vice versa, as the case may be. This agreement shall extend to, be binding upon and enure to the benefit of the respective heirs, executors, administrators, successors and assigns of the parties hereto. The transaction contemplated hereby shall be completed within One Hundred and Eighty (180) days following the approval hereof under the provisions of the Ontario Energy Board Act, including any appeal periods.

14. This agreement shall be null and void upon the registration of the Transfer of Easement as contemplated herein.

IN WITNESS WHEREOF, the parties hereto have executed this agreement.

_____

_____

I/We Have the Authority to Bind the Corporation

UTILITY

_____

_____

I/We Have the Authority to Bind the Corporation

SCHEDULE “A”

TRANSFEREE'S LANDS (DOMINANT TENEMENT)

<List results of title search here>

SCHEDULE "B"

INTEREST/ESTATE TRANSFERRED

1. The Transferors hereby transfer, sell, grant and convey in perpetuity to the Transferee, its successors and assigns, a free and unencumbered easement in, over, upon, under and/or through the lands described herein, hereafter referred to as the Easement Lands, to survey, lay, construct, install, operate, use, inspect, remove, renew, replace, alter, enlarge, reconstruct, repair, expand and maintain pipelines and all works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment (hereinafter collectively referred to as "Works") which the Transferee may deem necessary or convenient thereto. This Transfer of Easement shall include the right of the Transferee, its successors, assigns, servants and agents to use the surface of the Easement Lands for ingress and egress on foot and/or with vehicles, supplies, machinery and equipment at any time and from time to time.

2. The Transferee shall have the right at any time and from time to time to remove any boulder or rock and to sever, fell, remove or control the growth of any roots, trees, stumps, brush or other vegetation on or under the Easement Lands.

3. The rights of the Transferee herein shall be of the same force and effect as a covenant running with the Easement Lands and shall be appurtenant to the lands and premises described in this Schedule as the Transferee's Lands.

4. The Transferee shall have the right to assign or transfer its rights hereunder in whole or in part.

5. This Transfer shall extend to, be binding upon and enure to the benefit of the estate trustees, successors and assigns of the parties hereto. If the Transferors are not the sole owners of the said lands, this Transfer shall bind the Transferors to the full extent of their interest therein and shall also extend to any after-acquired interest but all monies payable or paid to the Transferors hereunder shall be paid to the Transferors only in the proportion that their interest in the said lands bears to the entire interest therein.

The Transferors hereby agree that all provisions herein are reasonable and valid and if any provision herein is determined to be unenforceable, in whole or in part, it shall be severable from all other provisions and shall not affect or impair the validity of all other provisions.

6. The Transferors shall have the right to use and enjoy the surface of the Easement Lands except that such use and enjoyment shall not interfere with the rights of the Transferee hereunder. Without limiting the generality of the foregoing, the Transferors shall not, without the prior written consent of the Transferee, place or erect on the Easement Lands any building, structure or fence and shall not excavate, alter the grading, drill, install thereon any pit, well, foundation and/or pavement which will obstruct or prevent the exercise and enjoyment by the Transferee of its rights hereunder.

7. Notwithstanding any rule of law or equity, any Works constructed by the Transferee shall be deemed to be the property of the Transferee even though the same may have become annexed or affixed to the Easement Lands.

8. The Transferee shall at its own expense as soon as reasonably possible after the construction of any Works or other exercise of its rights hereunder, remove all surplus sub-soil and debris from the Easement Lands and restore them to their former state so far as is reasonably practicable.

9. The Transferors covenant that
   (i) the Transferee shall have quiet enjoyment of the rights hereby transferred;
   (ii) the Transferee shall have quiet enjoyment of the rights hereby transferred;
   (iii) the Transferors or their successors and assigns will execute such further assurances and do such other acts (at the Transferee's expense) as may be reasonably required to vest in the Transferee the rights hereby transferred; and
   (iv) the Transferors have not done, omitted or permitted anything whereby the Easement Lands is or may be encumbered (except as the records of the land registry office disclose).

10. The Transferor represents and warrants that the Easement Lands have not been used for the storage of and do not contain any toxic, hazardous, dangerous, noxious or waste substances or contaminants (collectively the "Hazardous Substances"). If the Transferee encounters any Hazardous Substances in undertaking any work on the Easement Lands, it shall give notice to the Transferor. At the expense of the Transferor, the Transferee (or, at the Transferee's option, the Transferor) shall effect the removal of such Hazardous Substances in accordance with the laws, rules and regulations of all applicable public authorities. The Transferee shall not bring any Hazardous Substances on the Easement Lands. In acquiring its interests in the Easement Lands pursuant to this Easement, the Transferee shall be deemed not to acquire the care or control of the Easement Lands or any component thereof.

11. Whenever the singular or neuter is used it shall, where necessary, be construed as if the plural or feminine or masculine has been used and vice versa, as the case may be.

12. Notwithstanding anything to the contrary contained in this easement, the Transferor and Transferee acknowledge that residential dwelling units have or will be constructed on certain parts of the Easement Lands and that such parts shall be excluded from this easement.

DOMINANT TENEMENTS (TRANSFEREE'S LANDS)

<List results of title search here>

WORKING AREA AGREEMENT

THIS AGREEMENT made the day of , 200 BETWEEN:

(hereinafter called the “Owner”)

-and-

UTILITY

(hereinafter called the “Company”)

WHEREAS:

1. The Company intends to construct and install a header service for the distribution of natural and/or manufactured gas through Lot , Concession/Plan , in the .

2. To facilitate the construction of the header service the Company requires a wide temporary working area adjacent to the pipeline;

3. The Owner is the owner of the Lands adjacent to the pipeline and has agreed to allow the Company to use such working area to construct and install the pipeline.

NOW THEREFORE THIS AGREEMENT provides that in consideration of the sum of Dollars ($) paid by the Company to the Owner, receipt whereof is hereby acknowledged, the Owner hereby agrees to permit the Company, its employees and agents, with or without vehicles and/or machinery, to enter upon, use and otherwise occupy during the period of construction of the pipeline, an area adjacent to the pipeline and being a distance of m.

The Company agrees that at its own expense it will make all grading, repairs and replacements necessary to restore the Lands to as near its original condition as is practicable upon the termination of such work. The Company shall pay for all damages to land, crops, timber or improvements caused by its operations.

IN WITNESS WHEREOF the parties have executed this Agreement.

SIGNED, SEALED AND DELIVERED
In the presence of

_____

_____

UTILITY

_____

_____

PUBLIC CONSULTATIONS

Stantec Consulting Ltd. implemented a comprehensive consultation program to drive awareness of the Project. The consultation program allowed interested or potentially affected parties to provide input into the Project. Input was evaluated and integrated into the Project.

Consultation program activities included the following:

- Letters sent to stakeholders
- Public notice placed in newspapers in the five Municipalities
- Project website created
- Information Session held in each of the five Municipalities

The activities are described in detail in Section 3 of the Environmental Reports (Tab 10, Schedule 1, Attachment 1). Correspondence summary tables and copies of all written correspondence and responses are located in Appendix B5 of the Environmental Reports.

Nine comments were received as of April 10, 2019 proceeding from the Information Sessions, and two comments were received via Canada Post regular mail as of June 10, 2019 from the public. These comments were considered in the preparation of the Environmental Reports. These comments related to the general safety of natural gas systems, service line access to their properties, the number of trucks transporting LNG per day, and the possibility of financial incentives to assist with conversions.

FIRST NATIONS AND MÉTIS CONSULTATION

OVERVIEW OF CONSULTATION ACTIVITIES

The Municipalities are committed to fostering positive and productive relationships with all indigenous rights-holder groups, including First Nations and Métis communities. The Municipalities have engaged with First Nations and Métis communities to build an understanding of Project-related interests, ensure regulatory requirements are met, mitigate or avoid project impacts, and provide mutually beneficial opportunities.

On behalf of the Municipalities, Stantec Consulting Ltd. performed community engagement activities including letters, email, phone calls and face-to-face meetings with representatives of the following First Nation and Métis communities:

- Batchewana First Nation
- Biigtigong Nishnaabeg (Pic River First Nation)
- Biinjitiwaabik Zaaging Anishinaabek
- Bingwi Neyaashi Anishinaabek
- Garden River First Nation
- Ginoogaming First Nation
- Long Lake #58 First Nation
- Métis Nation of Ontario (MNO) Superior North Shore Métis Council
- Michipicoten First Nation
- Pays Plat First Nation
- Pic Mobert First Nation
- Red Rock Indian Band
- Red Sky Métis Independent Nation

Detailed information about the indigenous consultation program is found in the Environmental Reports (Tab 10, Schedule 1, Attachment 1). The consultation activities are described in detail in

Section 3, specifically Sections 3.2, 3.3.2 and 3.5.6. Correspondence summary tables and copies of all written correspondence and responses are located in Appendix B5 of the Environmental Reports.

PRE-APPROVAL OF COST CONSEQUENCES OF LONG-TERM CONTRACT

APPLICATION

Introduction

The Corporation of the Town of Marathon (the "Corporation") brings this Application pursuant to Section 36 of the *Ontario Energy Board Act, 1998*[1] and the Ontario Energy Board's (the "OEB" or the "Board") Filing Guidelines for Pre-Approval of Long-Term Natural Gas Supply and/or Upstream Transportation Contracts[2] (the "Guidelines") to seek pre-approval of the cost consequences of a proposed long-term gas service contract (the "Contract") between Nipigon LNG LP ("Nipigon LNG") and the Corporation on behalf of a utility to be formed (the "Utility"). Pursuant to the Contract, Nipigon LNG proposes to construct, own and operate storage and regasification facilities situated on land leased or owned by the Utility in Northern Ontario, in order to supply natural gas to the Town of Marathon, the Township of Manitouwadge, the Township of Schreiber, the Township of Terrace Bay and the Municipality of Wawa (the "Municipalities" or the "North Shore Municipalities").

Nipigon LNG is a transformative and regionally significant initiative for the economic development of northern Ontario. Project infrastructure will help sustain existing industrial operations, accelerate new development and provide a platform to extend natural gas service where feasible to northern and First Nation communities from a regional liquefied natural gas ("LNG") facility situated in the Township of Ledger, north of Nipigon, Ontario. For more information, see the Nipigon LNG Fact Sheet (Tab 13, Schedule 1, Attachment 1) and map (Tab 13, Schedule 1, Attachment 2).

[1] *Ontario Energy Board Act, 1998*, SO 1998, c 15, Sch B.
[2] Guidelines for Pre-Approval of Long-Term Natural Gas Supply and/or Upstream Transportation Contracts, Ontario Energy Board, dated April 23, 2009 [*Guidelines*].

The Nipigon LNG production facility (the "LNG Plant") is designed and engineered to have the capacity to liquefy approximately 7,200 GJ per day of natural gas, with the potential for future expansion. The LNG Plant will have tie-ins between facilities owned by Nipigon LNG and facilities owned by TransCanada Corporation ("TransCanada" or "TCPL"). Nipigon LNG and TransCanada have entered into an agreement to effect the design, construction and commissioning of the tie-ins by July 1, 2020. Nipigon LNG will own LNG cryogenic truck trailers and operate loading facilities capable of transferring and measuring LNG from the LNG Plant to the cryogenic truck trailers for delivery of LNG to the Utility and its customers. Pursuant to the Contract, Nipigon LNG proposes to construct and operate five LNG depots on land leased or owned by the Utility ("LNG Depots").

Nipigon LNG and the Utility intend to enter into an agreement for the delivery of and payment for LNG for a period of 10 years. The proposed agreement will catalyze the investment required to build and operate the new infrastructure capacity to supply the Municipalities with natural gas, specifically the five LNG Depots. This upstream capacity represents 100% of the Utility's annual upstream portfolio. (See the Gas Supply Plan in Tab 8.)

The Corporation seeks pre-approval of the cost consequences of entering the contemplated long-term commitment for upstream capacity in order to: (i) provide the Utility and its investors with the necessary assurance that the costs associated with the proposed Contract are eligible for recovery from the Utility's customers; and (ii) provide Nipigon LNG with the necessary assurance and financial commitment to construct the proposed facilities.

Without pre-approval of the cost consequences of the proposed Contract, the Utility's investors would not commit the capital to finance the Utility, and, in turn, Nipigon LNG could not commit to build and operate the LNG Depots to supply the Utility with natural gas. As a result, the residents and businesses of the Municipalities would be exposed to the sustained impacts of higher-cost energy.

Under the proposed Contract, Nipigon LNG is committing to a fixed capacity charge based on the forecasts provided in this Application, and the Utility is not exposed to any capital cost overruns incurred by Nipigon LNG during the term. The upper limit of the fixed portion of the proposed Contract charges is therefore known and can be approved by the OEB.

Summary of the Proposed Contract

Under the terms of the proposed Contract, Nipigon LNG will liquefy natural gas for the Utility, truck same to each of the Municipalities, and store and convert the LNG back into natural gas for distribution by the Utility (collectively, the "LNG Services").

To this end, Nipigon LNG will design, build, own and operate an LNG Depot in each of the Municipalities to enable Nipigon LNG to provide the LNG Services to the Utility through the effective term of the proposed Contract. Nipigon LNG will also provide procurement and transportation of the natural gas commodity to the LNG Plant on behalf of the Utility, as required.

The LNG Depots will each consist of one or more LNG tanks, product vaporizers, process piping and instrumentation, electric trim heaters, control and safety systems, truck unloading, meters, natural gas odorization, and LNG spill containment, with potential for expansion at some future date. The conceptual design for each LNG Depot includes a receipt connection that transfers LNG from cryogenic truck trailers to on-site storage tanks. From these tanks, the LNG is piped through a series of vaporizers where the LNG is regasified to natural gas. The gas is then sent through a conventional underground distribution system at the desired distribution temperature and pressure to homes and businesses in the service area. A draft LNG Depot layout is included (see Tab 13, Schedule 1, Attachment 3).

The LNG Depots will be located on land leased or owned by the Utility identified in Tab 6, either pursuant to a lease or agreement of purchase and sale, with road access and utility services provided by the Utility.

Representatives of each Municipality have reviewed and approved the proposed depot locations. Public information sessions/open houses were conducted in each of the communities in April 2019, where information about the LNG Depots was shared with the residents. Multiple depot locations were proposed and subsequently evaluated as a result of the information sessions before a consensus decision was reached on the final depot locations.

While the LNG Depots in each Municipality all perform the same basic function, the capacity requirements vary. Each LNG Depot will be sized to accommodate the specific demand requirements of the Municipality. With the exception of the Municipality of Wawa, on-site storage is specified to provide a minimum of five days of peak-day gas demand for each Municipality, excluding industrial volumes. LNG Depots located in the Municipality of Wawa will be sized to provide a minimum of seven days of peak day gas demand.

The number and size of the tanks to be located at each Municipality are shown in the following table, which illustrates the anticipated ultimate storage requirements. Individual tanks may be added in phases to accommodate load growth over several years.

