JX LNG Canada

Summit Lake PG LNG Project

Liquified Natural Gas Facility

Initial Project Description

(BCEAA 2018, IAA 2019)

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Abbreviations (English)

ALC	Agricultural Land Commission
BC MoEC	BC Ministry of Environment and Climate Change
BC MoTI	BC Ministry of Transportation and Infrastructure
BC MoF	BC Ministry of Forests
BC MoLWR	BC Ministry of Land, Water and Resource Stewardship
BC	British Columbia
BCEAA	British Columbia Environmental Assessment Act
BCEAO	BC Environmental Assessment Office
BCER	British Columbia Energy Regulator
BC Hydro	British Columbia Hydro and Power Authority
CAD	Consultative Areas Database
CER	Canadian Energy Regulator
CN	Canadian National Railway
CNG	Compressed Natural Gas
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
EEP	Early Engagement Plan
FEED	Front End Engineering and Design
GHG	Greenhouse Gas
IA	Impact Assessment
IAA	Impact Assessment Act
IAAC	Impact Assessment Agency of Canada
IPD	Initial Project Description
ISO	International Organization for Standardization
JX LNG	JX LNG Canada Ltd.
km	kilometers

LNG	liquified natural gas
LTN	Lheidli T'enneh First Nation
MLIB	McLeod Lake Indian Band
mm	millimeters
mmscfd	million standard cubic feet per day
MRC	Mixed Refrigerant
MTPA	million tons per annum
MW	megawatt
Nak'azdli	Nak'azdli Whut'en First Nation
Nav Can	Transport Canada's Navigation Canada
Nazko	Nazko First Nation
NHA	Northern Health Authority
NPS	Nominal Pipe Size
PJ	Petajoules
PM	particulate matter
PRPA	Prince Rupert Port Authority
RDFFG	Regional District of Fraser Fort George
RIELP	Ridley Island Export Logistics Platform Project
SARA	Species at Risk Act
Pre-FEED	Preliminary Front-End Engineering and Design
Project	Summit Lake PG LNG Project
TC NGTL	TransCanada Nova Gas Transmission Ltd.
TRS	Total Reduced Sulphur
TSBC	Technical Safety BC
WCSB	Western Canadian Sedimentary Basin
Westcoast Pipeline	Enbridge Westcoast Transmission System

Abréviation (Francais)

ALC	Commission des terres agricoles
BC MoEC	Ministère de l'Environnement et du Changement climatique de la Colombie-Britannique
BC MoTI	Ministère des Transports et de l'Infrastructure de la Colombie-Britannique
BC MoF	Ministère des Forêts de la Colombie-Britannique
BC MoLWR	Ministère de l'intendance des terres, de l'eau et des ressources de la Colombie-ritannique
BC	Colombie britannique
BCEAA	Loi sur l'évaluation environnementale de la Colombie-Britannique
BCEAO	Bureau d'évaluation environnementale de la Colombie-Britannique
BCER	Régulateur de l'énergie de la Colombie-Britannique
BC Hydro	Autorité hydroélectrique et électrique de la Colombie-Britannique
CAD	Base de données des zones consultatives
CER	Régie canadienne de l'énergie
CN	Chemin de fer national du Canada
CNG	Gaz naturel compressé
COSEWIC	Comité sur la situation des espèces en péril au Canada
DFO	Pêches et Océans Canada
EA	Évaluation environnementale
ECCC	Environnement et Changement climatique Canada
EEP	Plan d'engagement précoce
FEED	Ingénierie et conception frontale
GHG	Gaz à effet de serre
IA	Évaluation de l'impact
IAA	Loi sur l'évaluation d'impact
IAAC	Agence d'évaluation d'impact du Canada
IPD	Description initiale du projet
ISO	Organisation internationale de normalisation

JX LNG	JX LNG Canada Ltd.
km	kilomètres
LNG	gaz naturel liquéfié
LTN	Première Nation Lheidli T'enneh
MLIB	Bande indienne de McLeod Lake
mm	millimètres
mmscfd	millions de pieds cubes standard par jour
MRC	Réfrigérant mixte
MTPA	millions de tonnes par an
MW	mégawatt
Nak’azdli	Première Nation Nak'azdli Whut'en
Nav Can	Navigation Canada de Transports Canada
Nazko	Première Nation Nazko
NHA	Autorité sanitaire du Nord
NPS	Taille nominale du tuyau
PJ	Pétajoules
PM	affaire particulière
PRPA	Administration portuaire de Prince Rupert
RDFFG	District régional de Fraser Fort George
RIELP	Projet de plateforme logistique d’exportation de Ridley Island
SARA	Loi sur les espèces en péril
Pre-FEED	Ingénierie et conception préliminaires du front-end
Project	Projet de GNL Summit Lake PG
TC NGTL	TransCanada Nova Gas Transmission Ltée.
TRS	Soufre total réduit
TSBC	Sécurité technique BC
WCSB	Bassin sédimentaire de l'Ouest canadien
Westcoast Pipeline	Réseau de transport d’Enbridge Westcoast

Executive Summary (English)

JX LNG Canada Ltd. (JX LNG) is proposing to develop a liquified natural gas (LNG) facility in the Caribou Region of British Columbia called the Summit Lake PG LNG Project (referred as the "Project"). The proponent, JX LNG Canada Ltd. (JX LNG) is an Alberta-based subsidiary of Changchun Jixing New Energy Ltd. (Jixing). Jixing is a prominent player in the LNG and compressed natural gas (CNG) sector within northeastern China. JX LNG is newly established in British Columbia and is dedicated to advancing the development of LNG and renewable energy within the country. The contact information for JX LNG can be found below:

Parameter	Contact Information
Organization Name	JX LNG Canada Ltd.
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Company Website	www.JXLNGCanada.com
Company Phone	403-355-6623
Principal Contact for EA	Christine Olson
Principal Contact Email	colson@keywestprojects.ca

Location

The Project will be located on undisturbed land, approximately 30 kilometers (km) north of Prince George at the Hart North Industrial Site. The Project site is zoned as Rural 2 and Rural 3 under the Regional District of Fraser Fort George (RDFFG) Zoning Bylaw 2892, 2014 and designated for Heavy Industrial Use under the RDFFG Official Community Plan for the Crooked River – Parsnip Area. The site is located approximately 20 km from Lheidli-T'enneh First Nation Community and falls within the traditional territory of the Lheidli-T'enneh First Nation. The Project is preliminarily projected to utilize approximately 250 hectares of land. The Project site is approximately 7 km from the Giscome Portage Trail Protected Area. The Site of the project is not on Federal lands nor is it within proximity to any known federal lands. Coordinates of the approximate center of the Project are 54.185, -122.63, and the Legal description of the Land is NTS A-021-J/093-J-02.

Estimates and Purpose

The Project will be developed in two identical phases. Phase 1 will produce up to 1.35 million tonnes per annum (MTPA) and Phase 2 will produce an additional 1.35 MTPA for a total of 2.70 MTPA of LNG. Commercial operations for Phase 1 are expected to commence in 2028. As part of the Project, an approximately 2-kilometre pipeline to deliver natural gas to the facility from the existing Enbridge Westcoast Pipeline main transmission will be built, as well as an approximately 6-kilomter powerline to connect the Project to British Columbia Hydro and Power Authority (BC Hydro) green power at the Salmon Valley substation.

At full build out the Project will process approximately 10,060 e^3m^3/d (355 million standard cubic feet per day (mmscfd)) of pipeline grade natural gas to produce 2.70 MTPA of LNG. The Project is expected to operate for 30 years. JX LNG is designing the Project to be environmentally best in class with no direct impacts to water or aquatic life and net-zero in terms of greenhouse gas (GHG) emissions. This will be achieved through connection to the BC Hydro renewable power grid, in combination with an operating culture focussed on minimizing environmental impacts, new technologies and design elements intended to reduce GHG emissions, a detailed monitoring and measurement system, and potential consideration of recognized carbon offsets or carbon capture and sequestration measures. This process will be in liaison with the 2030 Emissions Reduction Plan under the Bill 12 Canadian Net-Zero Emissions Accountability Act.

Across the globe, countries are looking to reduce greenhouse gas (GHG) emissions and are seeking cleaner energy options to address global climate change. LNG produces significantly less GHG emissions and other pollutants than other fossil fuel options. The construction of the Project will enable the export of LNG to meet growing demand across the globe. In addition, it will create direct and indirect socio-economic benefits to the people in British Columbia (BC) and assist in meeting federal and provincial objectives to address global climate change due to GHG emissions.

Scope/Process Overview

Subject to the negotiation of certain agreements, JX LNG intends to receive feed gas from the existing Enbridge Westcoast Transmission System (Westcoast Pipeline) which is interlinked with the Westcoast Station 2 Gas Hub and TransCanada Nova Gas Transmission Ltd. (TC NGTL) system. Initial conversations with Enbridge indicate that, in order to align with the Phase 1 pipeline capacity of the current Westcoast Pipeline, a pipeline loop of under 40 km could be required upstream of Compressor Station 4A within the existing Westcoast Pipeline system. The new Enbridge pipeline loop will be done as an independent project from the JX LNG Project. JX LNG has engaged in discussions with Enbridge regarding the capacity of the Westcoast Pipeline that is available for the Project. Based on the initial hydraulics assessment conducted by Enbridge, the additional looping to their existing Westcoast Pipeline is expected to be under 40 km in length. The exact dimensions of the loop will be confirmed in an upcoming and more comprehensive hydraulics study. Pipeline expansion for Phase-2 will be done after FID of Phase-1. A new meter station take-off point will be installed south of Compressor Station 4A by Enbridge, and approximately 508 millimeter (mm) (Nominal Pipe Size (NPS) 20) diameter and minimum 2 km in length pipeline will be installed either by JX LNG or Enbridge. The exact pipeline routing will be determined through consultation with landowners, indigenous groups and Enbridge.

The feed gas will be purchased from Westcoast Station 2 Hub gas market. JX LNG plans to initiate discussions with various gas producers in this region later.

A high-level summary of the proposed facility equipment is as follows:

a) Natural gas receiving and treatment units.
b) Natural gas liquefaction train(s) powered by electricity.
c) Flare system.

d) LNG storage tanks with an initial total storage capacity of 100,000 m^3 for Phase 1; and a cumulative total storage capacity of 200,000 m^3 in Phase 2.
e) Storage vessels and tanks for products including natural gas liquids removed from the inlet gas, refrigerants for the liquefaction trains, fuel for the backup generators, process waste streams for offsite disposal, and other products to be used for operation and maintenance of the LNG facility.
f) LNG loading arms.
g) Rail spurs, LNG container loading and unloading facilities.
h) Water storage for fire water, amine makeup and other ancillary purposes.
i) Wastewater collection and treatment systems for stormwater and domestic wastewater.
j) Control room and staff facilities.
k) Emergency shutdown system.
l) Emergency backup power generation system.
m) Electrical transformers; and electrical utilities interface connection to infrastructure.
n) A helium recovery system extracting helium from the tail gas if economically viable.

