

TOWERBIRCH EXPANSION PROJECT

SUMMARY ASSESSMENT REPORT

Proposed by:

NOVA Gas Transmission Ltd.

Prepared by:

The Environmental Assessment Office

pursuant to section 17 of the *Environmental Assessment Act*, S.B.C. 2002, c.43

February 10, 2017



1. Introduction

NOVA Gas Transmission Limited (NGTL), a wholly owned subsidiary of TransCanada Pipelines Limited, proposes to build and operate the Towerbirch Expansion Project (Project). The Project would consist of approximately 87 kilometres (km) of new pipeline to transport sweet natural gas in northeast British Columbia (BC) and northwestern Alberta; approximately 69 km of the pipeline is located in BC. On September 2, 2015, NGTL submitted an application to the National Energy Board (NEB) under section (s.) 52 of the *National Energy Board Act (NEBA)* for a Certificate of Public Convenience and Necessity (CPCN) for facilities and applied under s. 58 for exception from certain requirements under s. 31 and s. 33.

The Project constitutes a reviewable project under BC's *Environmental Assessment Act (Act)* pursuant to Part 4 of the Reviewable Projects Regulation, as it includes a new transmission pipeline with a diameter of >323.9 millimetre (mm) and a length of ≥ 40 km. The Project also required a federal environmental assessment under the *Canadian Environmental Assessment Act, 2012 (CEAA, 2012)* and the *NEBA*, which was undertaken by the NEB.

On June 21, 2016, the EAO issued an Order under s. 11 of the *Act* that outlined the procedures for the environmental assessment process, including the requirement to prepare a summary assessment report that summarizes the key findings of the NEB Report that are relevant to the responsible Ministers, the Minister of Environment and Minister of Natural Gas Development. The summary assessment report will inform the Ministers decision regarding the issuance of an environmental assessment Certificate under s. 17(3) of the *Act*. This report provides a summary of the:

- Project and components;
- Environmental assessment process undertaken federally and provincially;
- Key conclusions and recommendations from the NEB Report;
- Key conclusions of the joint federal-provincial Aboriginal Consultation and Accommodation Report;
- Environmental assessment certificate conditions proposed by the EAO to Ministers should they decide to approve the Project; and
- The EAO's conclusions.

2. Project Description

NGTL is proposing to build an approximately 87 km long natural gas pipeline in northeast BC and northwest Alberta (AB). The portion of the pipeline in BC would be approximately 69 km. The Project would start at the existing Gordondale Meter Station (located approximately 11 km east of Bay Tree, AB) and end at the Tower Lake Receipt Meter Station (located approximately 26 km south of the City of Fort St. John, BC). The pipeline consists of two sections: the Groundbirch Mainline Loop and the Tower Lake Section.

The Groundbirch Mainline Loop is an approximately 55 km long, 914 mm outside diameter (OD) pipeline loop off the existing Groundbirch Mainline. The Tower Lake Section is an approximately 32 km long,

762 mm OD pipeline extension off the Groundbirch Mainline. These two sections of pipeline form the basis for the CPCN application made under *NEBA* s. 52 to the NEB (collectively referred to as Section 52 facilities). The activities applied for under *NEBA* s. 58 include five meter stations at four locations (Dawson Creek East Meter Station, Groundbirch East Meter Station Expansion, Dawson Creek North Receipt Meter Station, Dawson Creek North No. 2 Receipt Meter Station, and the Tower Lake Receipt Meter Station); right of way (RoW) preparation activities at horizontal directional drilling (HDD) watercourse crossings and locations on the RoW that could be impacted by the breeding bird period and seasonal fire bans; and temporary infrastructure, including stockpile sites, contractor yards, access roads, and borrow pits (collectively referred to as Section 58 activities). Further details of the Section 58 activities are provided on the NEB registry¹. The location of infrastructure related to the Project is shown in Figure 1 below.