Depot Location	No. and Size of Tanks	Total Storage
Manitouwadge	2 x 20,000 gallons each	40,000 gallons
Marathon	3 x 20,000 gallons each	60,000 gallons
Schreiber	2 x 20,000 gallons each	40,000 gallons
Terrace Bay	1 x 90,000 gallons each; 1 x 20,000 gallons each	110,000 gallons
Wawa	3 x 20,000 gallons each	60,000 gallons

Table 1: Tanks and Storage at LNG Depots (US Gallons)

In addition to the storage tanks and the vaporizers, other equipment at the LNG Depots include the following:

- Truck unloading skid, including offload pumps. Two pumps have been proposed to allow for redundancy. These are typically single-stage centrifugal pumps that have a

throughput of approximately 300 US gallons per minute and nominal discharge pressure of around 120 psig (827 kPa);

- Electric trim heaters to heat the gas exiting the ambient vaporizers to the required temperature before it is sent to the distribution system. Depending on the gas pressure and temperature, the gas may need to be heated before it can be regulated to distribution line pressure;
- Odorization equipment and a pressure-control manifold to regulate the gas to the required line pressure;
- Control building and truck unloading area that houses automated control computers, security systems, safety systems, telemetry and communications equipment for the LNG Depot;
- A perimeter roadway with provisions for maintenance access to tanks and equipment. LNG truck access will be provided in a manner that does not require LNG transports to back up at any time. Provisions for safe parking of LNG transports while waiting to unload will also be provided inside the security fence of the LNG Depot; and
- Supervisory control and data acquisition systems that allow for remote monitoring of the LNG Depots.

The anticipated commercial operation date for provision of the LNG Services to the Utility is October 1, 2020 (the "Commercial Operation Date"). All costs to effect the Utility's distribution pipeline infrastructure located outside the LNG Depots will be the Utility's sole responsibility.

Nipigon LNG and the Corporation are in the process of obtaining, and causing any other parties whose participation is required to obtain, such contractual rights, environmental clearances, pipeline interconnection approvals, natural gas delivery facility permits and regulatory authorizations (collectively, the "Rights and Authorizations") as may be necessary to effectuate the LNG Services. The Rights and Authorizations with which Nipigon LNG intends to comply are

expected to include, but not necessarily be limited to, authorizations from any applicable provincial or federal agency required to provide the LNG Services. The Rights and Authorizations with which the Utility intends to comply are expected to include, but not necessarily be limited to, an order or orders from the OEB pre-approving the cost consequences of the proposed Contract to receive the LNG Services.

The proposed Contract commits the Utility to the cost consequences to acquire firm, non-interruptible service to liquefy natural gas, store LNG and regasify LNG, as indicated in the proposed Contract (Tab 13, Schedule 1, Attachment 5). The services and charges therein are based on the Nipigon LNG's current estimates to provide the LNG Services according to the current forecasts in this Application regarding the type of service, the maximum daily quantity, minimum annual volumes, storage volumes of the LNG Depots, commencement date and contract term.

The proposed Contract would commit the Utility to the cost consequences of 2,400 GJ per day of firm capacity in Year 1 with an annual cost of the proposed Contract of approximately $6.2 million, escalating to 3,700 GJ per day of firm capacity in Year 10 with an annual cost of the proposed Contract of approximately $10.9 million. Any applicable taxes will be in addition to the total cost of the LNG Services purchased.

	Maximum Daily Quantity GJ/Day	Minimum Annual Volume GJ/Year	Firm Capacity Charge $/GJ	Total Annual Cost
Year 1	2,400	876,000	7.03	6,158,280
Year 2	2,400	876,000	7.14	6,250,654
Year 3	2,800	1,022,000	7.24	7,401,816
Year 4	3,100	1,131,500	7.35	8,317,791
Year 5	3,200	1,168,000	7.46	8,714,899
Year 6	3,300	1,204,500	7.57	9,122,048
Year 7	3,400	1,241,000	7.69	9,539,451
Year 8	3,500	1,277,500	7.80	9,967,323
Year 9	3,600	1,314,000	7.92	10,405,885
Year 10	3,700	1,350,500	8.04	10,855,362

Table 2: Proposed Annual Quantities and Costs

The Utility will agree to pay the total cost of all natural gas purchased by Nipigon LNG on the Utility's behalf for liquefaction in addition to the charges indicated. Any applicable taxes will be in addition to the total cost of the natural gas purchased. Nipigon LNG may amend its proposed services and charges if the Utility revises the demand forecasts in this Application, and Nipigon LNG determines, in its reasonable judgment, that it must incur additional costs to serve the incremental demand.

The Utility will be required to provide and maintain evidence of satisfactory creditworthiness and provide the requisite financial assurances during the term of the proposed Contract, and the Utility may be required to execute a financial backstopping agreement, in form and substance reasonably acceptable to Nipigon LNG upon execution of the proposed Contract.

Nipigon LNG is under no obligation to order any equipment, materials or labour necessary for the construction of the LNG Depots prior to the execution of the proposed Contract.

Applicable Tests for the Pre-Approval Sought

The Guidelines establish what is effectively a two-part test for obtaining pre-approval of the cost consequences of a long-term contract. First, to be eligible for pre-approval of the cost consequences, the contemplated contract must be a long-term natural gas supply and/or upstream transportation contract supporting the development of new infrastructure. If the contract is eligible for pre-approval, the applicant must nevertheless establish that pre-approval should be granted. The OEB's determination shall be made in light of the need, costs, benefits, diversity and risks associated with the proposed contract.

Test 1: Whether the Proposed Contract Qualifies for Pre-Approval

The Guidelines apply to new natural gas infrastructure and are not limited to new pipeline infrastructure from a new gas supply source. The Guidelines state:

> This form applies to all applicants who are requesting pre-approval of long-term natural gas supply and/or upstream transportation contracts that support the development of new natural gas infrastructure.[3]

As noted by the OEB in the Guidelines, "stakeholders generally agreed to a pre-approval process for long-term contracts that support the development of new natural gas infrastructure (e.g., new pipeline facilities to access new natural gas supply sources such as Liquefied Natural Gas plants and frontier production)."[4]

The proposed Contract for services from Nipigon LNG meets the eligibility criteria for pre-approval as the facilities proposed by Nipigon LNG is new infrastructure. Furthermore, the proposed Contract will result in the introduction of natural gas in the Municipalities by securing access to the TransCanada Mainline for off-pipeline consumers and groups of consumers.

[3] *Guidelines*, Attachment
[4] *Guidelines* at page 2.

Consequently, it would be prudent and in the public interest for the Utility to execute the proposed Contract on behalf of its potential customers who would rely on the Utility to provide for their gas supply needs.

Nipigon LNG submits that that Contract is eligible for pre-approval as it supports the development of new natural gas infrastructure within the Municipalities and it affords access to a new natural gas supply source in Northern Ontario, specifically LNG from the TransCanada Mainline near Nipigon, Ont.

Test 2: Whether Cost Consequences of the Proposed Contracts Should Be Pre-Approved

The Guidelines set out the information and analysis that must be included in an application for pre-approval of a long-term contract, and provide a framework for assessing whether the contract and its associated cost consequences are reasonable. The Guidelines include the following key factors for OEB consideration:

1. Need, Costs and Benefits of the Project
2. Contract Diversity
3. Risk Assessment
4. Other Considerations
    a. Affiliate Relationships
    b. Retail Competition Impacts
5. Contract

Need, Costs and Benefits of the Contract

Applications for the pre-approval of cost consequences must include evidence regarding the need, costs and benefits of a proposed contract and a landed cost analysis comparing a proposed contract to alternatives. As noted above, the costs are known and defined in the

proposed Contract. The Corporation has projected the benefits based on current forecasts and estimates.

In determining the need of the contemplated contract, the applicant need not demonstrate that there are no alternatives to the proposed contract.[5] Instead, as the OEB has previously stated, "[i]t is sufficient for the OEB to assess the benefits that will accrue to customers against the costs to customers."[6]

Substantial net benefits will accrue to residents and businesses in the Municipalities through the proposed Contract.[7] A full discussion of the Project's benefits is presented in Tab 4 and Tab 9 of this Application. These benefits include cost savings, job creation and a more economically viable environment to draw new business to the region. The said benefits will accrue to customers of the Utility, net of all costs to customers, including the cost of the proposed Contract.

Furthermore, there is a public need to reduce energy costs and greenhouse gas emissions for northern Ontario's residents and businesses. The expected energy cost savings and emission reductions resulting from the Project are key differentiating benefits of the proposed Contract, which would establish a cost-effective and gas supply link between the TransCanada Mainline and the Municipalities.

Landed Cost Analysis

The average landed gas supply cost of the proposed Contract is less than or competitive with costs for alternate natural gas supply. Nipigon LNG and the Corporation have considered other options of providing the requisite natural gas services to meet the demands of the North Shore Municipalities. These options include LNG service, compressed natural gas service and a lateral

[5] Union Gas Limited, Enbridge Gas Distribution Inc., Application for Pre-Approval of the Cost Consequences of Long-Term Natural Gas Transportation Contracts for Capacity on the NEXUS Pipeline, Decision and Order dated December 17, 2015, EB-2015-0166 / EB-2015-0175 [*NEXUS Decision*] at 14.
[6] *NEXUS Decision* at 14.
[7] The contemplated Contract's numerous benefits are identified in Tab 4 and Tab 9 of this Application.

pipeline. A landed cost analysis demonstrates that the LNG Services contemplated in the proposed Contract is the most beneficial and cost-effective option.

At present, there is no natural gas supply or distribution on the North Shore of Lake Superior, and no other entity has applied for or been granted authority (conditional or otherwise) to serve the Municipalities due to the high capital cost of natural gas pipeline expansion. Connecting each of the Municipalities to the TransCanada Mainline would require approximately 450 kilometres of pipeline. Union Gas completed an opportunity assessment for its 2015 Community Expansion proposal that estimated the capital costs required to expand service to Terrace Bay, Schreiber and Marathon.[8] Union Gas forecast the capital cost of the 200 kilometres of pipeline required to connect those three municipalities to be $243.97 million. Considering the additional 250 kilometres of pipeline required to connect Manitouwadge and Wawa, which is not included in the assessment, the total capital cost for an alternative pipeline project may exceed half a billion dollars.

The capital cost of a pipeline project cannot be supported by the size of the potential natural gas market within the Municipalities. With an assumed $500 million project cost and 50-year depreciable life, the cost of depreciation alone would require recovery of $10 million per year. This amount does not include cost of capital or operations, maintenance and administration costs. With an assumed return on capital rate of 6% the cost of capital would be $750 million over the life of the asset. This conservative estimate of depreciation costs, before additional costs associated with the pipeline are included, materially exceeds the cost of alternate natural gas supplies. A pipeline project would also require more time to develop, consult with relevant communities and construct, substantially delaying the Municipalities' access to natural gas.

As the cost of constructing a pipeline is simply not feasible for the North Shore Municipalities, the landed cost of LNG is evaluated against the landed cost of an alternative form of natural gas

[8] EB-2015-0179, Exhibit A-1, Appendix D, Page 2.

delivered by truck, compressed natural gas ("CNG"). The scenario analyzed herein accounts for a peak day of 2,400 GJ, a 100% utilization rate, and sufficient storage for five days of peak day consumption in each Municipality (although it is recognized that Wawa would require storage for seven days of peak-day consumption). These are the forecast conditions for the first few years of the Utility's operation.

The estimated landed costs for LNG include the commodity, upstream pipeline transportation, liquefaction, gasification, storage, and trucking costs. The majority of the cost for this option is attributed to the fixed contract for liquefaction, gasification and storage service.

Est. Annual Operating Costs - Year 1	Nipigon LNG	$/GJ
Fixed Costs	6,158,280	7.03
Variable Operating Cost	383,823	0.44
TCPL Charges (Assumed ex-franchise)	868,368	0.99
Trucking	734,096	0.84
Subtotal	8,144,568	9.30
Commodity (Empress)	2,330,160	2.66
Total	10,474,728	11.96

Table 3: Estimated LNG Landed Cost

The estimated landed costs for the CNG alternative would be operationally similar to the LNG option and has a similar cost structure. The landed costs for CNG include the commodity, upstream transportation, compression, decompression, storage and trucking costs. For modeling purposes, it is assumed that the Utility would build and operate a CNG compression facility near Nipigon to serve the Municipalities. The annual fixed cost of providing compression, storage and decompression services is forecast to be approximately 15% more than the annual cost for the LNG Services. The forecast is based on an estimated annual revenue requirement associated with total capital costs of $42 million, which includes the CNG production plant, trailer modules designed specifically for bulk transportation and storage of large amounts of CNG, and local decanting depots within each community, as well as annual operations costs of $1.4 million for a total of $7.1 million per year.

Est. Annual Operating Costs – Year 1	CNG - Nipigon	$/GJ
Fixed Costs	7,102,039	8.11
Variable Operating Cost	297,840	0.34
TCPL Charges (Assumed ex-franchise)	868,368	0.99
Trucking	1,882,108	2.15
Subtotal	10,150,355	11.59
Commodity (Empress)	2,330,160	2.66
Total	**12,480,515**	**14.25**

Table 4: Estimated CNG Landed Cost

While LNG production requires higher capital cost than CNG production per unit of energy, CNG has a lower energy density and requires more storage capacity in high-pressure trailers, which are significantly more expensive to own and operate than stationary LNG tanks that store the same amount of energy. In this analysis, fixed costs of LNG are approximately $1 million per year lower than of CNG due principally to the cost to store five days of peak demand of natural gas within each Municipality.

LNG and CNG have the same commodity and pipeline infrastructure costs, but there is a significant difference in trucking costs. Both options have same forecast average cost of $1,016 per delivery; however, each LNG delivery can transport more than 2.5 times as much energy as a CNG delivery. The distance from the LNG Plant to the Municipalities ranges from 110 kilometres (Schreiber) to 385 kilometres (Wawa), with an average delivery distance of approximately 200 kilometres. Consequently, the incremental trucking costs make CNG a costlier option than LNG under the forecast market projection and conditions.

Transporting LNG would require an average of two total truck deliveries per day during the winter across the Utility's service area. For each Municipality, it is estimated there would be an average of two to three deliveries per week of LNG. Because of the relatively low energy density of CNG, CNG would require five or more deliveries per day during the winter or more than one delivery per day in each Municipality. As the LNG option reduces the number of trucks on the road by a factor of 2.5 times, it is better aligned with the Municipalities' preference for reliability.

Furthermore, with the average distance at 200 kilometres, LNG has the lowest landed cost if required storage is sufficient for more than one day of peak demand. The following table demonstrates the impact of the required days of storage and distance on the relative cost differential between LNG and CNG per GJ. If there are fewer days of storage required, and if the average trucking distance is shorter, CNG is a more cost-effective option than LNG.

One-Way Distance (Kilometres) \ Days of Storage	1	2	3	4	5	6	7
100	(1.09)	(0.41)	0.27	0.95	1.63	2.31	3.00
200	(0.43)	0.25	0.93	1.61	2.29	2.97	3.65
300	0.22	0.90	1.58	2.26	2.94	3.63	4.31
400	0.88	1.56	2.24	2.92	3.60	4.28	4.96
500	1.53	2.21	2.89	3.57	4.26	4.94	5.62
600	2.19	2.87	3.55	4.23	4.91	5.59	6.27
700	2.84	3.52	4.20	4.89	5.57	6.25	6.93
800	3.50	4.18	4.86	5.54	6.22	6.90	7.58

Table 5: Estimated Benefit/(Cost) of LNG vs CNG ($/GJ)

The LNG and CNG each have cost advantages and disadvantages and each has the potential to be the least-cost option depending on the specific circumstances of the Utility.