The pipeline will deliver natural gas to the facility where it will enter the facility through the inlet separator for free liquids or contaminants to be removed. Next, the gas will go through a pre-treatment system consisting of an amine solvent unit to remove CO_2 and any trace sulfur gases. The treated gas is then dehydrated in molecular sieve dehydration units. The removed water from this stage will be stored on-site in produced water tanks for truck out or other disposal methods. The final step in pre-treatment is a mercury absorption bed which prevents damage to the downstream aluminum components. Once CO_2, water and other contaminants are removed, the gas will go through a liquefaction process that will chill the natural gas to approximately -162 °C into LNG. The preliminary LNG process selected is a mixed refrigerant (MRC) cold box based three stage cooling system. It consists of a precooling step, where heavy hydrocarbons that will freeze in later stages are removed. These hydrocarbons will be stored in on-site bullets for truck-out or further processing. Following the precooling stage is the liquefaction stage where the gas is liquified. Finally, there is a subcooling stage where the now liquid gas or LNG is reduced in pressure and sent to onsite storage. The LNG product will be stored in International Organization for Standardization (ISO) shipping containers which means that it is easily transported.

The LNG product within the ISO containers will be loaded on to rail cars on the Project lease, where it will be transported to the BC west coast and loaded on to cargo ships for delivery overseas to international consumers of LNG.

JX LNG is proposing to lease land from the Prince Rupert Port Authority within their Ridley Island Export Logistics Platform (RIELP) project. From the RIELP the ISO containers will be transported via rail to the Fairview Terminal for loading onto dedicated ships.

It is expected that the LNG Product stored near the cargo ship port would not exceed the LNG storage capacity limit of 136,000 m^3 to trigger an IA under the IAA nor a BC environmental assessment (EA) under the BCEAA. For these reasons this portion of the Project is considered out of boundaries for the EA and IA process.

The design of the proposed Project is ongoing and will be finalized during the pre-front-end engineering design (pre-FEED) and front-end engineering design (FEED) phases.

Utilities for the Project consist of green electrical power, and a small amount of trucked in process makeup water and chemicals. Power for the Project will be supplied from the BC Hydro with an approximately 6 km new powerline south from the proposed Project site to the existing Salmon Valley substation. Cooling will be accomplished primarily from aerial coolers.

The makeup water for the amine unit will be trucked in with the intent to utilize technologies that require a small amount of water, to minimize the impact.

The boundaries of the Project for the purposes of the IA and EA include the pipeline from the Enbridge meter station to the Project, the Project itself, the powerline from the Salmon Velley substation to the Project and the rail loading facilities. There will be a need for new rail track connecting the site to the Canadian National (CN) main line. Once on the rail cars the product will be conveyed to the west coast of BC, and shipped overseas, utilizing existing infrastructure.

Schedule

Based on the information available at the time of writing, Phase 1 of the Project is scheduled to begin construction in Q1 2026 with a commission date of Q3 2028. The construction schedule for Phase 2 will immediately follow Phase 1 commissioning. The Project is set to operate from 2029 till 2057. From 2057 till 2058 will be the decommissioning and closure phases of the Project as currently planned.

Construction of Phase 1 of the Project will commence after all regulatory requirements are satisfied. JX LNG will work closely with regulators and seek feedback on the proposed schedule throughout the assessment process.

Regulatory & Environmental Permits

The Project is reviewable under both the British Columbia Environmental Assessment Act (BCEAA) and the federal Impact Assessment Act (IAA). Both acts emphasize the importance of early engagement of First Nations, stakeholders, and impacted communities to encourage the exchange of information early in the Project development.

The filing of an Initial Project Description (IPD) and Early Engagement Plan (EEP) is the first step in both the provincial and federal processes. JX LNG is introducing the Project to First Nations, government agencies, public stakeholders and regulatory officials prior to submission of the IPD and EEP and facilitate conversations regarding potential effects on impacted communities and incorporate feedback into these documents.

As the Project triggers federal and provincial processes, it is anticipated that the BC Environmental Assessment Office (BCEAO) will request a substitution of the federal Impact Assessment (IA) process following Readiness Decision from the BCEAO. The Project schedule assumes that the Project is granted substitution.

The Project is subject to a Ministerial decision under the IAA and BCEAA as it exceeds the following triggers for the assessment:

- *"a new facility for the liquefaction, storage, or regasification of liquefied natural gas, with a liquefied natural gas processing capacity of 3 000 t/day or more or a liquefied natural gas storage capacity of 136 000 m^3 or more"* - Part 37 (d), Oil, Gas and Other Fossil Fuels, Schedule (Section 2) Physical Activities, Physical Activities Regulations – IAA
- *"a new liquified natural gas facility with the design capacity to store >= 136,000 m^3 of liquified natural gas"* - Part 4, Table 8, Project Category 1 Energy Storage Facility, Column 2, Criteria (1)(a) Reviewable Projects Regulation - BCEAA

The trigger points are at the LNG Projects – Volume Produced and Storage: The Project will have a production capacity of 2.70 MTPA which is equivalent to approximately 7,400 tonnes/day, and have a storage capacity of approximately 200,000 m^3, exceeding the threshold of 136,000 m^3.

An additional trigger point for the IAA is in regard to the Rail Yard – Area: The Project's rail yard area is expected to be approximately 155 ha, exceeding the threshold of 50 ha.

A variety of federal, provincial, and municipal permits are required prior to the commencement of construction. Consultation with regulatory agencies is required to confirm permit requirements. There are no existing permits for the Project and no permits have been applied for at this time.

Engagement

JX LNG is dedicated to initiating early and open engagement with effected Indigenous groups, public stakeholders, municipalities, federal and provincial governments, and government agencies. JX LNG's primary objective for engagement on the Project is to keep the groups mentioned above and other concerned parties informed about the Project. Their goal is to make project-related information easily accessible to all and encourage feedback throughout the duration of the Project. To ensure successful engagement, JX LNG intends to consult with each Indigenous Group on their preferred engagement methods, which may include policies, protocols, and traditional approaches. JX LNG also intends to foster effective and meaningful collaborations with public stakeholders, municipalities, federal and provincial governments, and government agencies. These engagements will follow and be in liaison with the First Nations Leadership Council's (FNLC) climate strategy and action plan and the Early Engagement Policy (EAO 2019).

The following is a list of identified Indigenous nations that will be involved in engagement for the Project:

- Lheidli-T'enneh First Nation – Gbenga Ayansola
- McLeod Lake Indian Band
- Nazko First Nation
- West Moberly First Nations
- Nak'azdli Whut'en
- Metis Nation of British Columbia
- British Columbia Metis Federation

Below is a list of identified jurisdiction stakeholders involved in engagement for the Project:

- BCEAO – Fern Stockman / Brennan Hutchison
- BCER – Marc Chawrun
- Federal IAA – Andrea Raska / Nicola Cook
- Regional District of Fraser Fort Geroge (RDFFG) – mayor and council
- City of Prince George – mayor and council
- CN Rail – Alexandre Shaughnessy/ Brittany Sciangola/Linda Vergata/Lyndon Jacak
- BC Hydro – Glen Thompson/Alison Wilson/Zach Osman
- Agricultural Land Commission (ALC) – Connor Newcombe
- Enbridge Pipeline – Mattew Wilpert
- Prince Rupert Port Authority (PRPA) – Michael Inman
- Ministry of Energy, Mines and Low Carbon Innovation (BC MoEMLI) – Mark Urwin
- Ministry of Forest (BC MoF)
- Ministry of Land, Water, and Resource Stewardship (BC MoLWR)
- Ministry of Jobs, Economic Development, and Innovation
- Ministry of Municipal Affairs
- Ministry of Transportation and Infrastructure (BC MoTI) – Shaun Holaham
- Fisheries and Oceans Canada (DFO) (potentially) – Tessa Richardson

The list below is the initial list of potential public stakeholders and groups to be consulted with after submission of the final IPD and EEP. These groups have been identified and included because of their known or anticipated interest in the Project, and/or anticipated effects of the Project.

- Northern Health Authority (NHA)
- RCMP – Prince George Detachment
- Prince George Fire Department
- Prince George Airport Authority
- Goodsir Nature Park
- Salmon Valley Community Association
- Summit Lake Community Association
- Willow River Recreation Association
- University of Northern BC (UNBC)
- College of Caledonia
- Prince Geroge Community College
- Summit Log Corporation
- Prince George Natural Resource District
- District Manager Prince George
- BC Rail
- The Wright Investment Company Limited
- Saunders Falling Ltd.
- Province of BC
- Summit LNG Corporation
- Ainsworth Lumber Co Ltd.
- Point Creek Contracting
- Ministry of Transportation
- Nearby outfitters and trappers
- Nearby Freehold landowners

- Local Forestry Road user groups (FSR)

Indigenous Nations

A review of the Consultative Areas Database (CAD) has identified one Indigenous Group who's established or asserted traditional territories overlap with the Project. The Lheidli-T'enneh First Nation (LTN) is located approximately 20 km from the proposed Project site. JX LNG is committed to working with First Nations on the development of the Project and understanding Indigenous knowledge that is pertinent to the Project, through all phases from design to reclamation.

Potential interactions with and effects on Indigenous interests associated with the Project components and activities include, but are not limited to:

- Effects on traditional practices including hunting, trapping, fishing, and plant gathering.
- Effects on access to traditionally harvested resources.
- Effects on access to traditional land use sites.
- Effects on cultural transmission and experience.
- Opportunity for training and employment.
- Opportunity for business.

From biophysical impact standpoints, communication with Indigenous groups have taken place and some concerns were expressed:

- Lheidli-T'enneh First Nation (LTN) has expressed concern about culminative effects and potential impacts on/to traditional practices/use.
- Nazko First Nation (Nazko) has expressed concern surrounding the Fraser River Watershed regarding potential spills, water contamination, or water diversion. The Project's location within this watershed could potentially impact the water quality, quantity, and aquatic environment, including but not limited to fisheries, species at risk and biodiversity.
- Nak'azdli Whut'en (Nak'azdli) would like to ensure that waterways are protected during the construction and operation of the Project. Salmon are very important traditionally to the Nak'azdli community and the current fish stock population is already in decline. Nak'azdli has an environmental stewardship plan that they would like to be incorporated into the EA where possible. Once the Environmental reporting is completed for the Project Nak'azdli would like the opportunity to review and provide comments.

JX LNG has reached out to the LTN for a list of preferred contractors to help with the Environmental Assessments and Archaeology. The goal is to ensure that the LTN is a part of the EA process and that their concerns will be addressed. JX LNG has spoken to Nak'azdli regarding notification of any negative impacts on waterways and of any mitigation measures that may be required.

The McLeod Lake Indian Band, West Moberly First Nation, Metis Nation of British Columbia and British Columbia Metis Federation have not expressed any concerns around Biophysical Impacts at this time. JX LNG will continue to keep communication open and address any concerns that may arise further along in the process.

From socioeconomic impact standpoints, communication with Indigenous groups have taken place and the following comments were provided:

- The LTN and Nak'azdli have both expressed an interest in training opportunities for their communities so that they may becoming part of the work force long term.
- The McLeod Lake Indian Band (MLIB) is interested in working together on construction opportunities, and the Nak'azdli has a development corporation of small band-owned companies they would like to be utilized for the Project. Nak'azdli has also made JX LNG aware that they have office space available for rent in Prince George (1515 2nd Avenue Prince George).
- Nak'azdli has proposed an Impact Benefit Agreement that could provide long/short term corporate support to their community. They have suggested potential sponsorships including Hatchery funding, Cultural center, Administration Building, Youth camps/center, Museum and a Health unit. Nak'azdli also expressed concerns about increased cost to the Nak'azdli community due to the perceived increased draw on BC Hydro by the Project. JX LNG believes that the additional draw will not be sufficient to negatively impact the communities.

The Nazko, West Moberly First Nation, Metis Nation of British Columbia and British Columbia Metis Federation have not commented on the Socioeconomic Impacts at this time. JX LNG will continue to keep communication open and address any concerns on input that maybe raised further along in the process.