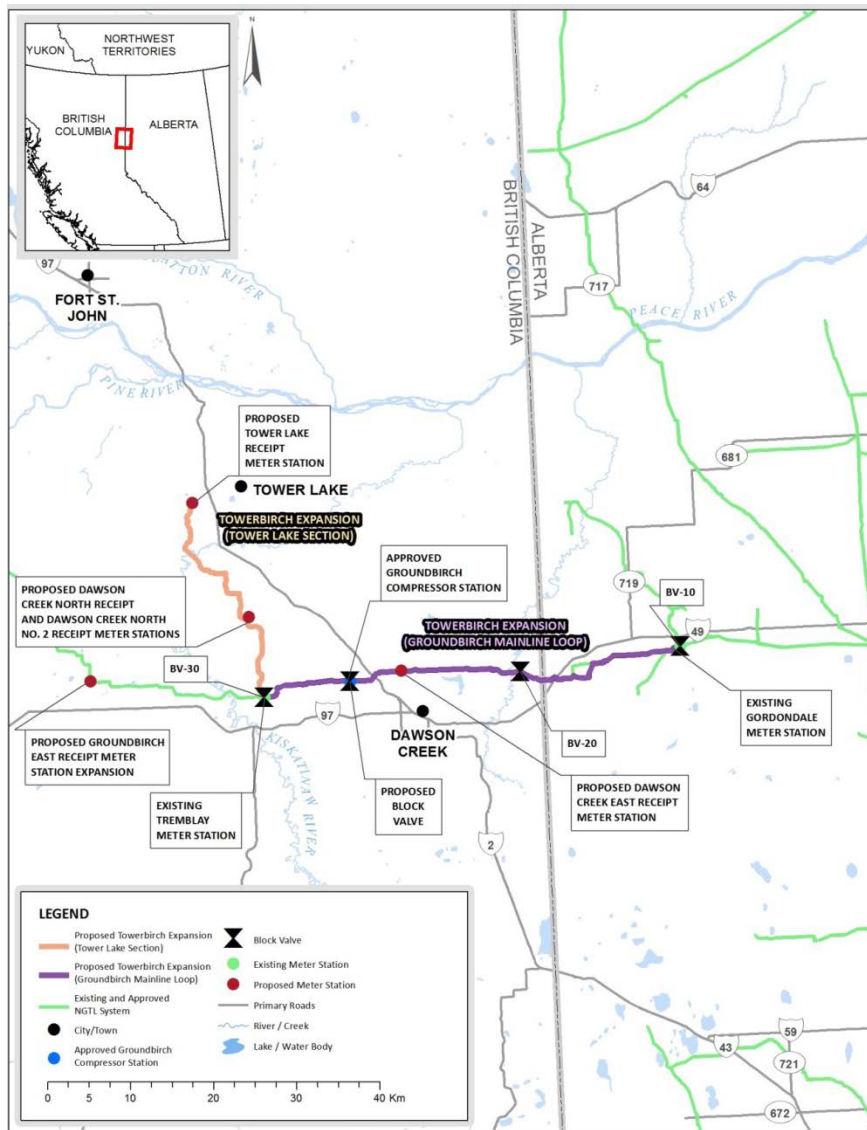


Figure 1: Location of the Towerbirch Expansion Project in northeast BC and northwest AB (NGTL 2017).

¹ NGTL response to NEB Information Request No.5 (A77103-1)

The pipeline in BC is located primarily (97%) on private land, with largest portion of Crown land at the Kiskatinaw River crossing. Approximately 82% of the Project will parallel existing right of RoW or disturbance. There are 18 watercourse crossings in BC, including the Kiskatinaw River, Pouce Coupé River, Sergeant Creek, McQueen Creek, and Coal Creek. There are four trenchless horizontal directional drilling (HDD) crossings over five watercourses in BC that are considered high value, sensitive water crossings, or that cannot be readily isolated, including the Pouce Coupé River and Kiskatinaw River. There are 23 wetlands crossed by the Project in BC.

The Project would require a construction RoW width of 22 meter (m) to 32 m, as well as site-specific temporary workspace at highway, road, pipeline and watercourse crossings, log deck sites, valves sites, and other locations to accommodate pipeline construction activities. The construction RoW would be reclaimed after construction and maintained during pipeline operation. NGTL noted that less than 100 m of new permanent access road would be required.

The Project would be within or in proximity to what the Province understands to be the area of traditional use of the following Aboriginal groups: Blueberry River First Nations, Dene Tha' First Nation, Doig River First Nation, Fort Nelson First Nation, Halfway River First Nation, Horse Lake First Nation, McLeod Lake Indian Band, Prophet River First Nation, Saulteau First Nations, and West Moberly First Nations.

Technical details about the Project are summarized in the NEB Report, and presented in NGTL's application to the NEB².

3. Environmental Assessment Process

National Energy Board Process

The NEB is responsible for regulating pipelines that cross international borders or provincial boundaries and for the related pipeline tolls and tariffs. The NEB is a quasi-judicial federal agency that reports to Parliament through the Minister of Natural Resources. The NEB completed an environmental assessment of the Project in accordance with its authority under the *NEBA* and the *CEAA, 2012*. As the regulatory authority for interprovincial pipelines, the NEB is responsible for assessing the application for a CPCN for the Project and for providing a report under s. 52 of the *NEBA*, which would also include recommendations flowing from an environmental assessment conducted under subsection 29(1) of the *CEAA, 2012*. Overall, the NEB report provides recommendations to the Governor in Council (GiC) whether a CPCN should be issued in the public interest, terms and conditions that should be attached to the CPCN if issued for the Project, and recommendations based on the environmental assessment conducted under the *CEAA, 2012*. The assessment was to be completed within 15 months or by March 22, 2017, as required by the *NEBA*. The NEB is the decision maker for activities applied for under s. 58 of the *NEBA*. The s. 58 Order decision, as well as associated conditions, would come into effect should the GiC approve a CPCN for the s. 52 activities.

² [NGTL application to the NEB \(A72401\)](#)

NGTL provided a Project Description to the NEB on May 29, 2015, and filed the Project application on September 2, 2015. On October 20, 2015, the NEB issued a Notice of Public Hearing and opened the Application to Participate process. The NEB determined who could participate in a hearing for a Project before the NEB. To be eligible to participate, interested persons or groups were required to request participation and demonstrate in their application to the NEB that they:

- Are directly affected by the proposed Project; or
- Have relevant expertise or information that will assist the NEB in making its decision and recommendation in respect to the proposed Project.

The NEB accepted 39 Applications to Participate from 24 commercial parties, 7 landowners, 6 Aboriginal groups, and 2 individuals; resulting in 25 Intervenors³ and 14 Commenters⁴.

During the NEB's review of the Project, all evidence, letters of comment, NEB decisions and other relevant documents were filed with the NEB and placed on the NEB's online public registry site.⁵

The NEB issued their Recommendation Report on October 6, 2016. The NEB assessed the potential adverse environmental and socio-economic effects as well as the adequacy of the Project's proposed environmental protection strategies and mitigation measures. Where residual effects remained after the application of proposed mitigation, the NEB considered cumulative effects. The NEB considered all Project phases including construction, RoW preparation, infrastructure installation, tolling methodology, operations, and abandonment. The NEB Report also contains the NEB's recommendation to the GiC on the construction and operation of the pipeline. NEB members considered all the information on the public record and made decisions and recommendations in respect of the public interest, which included conditions that NGTL must comply with should the Project be approved.

All three NEB members recommended that a CPCN be issued subject to 24 conditions and approved of the applied for exemptions under s. 58 subject to 12 conditions. The applied for tolling methodology was approved under the Part IV Order; however, there was one dissenting member who did not agree with the applied for methodology. The GiC decision was originally required January 6, 2017; however, the GiC extended the legislated time limit until April 6, 2017.

For more information on the NEB process please refer to the NEB Report⁶ or to the NEB Hearing Process Handbook⁷.

³ Intervenors may file evidence, submit notices of motion, ask questions of NGTL and other intervenors, provide final written and oral argument, and be questioned by other parties to the Hearing.

⁴ Commenters may provide letters of comment to the NEB to express knowledge, views, or concerns.