Given the circumstances of the Utility, especially the trucking distances and number of storage days required, LNG is the lowest-cost option for the Municipalities, based on estimated fixed and variable operating costs and current commodity prices. In addition, LNG provides a higher reliability factor that CNG as it requires fewer trucks to be on the road, especially during the winter months.

Contract Diversity

The Guidelines require that applications for pre-approval include an assessment of how the contract fits into the applicant's overall transportation and natural gas supply portfolio in terms of contract length, volume and services. The proposed Contract will increase energy supply

diversity for the Municipalities to be served. As a result, the proposed Contract is an appropriate addition to region's energy supply portfolio.

Furthermore, the contemplated project is a stand-alone greenfield development that requires a sizable investment in new natural gas infrastructure to provide a relatively small quantity of natural gas. While the proposed Contract represents the entire portion of the Utility's overall gas supply portfolio, it is not unreasonable that the Utility would rely on a single contract during the initial term of the proposed Contract.

Risk Assessment

The Guidelines require applications for pre-approval to include a description of all the risks associated with a project and the applicant's plans for minimizing the identified risks. A detailed risk analysis is provided in the Gas Supply Plan found at Tab 8 of this Application.

As with any greenfield natural gas project, actual attachments and demand may not match forecasts over the term of the proposed Contract and the discrepancy may be material, thereby creating financial risk to customers. Further, changes may occur in natural gas markets over the term of the proposed Contract, such as the emergence of lower-cost supply and transportation options, and these opportunities could be lost to customers due to the proposed Contract held by the Utility.

With respect to forecasting risks, the Utility's commitment under the proposed Contract includes the phasing in of capacity over the term of the proposed Contract. The escalating contracted demand over time provides the Utility with flexibility to address ramping up of natural gas demand, especially in the early years. In addition, the proposed Contract is structured as a 10-year commitment with a renewal option, rather than a longer commitment typical for new facilities (by comparison, Union Gas's and Enbridge's NEXUS project was a 15-year transportation contract), so the Utility could opt to revise its contracted demand after Year 10.

Similarly, if the Utility expands faster than projected and lower-priced gas supply and transportation options became available at some point in during the proposed Contract, the Utility will have flexibility to take advantage of those opportunities by adding that capacity to its supply portfolio. Accordingly, the risks associated with the proposed Contract have been sufficiently identified and mitigated. Furthermore, the proposed Contract provides the Utility with reasonable flexibility to mitigate financial risks to its customers.

Other Considerations

The Guidelines require applications for pre-approval to include a description of the relationship between the parties to the contract and the applicant's parent company and/or affiliates. Applications must also include an assessment of the retail competition impacts and impacts on existing transportation pipeline facilities.

There are no affiliate relationship issues related to the Contract. The parties to the proposed Contract are arm's length parties. This Application does not involve a scenario whereby a regulated entity charges customers to cross-subsidize the costs of a non-regulated affiliated entity.

Under the proposed Contract, there is nothing that would preclude a natural gas marketer from offering natural gas to customers it may attract in the Municipalities, similar to how natural gas marketers deliver gas to different Enbridge delivery points on the TCPL or Dawn systems. In terms of retail competition with other fuels, this project is enhancing competition by providing more energy choices for consumers.

The proposed Contract does not displace any existing pipeline capacity. Rather, the proposed Contract will benefit TransCanada and all Mainline shippers, including utilities serving other consumers in Ontario, as Nipigon LNG is expected to enter into a new firm transportation agreement with TransCanada, thereby increasing capacity on an under-utilized section of the Mainline system.

Contract

The proposed Contract for which the Corporation is seeking pre-approval is filed in this Application.[9]

Conclusion

In the Guidelines, the OEB notes that the pre-approval process for the cost consequences of long-term transportation or supply contracts is intended to serve a specific role in the development of natural gas infrastructure in the interests of Ontario consumers. The need for pre-approval stems from recognition by the OEB that developers of natural gas infrastructure in some circumstances require long-term commitments to support large infrastructure development. The OEB has also recognized that natural gas utilities could be a necessary and desirable element in new infrastructure development, but these utilities may be reluctant to enter into long-term commitments for new infrastructure without assurances of cost recovery.

The contemplated Contract supports the development of new natural gas infrastructure to provide access to new natural gas supply sources. The contemplated LNG Services would meet the natural gas demands of the North Shore Municipalities, which currently do have access to natural gas service. Financial projections and costs analyses also demonstrate that the LNG Services are the most reliable and cost-effective way of meeting the needs of the Municipalities in a market that also strives for reduced greenhouse gas emissions. The requested pre-approval will allow the Corporation to proceed confidently with this opportunity and for residents and businesses of the Municipalities to obtain the resulting benefits of natural gas service.

The Corporation respectfully submits that the Application for pre-approval of the cost consequences of the Contract should be approved.

[9] See Tab 13, Schedule 1, Attachment 5 for the Contract.

NIPIGON LNG FACT SHEET

PROJECT OVERVIEW

Nipigon LNG is a strategic infrastructure project in northern Ontario to lower energy costs, reduce GHG emissions, and support economic development.

- Pipeline natural gas will be liquefied at a new plant near Nipigon, Ontario, trucked to local LNG depots, and converted back into natural gas to replace diesel, fuel oil, and propane for heating and power generation.
- Significant energy cost savings and GHG reductions will help sustain existing industries and increase the potential for new investments.
- Facilities will enable natural gas service to northern and Indigenous communities and support the transition to a low-carbon fuel for trucking, railways, and shipping.
- Status: Front-End Engineering and Design, with commercial operation to begin in 2020.

WHAT ARE THE EXPECTED BENEFITS?

Nipigon LNG will lower energy costs and reduce GHG emissions for northern industry, helping Ontario reach its economic and climate change goals.

- Industrial customers can cut operating costs and GHG emissions, improving their competitiveness.
- Access to LNG will enable fuel-switching from diesel to cleaner-burning natural gas for regional transportation.
- New natural gas infrastructure will contribute to the local economy through construction jobs, purchase of materials and services, and new full-time employment.

WHAT IS LNG?

Liquefied natural gas (LNG) is natural gas cooled to -162°C, converting it into a liquid so it can be safely stored and economically transported for use as a low-carbon fuel.

- LNG is odourless, colourless, non-toxic, and non-corrosive – it cannot burn or explode in its liquid state.
- LNG is transported by truck to an LNG depot, and is then heated using a vaporizer, returning the liquid to conventional natural gas.
- More than 100 natural gas distribution systems in North America successfully use LNG where pipeline capacity is restricted or unavailable.
- Ontario is joining British Columbia, Quebec, and Alaska in using LNG for heating and power generation in northern areas and for transportation.

MORE INFORMATION

Joshua Samuel
President & CEO
of the General Partner

jsamuel@northeastmidstream.com
+1 416 848 1165 (Direct)

WHY LNG?

LNG provides industries with the economic and environmental benefits of natural gas without requiring a pipeline.

- LNG is the cleanest-burning fossil fuel, producing fewer emissions than diesel, fuel oil, and propane.
- LNG is kept cold at low pressure in insulated containers, like a thermos bottle, making storage and transportation very safe and secure.
- In the unlikely case of a spill, LNG vaporizes into the atmosphere and dissipates quickly, unlike petroleum products that sink into the ground and threaten wildlife.
- One truck trailer of LNG can deliver three to five times more energy than a trailer of compressed natural gas.

WHAT ABOUT SAFETY?

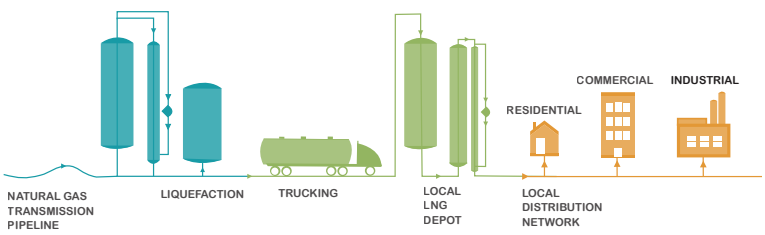
Natural gas liquefaction and distribution facilities are built and operated to strict engineering and environmental standards to protect public safety and the environment.

- LNG facilities meet or exceed national safety standards, and are inspected by provincial agencies to ensure code compliance.
- Technicians monitor systems continuously, helping to ensure safe and reliable delivery of natural gas at all times.
- Trucks transport LNG more than 15 million kilometres a year in North America, with an admirable safety record.
- Local first-responders are trained before LNG production and natural gas delivery begin.

ABOUT NORTHEAST MIDSTREAM LP

Northeast Midstream is an Ontario partnership with a track record of originating mid-scale energy infrastructure for new and unserved markets. Additional projects include:

- North Shore Gas Distribution Project – A transformative initiative to extend the benefits of natural gas to the northern Ontario communities of Marathon, Terrace Bay, Schreiber, Manitouwadge, and Wawa.
- Thorold LNG – A shovel-ready natural gas liquefaction facility to serve utility and transportation markets in Ontario and northeastern United States.