Biophysical Setting

The proposed environment for the project will occur on a greenfield site that is within the Nechako Lowland Ecosection. The area has a sub-boreal climate, which is typically humid in the summer due to moist Pacific air from the west coast, and intensely cold with high increments of snowfall during the winter. The Project is sited 3.5 km east of the Salmon River and 4.7 km west of the Fraser River. There are two tributaries located within the Project site, Tay Creek and one unnamed tributary. The Project will be designed to have no permanent impact to these streams.

The agricultural capability of the site is 20% Class 5 and 80% Class 7 with stoney soil deficiencies according to the Canada Land Inventory. There are some areas with varying degrees of grade change, however these changes in grade are minimal and take place over large distances. Most of the southern portion of the site is not located within the Agricultural Land Reserve. The portion in the Agricultural Land Reserve has an active approval for non-farm use dated 2016 from the Regional District. In consultation with the Agricultural Land Commission, this approval is transferrable to JX LNG. Some of the sites are located within the Provincial Forest, which would require amendment during the Crown Land disposition process.

This site is accessed directly from Highway 97 or from the Salmon Valley Forest Service Road which bisects the area. The Forestry Road is well maintained and is in good condition year-round. The major 500KV BC Hydro line runs east of the property. The CN Rail Line passes along the west portion of the site at a grade which will make railway extension into the site relatively easy. The Integrated Land Management Bureau of the Province of BC has secured approval from the Agricultural Land Commission for a line extension into the potential industrial area. This site is located on a plateau, therefore, reduces the potential for inversions and calm air conditions to cause pollution to build up. Hart North is the best all round industrial site in the Prince George area.

Health, Social and Economic Context

As of the 2021 Canada Census, the RDFFG (Regional District of Fraser Fort-George – electoral area G) has a population 96,979 people, with most of the population concentrated in the Prince George Census Agglomeration (92.3%), which has a population of 89,490. Most residents within the RDFFG live in the City of Prince George (79.2%), which alone has a population of 76,708. Electoral area G of the RDFFG has a population of 365 people and 3,471 people live in electoral area A of RDFFG. The closest community to the Project is the community of Salmon Valley, located approximately 9 km south of the Project (54° 05′ 00″ N 122° 42′ 00″ W) and 20 km north of the city of Prince George. Salmon Valley is an unincorporated community with a rural population and limited resources. The area relies on Prince George as the economic center of the region.

Economic activities in the Prince George area are primarily centered on forestry, recreation, mining, oil and gas and recreational and subsistence hunting and fishing. The City of Prince George has historically developed from a mainly forest-based economy to an economy that has diversified across various sectors.

The Project area is located within one provincial administrative region, Region 7A – Omineca, consisting of multiple wildlife management units (WMU) for the purpose of game management. General open seasons in the Omineca region are available for numerous big game and mammal species as well as wild game birds. Waterbodies and watercourses located within the region support a recreational sport fishery.

Some of the socio-economic effects of the area are the following:

- Hunting, outfitting, and trapping occur within the regional WMU with opportunities (i.e., outfitting areas, trapping areas) available.
- Recreation and tourism are important industries in the region focused on the natural environment.
- Opportunities relate to various attractions, provincial parks and natural areas, regional parks, recreation and scenic values, and heritage sites.

Human health can be affected by the inhalation of air emissions from combustion sources and increases in noise levels. Human health may also be affected by altered changes to the quality and quantity of traditional foods and drinking water. Potential effects of the Project on human health will be identified and evaluated. Using best practices, JX LNG intends to address these potential effects and will conduct first person interviews with the residents in the nearby area to better understand the potential human health effect of the Project.

Project Benefits

The Project will provide socio-economic benefits to the province and to the local economy. These benefits include but are not limited to:

- Generate thousands of person-years of employment during the construction period.
- Generate hundreds of permanent, direct and contract positions during commercial operation.
- Generate a significant on-going economic benefit to the local community and local Indigenous groups.

- Training at local college and university institutions.
- Support services throughout construction and plant operations (food and lodging).
- Provide education and employment training for members of local Indigenous communities.
- Associated new business development opportunities.
- Stand as Canada's inaugural inland LNG endeavor, strategically positioned a mere 300 km from gas producing areas, the Project will increase the Canadian LNG export capacity to overseas markets, utilizing existing transportation infrastructure to transport gas to the coast.
- Provide LNG to support local emergency relief efforts within Canada, as well as remote sites lacking natural gas pipeline, leveraging the pre-existing railway and highway infrastructure.

As well, the Project will have environmental benefits including, but not limited to:

- Designed to "best in class" standards for environmental performance.
- Designed to minimize impacts to water sources and aquatic life by utilization of aerial coolers.
- Designed to minimize impacts to air emission by utilizing BC Hydro green electricity.
- By constructing the facility inland, the impacts associated with coastal environments and marine life can be avoided. Construction of a Jetty and shipping infrastructure is avoided.
- An existing zoned industrial site is proposed for the Project. This has the direct benefit of avoiding development into new and potentially environmentally sensitive areas.
- The use of modularized construction techniques will reduce equipment footprint and land use, in addition to minimizing construction timelines and impact due to heavy equipment movement in the area.
- Utilizing existing roads and transport infrastructure will reduce access to new land and impact to natural areas.
- As the LNG process is a refrigeration driven process, an installation at high latitudes will result in seasonally significant power savings which translates into lower overall power consumption for the plant. Thus, leaving green power on the grid for other demand.
- There is a future opportunity for local utilization of the produced LNG to displace other heavy hydrocarbon emitter fuel sources in the area.

Potential Effects of the Project

JX LNG is aware of the validity of the effects that may occur towards valued components throughout the various phases of the project and intends to identify them accordingly.

The project has the potential to affect fish and fish habitat as defined by the Fisheries Act – the harmful alteration, disruption, and destruction of fish habitat under the Project's aquatic areas. Some of these fish include Burbot, Chinook Salmon, Mountain Whitefish, rainbow trout, etc. The fish habitats would include water and sediment quality and quantity.

Similarly to fish and fish habitat, the Project has the potential to affect Aquatic species as defined by SARA (Species at Risk Act) – mortality or physical injury due to physical impact due to construction activities (e.g., by machinery or covering by sediment). Some of these aquatic species in fresh water include Buckbean / Peat-Mosses, Truncated Quillwort, Small White Waterlily, etc. Along with sediment quality and quantity.

The project also has the potential to affect migratory birds as defined by the Migratory Bird Convention Act, 1994. The affects are the following:

- Changes to migratory bird movement patterns due to an increase in traffic (via Railroads and highways).
- Loss or alteration of habitat due to the construction and operation of the Project.
- Increased risk of mortality due to the construction and operation of the Project.

Some examples of migratory birds that may be impacted include Hawks, Owls, Sandpipers, Falcons, Warblers, etc.

Emissions and Waste

The Project will comply with all provincial and federal regulatory requirements and guidelines when dealing with the variety of wastes, emissions, and effluents that it produces over its lifetime. An environmental management plan will be developed based on the outcome of the EA-IA and the requirements laid out in the permitting process.

The production of waste and emissions will occur during the construction of the site as well as during operation and decommission. Waste products and emissions are assumed to be very similar regarding construction and decommission considering the use of similar equipment required for set up and take down. Some of the toxic waste products include nitrogen oxides (NO_X), carbon monoxide (CO), particulate matter (PM), and volatile organic compounds (VOC) from vehicles, diesel-powered portable electricity generators (back up) and construction equipment emissions. GHG emissions of CO_2, methane (CH_4), and nitrous oxide may also be emitted from construction equipment, and vehicle traffic. Used oils and solvents will be managed during construction in compliance with provincial hazardous waste management requirements. Operating waste may come in the form of paper, cardboard, cartridges, batteries, or domestic waste due to administrative/office/warehouse duties or as wood and scrap metal from maintenance duties. The operation of the site will lead to the production of sanitary wastewater which will be stored and trucked off site accordingly. Additionally, small amounts of Propane, Butane, and Condensate will be produced as by-products. These will be captured, stored, and sold as separate commodities.

The GHG emissions produced by the Project will be limited due to power being supplied by the BC Hydro transmission system. The Project does have a CO_2 stream that is produced. JX LNG is evaluating options for this stream including but not limited to carbon sequestration and storage, sale as a byproduct and venting with appropriate carbon offsets to neutralize the Project. It is estimated that the total amount of CO_2 emissions for the full Project build out (both Phases) will be approximately 99,669 tonnes CO_2e per year. A thorough breakdown of the GHG estimates is in Appendix C.

Alternatives

Current alternatives for review include site location/selection, power supply, pipeline options, technology/equipment selection, construction processes and management of operations. The best available technology for the maximization of operational efficiencies and the reduction of Project

emissions will be assessed. This will be balanced with Project cost economics and mitigating Project risks and uncertainties. The assessment of these alternatives will be informed by engagement with local Indigenous communities, regulators, and the public.

Current major Project decisions include:

- Fresh Water vs. Air Cooling
- Electric vs. Gas Drive Equipment
- Plant Siting
- Pipeline and Powerline Routing

There are currently no alternatives to the Project at this time that would contribute towards the three major objectives of this project, which are:

- Enable the export of rich natural gas deposits of the Western Canadian Sedimentary Basin (WCSB) to serve the growing demand for natural gas across the globe.
- Create direct and indirect benefits for Indigenous parties involved and overall citizens of BC and Alberta.
- Assist all parties involved in meeting objectives to address global climate change due to GHG emissions.

Conclusion

This Executive Summary highlights key aspects of the JX LNG Canada - Summit Lake PG LNG Project. The Project will be developed in a manner consistent with the environmental goals of BC, Canada, all stakeholders involved while respecting Indigenous values and rights. The Project will create significant benefits in Canada and produce global environmental benefits as the world transitions to a low carbon energy economy.

Résumé Exécutif (Francais)

JX LNG Canada Ltd. (JX LNG) propose de développer une installation de gaz naturel liquéfié (GNL) dans la région de Caribou en Colombie-Britannique appelée projet Summit Lake PG LNG (appelé le « projet »). Le promoteur, JX LNG Canada Ltd. (JX LNG), est une filiale albertaine de Changchun Jixing New Energy Ltd. (Jixing). Jixing est un acteur de premier plan dans le secteur du GNL et du gaz naturel comprimé (GNC) dans le nord-est de la Chine. JX LNG est nouvellement établie en Colombie-Britannique et se consacre à faire progresser le développement du GNL et des énergies renouvelables dans le pays. Les coordonnées de JX LNG se trouvent ci-dessous:

Parameter	Contact Information
Nom de l'organisation	JX LNG Canada Ltd.
Adresse	Suite 900, 717 - 7th Ave SW, Calgary, Alberta T2P 0Z3
Personne-ressource principale	Binyou Dai - Président directeur général
E-mail de l'entreprise	info@jxlngcanada.com
site Web d'entreprise	www.JXLNGCanada.com
Téléphone de l'entreprise	403-355-6623

Contact principal pour EA	Christine Olson
Courriel du contact principal	colson@keywestprojects.ca

Emplacement

Le projet sera situé sur un terrain intact, à environ 30 kilomètres (km) au nord de Prince George, sur le site industriel Hart North. Le site du projet est zoné comme rural 2 et rural 3 en vertu du règlement de zonage 2892 de 2014 du district régional de Fraser Fort George (RDFFG) et désigné pour un usage industriel lourd en vertu du plan communautaire officiel du RDFFG pour la rivière Crooked – région de panais. Le site est situé à environ 20 km de la communauté de la Première Nation Lheidli-T'enneh et fait partie du territoire traditionnel de la Première Nation Lheidli-T'enneh. Il est initialement prévu que le projet utilisera environ 250 hectares de terrain. Le site du projet se trouve à environ 7 km de la zone protégée du sentier Giscome Portage. Le site du projet ne se trouve pas sur des terres fédérales ni à proximité de terres fédérales connues. Les coordonnées du centre approximatif du projet sont 54,185, -122,63, et la description légale du terrain est NTS A-021-J/093-J-02.