⁵ [NEB Towerbirch Expansion Project Registry](#)

⁶ [NEB Report GH-003-2015](#)

⁷ [National Energy Board Hearing Process Handbook](#)

Provincial Environmental Assessment Process

On June 21, 2010, the EAO and the NEB entered into an equivalency agreement (NEB-EAO Agreement) on environmental assessments for projects that would trigger both provincial and NEB reviews. Under the 2010 Equivalency Agreement, the assessment process completed by the NEB is substituted for the provincial application and assessment process under the *Act*.

In January 2016, the BC Supreme Court, in *Coastal First Nations v. British Columbia* (BCSC Decision)⁸, held that a portion of the NEB-EAO Agreement was invalid. Specifically, the Court ruled that the *Act* applies to NEB projects to the extent that they require a provincial decision on whether to issue a provincial environmental assessment certificate. Although effectively amended by virtue of the BCSC Decision, the remainder of the NEB-EAO Agreement remains valid, allowing the review process completed by the NEB to be substituted for the BC environmental assessment process. Therefore, the EAO has accepted the technical conclusions of the NEB Report as the assessment report for this Project, as required under the *Act*. Section 4 of this report summarizes the NEB's conclusions and recommendations.

As a result of the BCSC Decision, a legal Order was issued under s. 10(1)(c) of the *Act* on April 8, 2016, requiring the Minister of Environment and the Minister Natural Gas Development (Ministers) to make a decision on the issuance of a provincial environmental assessment certificate. Following consultation on a draft with Aboriginal groups and NGTL, a legal Order was issued under s. 11 of the *Act* on June 21, 2016. The s. 11 order established the procedures for the provincial environmental assessment process for the Project and specified the Aboriginal groups to be consulted by the EAO, the Aboriginal consultation opportunities that would be provided, and requirements for NGTL.

The EAO undertook consultation with Aboriginal groups, as outlined in the s. 11 Order. To the extent practicable, the EAO coordinated consultation activities with the Government of Canada, represented by the Major Projects Management Office, including conducting joint meetings, information sharing, and completing a joint federal-provincial Consultation and Accommodation Report (CAR). The CAR provides the Ministers with information on the consultation process, the key issues of concern raised by Aboriginal group, and accommodation measures proposed through the NEB conditions, the EAO conditions, and NGTL commitments.

The draft CAR was shared with the Aboriginal groups included in the s. 11 Order on January 5, 2017, for a two-week review. This was followed on January 12, 2017, with draft BC provincial referral material for a two week review that included: Aboriginal group specific annexes to the CAR, this summary assessment report, proposed provincial conditions, and the certified project description.

The EAO engaged provincial agencies to provide technical expertise and support to the EAO in understanding key issues raised by Aboriginal groups, to consider the NEB's report findings and

⁸ *Coastal First Nations vs. British Columbia* (BCSC Decision)

recommended conditions with respect to areas of provincial responsibility, and to assist the EAO by reviewing proposed provincial conditions.

If the Project receives approval from Ministers, a number of provincial agencies may be required to make various provincial permitting decisions, including: BC Oil and Gas Commission (OGC), Ministry of Transportation and Infrastructure, Ministry of Environment, and Ministry of Forests, Lands and Natural Resource Operations (FLNRO). Provincial agencies will seek to coordinate consultation to the extent practicable and will rely, in part, on the previous consultation and accommodation that has occurred on the Project where relevant to the permitting decision.

During the provincial EA process, NGTL provided an Aboriginal Engagement Summary (October 13, 2016) to the EAO, as required by the s. 11 Order, which summarized NGTL's efforts undertaken to engage with Aboriginal groups, identified feedback and information received from Aboriginal groups, and identified potential adverse impacts of the Project on established or asserted Aboriginal or treaty rights (referred to collectively in this report as "Aboriginal Interests") and how such impacts would be avoided, mitigated, addressed, or otherwise accommodated. This summary is posted on the EAO's website⁹.

4. NEB's Environmental Assessment Conclusions and Recommendations

The NEB considers a wide range of commercial, environmental, and socio-economic components that are related to the Project or that are otherwise relevant. The list of issues considered by the NEB is given in Appendix 1 of the NEB Report¹⁰.

The assessment of environmental and socio-economic components is outlined in Chapter 9 of the NEB Report. The NEB uses an issues-based approach for its environmental assessment. The NEB identified expected interactions between the Project and the environment and identified resulting adverse environmental effects. The NEB conducted a more detailed analysis for issues that are of public concern and/or environmental consequence and that may require further mitigation by way of conditions on any potential Project authorizations. Participants in the NEB review provided submissions outlining their concerns regarding environmental and social-economic effects of the Project, including species at risk, nesting birds, wetlands, fish and fish habitat, reclamation, traditional land and resource use, and cumulative effects. Where any residual effects remained after proposed mitigation, the NEB considered cumulative effects. The NEB examined a number of socio-economic and environmental values and identified potential Project interactions and resulting adverse effects. A summary of the potential adverse effects to socio-economic and environmental values that were considered by the NEB is provided in Appendix 1. The NEB's in-depth analysis considered four key environmental issues: revegetation, old growth forest bird habitat, heritage resources, and traditional land and resource use.

The NEB found that with the implementation of NGTL's environmental protection procedures and mitigation and the NEB's recommended and imposed conditions, that the Project is not likely to cause

⁹ [EAO Project Information Centre: Towerbirch Expansion Project](#)

¹⁰ [NEB Report GH-003-2015](#)

significant adverse effects. The NEB noted that NGTL has committed to using standard mitigation¹¹, best practices, and avoidance through route selection, as primary tools to eliminate or reduce adverse environmental effects and that the Project parallels existing RoW or disturbance for approximately 82% of the route. The NEB concluded that the implementation of these measures by NGTL will address potential effects to wildlife and wildlife habitat, riparian habitat, migratory bird species, and wetlands, among others. The NEB recommended a CPCN be issued subject to 24 conditions related to Section 52 activities and approved the Section 58 Order subject to 12 conditions. A number of specific conditions were recommended by the NEB to ensure that appropriate mitigation measures are implemented and in recognition of the comments and knowledge provided by Intervenor. These included three general conditions, five conditions for pre-construction planning tools, two conditions related to environmental protection and reporting during construction, and two conditions related to post-construction and operation. As well, all policies, programs, practices, mitigation measures, recommendations, procedures, and commitments related to environmental protection stated by NGTL in its application or subsequent filings would become binding requirements should a CPCN be issued, as per NEB Conditions 2 and 3.