Nipigon LNG Project

LNG Facility

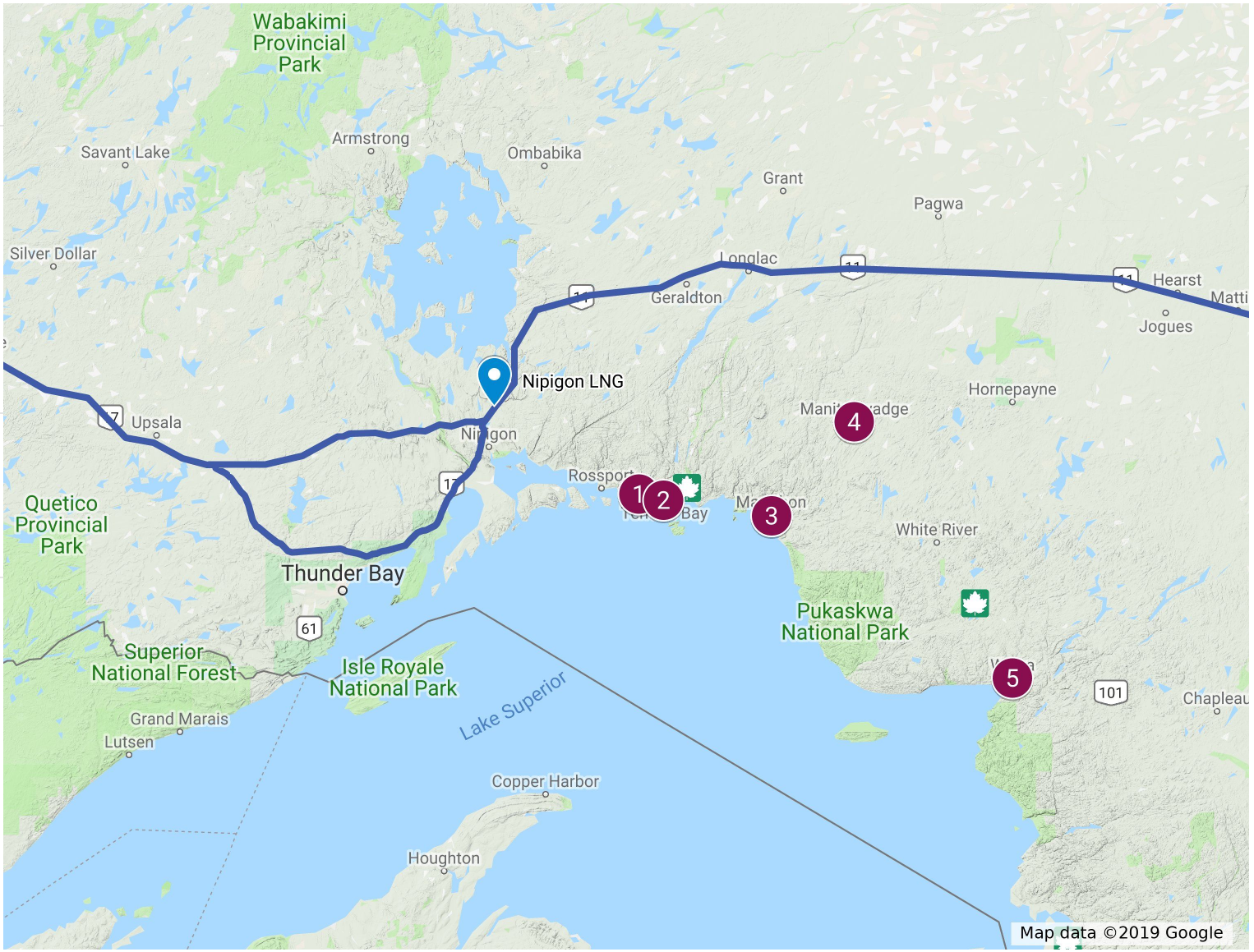
- Nipigon LNG

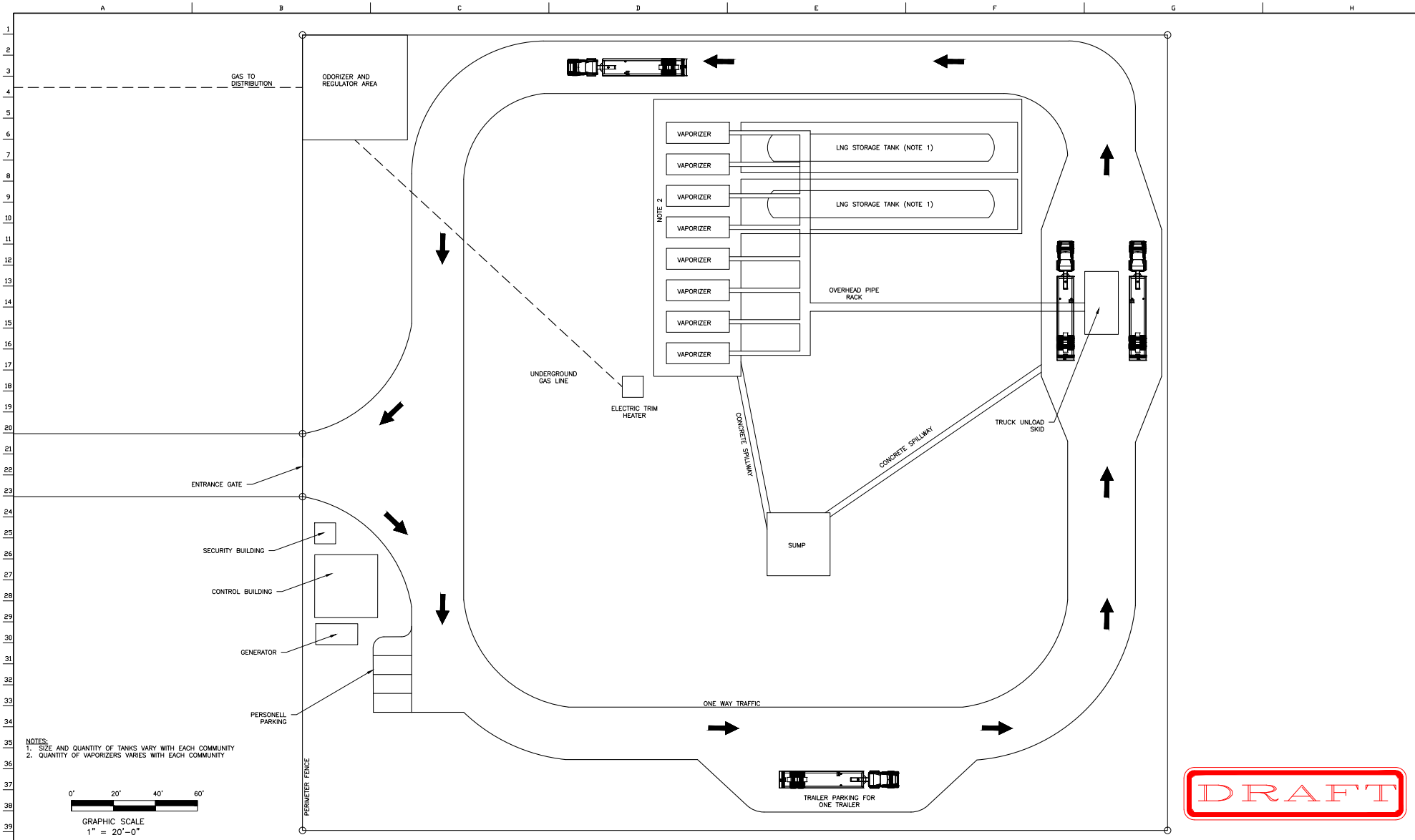
North Shore Municipalities

1. Schreiber
2. Terrace Bay
3. Marathon
4. Manitouwadge
5. Wawa

TransCanada Mainline

- TCPL Mainline
- TCPL T-Bay Lateral





DRAWING NUMBER	DRAWING TITLE	COMPANY

DRAWING REFERENCES

REV. NO.	DATE	DESCRIPTION	DRWN BY	CHK'D BY	APP'D BY
B	5/27/2016	AMBIENT VAPORIZER OPTION	TBC	YSS	PMC
A	5/3/2016	ISSUED FOR REVIEW	NPA	TBC	PMC

REVISIONS

Cornerstone Energy Services

NORTHEAST MIDSTREAM
LAKE SUPERIOR LNG DEPOTS
ONTARIO, CANADA

GENERAL ARRANGEMENT

DRAWN BY: TBC	DATE: 4/26/2016	DRAWING SCALE: 1" = 20'
CHECKED BY:	DATE:	
APPROVED BY:	DATE:	
FILE NAME: GA AMBIENT VAPORIZERS.DWG		

16053-G-002

SET REV. B

PRE-APPROVAL FORM

Part I – Identification of Applicant

Name of Applicant: Corporation of the Town of Marathon	File No: EB-2018-0329
Address of Head Office: Town of Marathon 4 Hemlo Drive, PO Bag TM Marathon, ON P0T 2E0	Telephone Number: 807-229-1340
	Facsimile Number: 807-229-1999
	E-mail Address: cao@marathon.ca
Name of Individual to Contact: Daryl Skworchinski, Chief Administrative Officer and Clerk	Telephone Number: Same as above
	Facsimile Number: Same as above
	E-mail Address: Same as above

Part II – Needs, Costs and Benefits

2.1	A description of the proposed project that includes need, costs, benefits (such as this project improves the security of supply and the diversity of supply sources) and timelines.	Exhibit A, Tab 13, Schedule 1, pages 9 to 10
2.2	An assessment of the landed costs (supply costs + transportation costs including fuel costs) for the newly contracted capacity and/or natural gas supply compared to the landed costs of the possible alternatives.	Exhibit A, Tab 13, Schedule 1, pages 10 to 14

Part III – Contract Diversity

3.1	A description of all the relevant contract parameters such as transportation/supply provider, contract length, conditions of service, price, volume, and receipt and delivery points.	Exhibit A, Tab 13, Schedule 1, pages 14 to 15
3.2	An assessment on how the contract fits into the applicant's overall transportation and natural gas supply portfolio in terms of contract length, volume and services.	Exhibit A, Tab 13, Schedule 1, pages 14 to 15

Part IV – Risk Assessment

4.1	Identification of all the risks (such as forecasting risks, construction and operational risks, commercial risks and regulatory risks) and plans on how these risks are to be minimized and allocated between ratepayers, parties to the contract and/or the applicant's shareholders. For example, forecasting risks include future demand, prices, actual landed costs and performance of basin; commercial risks include competitive and credit-worthiness of provider/operator; construction and operational risks include costs escalations, delays or reliability issues pertaining to new construction, and gas interchangeability and quality issues; and regulatory risks include changes in laws or regulations.	Exhibit A, Tab 13, Schedule 1, pages 15 to 16

Part V – Other Considerations

5.1	A description of the relationship and any other conditions, rights or obligations between the parties to the contract and the applicant's parent company and/or affiliates.	Exhibit A, Tab 13, Schedule 1, page 16
5.2	An assessment of retail competition impacts and potential impacts on existing transportation pipeline facilities in the market (in terms of Ontario customers).	Exhibit A, Tab 13, Schedule 1, page 16

Part VI – Contract

6.1	The contract for which the utility is seeking pre-approval for is filed in this application. The utility may request confidential treatment of its contract in accordance with the Ontario Energy Board's Practice Direction on Confidential Filings.	Exhibit A, Tab 13, Schedule 1, Attachment 5

LNG SERVICES AGREEMENT

THIS AGREEMENT made as of the _____ day of •, 201•.

B E T W E E N:

NIPIGON LNG CORPORATION in its capacity as the general partner of **NIPIGON LNG LP**

(hereinafter referred to as "**Nipigon LNG**");

- and –

• (hereinafter referred to as the "**Customer**")

RECITALS:

A. Nipigon LNG intends to develop, own and operate certain facilities for the receipt, liquefaction, storage, truck transportation, and regasification of natural gas in western Ontario.

B. Customer has requested to acquire from Nipigon LNG, and Nipigon LNG has agreed to provide, LNG Services on the terms and conditions set forth in this Agreement.

NOW THEREFORE, for good and valuable consideration, the Parties agree as follows:

ARTICLE 1 – DEFINITIONS

Except where the context requires otherwise, all words and phrases defined below or used in this Agreement have the meanings set out below.

1.1 Definitions

(a) "**Affiliate**" of any Person means any other Person or group of Persons, acting in concert, who directly or indirectly, Controls, or is Controlled by, or is under common Control with, such Person.

(b) "**Agreement**" means this LNG Services agreement, including all schedules, and all amendments or restatements as permitted.

(c) "**Business Day**" means a day, other than a Saturday, Sunday or statutory holiday in Toronto, Ontario, Canada.

(d) "**Calendar Year**" means a period of twelve (12) months commencing on January 1st and ending on December 31st of each year determined as of the date in

Toronto, Ontario, Canada; provided that the last Calendar Year shall commence on January 1st of the Calendar Year in which this Agreement terminates and shall end on the termination of this Agreement.

(e) "**Claim**" means any cause of action, action, account, lien of any kind whatsoever, claim, demand, lawsuit, proceeding or arbitration, including any proceeding or investigation by a Governmental Authority.

(f) "**Commercial Operation Date**" means the date upon which Nipigon LNG has received all necessary approvals and permits from Governmental Authorities for the provision of the LNG Services and has obtained all rights of way, easements, and other property leases or access rights required for the operation of the LNG Facilities, and the LNG Facilities have been physically and operationally completed and are capable of providing the LNG Services as contemplated by this Agreement.

(g) "**Consequential Loss**" means, as to any Person, any damage, cost, expense, liability, or Losses (including pass-through claims for indemnification or contribution owed to another Person under a contract, governmental requirement, or other obligation) of that Person that is caused (directly or indirectly) by any of the following arising out of, relating to, or connected with this Agreement or work carried out (or failed to be carried out) in relation to it: loss or deferment of income or profits; loss of use of any asset; loss of business or reputation; loss of business opportunity; loss of labour or management productivity; increases in wage, salary, or other cost of labour cost; or other indirect damages or Losses, costs, expenses, or liabilities, whether or not similar to the foregoing; in addition, Consequential Loss includes any exemplary, punitive, special, or treble damages.

(h) "**Contract Month**" means:

(i) for the first Contract Month, the period commencing on the Commercial Operations Date and finishing on the last Day of the calendar month in which the Commercial Operation Date happens;

(ii) for each subsequent Contract Month other than the last Contract Month, the period commencing on the first (1st) Day of each calendar month and finishing on the last Day of the same calendar month; and

(iii) for the last Contract Month, the period commencing on the first (1st) Day of the calendar month when the termination of this Agreement occurs and finishing on the Day when the termination occurs.

(i) "**Contract Year**" means a period of 12 consecutive Contract Months beginning on the Commercial Operations Date and ending at the beginning of the next succeeding Contract Year, and in each year thereafter, until the Expiry Date.

(j) "**Control**" means one or more of the following:

(i) a body corporate is controlled by a Person if: (i) securities of the body corporate to which are attached more than fifty percent (50%) of the votes that may be cast to elect directors of the body corporate are beneficially owned, directly or indirectly, by such Person; and (ii) the votes attached to those securities are sufficient to elect a majority of the directors of the body corporate;

(ii) an association, partnership, limited liability company, trust or other organization is controlled by a Person if: (i) more than fifty percent (50%) of the ownership interests, however designated, into which the association, partnership, limited liability company, trust or other organization is divided are beneficially owned, directly or indirectly, by such Person; and (ii) the Person is able to direct the business and affairs of the association, partnership, limited liability company, trust or other organization;

(iii) a body corporate, association, partnership, limited liability company, trust or other organization is controlled by a Person if such Person has, directly or indirectly, control in fact of the body corporate, association, partnership, limited liability company, trust or other organization; or

(iv) a body corporate, association, partnership, limited liability company, trust or other organization that controls (within the meaning of this definition) another body corporate, association, partnership, limited liability company, trust or other organization that is controlled or deemed to be controlled (within the meaning of this definition) by the other body corporate, association, partnership, limited liability company, trust or other organization.

(k) "**Customer Condition**" has the meaning given in Section 3.1(b).

(l) "**Customer's Inventory**" means, at any given time, the quantity in GJs that represents LNG and Gas held by Nipigon LNG at the Nipigon LNG Facility for Customer's account.

(m) "**Creditworthy**" means with respect to the Customer or its Guarantor, its unenhanced senior unsecured debt securities or, if there are no rated unenhanced debt securities, the legal entity itself is rated at least "**BBB+**" by S&P or at least "**Baa1**" by Moody's provided that if the debt securities or the entity is rated by both S&P and Moody's, only the lower rating will be taken into account.

(n) "**Day**" means a period of twenty-four (24) consecutive hours, beginning and ending at 08:00 hours, Eastern Time. Unless otherwise stated, the reference date for any day shall be the calendar date of the beginning of such day.

(o) "**Delivery Point**" means a point where the LNG Depot interconnects with the facilities of the Customer as specified in SCHEDULE B.

(p) "**Dispense**" means the act of re-gasifying LNG at the Delivery Point.

(q) "**Dispute**" means a dispute, matter, controversy or Claim between or among the Parties or their Affiliates arising out of or relating to this Agreement, including the validity, interpretation, construction or enforcement of this Agreement, the LNG Services, or a Party's (or a Party's Affiliate's) performance, privileges, rights or obligations under or with respect to this Agreement.

(r) "**Discounted Remaining Obligation**" means the Customer's remaining outstanding, discounted (at •% per annum rate) contractual obligation derived from the total Firm Capacity Charges under this Agreement, for the remaining Term under this Agreement, as calculated at the beginning of each Contract Year.

(s) "**Expiry Date**" means the date on which the LNG Services terminate.

(t) "**Extension Term**" has the meaning given in Section 10.2.

(u) "**Financial Security**" means one or more of the following credit alternatives:

(i) A guarantee of financial performance, from a Person ("**Guarantor**") that is Creditworthy, in a form satisfactory to Nipigon LNG, acting reasonably, for the remaining Term and the Discounted Remaining Obligation of this Agreement;

(ii) An irrevocable standby Letter(s) of Credit ("**LCs**"), in a form acceptable to Nipigon LNG, acting reasonably, from one or more financial institutions which are (a) Schedule I banks pursuant to the *Bank Act* (Canada); (b) Schedule II banks pursuant to the *Bank Act* (Canada) whose total assets exceed ten (10) times the amount of the LC determined in accordance with the foregoing and at minimum equal $3 billion; or (c) an authorized foreign bank pursuant to Schedule III to the *Bank Act* (Canada) that is a branch of a foreign financial institution, such foreign financial institution domiciled in a jurisdiction satisfactory to Nipigon LNG, acting reasonably; in each case with a minimum debt rating of A- from S&P or A3 from Moody's (if rated by both S&P and Moody's, only the lower rating will be taken into account); which LCs shall be in an amount equal to the Discounted Remaining Obligation of this Agreement;

(iii) A cash security deposit in an amount equal to the Discounted Remaining Obligation of this Agreement; or

(iv) Any other credit alternative mutually agreed upon by Nipigon LNG and Customer.

(v) "**Firm Capacity Charge**" has the meaning given in Section 4.1(a)

(w) "**Force Majeure**" means any event and which prevents or delays the Party claiming Force Majeure from performing any of its obligations under this Agreement which event was not within the reasonable control of the Party claiming that such event has occurred and which by the exercise of due diligence the Party claiming Force Majeure is unable to prevent, or overcome, including acts of God; strikes, lockouts, or other industrial disturbances; civil disturbances, arrests and restraints of rulers or people; interruptions by government or court orders, present or future valid orders of any regulatory body having proper jurisdiction; acts of the public enemy, wars, riots, blackouts, insurrections; failure or inability to secure materials or labour by reason of regulations or orders of government; serious epidemics, landslides, lightning, earthquakes, fires, storms, floods, unusually severe weather conditions, washouts, road closures, explosions, breakage or accident to machinery or lines of pipes or the LNG Facilities, or freezing of pipelines, or the failure of electricity or Gas supply, temporary or otherwise, from a supplier of electricity or Gas; inability to obtain or maintain a governmental permit or approval including a denial, revocation or non-renewal of a permit or approval and revocation and amendment of any permit, license, certificate or authorization, unless either is attributable to a failure to make a timely and appropriate application for a permit or approval or failure by a Party to comply with its permit or approval, or any curtailment or temporary discontinuance of the LNG Facilities as is reasonably necessary in order to protect persons and property from harm or damage due to operational or safety conditions. Force Majeure will also include a declaration of Force Majeure by a Transporter that results in Gas being unavailable for delivery at the Receipt Point, but Force Majeure shall expressly exclude lack of funds for any reason, or a change in economic or market conditions including a change in the price of Gas or other commodity prices.

(x) "**Gas**" means any hydrocarbon or mixture of hydrocarbons consisting predominantly of methane in a gaseous state.