Estimations et objectif

Le Projet sera développé en deux phases identiques. La phase 1 produira jusqu'à 1,35 millions de tonnes par an (MTPA) et la phase 2 produira 1,35 MTPA supplémentaires pour un total de 2,70 MTPA de GNL. Les opérations commerciales de la phase 1 devraient commencer en 2028. Dans le cadre du projet, un pipeline d'environ 2 kilomètres sera construit pour acheminer le gaz naturel à l'installation à partir du réseau de transport principal existant du pipeline Enbridge Westcoast, ainsi qu'un pipeline d'environ 6 kilomètres. ligne électrique d'un kilomètre pour connecter le projet à l'énergie verte de la British Columbia Hydro and Power Authority (BC Hydro) à la sous-station de Salmon Valley.

Une fois pleinement construit, le projet traitera environ 10 060 e3m3/j (355 millions de pieds cubes standard par jour (mmscfd)) de gaz naturel de qualité pipeline pour produire 2,70 MTPA de GNL. Le projet devrait fonctionner pendant 30 ans. JX LNG conçoit le projet pour qu'il soit le meilleur sur le plan environnemental, sans impact direct sur l'eau ou la vie aquatique et nul en termes d'émissions de gaz à effet de serre (GES). Cet objectif sera atteint grâce à la connexion au réseau d'énergie renouvelable de BC Hydro, en combinaison avec une culture d'exploitation axée sur la minimisation des impacts environnementaux, de nouvelles technologies et éléments de conception destinés à réduire les émissions de GES, un système de surveillance et de mesure détaillé et la prise en compte potentielle des émissions de carbone reconnues. Compensations ou mesures de captage et de séquestration du carbone. Ce processus sera en liaison avec le Plan de réduction des émissions 2030 en vertu du projet de loi 12, Loi canadienne sur la responsabilité en matière de carboneutralité.

Partout dans le monde, les pays cherchent à réduire les émissions de gaz à effet de serre (GES) et recherchent des options énergétiques plus propres pour lutter contre le changement climatique mondial. Le GNL produit beaucoup moins d'émissions de GES et d'autres polluants que les autres options de combustibles fossiles. La construction du projet permettra à l'exportation de GNL de répondre à la demande croissante à travers le monde. De plus, il créera des avantages socio-économiques directs et

indirects pour la population de la Colombie-Britannique (C.-B.) et contribuera à atteindre les objectifs fédéraux et provinciaux visant à lutter contre le changement climatique mondial dû aux émissions de GES.

Aperçu de la portée/du processus

Sous réserve de la négociation de certains accords, JX LNG a l'intention de recevoir du gaz d'alimentation du réseau de transport d'Enbridge Westcoast existant (pipeline Westcoast), qui est relié au carrefour gazier de la station 2 de Westcoast et au réseau de TransCanada Nova Gas Transmission Ltd. (TC NGTL). Les premières conversations avec Enbridge indiquent qu'afin de s'aligner sur la capacité pipelinière de la phase 1 du pipeline Westcoast actuel, une boucle de pipeline de moins de 40 km pourrait être nécessaire en amont de la station de compression 4A au sein du réseau pipelinier Westcoast existant. Le nouveau doublement du pipeline Enbridge sera réalisé en tant que projet indépendant du projet JX LNG. JX LNG a engagé des discussions avec Enbridge concernant la capacité du pipeline Westcoast disponible pour le projet. D'après l'évaluation hydraulique initiale réalisée par Enbridge, le doublement supplémentaire au pipeline Westcoast existant devrait avoir une longueur inférieure à 40 km. Les dimensions exactes de la boucle seront confirmées dans une prochaine étude hydraulique plus complète. L'expansion du pipeline pour la phase 2 sera effectuée après le FID de la phase 1. Un nouveau point de prélèvement de la station de comptage sera installé au sud de la station de compression 4A par Enbridge, et un pipeline d'environ 508 millimètres (mm) (taille nominale du tuyau (NPS) 20) de diamètre et d'au moins 2 km de longueur sera installé soit par JX LNG ou Enbridge. Le tracé exact du pipeline sera déterminé après consultation des propriétaires fonciers, des groupes autochtones et d'Enbridge.

Le gaz d'alimentation sera acheté sur le marché gazier du carrefour de la station 2 de Westcoast. JX LNG prévoit d'entamer ultérieurement des discussions avec différents producteurs de gaz de cette région.

Un résumé de haut niveau de l'équipement de l'installation proposé est le suivant :

a) Unités de réception et de traitement du gaz naturel.
b) Train(s) de liquéfaction du gaz naturel alimenté(s) par l'électricité.
c) Système de fusée éclairante.
d) Réservoirs de stockage de GNL d'une capacité totale de stockage initiale de 100 000 m^3 pour la Phase 1 ; et une capacité de stockage totale cumulée de 200 000 m^3 en Phase 2.
e) Récipients et réservoirs de stockage pour les produits, notamment les liquides de gaz naturel retirés du gaz d'entrée, les réfrigérants pour les trains de liquéfaction, le carburant pour les générateurs de secours, les flux de déchets de traitement destinés à être éliminés hors site et d'autres produits destinés à être utilisés pour l'exploitation et la maintenance du GNL.
f) Bras de chargement de GNL.
g) Embranchements ferroviaires, installations de chargement et de déchargement de conteneurs de GNL.
h) Stockage d'eau pour l'eau d'incendie, l'appoint aux amines et à d'autres fins auxiliaires.
i) Systèmes de collecte et de traitement des eaux usées pour les eaux pluviales et les eaux usées domestiques.
j) Salle de contrôle et installations du personnel.

k) Système d'arrêt d'urgence.
l) Système de production d'énergie de secours d'urgence.
m) Transformateurs électriques ; et la connexion des services publics d'électricité à l'infrastructure.
n) Un système de récupération de l'hélium extrayant l'hélium du gaz résiduaire si cela est économiquement viable.

Le gazoduc livrera du gaz naturel à l'installation où il entrera dans l'installation par le séparateur d'entrée pour éliminer les liquides et/ou les contaminants. Ensuite, le gaz passera par un système de prétraitement composé d'une unité de solvant aminé pour éliminer le CO2 et toute trace de gaz soufrés. Le gaz traité est ensuite déshydraté dans des unités de déshydratation sur tamis moléculaire. L'eau retirée de cette étape sera stockée sur place dans des réservoirs d'eau produite pour être transportée par camion ou par d'autres méthodes d'élimination. La dernière étape du prétraitement est un lit d'absorption de mercure qui évite d'endommager les composants en aluminium en aval. Une fois le CO2, l'eau et les autres contaminants éliminés, le gaz passera par un processus de liquéfaction qui refroidira le gaz naturel à environ -162 °C pour le transformer en GNL. Le processus préliminaire de GNL sélectionné est un système de refroidissement à trois étages basé sur une boîte froide à réfrigérant mixte (MRC). Il s'agit d'une étape de pré-refroidissement, au cours de laquelle les hydrocarbures lourds qui gèleront dans les étapes ultérieures sont éliminés. Ces hydrocarbures seront stockés dans des balles sur place pour être expédiés par camion ou traités ultérieurement. Après l'étape de prérefroidissement vient l'étape de liquéfaction où le gaz est liquéfié. Enfin, il existe une étape de sous-refroidissement au cours de laquelle le gaz désormais liquid, ou GNL, est réduit en pression et envoyé vers le stockage sur site. Le produit GNL sera stocké dans des conteneurs d'expédition de l'Organisation internationale de normalisation (ISO), ce qui signifie qu'il est facilement transportable.

Le produit GNL contenu dans les conteneurs ISO sera chargé sur des wagons dans le cadre du bail du projet, où il sera transporté vers la côte ouest de la Colombie-Britannique et chargé sur des cargos pour être livré à l'étranger aux consommateurs internationaux de GNL.

JX LNG propose de louer un terrain auprès de l'Administration portuaire de Prince Rupert dans le cadre de son projet de plateforme logistique d'exportation de Ridley Island (RIELP). Depuis le RIELP, les conteneurs ISO seront transportés par train jusqu'au terminal Fairview pour être chargés sur des navires dédiés.

Il est prévu que le produit GNL stocké près du port du cargo ne dépassera pas la limite de capacité de stockage de GNL de 136 000 m^3 pour déclencher une EI en vertu de l'IAA ni une évaluation environnementale (EE) de la Colombie-Britannique en vertu de la BCEAA. Pour ces raisons, cette partie du projet est considérée comme hors des limites du processus d'ÉE et d'AI.

La conception du projet proposé est en cours et sera finalisée au cours des phases de conception technique préalable (pré-FEED) et de conception technique initiale (FEED).

Les services publics du projet comprennent de l'énergie électrique verte, une petite quantité d'eau d'appoint et de produits chimiques transportés par camion. L'électricité nécessaire au projet sera fournie par BC Hydro avec une nouvelle ligne électrique d'environ 6 km au sud du site du projet proposé jusqu'à

la sous-station existante de Salmon Valley. Le refroidissement sera assuré principalement par des refroidisseurs aériens.

L'eau d'appoint pour l'unité d'amine sera transportée par camion dans le but d'utiliser des technologies nécessitant une petite quantité d'eau, afin de minimiser l'impact.

Les limites du projet aux fins de l'analyse d'impact et de l'évaluation environnementale comprennent le pipeline allant de la station de comptage d'Enbridge au projet, le projet lui-même, la ligne électrique allant de la sous-station de Salmon Velley au projet et les installations de chargement ferroviaire. Il faudra construire une nouvelle voie ferrée reliant le site à la ligne principale du Canadien National (CN). Une fois à bord des wagons, le produit sera transporté vers la côte ouest de la Colombie-Britannique et expédié outre-mer, en utilisant l'infrastructure existante.

Calendrier

Sur la base des informations disponibles au moment de la rédaction, la phase 1 du projet devrait commencer la construction au premier trimestre 2026 avec une date de mise en service au troisième trimestre 2028. Le calendrier de construction de la phase 2 suivra immédiatement la mise en service de la phase 1. Le projet devrait être opérationnel de 2029 à 2057. De 2057 à 2058 se dérouleront les phases de déclassement et de fermeture du projet, comme prévu actuellement.

La construction de la phase 1 du projet débutera une fois que toutes les exigences réglementaires seront satisfaites. JX LNG travaillera en étroite collaboration avec les régulateurs et sollicitera des commentaires sur le calendrier proposé tout au long du processus d'évaluation.

Permis réglementaires et environnementaux

Le projet est susceptible d'être examiné en vertu de la Loi sur les évaluations environnementales de la Colombie-Britannique (BCEAA) et de la Loi sur l'évaluation d'impact (IAA) fédérale. Les deux lois soulignent l'importance d'un engagement précoce des Premières Nations, des parties prenantes et des communautés touchées pour encourager l'échange d'informations dès le début du développement du projet.