The NEB Report also contains the NEB's approval of the applied-for rolled-in tolling design. In making their decision the NEB considered whether the tolling would be just and reasonable and not result in any discrimination in tolls, services, or facilities. All three of the NEB members agreed on the tolling methodology for the Groundbirch Mainline Loop section; however, one member dissented on the methodology for the Tower Lake Section section, stating that the applied for tolling method could result in higher costs to end-users and duplication of facilities. The dissenting member noted that while there is a need for the Project and that cumulative effects have been sufficiently minimized, he did not believe the proposed tolling methodology was appropriate. The tolling methodology was approved for both the Groundbirch Mainline Loop and Tower Lake Section pipelines. Following the release of the NEB Report, Westcoast Energy Inc., carrying on business as Spectra Energy, filed an application to review the tolling decision for the Tower Lake Section section under subsection 21(1) of the *NEBA* and Part III of the *National Energy Board Rules of Practice and Procedure, 1995*. This application is currently under review by the NEB. During Crown consultation Aboriginal groups have expressed concerns about how the tolling methodology could contribute to duplication of infrastructure and increased cumulative effects in northeast BC.

5. Key Issues of Provincial Interest

While the Project is a primarily federally-regulated undertaking, as described above, it also triggers a provincial environmental assessment and would require various provincial permits and authorizations. Under the terms of the EAO-NEB Equivalency Agreement, the environmental assessment undertaken by the NEB for the Project constitutes an equivalent assessment under s. 27 and s. 28 of the *Act*, and the NEB Report is substituted for the assessment report required under s. 17(2) of the *Act*.

¹¹ Standard mitigation refers to a specification or practice that has been developed by industry or prescribed by a government authority, that has been previously employed successfully and is now considered sufficiently common or routine that it is integrated into the company's management system and meets the expectations of the NEB.

The provincial and federal governments have a common interest in environmental and socio-economic components that may be affected by the Project. The provincial government has authority for the management of provincial lands and natural resources that may be affected by the Project. This section summarizes some of the findings of the NEB Report in relation to key areas of provincial interest and jurisdiction.

Vegetation

Areas of old growth forest bird habitat and revegetation were identified as key environmental issues by the NEB during the environmental assessment. Within BC the pipeline follows existing disturbance or RoW for 82% of the route and 97% of the pipeline route is located on private lands. While the NEB noted that the Project is primarily on agricultural land and that NGTL is required, pursuant to s. 21 of the National Energy Board Onshore Pipeline Regulation, to restore the RoW and temporary work areas to a condition similar to the surrounding environment, there is still the potential for adverse effects to species at risk as a result of a loss or reduction in habitat. In order to mitigate these potential adverse effects, the NEB recommended Condition 23 that would require NGTL to report on the status of all reclamation efforts and Condition 4 that would require NGTL to prepare a plan outlining enhanced reclamation efforts in areas within or adjacent to old growth forest bird habitat.

It was presented by Aboriginal groups during the NEB environmental assessment and subsequent Crown consultation that the areas south of Fort St. John are heavily disturbed, and as such, any remaining forested areas are of critical importance for wildlife populations and the gathering of plants for consumption, medicinal, or spiritual purposes. Aboriginal groups presented concerns about the method of reclamation used and expressed doubts as to the efficacy of passive (natural) regeneration proposed by NGTL.

In addition to the NEB conditions, and the Onshore Pipeline Regulations, the EAO proposes a condition requiring NGTL to provide further details of vegetation disturbance, control, and reclamation measures in a vegetation management plan. The plan would be required to be developed in consultation with relevant government agencies, potentially affected private landowners who expressed interest in further consultation, and Aboriginal groups. The plan would be submitted to the EAO prior to the commencement of construction.

Heritage Resources

The NEB identified heritage resources as a key environmental issue that warranted further analysis. NGTL identified several mitigation strategies to avoid potential adverse effects to heritage resources and in response to concerns raised by Aboriginal groups, including: avoiding impacts through narrowing or moving the RoW or temporary work spaces; implementing a Heritage Resources Discovery Contingency Plan; implementing environmental orientation for all Project site staff; and applying NGTL's Aboriginal Construction Participation Program.

The NEB included Condition 11 that would require NGTL to file confirmation that all relevant archaeological and heritage resource permits and clearances have been received prior to commencing construction. In BC, these permits would be adjudicated by FLNRO. The NEB also directed NGTL to provide Aboriginal monitors with the opportunity to receive training in heritage resources potential and the NGTL Heritage Resources Discovery Plan. In response to interests expressed from Aboriginal groups to be involved in construction monitoring, the NEB included Condition 8, requiring NGTL to file a plan for Aboriginal participation in construction monitoring and Condition 20, to provide a post-construction report which summarizes this participation. The NEB found that residual adverse effects to heritage resources would be short-term, reversible, limited to the Project footprint, and of moderate magnitude and therefore concluded that adverse effects are not likely to be significant.

The EAO proposes a condition that would require NGTL to submit a heritage values management plan that provides further details on the identification, assessment, and management of heritage values¹². The plan would be required to be developed in consultation with Aboriginal groups and appropriate provincial agencies (i.e. FLNRO) to ensure that Project activities are aligned with all provincial legislation, regulation, and policy, including the BC Fossil Management Framework¹³. The plan would also facilitate opportunities for Aboriginal groups to meaningfully participate in the identification and management of heritage resources.