(y) "**Gas Procurement Services**" has the meaning given in Section 2.2(a).

(z) "**GJ**" means gigajoule, or one billion Joules.

(aa) "**Governmental Authority**" means:

(i) any domestic or foreign federal, provincial, state, territorial, county, regional district, borough, city, municipal or other government or any agency, board, bureau, commission, court, department, or other instrumentality of any such government;

(ii) any Person having the authority under any applicable governmental requirement to assess and collect taxes for its own account;

in each case having jurisdiction or authority in regard to the applicable Person or thing.

(bb) "**Gross Negligence**" means any act or failure to act (whether sole, joint or concurrent) by any Person which was a reckless disregard of or wanton indifference to, harmful consequences such Person knew, or should have known, that such act or failure to act would have on the safety or property of another Person.

(cc) "**GST**" means the goods and services and harmonized sales tax provided for under Part IX of the *Excise Tax Act* (Canada), or any successor parallel federal or provincial legislation that imposes a value-added tax on the recipient of goods and services.

(dd) "**Initial Term**" has the meaning given in Section 10.1.

(ee) "**Joule**" or "**J**" means the work done when the point of application of a force of one (1) newton is displaced a distance of one (1) metre in the direction of the force.

(ff) "**LNG**" means liquefied natural gas.

(gg) "**LNG Depot**" means facilities with the design basis and specifications described in SCHEDULE D, having LNG storage with the Working Storage Capacity described as LNG Depot Storage Capacity in SCHEDULE B, and LNG regasification capacity with the Maximum Hourly Regasification Capacity specified in SCHEDULE B.

(hh) "**LNG Facilities**" means facilities to be constructed and commissioned so as to be able to provide natural gas liquefaction and re-gasification services, consisting of the Nipigon LNG Facility, and LNG Depot.

(ii) "**LNG Services**" means service of the liquefaction, storage, transportation and dispensing of LNG from the LNG Facilities as further specified in Section 2.1.

(jj) "**LNG Spot Price**" means the price per GJ of LNG as set out in the Table of Services and Charges annexed hereto as SCHEDULE B and forming a part hereof.

(kk) "**Load Balancing Fees**" means fees for Load Balancing Services.

(ll) "**Load Balancing Services**" means services to periodically match available supplies and available demand, using, inter alia, storage, scheduling, and other operational structuring, and includes services to accommodate imbalances between the Customer's NomDQ and the amount of LNG actually Dispensed.

(mm) "**Losses**" means, in respect of a Person and in relation to a matter, any and all losses, damages, costs, expenses, charges (including all penalties, assessments and fines) which such Person suffers, sustains, pays or incurs in connection with such matter and includes taxes (other than income taxes), reasonable costs of legal counsel (on a solicitor and client, full indemnity basis) and other professional advisors and consultants and reasonable costs of investigating and defending any Claims arising from the matter, regardless of whether such Claims are sustained.

(nn) "**MaxDQ**" means the maximum daily quantity of liquefaction services expressed in GJ/Day contractually reserved by the Customer per Table of Service and Charges (SCHEDULE B), which may be limited on a prorated basis when Operational Flow Orders ("**OFO**") are in effect by Transporter or any dependent upstream natural Gas transporter or when the Nipigon LNG Facility is operating at reduced capacity.

(oo) "**Maximum Hourly Regasification Capacity**" means, subject to maintenance, unplanned interruptions and Force Majeure, the sustainable Gas Dispensing capacity rate specified in SCHEDULE B.

(pp) "**Minimum Annual Volume**" has the meaning given in Section 3.2.

(qq) "**Monthly Service Charge**" means the monthly fee for LNG Services as described and calculated pursuant to Section 4.1.

(rr) "**Net LNG Weight**" has the meaning given in Section 6.2.

(ss) "**Nipigon Condition**" has the meaning given in Section 3.1(a).

(tt) "**Nipigon LNG Facility**" means an LNG production facility and related receipt and storage facilities with Working Storage Capacity of located in or near Nipigon, Ontario.

(uu) "**Nipigon LNG Failure Payment**" has the meaning given in Section 3.6.

(vv) "**Nipigon LNG Failure Quantity**" has the meaning given in Section 3.6.

(ww) "**NomDQ**" means the quantity of liquefaction services in GJ/Day nominated by the Customer for a given Day, which NomDQ amount may be no more than the contracted MaxDQ.

(xx) "**Party**" means a party to this Agreement from time to time, and "**Parties**" means both of them.

(yy) "**Person**" means and includes an individual, limited or general partnership, limited liability company, limited liability partnership, trust, joint venture, association, body corporate, unlimited liability corporation, trustee, executor, administrator, legal representative, government (including any Governmental Authority) or any other entity, whether or not having legal status.

(zz) "**Pipeline Procurement Services**" has the meaning given in Section 2.2(b).

(aaa) "**Procurement Nomination**" means a nomination to acquire Gas (in GJ/Day) for a given Day pursuant to Gas Procurement Services and to acquire pipeline transportation services (in GJ/Day) for a given Day pursuant to Pipeline Procurement Services;

(bbb) "**Reasonable and Prudent Operator**" means a Person seeking in good faith to perform its contractual obligations, and in so doing, and in the general conduct of its undertaking, exercising at a particular time that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances and conditions at the time the decision was made. "Reasonable and Prudent Operator" is not intended to be limited to the optimum practice, method or act, to the exclusion of all others, but rather to be a spectrum of possible practices, methods or acts employed by owners, operators or maintainers of facilities similar in nature and operation characteristics to the LNG Facilities.

(ccc) "**Receipt Point**" means the point where the Nipigon LNG Facility interconnects with the TransCanada Mainline Pipeline located at the Ledger meter station where custody to Gas transfers from the TransCanada Mainline Pipeline to the Nipigon's LNG's facilities.

(ddd) "**Statement**" has the meaning given in Section 7.1.

(eee) "**Storage**" means the retention by Nipigon LNG of Customer's Inventory at the Nipigon LNG Facility, or at the LNG Depot, as applicable.

(fff) "**Table of Services and Charges**" means the table of services, prices, fees and charges, attached to this Agreement as SCHEDULE B.

(ggg) "**Term**" shall mean the Initial Term and any Extension Term.

(hhh) "**Third Party**" means any Person other than the Parties or any Affiliate of any of them.

(iii) "**TransCanada**" means TransCanada Pipelines Limited, a Canadian corporation which owns and operates the TransCanada Mainline Pipeline.

(jjj) "**TransCanada Mainline Pipeline**" means the natural gas pipeline system owned and operated by TransCanada which extends from a point near the Alberta/Saskatchewan border, where TransCanada's facilities interconnect with the facilities of Nova Gas Transmission Ltd, easterly to the Province of Quebec with branch lines extending to points on the Canada/United States international border.

(kkk) "**Transporter**" means, in the case of the Nipigon LNG Facility, TransCanada, and any other pipeline or local distribution company connected to the facilities of Nipigon LNG from which the Nipigon LNG Facility receives feedstock Gas for the purposes of LNG production.

(lll) "**Truck Transportation Services**" means arranging for the receipt, handling, transportation, and delivery, by truck, of LNG in accordance with the terms, conditions and standards described in SCHEDULE C.

(mmm) "**Wilful Misconduct**" means any act or failure to act (whether sole, joint or concurrent) by any Person or entity, which was voluntary and was intended to cause harmful consequences such Person knew would have on the safety or property of another Person, provided that Wilful Misconduct does not include any act or failure to act insofar as it: (a) constituted Gross Negligence or mere ordinary negligence; or (b) was done or omitted in accordance with the express instructions or approval of the other Party

(nnn) "**Working Storage Capacity**" means the working capacity of the LNG storage facilities (gross storage capacity less heel retention required for storage tank operations) at the Nipigon LNG Facility and the LNG Depot, which is available to Customer and other customers of Nipigon LNG.

1.2 Interpretation

Except where the context requires otherwise or except as otherwise expressly provided, in this Agreement:

(a) all references to a designated section are to the designated section of this Agreement unless otherwise specifically stated;

(b) the singular of any term includes the plural, and vice versa, and the use of any term is equally applicable to any gender and, where applicable, body corporate;

(c) any reference to a corporate entity includes and is also a reference to any corporate entity that is a successor by merger, amalgamation, consolidation or otherwise to such entity;

(d) all words, phrases and expressions used in this Agreement that have a common usage in the Gas industry and that are not defined in this Agreement have the meanings commonly ascribed thereto in the Gas industry;

(e) the headings of the sections set out in this Agreement are for convenience of reference only and will not be considered in any interpretation of this Agreement;

(f) references to dollars or $ shall be a reference to the lawful currency from time to time of Canada.

1.3 Schedules

The schedules to this Agreement, as listed below, are an integral part of this Agreement:

Schedule	**Description**
SCHEDULE A -	Interruption of Services
SCHEDULE B -	Table of Services and Charges

SCHEDULE C -	Truck Transportation Terms, Conditions and Standards
SCHEDULE D-	LNG Depot Design Basis/Specifications

ARTICLE 2 – LNG SERVICES

2.1 Description of LNG Service

During the Term and subject to the provisions of this Agreement, Nipigon LNG shall, acting as a Reasonable and Prudent Operator, make available the following LNG Services to Customer on a firm "take or pay" basis:

(a) receipt of Gas at the Receipt Point;

(b) liquefaction of Gas (subject to the MaxDQ), and Storage (subject to available Working Storage Capacity) of Customer's Inventory of LNG at the Nipigon LNG Facility;

(c) Truck Transportation Services of nominated volumes of Customer's Inventory of LNG from the Nipigon LNG Facility to the LNG Depot, and measurement of Customer's Inventory of LNG at the LNG Depot;

(d) Storage (subject to available Working Storage Capacity) of Customer's LNG for a reasonable period of time at the LNG Depot;

(e) Regasification (subject to the MaxDQ and the Maximum Hourly Regasification Capacity) of Customer's LNG and Dispensing LNG at the Delivery Point in the volumes nominated by Customer; and

(f) other activities directly related to performance by Nipigon LNG of the foregoing, including maintenance and operation of the LNG Facilities and related facilities, periodic communication to Customer of Customer's Inventory, metering, pressure regulation, temperature regulation, custody transfer, and reporting.

2.2 Additional Services

In addition to the LNG Services, from time to time during the Term, Nipigon LNG and Customer may agree that Nipigon LNG will provide any or all of the following additional services on the terms and conditions specified in this Agreement, or on such other terms and conditions as the Parties may agree,:

(a) procurement of Gas from a Third Party, acting as agent for and on behalf of the Customer, for such duration and on such terms and conditions as may be acceptable to Customer, for delivery of such Gas to the Receipt Point ("**Gas Procurement Services**");

(b) procurement of pipeline transportation services, from Nipigon LNG or a Third Party, for such duration and on such terms and conditions as may be acceptable to Customer, for transportation of Gas to the Receipt Point ("**Pipeline Procurement Services**");

(c) Load Balancing Services;

(d) such other services as Nipigon LNG may offer and Customer may accept.

2.3 Excluded Services

The Parties confirm that the following activities, *inter alia,* are not services provided by Nipigon LNG to the Customer, and are expressly outside the scope of this Agreement:

(a) construction, operation, ownership, maintenance, repair and removal of facilities downstream of the Delivery Point;

(b) transportation or distribution of Gas beyond the Delivery Point;

(c) marketing of Gas and all activities related thereto;

(d) treatment or processing of Gas or LNG;

(e) except to the extent the Parties have agreed to Gas Procurement Services, any acquisition or procurement of Gas required for the LNG Services;

(f) except to the extent the Parties have agreed to Pipeline Procurement Services, the acquisition or procurement of gas transportation services to the Receipt Point; and

(g) except to the extent the Parties have agreed to Load Balancing Services, the balancing of supply and demand of Gas from storage or at receipt or delivery points.

ARTICLE 3 – CONDITIONS OF SERVICE

3.1 Conditions Precedent to LNG Services.

(a) Nipigon LNG's obligation to provide the LNG Services is subject to the satisfaction or express waiver (in the sole discretion of Nipigon LNG) of the following conditions precedent within the specified time frames (each a "**Nipigon Condition**")

(i) On or prior to [•], Nipigon LNG shall have obtained in form and substance satisfactory to Nipigon LNG, and all conditions shall have been satisfied under, all governmental, regulatory and other Third Party approvals, permits, consents, orders, and authorisations, in final and non-appealable form, that are required to construct and operate the LNG Facilities and to perform the LNG Services;

(ii) On or prior to [•], Nipigon LNG shall have obtained in form and substance satisfactory to Nipigon LNG, all rights-of-way, easements, crossing agreements and other property leases or access rights (including leases or fee title to real property at the LNG Depot) reasonably required for the operation of the LNG Facilities;

(iii) On or prior to [•], Nipigon LNG shall have in place, the necessary agreements to effect natural gas pipeline interconnection facilities with the TransCanada Mainline Pipeline for the receipt of Gas at the Receipt Point, and such interconnection facilities shall have been commissioned and placed into service;

(iv) Within thirty (30) days following the date hereof, Nipigon LNG shall have received from the Customer Financial Security, in form and substance reasonably acceptable to the Parties, and such Financial Security shall be in full force and effect as of the Commercial Operations Date;

(v) On or prior to [•], Nipigon LNG shall have made a positive final investment decision, in its sole discretion, to construct the LNG Facilities; and

(vi) The LNG Facilities shall have been completed and be ready for commercial operations.

(b) Customer's obligation to receive and pay for the LNG Services is subject to the satisfaction or express waiver (in the sole discretion of Customer) of the following conditions precedent within the specified time frames (each a "**Customer Condition**")

(i) On or prior to [•], Nipigon LNG shall have obtained in form and substance satisfactory to Nipigon LNG, and all conditions shall have been satisfied under, all governmental, regulatory and other Third Party approvals, permits, consents, orders, and authorisations, in final and non-appealable form that are required to construct and operate the LNG Facilities and to perform the LNG Services;

(ii) On or prior to [•], Nipigon LNG shall have in place, the necessary agreements to effect natural gas pipeline interconnection facilities with the TransCanada Mainline Pipeline for the receipt of Gas at the Receipt Point, and such interconnection facilities shall have been commissioned and placed into service; and

(iii) On or prior to [•], the Customer shall have obtained in final and non-appealable form the requisite orders from the Ontario Energy Board pre-approving the cost consequences of this Agreement.

3.2 Minimum Annual Volume

During each Contract Year of the Term, and subject to the terms and conditions of this Agreement, Nipigon LNG shall make available and provide to Customer capacity at the LNG Facilities required to perform the LNG Services for, and Customer will accept and pay for LNG Services at the LNG Facilities with respect to, the minimum annual volume of Gas specified in SCHEDULE B (the "**Minimum Annual Volume**").