Le dépôt d'une description initiale du projet (DPI) et d'un plan d'engagement précoce (EEP) constitue la première étape des processus provincial et fédéral. JX LNG présente le projet aux Premières Nations, aux agences gouvernementales, aux parties prenantes publiques et aux responsables de la réglementation avant la soumission de l'IPD et de l'EEP, facilite les conversations concernant les effets potentiels sur les communautés touchées et intègre les commentaires dans ces documents.

Étant donné que le projet déclenche des processus fédéraux et provinciaux, il est prévu que le Bureau d'évaluation environnementale de la Colombie-Britannique (BCEAO) demandera le remplacement du processus fédéral d'évaluation d'impact (EI) suite à la décision sur l'état de préparation de la BCEAO. Le calendrier du projet suppose que le projet bénéficie d'une substitution.

Le projet est assujetti à une décision ministérielle en vertu de la LEI et de la BCEAA car il dépasse les déclencheurs suivants pour l'évaluation :

- « une nouvelle installation de liquéfaction, de stockage ou de regazéification de gaz naturel liquéfié, d'une capacité de traitement de gaz naturel liquéfié de 3 000 t/jour ou plus ou d'une capacité de stockage de gaz naturel liquéfié de 136 000 m3 ou plus » - Partie 37 (d), Pétrole, gaz et autres combustibles fossiles, Annexe (article 2) Activités physiques, Règlement sur les activités physiques – IAA
- « une nouvelle installation de gaz naturel liquéfié ayant la capacité nominale de stocker >= 136 000 m3 de gaz naturel liquéfié » - Partie 4, tableau 8, installation de stockage d'énergie de catégorie 1 de projet, colonne 2, critères (1)(a) Règlement sur les projets révisables -BCEAA

Les points de déclenchement se situent au niveau des Projets GNL – Volume produit et stockage : Le Projet aura une capacité de production de 2,70 MTPA ce qui équivaut à environ 7 400 tonnes/jour, et aura une capacité de stockage d'environ 200 000 m3, dépassant le seuil de 136 000 m3.

Un autre point de déclenchement pour l'AEI concerne la zone de la gare de triage : la superficie de la gare de triage du projet devrait être d'environ 155 ha, dépassant le seuil de 50 ha.

Divers permis fédéraux, provinciaux et municipaux sont requis avant le début de la construction. Une consultation avec les organismes de réglementation est nécessaire pour confirmer les exigences en matière de permis. Il n'existe aucun permis existant pour le projet et aucun permis n'a été demandé pour le moment.

Engagement précoce

JX LNG se consacre à initier un engagement précoce et ouvert avec les groupes autochtones concernés, les parties prenantes publiques, les municipalités, les gouvernements fédéral et provinciaux et les agences gouvernementales. L'objectif principal de JX LNG en matière d'engagement sur le projet est de tenir les groupes mentionnés ci-dessus et les autres parties concernées informés du projet. Leur objectif est de rendre les informations relatives au projet facilement accessibles à tous et d'encourager les commentaires tout au long de la durée du projet. Pour garantir un engagement réussi, JX LNG a l'intention de consulter chaque groupe autochtone sur ses méthodes d'engagement préférées, qui peuvent inclure des politiques, des protocoles et des approches traditionnelles. JX LNG entend également favoriser des collaborations efficaces et significatives avec les acteurs publics, les municipalités, les gouvernements fédéral et provincial et les agences gouvernementales. Ces engagements suivront et seront en liaison avec la stratégie et le plan d'action climatique du Conseil de leadership des Premières Nations (FNLC) ainsi que la politique d'engagement précoce (EAO 2019).

Voici une liste des nations autochtones identifiées qui participeront à la participation au projet :

- Première Nation Lheidli-T'enneh – Gbenga Ayansola
- Bande indienne de McLeod Lake
- Première Nation Nazko
- Premières Nations de West Moberly
- Nak'azdli Whut'en

- Nation métisse de la Colombie-Britannique
- Fédération des Métis de la Colombie-Britannique

Vous trouverez ci-dessous une liste des parties prenantes identifiées dans les juridictions impliquées dans la participation au projet :

- BCEAO – Fern Stockman / Brennan Hutchison
- BCER – Marc Chawrun
- IAA fédérale – Andrea Raska / Nicola Cook
- District régional de Fraser Fort Geroge (RDFFG) – maire et conseil
- Ville de Prince George – maire et conseil
- CN Rail – Alexandre Shaughnessy/Bretagne Sciangola/Linda Vergata/Lyndon Jacak
- BC Hydro – Glen Thompson/Alison Wilson/Zach Osman
- Commission des terres agricoles (ALC) – Connor Newcombe
- Pipeline Enbridge – Mattew Wilpert
- Administration portuaire de Prince Rupert (APPR) – Michael Inman
- Ministère de l'Énergie, des Mines et de l'Innovation à faibles émissions de carbone (BC MoEMLI) – Mark Urwin
- Ministère des Forêts (BC MoF)
- Ministère de l'intendance des terres, de l'eau et des ressources (BC MoLWR)
- Ministère de l'Emploi, du Développement économique et de l'Innovation
- Ministère des Affaires municipales
- Ministère des Transports et de l'Infrastructure (BC MoTI) – Shaun Holaham
- Pêches et Océans Canada (MPO) (potentiellement) – Tessa Richardson

La liste ci-dessous constitue la liste initiale des parties prenantes et des groupes publics potentiels à consulter après la soumission de l'IPD et du PEE finaux. Ces groupes ont été identifiés et inclus en raison de leur intérêt connu ou anticipé pour le projet et/ou des effets anticipés du projet.

- Régie de la santé du Nord (NHA)
- GRC – Détachement de Prince George
- Service d'incendie de Prince George
- Autorité aéroportuaire de Prince George
- Parc naturel Goodsir
- Association communautaire de Salmon Valley
- Association communautaire de Summit Lake
- Association récréative de Willow River
- Université du Nord de la Colombie-Britannique (UNBC)
- Collège de Calédonie
- Collège communautaire Prince George
- Société Summit Log
- District des ressources naturelles de Prince George
- Directeur de district de Prince George
- BC Rail
- La Wright Investment Company Limited
- Saunders Falling Ltée.
- Province de la Colombie-Britannique

- Société Summit LNG
- Ainsworth Lumber Co Ltd.
- Travaux de Point Creek
- Ministère des transports
- Pourvoiries et trappeurs à proximité
- Propriétaires fonciers en pleine propriété à proximité
- Groupements locaux d'usagers des routes forestières (FSR)

Premières nations

Un examen de la base de données des zones consultatives (CAD) a identifié un groupe autochtone qui a établi ou revendiqué des territoires traditionnels qui chevauchent le projet. La Première Nation Lheidli-T'enneh est située à environ 20 km du site du projet proposé. JX LNG s'engage à travailler avec les Premières Nations sur le développement du projet et à comprendre les connaissances autochtones pertinentes pour le projet, à travers toutes les phases, de la conception jusqu'à la remise en état.

Les interactions potentielles et les effets sur les intérêts autochtones associés aux composantes et activités du projet comprennent, sans s'y limiter:

- Effets sur les pratiques traditionnelles, notamment la chasse, le piégeage, la pêche et la cueillette de plantes.
- Effets sur l'accès aux ressources récoltées traditionnellement.
- Effets sur l'accès aux sites d'utilisation traditionnelle des terres.
- Effets sur la transmission et l'expérience culturelles.
- Possibilités de formation et d'emploi.
- Opportunité d'affaires.

Du point de vue des impacts biophysiques, des communications ont eu lieu avec les groupes autochtones et certaines préoccupations ont été exprimées:

- La Première Nation Lheidli-T'enneh (LTN) a exprimé ses inquiétudes quant aux effets culminants et aux impacts potentiels sur les pratiques/utilisations traditionnelles.
- La Première Nation de Nazko (Nazko) a exprimé ses inquiétudes concernant le bassin versant du fleuve Fraser concernant les déversements potentiels, la contamination de l'eau ou le détournement de l'eau. L'emplacement du projet dans ce bassin versant pourrait potentiellement avoir un impact sur la qualité, la quantité et l'environnement aquatique de l'eau, y compris, mais sans s'y limiter, les pêches, les espèces en péril et la biodiversité.
- Nak'azdli Whut'en (Nak'azdli) souhaite s'assurer que les voies navigables sont protégées pendant la construction et l'exploitation du projet. Le saumon est traditionnellement très important pour la communauté Nak'azdli et la population actuelle de poissons est déjà en déclin. Nak'azdli a un plan de gestion environnementale qu'elle aimerait intégrer dans l'EE lorsque cela est possible. Une fois le rapport environnemental terminé pour le projet, Nak'azdli aimerait avoir l'opportunité de l'examiner et de fournir des commentaires.

JX LNG a contacté le LTN pour obtenir une liste d'entrepreneurs privilégiés pour aider aux évaluations environnementales et à l'archéologie. L'objectif est de garantir que les LTN font partie du processus d'ÉE et que leurs préoccupations seront prises en compte. JX LNG a parlé à Nak'azdli concernant la notification

de tout impact négatif sur les voies navigables et de toute mesure d'atténuation qui pourrait être nécessaire.

La bande indienne de McLeod Lake, la Première Nation de West Moberly, la Nation métisse de la Colombie-Britannique et la Fédération des Métis de la Colombie-Britannique n'ont exprimé aucune préoccupation concernant les impacts biophysiques pour le moment. JX LNG continuera de maintenir la communication ouverte et de répondre à toutes les préoccupations qui pourraient surgir plus loin dans le processus.

Du point de vue des impacts socioéconomiques, des communications avec les groupes autochtones ont eu lieu et les commentaires suivants ont été fournis :

- Le LTN et Nak'azdli ont tous deux exprimé leur intérêt pour les opportunités de formation offertes à leurs communautés afin qu'ils puissent faire partie de la main-d'œuvre à long terme.
- La bande indienne de McLeod Lake (MLIB) souhaite travailler ensemble sur des opportunités de construction, et les Nak'azdli disposent d'une société de développement composée de petites entreprises appartenant à la bande qu'ils aimeraient utiliser pour le projet. Nak'azdli a également fait savoir à JX LNG qu'elle avait des bureaux disponibles à la location à Prince George (1515, 2e Avenue Prince George).
- Nak'azdli a proposé une entente sur les répercussions et les avantages qui pourrait fournir un soutien d'entreprise à long et à court terme à leur communauté. Ils ont suggéré des parrainages potentiels, notamment le financement d'un couvoir, d'un centre culturel, d'un bâtiment administratif, d'un camp/centre de jeunes, d'un musée et d'une unité de santé. Nak'azdli a également exprimé ses inquiétudes quant à l'augmentation des coûts pour la communauté de Nak'azdli en raison de l'augmentation perçue des prélèvements sur BC Hydro en raison du projet. JX LNG estime que le tirage supplémentaire ne sera pas suffisant pour avoir un impact négatif sur les communautés.

Nazko, la Première Nation de West Moberly, la Nation métisse de la Colombie-Britannique et la Fédération des Métis de la Colombie-Britannique n'ont pas fait de commentaires sur les impacts socioéconomiques pour le moment. JX LNG continuera de maintenir la communication ouverte et de répondre à toutes les préoccupations concernant les commentaires qui pourraient être soulevées plus loin dans le processus.