Cumulative Effects

During the NEB environmental assessment and Crown consultation several Aboriginal groups, including Blueberry River First Nations, Saulneau First Nations, West Moberly First Nations, Horse Lake First Nation, and Dene Tha' First Nation, expressed concern regarding cumulative effects in their traditional territory and noted that cumulative effects on the environment impact their ability to meaningfully exercise their Treaty rights. Several Aboriginal groups provided written evidence to the NEB that noted deficiencies in the methods used by NGTL to conduct the cumulative effects assessment for the Project and similar concerns were raised by Aboriginal groups during subsequent Crown consultation for the Project. Additionally, induced development, including increased well infrastructure, was noted as an area of particular concern for Aboriginal groups. The NEB Report states that the estimated field development in the Tower Lake area before the year 2025 is projected to include an additional 625 wells at a rate of 60 wells per year, for a total of 775 existing and future wells.

The NEB noted that due to the current extent of land use and industrial activity in the region, there are existing and ongoing adverse cumulative effects to environmental values such as vegetation, wetlands, wildlife and wildlife habitat, traditional land and resource use, and species at risk. The NEB cumulative effects assessment for the Project assessed potential residual effects for numerous physical, biological, and socio-economic elements. In their evaluation the NEB considered that the Project takes place in a largely agricultural setting and parallels existing linear disturbances for the majority of the proposed

¹² As defined in the *Heritage Conservation Act* heritage values means the historical, cultural, aesthetic, scientific, or educational worth or usefulness of a site or object.

¹³ [BC Fossil Management Framework](#)

corridor. The NEB also noted that the Proponent intended to employ a variety of strategies to reduce potential adverse effects, including standard mitigation, avoidance through route selection, and best practices specific to environmental elements. The NEB was satisfied that NGTL's planned mitigation would be effective in minimizing potential Project related effects within the Project footprint and that Project related residual cumulative effects would be minor and short-term, and therefore unlikely to result in a significant cumulative environmental effect as a result of the Project.

The Province has recognized the importance of assessing and managing the cumulative effects of resource development in northeast BC. FLNRO, in collaboration with other provincial agencies, Aboriginal groups, and stakeholders, continues to develop and implement a provincial Cumulative Effects Framework to provide the policy, procedures, and tools to improve the consideration of cumulative effects to support a broad range of natural resource decision-making. The Cumulative Effects Framework is linked with a number of other current and emerging initiatives across the natural resource sector, including the ongoing Regional Strategic Environmental Assessment (RSEA) project that is being developed with several Treaty 8 First Nations, LNG related proponents, other levels of government, and other Aboriginal groups, as part of the LNG Environmental Stewardship Initiative. The RSEA involves the collaborative development of cumulative effects assessment approaches with the aim of optimizing the meaningful exercise of Treaty 8 Rights and the development interests of the parties. The objectives of RSEA are to assess the impacts of natural resource development on the rights of the participating Aboriginal groups within an agreed upon study area and to use the results of this assessment to develop management responses.

Further, in recognition of the importance of assessing and managing the cumulative effects of resource development in northeast BC, the Province has established the Northeast Cumulative Effects Program and is working closely with Treaty 8 First Nations, local and federal governments, key non-government organizations, and industry on its development and implementation. The Northeast Cumulative Effects Program incorporates the work completed in the previous South Peace Cumulative Effects operational trial, as well as the OGC's Area-Based Analysis initiative¹⁴. The RSEA and the Northeast Cumulative Effects Program will provide complementary programs and capacity to identify and manage cumulative effects.

Aboriginal participants voiced concerns during the NEB review and subsequent Crown consultation about cumulative effects in the region and the impacts this is having on their ability to exercise their Aboriginal Interests. The EAO has proposed a condition that would require NGTL to participate in regional cumulative effects initiatives at the request of provincial agencies.

Greenhouse Gas Emissions

The Environmental and Socioeconomic Assessment completed by NGTL found that the maximum greenhouse gas emissions from the Project would be 0.01 megatonnes (MT) of carbon dioxide equivalent (CO₂e) emissions per year in both BC and Alberta. Emissions would be primarily from the

¹⁴ [Oil and Gas Commission Area Based Analysis](#)

operation of vehicles and equipment. Greenhouse gas emissions from the Project are not large enough to trigger provincial or federal reporting thresholds. The NEB noted that standard mitigation would effectively address potential adverse effects to air emissions, which includes greenhouse gas emissions.

The Government of Canada released a Project specific Upstream Greenhouse Gas Emissions¹⁵ report in October, 2016. The report finds that the upstream¹⁶ greenhouse gas emissions associated with the production, gathering, and processing of the additional volume of natural gas corresponding to the increase in total system capacity due to the Project are estimated to be 3.0 MT of CO₂e per year. The report notes that all of the gas is expected to be produced in BC, and as such these upstream emissions are assumed to originate entirely in BC.

6. Aboriginal Consultation

The Province of BC, represented by the EAO, and the Government of Canada, represented by the Major Projects Management Office, undertook coordinated consultation activities with potentially impacted Aboriginal groups to which there was a duty to consult. A joint CAR was prepared that details the consultation that occurred with each Aboriginal group noted on the s.11 Order, a discussion of the key issues of concern raised by the group, the relevant mitigation and accommodation measures proposed, and the Crown's assessment of the potential impacts of the Project on each Aboriginal group's Aboriginal and treaty rights. Separate annexes specific to each Aboriginal group were prepared by the EAO and MPMO. The annexes prepared by the EAO outline specific issues raised by the Aboriginal group, the provincial Crown's assessment of the potential impacts to the Aboriginal group's Aboriginal Treaty rights and other interests, any proposed accommodation measures, depth of consultation assessment, and whether the duty to consult has been met.

Within BC, ten Aboriginal groups were identified by the EAO to be consulted on the Project, including Aboriginal groups located along the pipeline route. These groups are specified in the legal order issued by the EAO under s. 11 of the *Act*¹⁷. The EAO consulted the following Aboriginal groups on the Project:

Schedule B

- Blueberry River First Nations;
- Doig River First Nation;
- Halfway River First Nation;
- Horse Lake First Nation;
- McLeod Lake Indian Band;
- Prophet River First Nation.
- Sauteau First Nations; and
- West Moberly First Nations;

¹⁵ Environment and Climate Change Canada. September 2016. DRAFT. NOVA Gas Transmission Ltd. – Towerbirch Expansion Project Review of Related Upstream Greenhouse Gas Emissions Estimates. Available at <http://www.ceaa.gc.ca/050/documents/p80106/115742E.pdf>

¹⁶ Upstream is defined as all natural gas sector stages before the gas transmission system, including natural gas production, gathering, and processing and accounts for all greenhouse gas emissions including fugitives, venting, flaring, and combustion.