3.3 Nominations

(a) For each Day of the Term, and subject to the terms and conditions of this Agreement, Customer shall, not later than [•48 hours] in advance of such Day, provide Nipigon LNG with a written NomDQ of requested LNG Services, which nomination shall include, at a minimum:

(i) the volume of Gas to be received at the Receipt Point (expressed in GJ);

(ii) the volume of Gas to be liquefied (subject to MaxDQ) and injected into Storage at the Nipigon LNG Facility (subject to available Working Storage Capacity);

(iii) the volume of Customer's Inventory to be withdrawn from Storage at the Nipigon LNG Facility and transported to the LNG Depot; and

(iv) the volume of LNG the Customer wishes to have Regasified (subject to the Maximum Hourly Regasification Capacity) and Dispensed from the LNG Depot to the Delivery Point.

and, in the event that the Parties have agreed to Gas Procurement Services and Pipeline Procurement Services, for each Day of the Term, and subject to the terms and conditions of this Agreement, Customer shall, not later than [•48 hours] in advance of such Day or the deadline for nominations under the relevant Gas procurement and pipeline transportation services agreement, whichever is earlier, provide Nipigon LNG with a written Procurement Nomination, which nomination shall include, at a minimum:

(v) the quantity of gas (expressed in GJ) to be procured by Nipigon LNG for and on behalf of Customer pursuant to the relevant Gas procurement agreement, and such other information as may be required to procure Gas pursuant to the relevant Gas procurement agreement;

(vi) the volume of gas (expressed in GJ) to be transported to the Receipt Point pursuant to the relevant pipeline transportation agreement, and such other information as may be required to nominate transportation services pursuant to the relevant pipeline transportation agreement.

(b) The Parties acknowledge and agree that acceptance of the NomDQ, and if applicable a Procurement Nomination, and the nominations provided pursuant to Section 3.3(a) shall be subject to:

(i) confirmation of nominations and scheduling by Nipigon LNG, in accordance with nominations and scheduling rules developed by Nipigon LNG acting as a Reasonable and Prudent Operator, from time to time;

(ii) Working Storage Capacity available at the relevant time;

(iii) the location, capacity and availability of LNG truck transportation at the relevant time;

(iv) the Maximum Hourly Regasification Capacity; and

(v) confirmation of the Procurement Nomination, scheduling and other terms and conditions by the counterparty to the Gas procurement agreement and pipeline transportation agreement, with respect to Gas Procurement Services and Pipeline Procurement Services, if applicable;

(c) The Parties acknowledge and agree that Nipigon LNG may, in consultation with Customer and with other customers, amend the timelines, frequency, and process of nominations.

3.4 Nipigon LNG's Dispensing Obligation

(a) Subject to SCHEDULE A and all of the terms and conditions of this Agreement, and to the volumes of LNG in Storage at the LNG Depot, Nipigon LNG shall Dispense to the Customer or the Customer's authorized agent at the Delivery Point, and Customer shall receive and accept at the Delivery Point, the NomDQ to be Dispensed as nominated and scheduled, less:

(i) quantities of LNG heel retention required for storage tank operations;

(ii) quantities of Gas or LNG used by Nipigon LNG for fuel or other utility purposes, for testing, or otherwise lost and unaccounted for in Nipigon's operation of the LNG Facilities;

(iii) quantities of LNG not made available by Nipigon LNG pursuant to the provisions of this Agreement including Section 13.6 and SCHEDULE A or due to an event of Nipigon LNG Force Majeure.

(b) Nipigon LNG shall Dispense, and Customer shall receive and accept, LNG in accordance with those procedures stipulated by Nipigon LNG (which may be amended by Nipigon LNG from time to time to reflect current designs, practices and standards).

(c) It is the sole responsibility of the Customer to ensure that any personnel, system or equipment presented to Nipigon LNG for Dispensing meets the requirements of any laws, rules, regulations and orders of any legislative body, governmental agency or duly constituted authority now or hereafter having jurisdiction.

(d) Notwithstanding Section 3.4(a) above, Nipigon LNG may at its sole discretion refuse to Dispense LNG to the Customer, if in Nipigon LNG's opinion, Dispensing LNG to the Customer, may be contrary to any laws, rules, regulations and orders of any legislative body, governmental agency or duly constituted authority now or hereafter having jurisdiction.

3.5 LNG Service Interruptions

In the event that Nipigon LNG determines, acting as a Reasonable and Prudent Operator, that the ability of the LNG Facilities to receive, produce, transport, deliver or Dispense LNG is impaired due to a scheduled or unscheduled interruption, whether or not such interruption constitutes Force Majeure, or falls within the reasons described in SCHEDULE A, Nipigon LNG shall allocate the LNG Services that is available from the LNG Facilities pro rata among all customers of the LNG Facilities. The proportion of LNG Services allocated to the Customer, on any Day, will be the proportion that its NomDQ represents to the aggregate NomDQ received from all customers.

3.6 Failure Payment

Except as otherwise excused in accordance with the provisions of this Agreement, if, at any time, for any reason other than those specified in Section 3.4, Nipigon LNG does not, acting as a Reasonable and Prudent Operator, Dispense at the Delivery Point [●percent (●%)] of the volume of Gas to be Dispensed at the Delivery Point pursuant to the Customer's NomDQ then the volume by which [●percent (●%)] of the Customer's NomDQ exceeds the volume of Gas Dispensed at the Delivery Point shall be the "**Nipigon LNG Failure Quantity**". Nipigon LNG shall, within thirty (30) days of receipt of an invoice from Customer, make a payment or provide credit to the Customer for each GJ of the Nipigon LNG Failure Quantity in the amount equal to the Firm Capacity Charge per GJ ("**Nipigon LNG Failure Payment**"). For purposes of calculating the Nipigon LNG Failure Payment, the Firm Capacity Charge shall be determined as of the Day on which the applicable delivery was to begin.

ARTICLE 4 – FEES

4.1 Fee Structure

Subject to the terms and conditions of this Agreement, the Monthly Service Charge applicable to the provision of the LNG Services under this Agreement shall be comprised of the following components:

(a) The charge to recover the capital investment in the LNG Facilities which is allocated to Customer in the proportion that the Customer's contractual Minimum Annual Volume bears to the aggregate of all minimum annual volumes of all customers of the LNG Facilities (the "**Firm Capacity Charge**"). The Firm

Capacity Charge will be divided by the Contract Years of the Term and by 12 to derive the Firm Capacity Charge for each Contract Month of the Term. The Customer is obligated to pay the Firm Capacity Charge irrespective of the actual amount of the Customer's daily NomDQ, or the LNG Services provided. For the avoidance of doubt, the Firm Capacity Charge is payable whether or not the Customer uses the LNG Services set out in SCHEDULE B. The Firm Capacity Charge will be adjusted annually on the commencement of each Contract Year pursuant to the provisions indicated in SCHEDULE B, attached hereto.

(b) The charge per GJ of LNG produced and Dispensed to recover the variable costs of providing LNG Service at the LNG Facilities (the "**Variable Charge**") which will be applied to the actual volume of LNG Services provided, expressed in $/GJ, and allocated entirely to the Customer with respect to the variable costs of the LNG Depot, and allocated proportionately to Customer and all other customers with respect to the LNG Facilities on the basis of each customer's NomDQ. The Variable Charge per GJ, will be re-determined by Nipigon LNG each Contract Year. Nipigon LNG will provide Customer with the upcoming Year's Variable Charge per GJ at least thirty (30) days prior to the commencement of each Contract Year. Each Year's Variable Charge will be divided by 12 to derive the Variable Charge for each Contract Month of the Term. The Variable Charge per GJ for the first Contract Year will be determined and provided to Customer on or before the Commercial Operation Date.

(c) The fees, charges and expenses, without markup by Nipigon LNG, of the Truck Transportation Services for transportation of LNG from the Nipigon LNG Facility to the LNG Depot.

(d) The fees, charges and expenses, at the rate agreed by the Parties, for the Gas Procurement Services, if applicable.

(e) The fees, charges and expenses, at the rate agreed by the Parties, for the Pipeline Procurement Services, if applicable.

(f) The Load Balancing Fees, if applicable.

4.2 Spot Loads

If capacity exists, Nipigon LNG may offer additional LNG Service above the MaxDQ to the Customer or other customers on a spot load interruptible basis at the LNG Spot Price per GJ. The spot load interruptible LNG Services on any Day, shall be deemed to be the total volumes for which LNG Services were performed on such Day, less the NomDQ volumes.

ARTICLE 5 – TITLE TO GAS

5.1 Title to Gas

(a) Title to all quantities of Gas and LNG which is subject to LNG Services under this Agreement shall remain with Customer, notwithstanding any commingling of such Gas or LNG with other Gas or LNG while in transit, while subject to LNG Services or while in Storage.

(b) Customer warrants that it (or its Affiliate) owns or controls, and has the right to tender, the Gas that is delivered to Nipigon LNG under this Agreement.

(c) Customer shall indemnify and hold harmless Nipigon LNG from and against all Claims, actions or damages arising from any adverse Claims by Third Parties claiming an ownership or an interest in the Gas delivered to Nipigon LNG under this Agreement.

(d) Customer acknowledges that Nipigon LNG shall not at any time be responsible for securing and maintaining loss of product insurance covering the risk of loss of Customer's Gas or LNG and that Customer shall be responsible for insuring against such risk.

5.2 Custody of Gas

Gas received by Nipigon LNG from Customer for LNG Services pursuant to this Agreement (whether received at the Receipt Point or another receipt point pursuant to a gas procurement agreement or pipeline transportation agreement) shall be deemed to be in the exclusive custody and under the exclusive control of Nipigon LNG from the time such Gas is accepted at the Receipt Point (or the designated receipt point pursuant to a gas procurement agreement or pipeline transportation agreement if the LNG Services include Gas Procurement Services or Pipeline Procurement Services) and until the time it is delivered by Nipigon LNG to Customer at the Delivery Point. Nipigon LNG has no title to Customer's Gas or LNG during periods when it is in the custody and control of Nipigon LNG.

5.3 LNG Specifications, Temperature and Pressure

Gas received by Nipigon LNG from Customer for LNG Services pursuant to this Agreement (whether received at the Receipt Point or another receipt point pursuant to a gas procurement agreement or pipeline transportation agreement) shall meet the Gas specifications set forth in SCHEDULE B. The pressure of the Gas tendered by Customer to Nipigon LNG for LNG Services pursuant to this Agreement (whether received at the Receipt Point or another receipt point pursuant to a gas procurement agreement or pipeline transportation agreement) shall be the pressures specified in SCHEDULE B. The pressure and temperature of the Gas Dispensed to Customer by Nipigon LNG at the Delivery Point shall be the pressures and temperature specified in SCHEDULE B.

ARTICLE 6 – MEASUREMENT

6.1 Unit of Measurement

The unit of measurement of LNG for all purposes hereunder will be kilograms and GJ. Pricing will be per GJ.

6.2 Determination of Net Weight

The quantity of LNG Dispensed pursuant to this Agreement shall be measured by instruments approved and certified by Measurement Canada. The vehicle transporting LNG from the Nipigon LNG Facility shall be weighed at a scale before and after LNG is delivered to the LNG Depot. The weight measurement of the amount of LNG delivered shall be based on the difference of these two weights expressed in kilograms (the "**Net LNG Weight**"). Net LNG Weight will be specified in kilograms rounded to the nearest unit.

The scale will be test calibrated by a certified agent as required per regulation but not less frequently than annually.

Net Weight of the Delivered LNG (kilograms)	
equals	Tractor/Trailer Gross Weight after LNG receipt at the Nipigon LNG Facility (kilograms)
minus	Tractor/Trailer Gross Weight after discharge at the LNG Depot (kilograms)

6.3 Conversion to Energy Units.

In accordance with the *Electricity and Gas Inspection Act*, R.S.C., 1985, volumes of LNG delivered will be converted to energy units by multiplying the Net LNG Weight by the Heat Content of each unit of LNG calculated in accordance with Section 6.4. Total tractor trailer energy will be specified in GJ rounded to one decimal place.

Nipigon LNG will use the following formula to convert kilograms of LNG to GJ LNG:

Delivered LNG (Gigajoule)	
equals	Net LNG Weight of the delivered LNG (kilograms)
multiplied by	0.053334 Gigajoule/kilogram

6.4 Heat Content

The conversion factor from kilograms to Gigajoules listed above is based on nominal TransCanada Mainline Pipeline Gas composition, including C2+ hydrocarbons. This conversion factor will be verified and adjusted for each truckload, based on chemical analysis of the LNG using an online gas chromatograph.

Chemical composition will be in accordance with:

- GPA 2261 "Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography", as amended, supplemented, or revised from time to time

- GPA 2145 "Table of Physical Properties for Hydrocarbons and Other Compounds of Interest to the Natural Gas Industry", as amended, supplemented, or revised from time to time

Relative density and gross heating value will be accordance with:

- GPA 2172-09 "Calculation of Gross Heating Value, Relative Density, Compressibility and Theoretical Hydrocarbon Liquid Content for Natural Gas Mixtures for Custody Transfer", as amended, supplemented, or revised from time to time

The calibration of the online chromatograph will be checked against a certified calibration gas of known composition at least on a daily basis. The test results will be repeatable to • in •. The calibration gas will be a certified primary standard and of a composition close to the actual LNG being tested.

If the calibration deviation exceeds the tolerance stated, the heat content previously calculated will be corrected immediately. Previous analyses will be corrected to the point where the error occurred, if this can be positively identified to the satisfaction of both Parties. Otherwise it shall be assumed that the drift has been linear since the last recalibration and correction shall be based on this assumption.

ARTICLE 7 – STATEMENTS AND PAYMENTS

7.1 Statements to be Provided

Nipigon LNG will, on or about the fifteenth (15^{th}) Day of each Contract Month of the Term, deliver to the Customer, an itemized statement (the "**Statement**") showing the amount due for the preceding Contract Month showing:

(a) **Volumes** – A statement of volumes, in GJ, received at the Receipt Point each Day of such Contract Month by Nipigon LNG; a statement of Net Weight, in kilograms, of LNG for which Truck Transportation Services were provided during such Contract Month; and a statement of volumes in GJ, which were Dispensed at the Delivery Point each Day of such Contract Month by Nipigon LNG, including a separate statement of any spot load interruptible LNG volumes.

(b) **Table of Charges** – all amounts set out in SCHEDULE B, for the LNG Services provided under this Agreement which include the following:

(i) The Monthly Service Charge comprised of:

(A) the Firm Capacity Charge for such Contract Month as described and calculated in Section 4.1(a);

(B) the Variable Charge per GJ for such Contract Month as described and calculated in Section 4.1(b), subject to the minimum charge as set out in SCHEDULE B;

(C) the charges for any spot load interruptible LNG volumes for such Contract Month as described and calculated in Section 4.2, if applicable;

(ii) The fees, charges and expenses, without markup by Nipigon LNG, of the Truck Transportation Services for transportation of LNG from the Nipigon LNG Facility to the LNG Depot.

(iii) The fees, charges and expenses, at the rate agreed by the Parties, for the Gas Procurement Services, if applicable.

(iv) The fees, charges and expenses, at the rate agreed by the Parties, for the Pipeline Procurement Services, if applicable.

(v) The fees charges and expenses, at the rate agreed by the Parties, for such other additional services as Nipigon LNG may offer and the Customer may agree to purchase from time to time;

(vi) Any other applicable adjustments, amounts owing, or credits provided for herein; and

(vii) All applicable taxes, including but not limited to, the Harmonized Sales Tax ("**HST**"), the GST, and any provincial or municipal tax unless exempted therefrom, and any and all additional federal, provincial or municipal taxes.