Cadre biophysique

L'environnement proposé pour le projet se situera sur un nouveau site situé dans l'écosection des basses terres de Nechako. La région a un climat subboréal, généralement humide en été en raison de l'air humide du Pacifique provenant de la côte ouest, et extrêmement froid avec de fortes chutes de neige en hiver. Le projet est situé à 3,5 km à l'est de la rivière Salmon et à 4,7 km à l'ouest du fleuve Fraser. Il y a deux affluents situés sur le site du projet, le ruisseau Tay et un affluent sans nom. Le projet sera conçu pour n'avoir aucun impact permanent sur ces cours d'eau.

La capacité agricole du site est de 20 % de classe 5 et 80 % de classe 7 avec des carences en sols pierreux selon l'Inventaire des terres du Canada. Certaines zones présentent des degrés variables de changement de pente, mais ces changements de pente sont minimes et se produisent sur de grandes distances. La

majeure partie de la partie sud du site n'est pas située dans la réserve de terres agricoles. La partie de la réserve de terres agricoles bénéficie d'une approbation active pour une utilisation non agricole datée de 2016 du district régional. En consultation avec la Commission des terres agricoles, cette approbation est transférable à JX LNG. Certains des sites sont situés dans la forêt provinciale, ce qui nécessiterait des modifications au cours du processus d'aliénation des terres de la Couronne.

Ce site est accessible directement depuis l'autoroute 97 ou depuis le chemin de service forestier de Salmon Valley qui traverse la zone en deux. Le chemin forestier est bien entretenu et en bon état toute l'année. La principale ligne 500KV BC Hydro passe à l'est de la propriété. La ligne ferroviaire du CN longe la partie ouest du site à un niveau qui facilitera relativement facilement l'extension du chemin de fer jusqu'au site. Le Bureau de gestion intégrée des terres de la province de la Colombie-Britannique a obtenu l'approbation de la Commission des terres agricoles pour le prolongement d'une ligne dans la zone industrielle potentielle. Ce site est situé sur un plateau, ce qui réduit le risque d'inversions et de conditions d'air calme susceptibles de provoquer une accumulation de pollution. Hart North est le meilleur site industriel de la région de Prince George.

Contexte sanitaire, social et économique

Au recensement du Canada de 2021, le RDFFG (district régional de Fraser Fort-George – zone électorale G) compte 96 979 habitants, la majeure partie de la population étant concentrée dans l'agglomération de recensement de Prince George (92,3 %), qui compte une population de 89 490. La plupart des résidents du RDFFG vivent dans la ville de Prince George (79,2 %), qui compte à elle seule une population de 76 708 habitants. La zone électorale G du RDFFG compte une population de 365 habitants et 3 471 personnes vivent dans la zone électorale A du RDFFG. La communauté la plus proche du projet est la communauté de Salmon Valley, située à environ 9 km au sud du projet (54° 05′ 00″ N 122° 42′ 00″ W) et à 20 km au nord de la ville de Prince George. Salmon Valley est une communauté non constituée en société avec une population rurale et des ressources limitées. La région compte sur Prince George comme centre économique de la région.

Les activités économiques de la région de Prince George sont principalement axées sur la foresterie, les loisirs, les mines, le pétrole et le gaz ainsi que la chasse et la pêche récréatives et de subsistance. La Ville de Prince George est passée d'une économie principalement forestière à une économie diversifiée dans divers secteurs.

La zone du projet est située dans une région administrative provinciale, la région 7A – Omineca, composée de plusieurs unités de gestion de la faune (UGF) à des fins de gestion du gibier. Des saisons d'ouverture générale dans la région d'Omineca sont disponibles pour de nombreuses espèces de gros gibier et de mammifères ainsi que pour le gibier à plumes sauvage. Les plans d'eau et les cours d'eau situés dans la région soutiennent une pêche sportive récréative.

Certains des effets socio-économiques de la zone sont les suivants:

- La chasse, la pourvoirie et le piégeage ont lieu au sein de l'UGF régionale avec des opportunités (c.-à-d. zones de pourvoirie, zones de piégeage) disponibles.

- Les loisirs et le tourisme sont des industries importantes dans la région axées sur l'environnement naturel.
- Les opportunités concernent diverses attractions, parcs provinciaux et zones naturelles, parcs régionaux, valeurs récréatives et paysagères, et sites patrimoniaux.

La santé humaine peut être affectée par l'inhalation d'émissions atmosphériques provenant de sources de combustion et par l'augmentation des niveaux de bruit. La santé humaine peut également être affectée par des changements dans la qualité et la quantité des aliments traditionnels et de l'eau potable. Les effets potentiels du projet sur la santé humaine seront identifiés et évalués. En utilisant les meilleures pratiques, JX LNG a l'intention de répondre à ces effets potentiels et mènera des entretiens en première personne avec les résidents de la zone voisine pour mieux comprendre l'effet potentiel du projet sur la santé humaine.

Avantages du Projet

Le projet apportera des avantages socio-économiques à la province et à l'économie locale. Ces avantages comprennent, sans toutefois s'y limiter:

- Générer des milliers d'années-personnes d'emploi pendant la période de construction.
- Générer des centaines de postes permanents, directs et contractuels pendant l'exploitation commerciale.
- Générer un avantage économique continu important pour la communauté locale et les groupes autochtones locaux.
- Formation dans des établissements collégiaux et universitaires locaux.
- Services de soutien tout au long de la construction et de l'exploitation de l'usine (restauration et hébergement).
- Offrir une éducation et une formation professionnelle aux membres des communautés autochtones locales.
- Nouvelles opportunités de développement d'affaires associées.
- Étant le premier projet de GNL intérieur du Canada, stratégiquement positionné à seulement 300 km des zones de production de gaz, le projet augmentera la capacité canadienne d'exportation de GNL vers les marchés étrangers, en utilisant l'infrastructure de transport existante pour transporter le gaz vers la côte.
- Fournir du GNL pour soutenir les efforts de secours d'urgence locaux au Canada, ainsi que dans les sites éloignés dépourvus de gazoduc, en tirant parti de l'infrastructure ferroviaire et routière préexistante.

De plus, le projet aura des avantages environnementaux, notamment:

- Conçu selon les normes « les meilleures de sa catégorie » en matière de performance environnementale.
- Conçu pour minimiser les impacts sur les sources d'eau et la vie aquatique grâce à l'utilisation de refroidisseurs aériens.
- Conçu pour minimiser les impacts sur les émissions atmosphériques en utilisant l'électricité verte de BC Hydro.

- En construisant l'installation à l'intérieur des terres, les impacts associés aux environnements côtiers et à la vie marine peuvent être évités. La construction d'une jetée et d'une infrastructure de navigation est évitée.
- Un site industriel zoné existant est proposé pour le projet. Cela présente l'avantage direct d'éviter le développement de zones nouvelles et potentiellement sensibles sur le plan environnemental.
- L'utilisation de techniques de construction modulaires réduira l'empreinte de l'équipement et l'utilisation du terrain, en plus de minimiser les délais de construction et l'impact dû au mouvement de l'équipement lourd dans la zone.
- L'utilisation des routes et des infrastructures de transport existantes réduira l'accès à de nouvelles terres et l'impact sur les zones naturelles.
- Comme le processus de GNL est un processus de réfrigération, une installation à des latitudes élevées entraînera des économies d'énergie saisonnières significatives, ce qui se traduira par une consommation d'énergie globale inférieure pour l'usine. Ainsi, l'énergie verte est laissée sur le réseau pour répondre à d'autres demandes.
- Il existe une opportunité future d'utilisation locale du GNL produit pour remplacer d'autres sources de carburant émettrices d'hydrocarbures lourds dans la région.

Effets potentiels du projet

JX LNG est conscient de la validité des effets qui peuvent survenir sur les composantes valorisées tout au long des différentes phases du projet et entend les identifier en conséquence.

Le projet est susceptible d'avoir des effets néfastes sur le poisson et son habitat, tels que définis par la Loi sur les pêches : altération, perturbation et destruction de l'habitat du poisson dans les zones aquatiques du projet. Certains de ces poissons comprennent la lotte, le saumon quinnat, le corégone des montagnes, la truite arc-en-ciel, etc. Les habitats du poisson incluraient la qualité et la quantité de l'eau et des sédiments.

À l'instar du poisson et de son habitat, le projet est susceptible d'affecter les espèces aquatiques telles que définies par la LEP (Loi sur les espèces en péril) – mortalité ou blessures physiques dues à l'impact physique dû aux activités de construction (par exemple, par la machinerie ou par la couverture par des sédiments). Certaines de ces espèces aquatiques en eau douce comprennent le sarrasin/la tourbe, l'isoète tronquée, le petit nénuphar blanc, etc. ainsi que la qualité et la quantité des sédiments.

Le projet est également susceptible d'avoir des effets sur les oiseaux migrateurs, tels que définis par la Loi de 1994 sur la Convention concernant les oiseaux migrateurs. Les effets sont les suivants:

- Modifications des schémas de déplacement des oiseaux migrateurs en raison d'une augmentation du trafic (via les chemins de fer et les autoroutes).
- Perte ou altération de l'habitat en raison de la construction et de l'exploitation du projet.
- Risque accru de mortalité dû à la construction et à l'exploitation du projet.

Parmi les exemples d'oiseaux migrateurs susceptibles d'être touchés figurent les faucons, les hiboux, les bécasseaux, les faucons, les parulines, etc.

Émissions et déchets

Le projet se conformera à toutes les exigences et lignes directrices réglementaires provinciales et fédérales en ce qui concerne la variété de déchets, d'émissions et d'effluents qu'il produit au cours de sa durée de vie. Un plan de gestion environnementale sera élaboré sur la base des résultats de l'ÉE-IA et des exigences énoncées dans le processus d'autorisation.

La production de déchets et d'émissions se produira pendant la construction du site ainsi que pendant l'exploitation et le déclassement. Les déchets et les émissions sont supposés être très similaires en ce qui concerne la construction et le déclassement, compte tenu de l'utilisation d'équipements similaires requis pour le montage et le démontage. Certains des déchets toxiques comprennent les oxydes d'azote (NOX), le monoxyde de carbone (CO), les particules (PM) et les composés organiques volatils (COV) provenant des véhicules, des générateurs électriques portables alimentés au diesel (de secours) et des émissions des équipements de construction. Les émissions de GES de CO2, de méthane (CH4) et d'oxyde nitreux peuvent également être émises par les engins de construction et la circulation des véhicules. Les huiles et solvants usés seront gérés pendant la construction conformément aux exigences provinciales en matière de gestion des déchets dangereux. Les déchets d'exploitation peuvent prendre la forme de papier, de carton, de cartouches, de piles ou de déchets ménagers dus aux tâches administratives/de bureau/d'entrepôt ou de bois et de ferraille provenant des tâches de maintenance. L'exploitation du site entraînera la production d'eaux usées sanitaires qui seront stockées et transportées par camion hors site en conséquence. De plus, de petites quantités de propane, de butane et de condensat seront produites comme sous-produits. Ceux-ci seront capturés, stockés et vendus comme des produits distincts.

Les émissions de GES produites par le projet seront limitées en raison de l'électricité fournie par le réseau de transport de BC Hydro. Le projet produit un flux de CO2. JX LNG évalue les options pour ce flux, y compris, mais sans s'y limiter, la séquestration et le stockage du carbone, la vente en tant que sous-produit et la ventilation avec des compensations de carbone appropriées pour neutraliser le projet. On estime que la quantité totale d'émissions de CO2 pour la construction complète du projet (les deux phases) sera d'environ 99 669 tonnes d'équivalent CO2 par an. Une ventilation détaillée des estimations des GES se trouve à l’annexe C.