¹⁷ EAO s. 11 Order

Schedule C

- Dene Tha' First Nation; and
- Fort Nelson First Nation.

Aboriginal groups in Schedule B of the s. 11 Order were consulted at the deeper end of the *Haida* spectrum. Aboriginal groups in Schedule C of the s.11 Order were consulted at a lower end of the *Haida* spectrum.

Of the ten identified groups, the Project overlaps with what the Province understands to be the area of traditional use of five Aboriginal groups: Blueberry River First Nations, Horse Lake First Nation, McLeod Lake Indian Band, Sauteau First Nations, and West Moberly First Nations.

NGTL noted that while a variety of concerns were raised during their engagement with Aboriginal groups, some common issues included:

- Access;
- Accidents and malfunctions;
- Cultural sites and areas;
- Cumulative effects;
- Employment and contracting;
- Equipment servicing methods and materials;
- Fish and fish habitat;
- Environmental monitoring;
- Surface water quality;
- Vegetation; and
- Wildlife and wildlife habitat.

In addition to these issues, other common issues and concerns raised during Crown consultation activities subsequent to the release of the NEB Report included:

- Consultation fatigue;
- Concerns regarding the timing of Crown consultation occurring too late in the Project review to be effective; and
- Lack of capacity to meaningfully engage on the Project.

Section 4 of the CAR provides a discussion about the consultation that was undertaken with Aboriginal groups and the information that informed the Crown's assessment of potential impacts to Aboriginal Interests. Sections 5 and 6 of the CAR include a summary of concerns raised by Aboriginal groups as they related to potential impacts on potential and asserted Aboriginal and Treaty rights and other interests (e.g., socio-economic issues, cumulative effects). Relevant NGTL commitments, NEB recommended conditions, and Crown responses, where available, are described and key accommodation measures are presented in relation to how they would address potential impacts to Aboriginal and Treaty rights and other concerns.

The EAO also proposes a number of conditions that would specifically address concerns raised by Aboriginal groups or mitigate potential impacts to Aboriginal Treaty rights and other interests. These proposed conditions include providing opportunities to participate in construction monitoring and in the development of specific environmental management plans, as well as requiring NGTL to engage with

Aboriginal groups to identify opportunities for cultural awareness and recognition. Other conditions proposed by the EAO seek to address outstanding concerns related to vegetation, heritage resources, and cumulative effects. Many of the EAO conditions referenced throughout this Report include a requirement for engagement with Aboriginal groups by NGTL. A summary of the broad issues under provincial jurisdiction that were raised by Aboriginal groups and the EAO conditions that seek to address these concerns is presented in Table 2.

The CAR Aboriginal group specific annexes provide a summary of the proximity of the Project to Aboriginal groups' areas of traditional use, as understood by the Province, an assessment of the potential impacts of the Project on each Aboriginal group's Treaty rights and other interests, and the Province's assessed depth of consultation. The assessed seriousness of impacts on each groups Treaty rights is presented in Table 1.

Table 1. Location of the Project, depth of consultation, and the EAO's conclusions on the seriousness of impacts on Aboriginal Treaty rights and other interests.

Aboriginal Group	Location of Project with respect to Areas of Traditional Use	Depth of Consultation (<i>Haida</i> spectrum)	Treaty 8 Rights to Hunt & Trap	Treaty 8 Rights to Fish	Gathering Activities	Sites of Cultural Importance
Blueberry River First Nations	Approximately 50 km of the Project is located within what the Province understands to be Blueberry's area of traditional use.	Middle	Minor	Negligible-to-Minor	Minor	Negligible-to-Minor
Dene Tha' First Nation	The Project is approximately 15 km outside of the area understood by the Province to be Dene Tha's area of traditional use in BC.	Low	Negligible	Negligible	Negligible	Negligible
Doig River First Nation	The Project is located approximately 20 km, at the closest point, south of the area which the Province understands to be Doig River's area of traditional use, however based on the shared cultural Dane-zaa historical connection and history with Blueberry River, the Province assumes that Doig River historically used the vicinity of the Project as part of their seasonal round.	Low-to-middle	Negligible-to-Minor	Negligible	Negligible-to-Minor	Negligible-to-Minor
Fort Nelson First Nation	The Project is located approximately 225 km, at the closest point, southeast of what that the Province understands to be Fort Nelson's area of traditional use.	Low	Negligible	Negligible	Negligible	Negligible
Halfway River First Nation	The Project is located approximately 20 km, at the closest point, southeast of what the Province understands to be Halfway River's area of traditional use.	Low	Negligible	Negligible	Negligible	Negligible

Aboriginal Group	Location of Project with respect to Areas of Traditional Use	Depth of Consultation (<i>Haida</i> spectrum)	Treaty 8 Rights to Hunt & Trap	Treaty 8 Rights to Fish	Gathering Activities	Sites of Cultural Importance
Horse Lake First Nation	Approximately 70 km of the BC portion of the Project would be located within what the Province understands to be Horse Lake's area of traditional use (Area A).	Middle	Minor	Negligible-to-Minor	Negligible-to-Minor	Negligible-to-Minor
McLeod Lake Indian Band	Approximately 70 km of the BC portion of the Project would overlap with what the Province understands to be McLeod Lake's Claimed Traditional Territory.	Middle	Negligible-to-Minor	Negligible-to-Minor	Negligible-to-Minor	Negligible-to-Minor
Prophet River First Nation	The Project is approximately 182 km, at the closest point, away from what the Province understands to be Prophet River's area of traditional use.	Low	Negligible	Negligible	Negligible	Negligible
Saulteau First Nations	The BC portion of the Project, approximately 70 km, would overlap the northern portion of what the Province understands to be Saulteau's area of traditional use.	Middle	Minor	Negligible-to-Minor	Negligible-to-Minor	Minor
West Moberly First Nations	The BC portion of the Project, approximately 70 km, would overlap with what the Province understands to be West Moberly's area of traditional use.	Middle	Negligible-to-Minor	Negligible-to-Minor	Negligible-to-Minor	Negligible-to-Minor

Table 2. Summary of proposed EAO Conditions that respond to issues under provincial jurisdiction raised by Aboriginal Groups.