7.2 Taxes

(a) Nipigon LNG shall be responsible for the collection and administration of all sales and value-added taxes, including HST and GST, that are due in respect of all amounts payable by Customer under this Agreement, and any such tax shall be paid by Nipigon LNG when and as it is due to be paid, and, in the case of GST, as provided in Part IX of the *Excise Tax Act* (Canada) or any now existing or hereinafter imposed by Governmental Authority.

(b) All Statements issued by Nipigon LNG to Customer shall include Nipigon LNG's GST registration number.

7.3 Statement Errors

Any errors in any Statement will be promptly reported to the other Party as provided hereunder, and Statements will be final and binding unless questioned within sixty (60) Days after the date of the Statement.

7.4 Payment and Late Payment Consequences

Payment for the full amount of the Statement, including federal, provincial and municipal taxes applicable thereon, will be made to Nipigon LNG at its Ontario office, or such other place in Canada as it will designate, on or before the first (1st) Business Day of the Contract Month following the date of the Statement. If the Customer fails or neglects to make any payment required under this Agreement, or any portion thereof to Nipigon LNG when due, Nipigon LNG will include in the next Statement to the Customer a late payment charge of 1.5% per month (19.56% per annum) on the outstanding amount, accruing from the payment due date until it is paid in full.

7.5 Examination of Records

Each of Nipigon LNG and the Customer will have the rights to examine at reasonable times and at their own expense the records and charts of the other Party to the extent necessary to verify the accuracy of any statement, charge, computation or demand made pursuant to any provisions of this Agreement.

ARTICLE 8 – CREDIT

8.1 Credit and Security

In order to ensure the prompt and orderly payment of the charges to be paid by the Customer to Nipigon LNG, the Customer, or any Guarantor of Customer, will establish and maintain a status of being Creditworthy, throughout the Term. If Customer or its Guarantor fails or ceases to be Creditworthy, Customer shall, upon demand by Nipigon LNG or within ten (10) Business Days, whichever is earlier, provide Financial Security.

ARTICLE 9 – DEFAULT OR BANKRUPTCY

9.1 Default by the Customer

If the Customer at any time fails or neglects,

(a) to make any payment due to Nipigon LNG or to any other Person under this Agreement within thirty (30) Days after payment is due, or

(b) to satisfy or maintain Creditworthy status, or provide Financial Security within the applicable time, in accordance with Section 8.1, or

(c) to correct any default of any of the other terms, covenants, conditions or obligations imposed upon it under this Agreement, within thirty (30) Days after Nipigon LNG gives to the Customer notice of such default;

then Nipigon LNG may, in addition to any other remedy that it has available pursuant to this Agreement or at law or equity, at its option and without liability therefor:

(d) suspend further LNG Service to the Customer and may refuse to Dispense LNG to the Customer until the default has been fully remedied, and no such suspension or refusal will relieve the Customer from any obligation under this Agreement including the obligation to pay any rates, charges or other amounts to Nipigon LNG under this Agreement, or

(e) enforce any Financial Security in accordance with its terms; or

(f) terminate this Agreement and the provision of LNG Services, and upon such termination the Discounted Remaining Obligation will immediately be due and payable by the Customer and no such termination of this Agreement will exclude the right of Nipigon LNG to collect any amount due to it from the Customer for what would otherwise have been the remainder of the Term.

9.2 Bankruptcy or Insolvency of the Customer

If the Customer becomes bankrupt or insolvent or commits or suffers an act of bankruptcy or insolvency or a receiver is appointed pursuant to a statute or under a debt instrument or the Customer seeks protection from the demands of its creditors pursuant to any legislation enacted for that purpose or commences proceedings under the *Companies Creditors Arrangement Act* of Canada, Nipigon LNG will have the right, at its sole discretion, to terminate the provision of LNG Services by giving notice in writing to the Customer and thereupon Nipigon LNG may cease further delivery of LNG Services to the Customer and the Discounted Remaining Obligation will immediately be due and payable by the Customer.

ARTICLE 10 – TERM OF LNG SERVICES AGREEMENT

10.1 Initial Term

This Agreement shall be effective as of the date hereof, provided that the LNG Services shall commence on the Commercial Operations Date and shall continue for the period set out in SCHEDULE B, expiring at 10:00 a.m. Eastern Standard Time on the Expiry Date (such period the "**Initial Term**"), and the Term may be divided into Contract Years and monthly and daily intervals to accommodate operational, delivery, billing and payment considerations.

10.2 Extension Term

Provided that the Customer is not then in material default of its obligations under this Agreement, Customer shall have the option to extend the Initial Term for a period as specified in SCHEDULE

B (the "**Extension Term**"), provided that Customer provides written notice to Nipigon LNG not less than six (6) months prior to the Expiry Date.

10.3 Termination

Unless otherwise mutually agreed by the Parties, this Agreement shall terminate on the earliest to occur of any one of the following events:

(a) delivery by Nipigon LNG to Customer of a written notice of termination in the event that any Nipigon Condition is not satisfied or waived within the time frame specified for the satisfaction or waiver of same in Section 3.1(a); or

(b) delivery by Customer to Nipigon LNG of a written notice of termination in the event that any Customer Condition is not satisfied or waived within the time frame specified for the satisfaction or waiver of same in Section 3.1(b); or

(c) delivery by Nipigon to Customer of a Notice of termination following the occurrence and continued existence of a Customer default as set out in Section 9.1; or

(d) delivery by Nipigon to Customer of a Notice of termination following the occurrence an act of bankruptcy or insolvency of Customer as contemplated in Section 9.2; or

(e) [the written agreement of the Parties•]

10.4 Termination Payment

In the event of termination of this Agreement pursuant to Section 10.3(a) or 10.3(b), the reasonable costs incurred or accrued by Nipigon LNG for the construction and development of the LNG Depot, including for equipment, materials and facilities with respect thereto, and any reasonable wind up costs, including for the termination of rights-of-way, easements, crossing agreements and other property leases or access rights, shall be due and payable by the Customer within thirty (30) Days following receipt of an invoice from Nipigon LNG.

10.5 Survival of Covenants

Upon termination of this Agreement, whether pursuant to Article 9 of this Agreement or otherwise,

(a) all Claims or other outstanding obligations remaining or being unfulfilled as at the date of termination including the obligation of the Customer to pay the Monthly Capacity Charge for the Term, and

(b) all of the provisions of this Agreement relating to the obligations of any of the Parties to account to or indemnify the other and to pay to the other any monies owing as at the date of termination in connection with this Agreement,

will survive such termination.

ARTICLE 11 – REPRESENTATIONS, WARRANTIES AND COVENANTS

11.1 Mutual Representations and Warranties

(a) Each Party represents and warrants to the other Party that:

(i) Such Party (or in the case of a partnership, each of its partners) is duly organized or formed, validly existing, and in good standing under the laws of the jurisdiction of its organization or formation, and has all requisite power and authority to own, lease, and operate its assets and to carry on its businesses as they are now being conducted;

(ii) Such Party has all requisite power and authority to enter into this Agreement, to perform its obligations hereunder, and to consummate the transactions contemplated hereby. The execution, delivery, and performance by such Party of this Agreement and the consummation by such Party of the transactions contemplated by this Agreement have been duly authorized by all necessary corporate action or other action (as applicable) on the part of such Party. This Agreement has been duly executed and delivered by such Party and, assuming the due authorization, execution, and delivery hereof by the other Party, constitutes a legal, valid, and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as such enforceability may be affected by: (i) applicable bankruptcy, reorganization, insolvency, moratorium, and other similar laws and court decisions of general application, including statutory and other laws regarding fraudulent or preferential transfers relating to, limiting, or affecting the enforcement of creditors' rights generally; and (ii) general principles of equity, including the effect of such general principles of equity upon the specific enforceability of any of the remedies, covenants, or other provisions contained herein and therein, and their application (regardless of whether enforcement is considered in a proceeding at law or in equity) as such principles relate to, limit, or affect the enforcement of creditors' rights generally;

(iii) the execution and delivery by such Party of this Agreement, the consummation of the transactions contemplated by this Agreement, and the performance of the obligations of such Party hereunder will not conflict with, or result in any violation of or default under, any provision of any governing instrument applicable to such Party, or any agreement or other instrument to which such Party is a party or by which such Party (and in the case of a partnership each of its partners) or any of its assets is bound, or any requirement of a Governmental Authority applicable to such Party or its assets; and

(iv) the execution, delivery, and performance by such Party of this Agreement does not require any approval or permit by a Government Authority except as otherwise provided by this Agreement; and other than those approvals or

permits of a Government Authority which are customarily obtained at a later date.

11.2 Mutual Covenants

Each Party covenants to the other that it will:

(a) maintain its existence and good standing and its qualifications to do business in all jurisdictions where performance under this Agreement is required;

(b) maintain its power and authority to perform its obligations under this Agreement; and

(c) on request of the other Party, provide evidence of its compliance with these covenants within a reasonable period of time.

11.3 Emergency Response Action Plan

Nipigon LNG represents and warrants that it has, and shall maintain throughout the Term, an Emergency Response Action Plan ("**ERAP**") as required by the *Transportation of Dangerous Goods Act*, 1992 for the transportation of dangerous goods. Nipigon LNG agrees that the ERAP shall apply to all LNG production, storage and handling until the LNG is delivered to and received by the Customer.

11.4 Conformity with Law

The Customer represents and warrants that in its acceptance, transport, use or storage of LNG it is in compliance with the requirements of any laws rules, regulations and orders of any legislative body, governmental agency or duly constituted authority now or hereafter.

11.5 Transportation and Safety Documents

Nipigon LNG shall be responsible for preparing and supplying all transportation and safety documents that are the responsibility of a consignor of a dangerous good or a supplier of a hazardous material or product under the applicable laws and regulations, including without limitation, all safety marks, shipping documents and material safety data sheets.

11.6 Representations of Gas Quality

Nipigon LNG does not make, and expressly disclaims, any representation or warranty as the quality, content, specifications, merchantability or fitness for purpose of the Gas received, or LNG Dispensed to Customer pursuant to this Agreement.

11.7 Insurance

The Customer will ensure that the Customer and any Third Party contractor acting as the Customer's agent with respect to the LNG Facilities maintains throughout the Term:

(a) a minimum of $• million in general liability insurance with Nipigon LNG named as an additional insured;

(b) a minimum of $• million of automobile liability insurance and any other insurance coverage required by law; and

Prior to the Commercial Operations Date and thereafter at least once each Contract Year, Customer shall furnish evidence of the foregoing insurance to Nipigon LNG. All such insurance policies are required to include a waiver of right to subrogation, and shall provide Nipigon LNG with thirty (30) days prior written notice of any cancellation, material change or alteration in coverage.

ARTICLE 12 – INDEMNITY AND LIMITATION ON LIABILITY

12.1 Limitation on Liability

Nipigon LNG, its employees, partners, directors, shareholders, contractors or agents are not responsible or liable for any Claims, Losses, damage, costs or injury (including death) suffered, sustained, paid or incurred by the Customer or any Person claiming by or through the Customer caused by or resulting from, directly or indirectly, any discontinuance, suspension or interruption of, or failure or defect in the supply or delivery or transportation of, or refusal to supply, deliver or transport Gas, or provide LNG Service, unless the Claims, Losses, damage, costs or injury (including death) is directly attributable to the Gross Negligence or Wilful Misconduct of Nipigon LNG provided, however, that Nipigon LNG, its employees, directors, shareholders contractors and agents are not responsible or liable for any Consequential Losses even if the Losses are directly attributable to the Gross Negligence or Wilful Misconduct of Nipigon LNG, its employees, contractors or agents.

12.2 Indemnity

The Customer will be responsible for, and shall save, indemnify, defend and hold harmless each of Nipigon LNG, its employees, partners, directors, shareholders, contractors and agents from and against any and all adverse Claims, Losses, suits, actions, judgments, demands, debts, accounts, damages, costs, penalties and expenses (including all legal fees and disbursements) arising from or out of, or attributable to:

(a) Any act or omission, whether negligent or otherwise, of the Customer, or its employees, partners, directors, contractors or agents; or

(b) The breach by the Customer of any of its representations, warranties or covenants contained in this Agreement including those related to the payment by the Customer of all federal, provincial, and municipal taxes (or payments made in lieu thereof).

[**NTD: liability regime is subject to discussion]**

12.3 Cap on Liability

(a) Nipigon LNG's Cap on Liability

Notwithstanding any other provision to the contrary elsewhere in this Agreement the liability for Losses and Claims which Customer, or any Person claiming by through or under the Customer, may suffer, sustain, pay or incur pursuant to this Agreement for which Nipigon LNG is liable and must indemnify, or for which Nipigon LNG is determined or adjudged to be liable, shall be limited to a maximum aggregate amount of • ($•).

12.4 Survival

The provisions of this Article 12 shall survive the expiry or termination of this Agreement.

ARTICLE 13 – FORCE MAJEURE

13.1 Force Majeure

Subject to the other provisions of this Article 13, if either Party is unable or fails by reason of Force Majeure to perform in whole or in part any obligation or covenant set out in this Agreement, the obligations of that Party will be suspended to the extent occasioned by the event of Force Majeure. Provided, however, that the Customer will not be relieved of its obligation to pay Firm Capacity Charges through the invocation of any event of Force Majeure.

13.2 Exceptions.

Neither Party will be entitled to the benefit of provisions in Section 13.1 under any of the following circumstances:

(a) to the extent that the failure was caused by the negligence or contributory negligence of the Party claiming suspension,

(b) to the extent that the failure was caused by the Party claiming suspension having failed to diligently attempt to remedy the condition and to resume the performance of the covenants or obligations with reasonable dispatch, or

(c) unless as soon as possible after the happening of the occurrence relied on or as soon as possible after determining that the occurrence was in the nature of Force Majeure and would affect the claiming Party's ability to observe or perform any of its covenants or obligations under this Agreement, the Party claiming suspension will have given to the other Party notice to the effect that the Party is unable by reason of Force Majeure (the nature of which will be specified) to perform the particular covenants or obligations.

13.3 Notice to Resume

The Party claiming suspension will likewise give notice, as soon as possible after the Force Majeure condition has been remedied, to the effect that it has remedied and that the Party has resumed, or is then in a position to resume, the performance of the covenants or obligations.

13.4 Settlement of Labour Disputes

Notwithstanding any of the provisions of this Article 13, the settlement of labour disputes or industrial disturbances will be entirely within the discretion of the particular Party involved and the Party may make settlement of it at the time and on terms and conditions as it may deem to be advisable and no delay in making settlement will deprive the Party of the benefit of Section 13.1.

13.5 No Exemption for Payments

Notwithstanding any of the provisions of this Article 13, Force Majeure will not relieve or release either Party from its obligations to make payments to the other, or from performing any obligation to indemnify, reimburse or hold harmless the other.