Solutions de rechange

Les alternatives actuelles à examiner comprennent l'emplacement/la sélection du site, l'alimentation électrique, les options de pipelines, la sélection de la technologie/de l'équipement, les processus de construction et la gestion des opérations. La meilleure technologie disponible pour maximiser l’efficacité opérationnelle et réduire les émissions du projet sera évaluée. Cela sera équilibré avec les coûts économiques du projet et l’atténuation des risques et des incertitudes du projet. L’évaluation de ces alternatives sera éclairée par la mobilisation des communautés autochtones locales, des organismes de réglementation et du public.

- Les principales décisions actuelles du projet comprennent:
- Refroidissement à l'eau douce ou à l'air
- Équipement à entraînement électrique ou à gaz

- Emplacement de l'usine
- Acheminement des pipelines et des lignes électriques

Il n'existe actuellement aucune alternative au projet qui contribuerait à la réalisation des trois objectifs majeurs de ce projet, à savoir:

- Permettre l'exportation des riches gisements de gaz naturel du bassin sédimentaire de l'ouest canadien (BSOC) pour répondre à la demande croissante de gaz naturel à travers le monde.
- Créer des avantages directs et indirects pour les parties autochtones impliquées et pour l'ensemble des citoyens de la Colombie-Britannique et de l'Alberta.
- Aider toutes les parties impliquées à atteindre les objectifs de lutte contre le changement climatique mondial dû aux émissions de GES.

Conclusion

Ce résumé met en évidence les principaux aspects du projet de GNL JX LNG Canada - Summit Lake PG. Le projet sera développé d'une manière conforme aux objectifs environnementaux de la Colombie-Britannique, du Canada, et de toutes les parties prenantes impliquées, tout en respectant les valeurs et les droits des Autochtones. Le projet créera des avantages importants au Canada et produira des avantages environnementaux mondiaux alors que le monde passe à une économie énergétique à faibles émissions de carbone.

1. General Information and Contacts

JX LNG Canada Ltd. (JX LNG), a subsidiary of Changchun Jixing New Energy Ltd. (Jixing) is proposing the development, construction, and operation of a Liquified Natural Gas (LNG) facility in the Caribou Region of British Columbia (BC) ("The Project"). The proposed Project is located approximately 30 kilometers (km) north of the City of Prince George at the Hart North Industrial Site. The Project site is zoned as Rural 2 and Rural 3 under the RDFFG Zoning Bylaw 2892, 2014 and designated for Heavy Industrial Use under the RDFFG Official Community Plan for the Crooked River – Parsnip Area. This Initial Project Description was prepared in accordance with guidance under both the BC Environmental Assessment Act (BCEAA 2018) and the Federal Impact Assessment Act (IAA 2019). Tables of Concordance for both the BCEAA and IAA are in Appendix A and Appendix B respectively.

1.1 Proponent Information

JX LNG Canada Ltd. (JX LNG) is newly established company in British Columbia, Canada, dedicated to advancing the development of LNG and renewable energy within the country. JX LNG operates as a fully owned subsidiary of Changchun Jixing New Energy Ltd. (Jixing), a prominent player in the LNG and compressed natural gas (CNG) sector within northeastern China. With a robust 15-year track record in the LNG industry, Jixing possesses LNG plants, storage facilities, natural transmission pipelines, and retail stations, serving a diverse clientele encompassing remote municipalities, power plants, airports, factories, and extensive truck fleets. The Project is being proposed to increase the production of LNG for export to offshore markets to meet the growing demand for clean energy across the globe.

1.2 Project Contacts

JX LNG Canada Ltd. is an Alberta-based subsidiary of Changchun Jixing New Energy Ltd.

Table 1-1 Project Contacts

Parameter	Contact Information
Organization Name	JX LNG Canada Ltd.
Address	Suite 900, 717 - 7th Ave SW, Calgary, Alberta T2P 0Z3
Principal Contact	Binyou Dai - Chief Operating Officer
Company Email	info@jxlngcanada.com
Company Website	www.JXLNGCanada.com
Company Phone	403-355-6623
Principal Contact for EA	Christine Olson
Principal Contact Email	colson@keywestprojects.ca

2. Project Purpose and Rationale

Demand for LNG is increasing across the globe as governments are looking to phase out coal use while still supplying the growing demand for energy. According to the Canadian Association of Petroleum Producers (2018), natural gas releases approximately 40% fewer greenhouse gases than coal when utilized for generating electricity. By replacing higher-emitting fuel sources in overseas markets, the Project will contribute to global decarbonization and help countries achieve their objectives regarding GHG emissions reductions. Furthermore, the Project's shipping distance to Asia-Pacific markets is significantly more direct than that of other proponents on the American Gulf Coast.

With this in mind, the Western Canadian Sedimentary Basin (WCSB) is one of the largest reserves of natural gas in the world, however, additional infrastructure is needed to convert natural gas into LNG. The purpose of the Project is to produce 2.70 million tonnes per annum (MTPA) of LNG for export to global markets.

In addition, the Project will create a variety of economic benefits. An increase in employment, training, and business opportunities, increased gross domestic product, income, and government revenues through taxes will emerge as a result of the Project. Construction and operation of the Project will provide the opportunity for local and Indigenous to bid on contracting work. The implementation of the Project will contribute to the continued development of BC's natural gas resources. This in turn creates jobs and royalty revenue for the Provincial government and helps pay for social services.

2.1 Project Benefits

The Project will provide socio-economic benefits to the province and to the local economy. These benefits include but are not limited to generating:

- Thousands of person-years of employment during the construction period.
- Hundreds of permanent, direct and contract positions during commercial operation.
- A significant on-going economic benefit to the local community and local Indigenous groups.
- Training at local colleges and universities.
- Support services throughout construction and plant operations (food and lodging).
- Provide education and employment training for members of local Indigenous communities.
- Associated new business development opportunities.
- Stand as Canada's inaugural inland LNG endeavor, strategically positioned a mere 300km from gas producing areas, the Project will increase the Canadian LNG export capacity to overseas markets, utilizing existing transportation infrastructure to transport gas to the coast.
- Provide LNG to support local emergency relief efforts within Canada, as well as remote sites lacking natural gas pipeline, leveraging the pre-existing railway and highway infrastructure.

There are also many environmental benefits associated with this Project that includes, but not limited to:

- Designed to "best in class" standards for environmental performance.
- Designed to minimize impacts to water sources and aquatic life by utilization of aerial coolers.

- Designed to minimize impacts to air emission by utilizing BC Hydro green electricity.
- By constructing the facility inland, the impacts associated with coastal environments and marine life can be avoided. Construction of a Jetty and shipping infrastructure is avoided.
- An Existing industrial site is proposed for the Project. This has the direct benefit of avoiding development into new and potentially environmentally sensitive areas.
- The use of modularized construction techniques will reduce equipment footprint and land use, in addition to minimizing construction timelines and impact due to heavy equipment movement in the area.
- Utilizing existing roads and transport infrastructure will reduce access to new land and impact to natural areas.
- As the LNG Process is a refrigeration driven process, an installation at high latitudes will result in seasonally significant power savings which translates into lower overall power consumption for the plant. Thus, leaving green power on the grid for other demand.
- There is a future opportunity for local utilization of the produced LNG to displace other heavy hydrocarbon emitter fuel sources in the area.

3. Legislative and Regulatory Context

3.1 Provincial Environmental Assessment Act

The Project is subject to review and to a Ministerial decision under the BCEAA as it exceeds the following triggers for assessment:

- *"a new liquified natural gas facility with the design capacity to store >= 136,000 m^3 of liquified natural gas"*
  (Part 4, Table 8, Project Category 1 Energy Storage Facility, Column 2, Criteria (1)(a) Reviewable Projects Regulation).

Petroleum and Natural Gas Projects – The Project's LNG storage capacity in Phase 2 is expected to be approximately 200,000 m^3, exceeding the threshold of 136,000 m^3.

3.2 Federal Impact Assessment Act

The Project is subject to review and to a Ministerial decision under the IAA as it exceeds the following triggers for assessment:

- *"a new facility for the liquefaction, storage, or regasification of liquefied natural gas, with a liquefied natural gas processing capacity of 3 000 t/day or more or a liquefied natural gas storage capacity of 136 000 m^3 or more"*
  (Part 37 (d), Oil, Gas and Other Fossil Fuels, Schedule (Section 2) Physical Activities, Physical Activities Regulations).

LNG Projects – Volume Produced and Storage – The Project will have a production capacity of 2.70 MTPA which is equivalent to approximately 7,400 tonnes/day, and have a storage capacity of approximately 200,000 m^3, exceeding the threshold of 136,000 m^3.

Rail Yard – Area – The Project's rail yard area is expected to be approximately 155 ha, exceeding the threshold of 50 ha.

3.2.1 Environmental Assessment Schedule

The preliminary schedule for the BC Environmental Assessment is provided in Table 3-1.

Table 3-1 Preliminary Assessment Schedule

Environmental Assessment Schedule																
Regulatory Phase	**Activity**	**2023**				**2024**				**2025**				**2026**		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Early Engagement																
Early Engagement	Initial Project Description & Engagement Plan																
	Detailed Project Description																
EA Readiness	Notice of Decision																
Engineering Studies	Pre-FEED																
	FEED																
Process Planning	Process Order (legislated 120 days)																
Application Development	EA-IA Application Development and Submission																
	EA-IA Application Review and Revision																
	Revised EA-IA Accepted																
Recommendation	Assessment Report																
Decision	BC EAA and IAA Decision Statement																
Permitting	Key Permits BCER, CER																

3.2.2 Impact Assessment Schedule

This Initial Project Description has been prepared in accordance with both the Provincial and Federal requirements and will be submitted at the same time. As the Project triggers both the Federal and Provincial EA processes it is anticipated that the Province will request the Federal Minister of Environment and Climate Change to approve the substitution of the BC EA process for the Federal IA process following the Readiness Decision. The schedule presented in Section 3.1 of this document assumes that the Project is granted substitution.

If substitution is approved for the Project, it is expected that the BCEAO will conduct the EA/IA in accordance with the conditions set out in the Substitution Decision, and at the end of the assessment process the BCEAO will provide its report to both the Provincial and Federal Ministers for their consideration.

3.3 Other Permits and Approvals

The following Table outlines potential permits that may be required to commence construction. Consultation with regulatory agencies is required to confirm permit requirements. No permits have been applied for at this time. Federal and provincial permits, approvals and authorizations will be required.

Table 3-2 Table of all Expected Permits

Phase 1 (FEED)	Phase 2 (Detailed)	Phase 3 (Construction)	Phase 4 (Post-Construction)
- BCER - License of Occupation (Tenure) - BCER - Temporary Occupation of Crown Land - BC MoF Archaeology Branch - Archeological Assessment - BCER - Investigative Use Permits - ALC - Non Farm Use Permit - BCEAO - EA Certificate - IAAC - Impact Decision Statement - DFO-Fishers Act-Licences to Fish and Collect Fish-freshwater (potential) - LNRORD-Wildlife Act Authorization-Permit to sample for fish and amphibians (potential)	- BCER - LNG Facility Permit - BCER - Pipeline Permit - BCER - Access Road Permit - BCER - Water Well Permit (potential) - BCER - Section 10 Permit to Divert Water (potential) - BCER - Section 11 Permit for works in and about a stream (potential) - BC MoLWR - Water or groundwater use license (potential) - BCER - Camp Permit - NHA - Approval for the temporary construction workforce accommodation (potential) - BC MoTI - Access Road off the Highway (potential) - RDFFG - Development Permit - RDFFG - Building Permit (potential) - CER - LNG Export Permit	- BC MoLWR - Water or groundwater use license (potential) - MoF – Burning Permit - BCER - Notice of Construction - BCER - IFC Submission - TSBC - Equipment Safety Plan Approval - TSBC - Boiler Installation Permit (potential) - Nav Can - Land Use Obstacle Permit (potential) - BCER - Waste Discharge Permit	- BCER Leave to Open Inspection - BCER As Builts - TSBC - Operation Permits for Boiler (potential) - TSBC - Operation Permit for Vessels - BC MoEC - GHG Reporting

3.4 Lheidli T'enneh

The Lheidli T'enneh are currently negotiating with Canada and British Columbia in the BC Treaty Process. They are at Stage 5 of the process, which is the Final Agreement Stage, therefor there are no requirements of applicable agreements regarding Indigenous Nations.