Summary of issue	NEB Condition	EAO Condition
Cumulative effects	Certificate: 8, 20 Order: 4	Cumulative Effects: The Proponent must participate, at the request of BC provincial government agencies, in regional cumulative effects initiatives.
Aboriginal monitoring	Certificate: 8, 20 Order: 4	Involvement of Aboriginal Groups in Construction Monitoring: The Proponent must provide opportunities for Aboriginal groups to participate in monitoring for activities that occur in their asserted traditional territories.
Aboriginal employment and contracting	Certificate: 21	Aboriginal Engagement Reports: The Proponent must document their engagement efforts with Aboriginal groups and provide a report to Aboriginal groups and to the EAO for review and approval.
Proponent consultation, information sharing, and plan development	Certificate: 4, 6, 8, 9, 14 20 Order: 4, 7, 9	Consultation: Where a condition requires consultation with a party, including Aboriginal groups, the minimum consultation requirements are described. Aboriginal Engagement Reports: See description above. Aboriginal Cultural Awareness and Recognition: The Proponent must identify opportunities for cultural awareness and recognition through consultation with Aboriginal groups.
Traditional Land Use	Certificate: 9, 23 Order: 5, 6, 7	Heritage Values Management Plan: The Proponent must outline their efforts to identify, report, and mitigate potential adverse effects to archeological resources, including traditional land use sites. Vegetation Management Plan: The Proponent must prepare a plan outlining mitigation, avoidance, and management strategies to reduce potential adverse effects to vegetation, including reclamation, and considering traditional land use and traditional ecological knowledge in vegetation management activities.
Wildlife (including fisheries)	Certificate: 4, 6, 7, 8, 9, 12, 13, 14, 15, 16 20, 23 Order: 4, 5, 6, 7, 9, 10	Cumulative Effects: See description above. Vegetation Management Plan: See description above.
Heritage and historical resources	Certificate: 8, 11, 20, 23	Heritage Values Management Plan: See description above.
Reclamation	Certificate: 4, 23	Vegetation Management Plan: See description above.
Vegetation	Certificate: 4, 23	Vegetation Management Plan: See description above.
Watercourse crossings	Certificate: 13, 14, 15, 15, 16, 18, 23 Order: 10	Vegetation Management Plan: See description above.

7. Public and Local Government Consultation

The NEB hearing process provides opportunities for participation by those members of the public who are either directly affected or have relevant information or expertise. The NEB required NGTL to undertake public engagement with land owners and land users, government stakeholders, and provide commercial third party notifications.

Key issues raised by local and regional governments and municipalities included:

- Visual effects of RoW construction;
- Watercourse crossing methods;
- Local contracting and hiring opportunities;
- Effects on recreational land users;
- Potential effects on community infrastructure;
- Traffic management;
- Employment and economic benefits;
- Capacity of small, local government to participate in application review and consultation; and
- Land Use Permits in the Peace River Regional District.

The NEB found that NGTL's Project-specific public consultation activities were of an appropriate scope and scale.

The EAO proposes a condition which would require NGTL to provide private landowners whose property is located in the Project area to have an opportunity to be consulted on the development of the vegetation management plan. The EAO's also proposed a condition that would require a health and medical services plan for the project to be developed in consultation with Northern Health.

8. Other Required Authorizations

Should the Project be approved it would require various permits from federal, provincial, and local governments. The majority of provincial permits would be provided by the OGC, the primary operational regulator of oil and gas activities in BC. In particular, the OGC is responsible for permitting under the *Oil and Gas Activities Act*. As an NEB regulated project, the Project is not subject to the *Oil and Gas Activities Act* as it pertains to the pipeline itself and associated oil and gas infrastructure; however, most other provincial authorizations that are required are still issued by the OGC as per the specified enactments outlined in the *Oil and Gas Activities Act*.

Should a project be approved after the application and decision-making process, the NEB continues to regulate for the lifecycle of the project, including construction, and to abandonment when the facilities are no longer needed. The NEB's life cycle approach to regulation includes monitoring and inspecting during construction and operations.

9. Conclusions

The NEB concluded that:

- When considering the balance between the benefits (e.g. additional Canadian gas supply to meet market demand and offset production declines in the Western Canadian Sedimentary Basin) and the burdens (e.g. the extent of development in the region) associated with the Project, the Project is in the public interest and consistent with the requirements of the *NEBA*;
- Through the implementation of NGTL's environmental protection procedures, mitigation measures, and the NEB's recommended terms and conditions, the Project is not likely to cause significant adverse environmental effects;
- In light of the current land uses in the area, any resulting residual adverse effects would be minor and of limited duration once all mitigation measures are applied, including NEB conditions and NGTL commitments;
- Once all mitigation measures are applied the potential cumulative effects would be minor and of limited duration;
- The Project is in Canada's public interest, and it recommends that the GiC approve the Project and direct the NEB to issue the necessary CPCN; and
- Should the GiC approve the Project the associated regulatory instruments issued by the NEB would come into effect, and would be subject to the 24 Certificate conditions and 12 Order conditions.

Based on:

- Information contained in the NEB Report, NGTL's application, information filed with the NEB during the review of the Project, and supplemental information provided during the remaining provincial review of the Project;
- The record of consultation and engagement with Aboriginal groups, including by the NEB and NGTL, the federal government, and the EAO's efforts at consultation with potentially impacted Aboriginal groups, including the joint federal-provincial Crown consultation;
- NGTL's engagement program and commitments and requirements for ongoing consultation and engagement of Aboriginal groups by NGTL;
- Issues raised by Aboriginal groups regarding outstanding issues and concerns during Crown consultation;
- Commitments of NGTL, requirements imposed by the NEB conditions, and the regulatory requirements of the federal and provincial governments; and
- Mitigation measures identified as proposed conditions in Schedule B (Table of Conditions) of the environmental assessment Certificate to be undertaken by the proponent.