13.6 Periodic Repair by Nipigon LNG

Nipigon LNG may temporarily suspend LNG Services for the purposes of maintaining, repairing or replacing a portion of the LNG Facilities, and Nipigon LNG will make reasonable efforts to give the Customer as much notice as possible with respect to such interruption, not to be less than fifteen (15) Days prior notice except as provided in SCHEDULE A or when prevented by Force Majeure. Nipigon LNG will make reasonable efforts to schedule repairs or replacement to minimize interruption or curtailment of LNG Service to the Customer, and to restore LNG Service as quickly as possible.

ARTICLE 14 – DISPUTES

14.1 Mediation

In the event of a Dispute arising out of or in connection with this Agreement, Nipigon LNG and the Customer agree to try to resolve the Dispute by participating in a structured mediation administered by JAMS (Judicial Arbitration and Mediation Services Inc.) or another provider of mediation services agreed by the Parties.

14.2 Arbitration

If Nipigon LNG and the Customer fail to resolve the Dispute through mediation, the unresolved Dispute shall be referred to, and finally resolved or determined by arbitration under the JAMS (Judicial Arbitration and Mediation Services Inc.) Comprehensive Arbitration Rules and Procedures. Unless Nipigon LNG and the Customer agree otherwise the arbitration will be conducted by a single arbitrator.

14.3 Written Award

The arbitrator shall issue a written award that sets forth the essential findings and conclusions on which the award is based. The arbitrator will allow discovery as required by law in arbitration proceedings.

14.4 Failure to Render a Decision

If the arbitrator fails to render a decision within thirty (30) days following the final hearing of the arbitration, any party to the arbitration may terminate the appointment of the arbitrator and a new arbitrator shall be appointed in accordance with these provisions. If Nipigon LNG and the Customer are unable to agree on a an arbitrator or if the appointment of an arbitrator is terminated in the manner provided for above, then either Nipigon LNG or the Customer shall be entitled to apply to a judge of Ontario Supreme Court to appoint an arbitrator and the arbitrator so appointed shall proceed to determine the matter mutatis mutandis in accordance with the provisions of this Article 14.

14.5 Award

The arbitrator shall have the authority to award:

(a) money damages;

(b) interest on unpaid amounts from the date due;

(c) specific performance; and

(d) permanent relief.

14.6 Costs

The costs and expenses of the arbitration, but not those incurred by the parties to the arbitration, shall be shared equally, unless the arbitrator determines that a specific party prevailed. In such a case, the non-prevailing party shall pay all costs and expenses of the arbitration, but not those of the prevailing party.

14.7 Obligations Continue

The Parties will continue to fulfill their respective obligations pursuant to this Agreement during the resolution of any Dispute in accordance with this Article 14.

ARTICLE 15 – MISCELLANEOUS

15.1 Modification or Waiver

No modification or waiver of the terms and provisions of this Agreement may be made except by the execution of a written amendment to this Agreement. The waiver by any Party of a breach or violation of any provision of this Agreement shall not operate as or be construed to be a waiver of any subsequent breach or violation thereof.

15.2 Supersedes Other Agreements

This Agreement reflects the whole and entire agreement among the Parties with respect to the subject matter hereof and supersede all prior agreements and understandings among the Parties with respect to the subject matter hereof.

15.3 Notices

Any notice, request, statement or bill that is required to be given or that may be given under this Agreement will, unless otherwise specified, be in writing and will be considered as fully delivered when mailed, personally delivered or sent by fax to the other in accordance with the following:

If to Nipigon LNG:

Nipigon LNG Corporation
150 Connie Crescent, Unit 4
Concord, Ontario L4K 1L9

Attention: •

If to the Customer:

•

15.4 Change of Address

Any Party may change its address by written notice to that effect to the other Party. Notices given under this Agreement are deemed to have been effectively given upon receipt, if mailed via prepaid overnight mail by a reputable carrier or if delivered by courier. Notices sent by mail will be deemed effectively given on the third (3rd) Business Day following the day when the notice properly addressed and postpaid is placed in the Canadian mail. It is expressly understood and agreed, however, that any notices must first be delivered by email, facsimile or other similar means and if mailed or sent by courier, must be mailed or sent by courier as soon as practicable thereafter.

15.5 Governing Law

This Agreement shall be governed, interpreted, performed, and enforced in accordance with the laws of the Province of Ontario and of Canada, without giving effect to any choice or conflict of law rules or provisions thereof which may direct the application of the laws or rules of another jurisdiction.

15.6 Survival of Rights

Any termination or expiration of this Agreement shall be without prejudice to any rights, remedies, obligations and liabilities which may have accrued to a Party pursuant to this Agreement or otherwise under applicable law. All rights or remedies which may have accrued to the benefit of either Party (and any of this Agreement's provisions necessary for the exercise of such accrued rights or remedies) prior to the termination or expiration of this Agreement shall survive such

termination or expiration. Furthermore, the provisions of Sections 5.1, 10.4, 10.5, Article 11, Article 12, and Sections 15.6 and 15.11 shall survive the termination or expiration of this Agreement.

15.7 No Drafting Presumption

No presumption shall operate in favour of or against any Party as a result of any responsibility that any Party may have had for drafting this Agreement.

15.8 Assignment

The Parties hereto shall not assign or subcontract (except as expressly contemplated herein including Gas Procurement Services, Pipeline Procurement Services, and Truck Transportation Services) this Agreement, or any portion thereof, without the prior written consent of the other Party, which shall not be unreasonably withheld. Provided, however, that Nipigon LNG may assign all or any of its rights under this Agreement to any lenders, potential lenders, or members of a lender or potential lender syndicate (collectively "**Lenders**") to Nipigon LNG or any agent of such Lender or Lenders, as security for the obligations of Nipigon LNG. This Agreement shall be binding upon and shall enure to the benefit of the Parties hereto and their permitted successors and assigns. In no event will the assignment of this Agreement be permitted unless any evidence of creditworthiness or Financial Security are also assigned to the same permitted assignee.

15.9 Further Assurances

Each of Nipigon LNG and the Customer will, on demand by the other, execute and deliver or cause to be executed and delivered all such further documents and instruments and do all such further acts and things as the other may reasonably require to evidence, carry out and give full effect to the terms, conditions, intent and meaning of this Agreement and to assure the completion of the transactions contemplated hereby.

15.10 Severability

If any provision of this Agreement is invalid, illegal, or unenforceable, that provision shall, to the extent possible, be modified in such manner as to be valid, legal, and enforceable while most nearly retaining the Parties' intent as expressed herein, and if such a modification is not possible, that provision shall be severed from this Agreement. In either case, the validity, legality, and enforceability of the remaining provisions of this Agreement are not in any way affected or impaired. The Parties shall endeavour to replace that severed provision with a new provision agreeable to the Parties that is valid and enforceable and places the Parties in substantially the same economic, business, and legal position in which they would have been if the original provision had been valid and enforceable.

15.11 Relationship of the Parties

This Agreement is not intended to create, nor shall it be construed or interpreted as creating any partnership relationship by implication or otherwise between the Parties. Except as specifically

provided otherwise in this Agreement, no Party shall have any authority to act for and on behalf of any other Party.

15.12 Expenses

Each of Nipigon LNG and the Customer agrees that it will be responsible for its professional fees and other out of pocket expenses incurred with respect to the negotiation and execution of this Agreement.

15.13 Enurement

This Agreement will enure to the benefit of and be binding upon the Parties and their respective successors and permitted assigns, including without limitation, successors by merger, amalgamation or consolidation.

15.14 Confidentiality

From and after the date hereof, to and until two (2) Calendar Years following the Expiry Date, this Agreement is confidential and neither this Agreement nor information or documents disclosed by a Party (the "**Disclosing Party**") pursuant to this Agreement may be (i) used for any purpose other than in connection with the development and operation of the LNG Facilities and the provision of the LNG Services or (ii) communicated to Persons (other than the Parties), without the prior written consent of the Disclosing Party except that any Party shall have the right to disclose such information or documents without obtaining consent in any of the situations described below:

(a) to accountants, other professional consultants, ratings agencies or underwriters, provided such disclosure is solely to assist the purpose for which the aforesaid were so engaged and further provided that such Persons agree to hold such information or documents under terms of confidentiality substantively equivalent to this Section 15.14, and for the benefit of the Parties;

(b) to providers or prospective providers of financing to Nipigon LNG or the Customer or any of their Affiliates in relation to all or any portion of the LNG Facilities, provided that such Persons agree to hold such information or documents confidential, under terms of confidentiality substantively equivalent to this Section 15.14, and for the benefit of the Parties;

(c) to providers or prospective providers of Financial Security on behalf of Customer, provided that such Persons agree to hold such information or documents confidential, under terms of confidentiality substantively equivalent to this Section 15.14, and for the benefit of the Parties;

(d) to bona fide prospective purchasers of all or a part of a Party's or its Affiliate's business, or bona fide prospective assignees of all or part of a Party's interest in this Agreement; provided that such Persons agree to hold such information or documents confidential, under terms of confidentiality substantively equivalent to this Section 15.14, and for the benefit of the Parties;

(e) to legal counsel, provided such disclosure is solely to assist the purpose for which such legal counsel were engaged;

(f) to its Affiliates provided that such recipient entity has a bona fide business need for such information and agrees to hold such information or documents under terms of confidentiality equivalent to this;

Notwithstanding the foregoing, a Party may disclose this Agreement and information or documents disclosed pursuant to this Section 15.14 if required by any court of law or any law, rule, or regulation, or if requested by a Governmental Authority having or asserting jurisdiction over such Persons and having or asserting authority to require such disclosure in accordance with that authority, or pursuant to the rules of any recognized stock exchange or agency established in connection therewith. In any such circumstance, such Party shall provide the other Party with prompt notice so that the other Party may seek a protective order or other appropriate remedy and/or waive compliance with the provisions of this Agreement.

15.15 Counterparts

This Agreement may be executed in as many counterparts as are deemed necessary, and may be delivered by facsimile or in electronic pdf form, and when so executed and delivered, each such counterpart is as valid and binding on all Parties as every other such counterpart. If a Party delivers a counterpart by facsimile or in electronic pdf form, that Party shall promptly thereafter deliver to the other Parties an original executed counterpart.

[Remainder of page intentionally left blank – Signature page follows]

IN WITNESS WHEREOF the Parties hereto have executed this Agreement as of the date first written above.

NIPIGON LNG CORPORATION
n its capacity as the general partner of
NIPIGON LNG LP

Per: _____
Name:
Title:

•

Per: _____
Name:
Title:

SCHEDULE A

INTERRUPTION OF SERVICES

Nipigon LNG may with respect to Customer and any of its other customers, at all times or between specified Hours discontinue, interrupt or reduce to a specified degree or quantity, the LNG Services for any of the following purposes or reasons, whether or not these constitute Force Majeure:

(a) in the event of a temporary or permanent shortage of Gas, whether actual or perceived by Nipigon LNG,

(b) in the event of a breakdown, failure of the supply of Gas, or the threatened curtailment of Gas to Nipigon LNG by TransCanada or any LDC or of the Nipigon LNG Gas distribution, metering or pressure regulation systems,

(c) in order to comply with any legal requirements,

(d) in order to make repairs or improvements to any part of Nipigon LNG's pre-treatment, liquefaction, distribution, storage, control or loading systems,

(e) in the event of fire, flood, explosion or other event in order to safeguard persons or property against the possibility of injury or damage.

SCHEDULE B

TABLE OF SERVICES AND CHARGES

SERVICES

Type of Service	Firm
Maximum Daily Quantity (the "**MaxDQ**")	**GJ/Day** Year 1 2,400 Year 2 2,400 Year 3 2,800 Year 4 3,100 Year 5 3,200 Year 6 3,300 Year 7 3,400 Year 8 3,500 Year 9 3,600 Year 10 3,700
Minimum Annual Volume	MaxDQ multiplied by 365 days billed monthly
LNG Depot Storage Capacity	Manitouwadge 5 days multiplied by pro-rata share of MaxDQ Marathon 5 days multiplied by pro-rata share of MaxDQ Schreiber 5 days multiplied by pro-rata share of MaxDQ Terrace Bay 5 days multiplied by pro-rata share of MaxDQ Wawa 7 days multiplied by pro-rata share of MaxDQ
Delivery Point	●
Maximum Daily Liquefaction Capacity	● GJ/Day
Gas Quality	●

Receipt Pressure	●
Delivery Pressure and Temperature	●
Commencement Date	October 1, 2020
Expiry Date	10 years plus one 10-year extension term at Customer's option, with notice not less than twelve (12) from the Expiry Date

CHARGES

Firm Capacity Charge	$7.03/GJ per MDQ
Escalation	The Firm Capacity Charge shall be adjusted on the first anniversary of the Commencement Date, and each anniversary thereafter, where the Index Adjustment is 1.5% per year.
Variable Charge per Gigajoule of LNG delivered	Customers pro-rata share of consumables subject to a minimum monthly charge and adjusted from time to time
Spot load LNG Charge	Amount in excess of MaxDQ delivered to the Customer multiplied by the LNG Spot Price
LNG Spot Price	The Spot Charge per Gigajoule, as determined by demand and subject to a floor
Additional Services	As agreed by Nipigon LNG and the Customer
Currency	All amounts are in Canadian dollars

SCHEDULE C

Truck Transportation terms, conditions and standards

[●]

SCHEDULE D

LNG Depot Design Basis/Specifications

The number and size of the tanks to be located at each Municipality are shown in the following table (capacity in US gallons). These are the anticipated ultimate storage requirements. Individual tanks may be added in phases to accommodate load growth over several years.

Depot Location	**No. and Size of Tanks**	**Total Storage**
Manitouwadge	2 x 20,000 gallons each	40,000 gallons
Marathon	3 x 20,000 gallons each	60,000 gallons
Schreiber	2 x 20,000 gallons each	40,000 gallons
Terrace Bay	1 x 90,000 gallons; 1 x 20,000 gallons	110,000 gallons
Wawa	3 x 20,000 gallons each	60,000 gallons

In addition to the storage tanks and the vaporizers, other equipment at each LNG Depot includes the following:

(a) Truck unloading skid, including offload pumps. Two pumps have been proposed to allow for redundancy. These are typically single-stage centrifugal pumps that have a throughput of approximately 300 US gallons per minute and nominal discharge pressure of approximately 120 psig (827 kPa).

(b) Electric trim heaters to heat the gas exiting the ambient vaporizers to the required temperature before it is sent to the distribution system. Also, depending on the gas pressure and temperature, the gas may need further heating before it can be regulated to distribution line pressure.

(c) Gas odorization and pressure-control manifold to regulate the gas to the required line pressure.

(d) Control building and truck unloading area that houses automated control computers, security systems, safety systems, telemetry and communications equipment for the LNG Depot.

(e) A perimeter roadway with provisions for maintenance access to tanks and equipment. LNG truck access will be provided in a manner that does not require LNG transports to back up at any time. Provisions for safe parking of LNG transports while waiting to unload will also be provided inside the security fence of the LNG Depot.

(f) Supervisory control and data acquisition (SCADA) systems that allow for remote monitoring of the LNG Depots.

APPENDIX A – LETTER FROM INVESTMENT BANK

The letter from an investment bank is confidential and is not included in the electronic submission.