The EAO is satisfied that:

- Consultation has been carried out in good faith and that the Crown's process of seeking to understand potentially outstanding issues and impacts was reasonable;

- The potential for adverse effects on the Aboriginal Interests of Aboriginal groups has been avoided, minimized, or otherwise accommodated to an acceptable level; and
- The provincial Crown has fulfilled its obligations for consultation and accommodation to Aboriginal groups relating to the issuance of a provincial environmental assessment Certificate.

Appendix 1: Summary of the NEB findings of potential adverse effects (NEB Report Section 9.6 and Table 9-2)

Environment	Component	Summary of the NEB's Findings
	<i>Physical Environment</i>	Potential changes in slope morphology and in drainage patterns in areas of unstable terrain and disturbance that may expose potential acid generating rock from both construction and operation.
	<i>Soil and Soil Productivity</i>	Construction and RoW clean-up and reclamation activities may result in changes to the amount of productive soil, as well as in the soil capability and quality.
	<i>Vegetation</i>	Potential for a loss or change in important terrestrial vegetation or in vegetation community type, including listed plant species and ecological communities. There is also the potential loss of merchantable timber in the Project footprint.
	<i>Water Quality and Quantity</i>	Potential adverse environmental effects to water and water quality as a result of construction activities, including watercourse crossings, water withdrawal and release for hydrostatic testing, and water diversions. The construction and operation of the meter stations may also affect water and water quality. These potential adverse effects may include erosion and scour, changes in natural instream flow rates, increase sediment loading and deposition, changes in groundwater quantities, and changes in quality and biota at the release point for the water used in the hydrostatic testing.
	<i>Aquatic Species and Habitat</i>	Potential adverse effects to aquatic species and habitat from construction activities such as clearing, watercourse crossing, and water withdrawal and release for hydrostatic testing. Potential adverse environmental effects include changes in the quality and /or quantity of available habitat, including the alteration or removal of riparian vegetation and instream fish habitat; increases in sediment loads and deposition at and downstream of the RoW; changes in the distribution and abundance of fish populations; reduced fish spawning and rearing success; and, direct harm to fish through entrainment, suffocation, release of deleterious substances, or mechanical damage.
	<i>Wetlands</i>	Construction activities may adversely affect wetlands through the alteration of the wetland area or habitat considered important to humans or wildlife; the introduction of invasive plants resulting in a loss or alteration of native wetland communities; and, the alteration of health or function as a result of hydrological and water quality changes.
	<i>Wildlife and Wildlife Habitat</i>	Construction and operation activities may cause adverse environmental effects to wildlife and wildlife habitat. These effects may include: <ul style="list-style-type: none"> • Alteration or loss of habitat for all wildlife species due to vegetation clearing, fragmentation, or sensory disturbance; • Changes to movement for moose, furbearers/carnivores, old growth forest birds, and western toad due to the creation of barriers; • Increased mortality and changes in abundance for old growth bird species, such as olive sided flycatcher, barn swallow, and yellow rail, as well as for western toad, due to site clearing and construction activities; • Changes in abundance and increased mortality for moose, furbearers/carnivores, and old growth forest birds due to

		<p>increased predation, hunting, and/or trapping; and</p> <ul style="list-style-type: none"> • Changes in wildlife abundance and movements due to vehicle collisions and sensory disturbance.
	<i>Species at Risk or Species of Special Status and Related Habitat</i>	Species with special conservation status and related habitats were found to be potentially affected by both construction and operation activities. Potential adverse environmental effects to these species and habitats may include habitat alteration or loss and increased mortality for furbearers and carnivores, old growth forest birds, olive-sided flycatcher, barn swallow, yellow rail, and western toad. The NEB also noted the potential for effects to wildlife movement patterns for furbearers and carnivores, old growth forest birds, and western toads.
	<i>Atmospheric Environment</i>	Vegetation burning, equipment use during construction, meter station operation, and pipeline inspection and maintenance during operation may result in adverse environmental effects to the atmospheric environment. Specifically, Criteria Air Contaminants and greenhouse gas emissions may increase during both construction and operation.
	<i>Acoustic Environment</i>	Noise levels may increase during construction due to construction activities and operation of vehicles and equipment. There is the potential for intermittent increases in noise during operation due to operation of vehicles and equipment.
Socioeconomic	<i>Human Occupancy/ Resource Use</i>	Construction activities and operation of equipment during both construction and operation may cause changes in access for land and resource users as well as a disruption of agricultural, hunting, fishing, guide outfitting, and trapping activities.
	<i>Heritage Resources</i>	Earthworks activities during construction may cause disturbance or loss of undiscovered heritage sites.
	<i>Current Traditional Land and Resource Use</i>	Construction activities and equipment and vehicle traffic during both construction and operation may result in disturbance to users of trails and travelways; to hunting, fishing, and trapping activities; and to gathering and sacred sites. Additionally, plant gathering sites could be altered during construction and operation.
	<i>Navigation and Navigation Safety</i>	Construction for both trenchless and trenched watercourse crossings may result in a disruption of watercourse users and decrease in access to navigable waters for all users, including Aboriginal users, during construction.
	<i>Social and Cultural Well-being</i>	An influx of temporary workers during construction may disrupt community life.
	<i>Human Health and Aesthetics</i>	Nearby residents may have sensory disturbance from construction and operation related activities, as well potential health effects from changes in the acoustic environment. The viewshed may also be altered by construction and operation activities.
	<i>Accidents and Malfunctions</i>	Potential for a pipeline break, leak, repair or replacement; equipment traffic; spill of a hazardous material; fire; or release of drilling mud may cause a spill or accident during both operation and construction.
	<i>Effects of the Environment on the Project</i>	Potential interactions with the environment that could adversely impact Project components include geohazards, hydrological hazards, flooding, wildfire, and extreme weather. Potential adverse environmental effects from these interactions include pipeline exposure or loss of cover, damage from wildlife, delays to construction and operation scheduling with the potential for further environmental effects, and worker injury.