3.5 International Agreements

There are no international agreements pertinent to the Project.

3.6 Relevant government policies

The BC government has a CleanBC plan which lays out the BC government framework for a low-carbon intensity strategy. Within this plan the BC government has laid out key points including:

- Positioning BC as a destination for new investment and industry looking to meet the growing global demand for low-carbon products, services, and pollution-reducing technologies.
- Enhancing BC's competitive advantages while reducing GHG emissions intensity and helping avoid carbon leakage.
- Advancing technology and innovation that is focused on lowering emissions and reducing climate pollution.
- Supporting economic opportunities for Indigenous peoples and communities.
- Enhancing and marketing a clean BC brand internationally.

The plan goes further into LNG development with the following statements:

One of the conditions for LNG development in BC is that it fits within the Province's climate commitments. While LNG Canada is working to make its Kitimat facility the world's cleanest in terms of GHG emissions intensity, the project could add up to 3.45 MTPA of carbon emissions to the province's total.

Recognizing that natural gas can be a transitional fuel on the path to less carbon-intensive options, the CleanBC program for industry will encourage the use of the greenest technology available in the sector to reduce emissions and encourage economic and job growth. More reductions from LNG's climate impact will be achieved through investments in electrification of upstream oil and gas production so extraction and processing are powered by electricity, instead of burning fossil fuels.

As well, in early 2023 the BC government announced the New Energy Action Framework, which requires all proposed LNG projects entering into the EA process to pass an emissions test with a credible plan to be net-zero by 2030, as well as other requirements. The BC government is also proposing changes to the Greenhouse Gas Industrial Reporting and Control Act (GGIRCA) and its regulations to implement the Net-Zero New Industry Policy.

As part of this framework JX LNG will be preparing a plan to achieve net-zero by 2030, this plan will consider design elements intended to reduce GHG emissions, a detailed monitoring and measurement system, potential purchase of carbon offsets or carbon capture and sequestration.

The plan to achieve net-zero emissions through the operation of the Project includes a potential credit calculation from the displacement of coal used in other domestic and international markets. LNG, a cleaner-burning fossil fuel, can serve as a transitional energy source that significantly reduces greenhouse gas emissions compared to coal. Additionally, advancements in carbon capture and storage (CCS) technologies further enhance the potential for net-zero emissions, allowing the capture and storage of CO_2 emissions generated during the LNG production process.

GHG emissions from energy projects are an important concern for Canada and specifically, Environment and Climate Change Canada. ECCC has issued the Strategic Assessment of Climate Change which requires:

- GHG and climate change information that project proponents need to submit at each phase of a federal IA.
- Proponents of projects with a lifetime beyond 2050 to provide a credible plan that describes how the Project will achieve Net Zero emissions by 2050.
- Review and comment on the climate change information provided by proponents by the IAAC or lifecycle regulators, with support from expert federal authorities.

ECCC has also published Progress Toward's Canada's Greenhouse Gas Emissions Reduction Target. Where commitments for the country meets and exceed its 2030 emissions reduction goals toward achieving net-zero by 2050. The *Canadian Net-Zero Emissions Accountability Act* was passed into law on June 30, 2021. The *Act* formalizes Canada's target to achieve net-zero emissions by the year 2050 and establish a series of interim emissions reduction targets at 5-year milestones towards the goal. This *Act* was approved by the Senate on June 30, 2021. On July 12, 2022 the *2030 Emissions Reduction Plan* was announced. Within the *2030 Emissions Reduction Plan* the government is proposing a capping and cutting emissions framework to achieve net-zero by 2050 within the Oil and Gas industry.

GHG emissions from industry are federally and provincially monitored in Canada. At a federal level, GHG emissions are reported via the GHG Reporting Program under section 46 of the Canadian Environmental Protection Act, 1999. GHG emissions within BC are reported under GHGIRCA. Both laws require industrial facilities to report their annual GHG emissions if they emit more than 10,000 tonnes of CO2e per year. Those annual reports are then included in the provincial and national GHG inventories.

With JX LNG's plan to achieve net-zero by 2030 The Project will be exceeding the Federal Governments targets of net-zero in Oil and Gas by 2050.

4. Project Status and History

The Project is a new build and no previous iterations of the Project have been submitted. There are no existing permits in place related to the Project.

The location did historically have a project proposed by Summit LNG Corporation. Little is known about this project except that it was to be located at the proposed Project location. Summit LNG Corporation

did receive approval from the RDFFG for non-farm use under the Agricultural Land Reserve, as well Summit LNG Corporation does hold a cut block permit for the location.

5. Project Timing

The Project will be constructed in two phases. Phase 1 will produce up to 1.35 MTPA and Phase 2 will produce an additional 1.35 MTPA for a total of 2.70 MTPA. Permitting for both Phases will precede construction of the Project, as outlined in Table 5-1.

Additional details regarding components of each phase are further outlined in Section 6.4.

Table 5-1 Anticipated Project Schedule

Task	Timing
Kick-off IA Process with IAAC	Q3 2023
Kick-off EA Process with BCEAO	Q3 2023
Anticipated EA Approval	Q1 2026
Permitting and other authorizations (concurrent with EA Review)	Q1 2024 – Q1 2026
Phase 1 Construction	Q1 2026 – Q2 2028
Phase 1 Commissioning	Q3 2028
Phase 2 Construction and Commissioning	Immediately following Commissioning of Phase 2
Operational phase	2029-2057
Decommissioning	2057
Closure	2058

5.1 Time constraints

Least risk work windows will be considered during project schedule planning for construction near any sensitive environmental features such as migratory birds or areas identified by indigenous knowledge regarding seasonal timing constraints, learned through continued engagement.

6. Project Location, Activities and Components

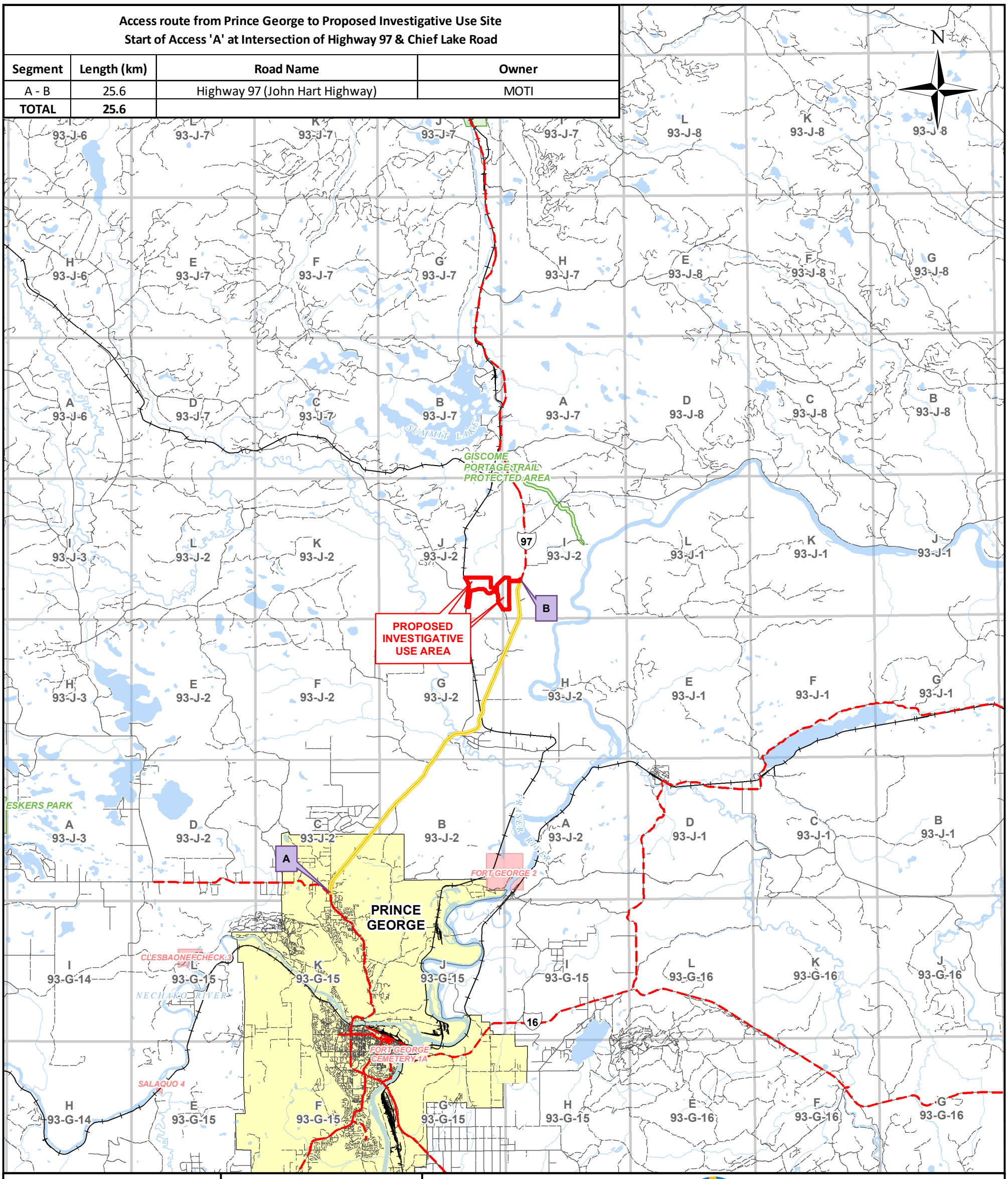
6.1 Location

The Project site is located on public land (none that is crown land) that is 30 km north of Prince George in the Regional District of Fraser-Fort George (RDFFG). The Hart Industrial Site is a greenfield development that is adjacent to both Highway 97 and the CN Rail and has existing infrastructure such as an industrial forest service road and BC Hydro 500 kV transmission line. The nearest BC Hydro substation to the Project site is the Salmon Valley substation which is located approximately 6 Km south from the Project site. The Project site is zoned as Rural 2 and Rural 3 under the RDFFG Zoning Bylaw 2892, 2014 and designated for Heavy Industrial Use under the RDFFG Official Community Plan for the Crooked River – Parsnip Area. Coordinates of the approximate center of the Project are 54.185, -122.63. Figure 1 shows the location of

the Project in relation to communities. The Project site is approximately 7 km from the Giscome Portage Trail Protected Area.

Access route from Prince George to Proposed Investigative Use Site
Start of Access 'A' at Intersection of Highway 97 & Chief Lake Road

Segment	Length (km)	Road Name	Owner
A - B	25.6	Highway 97 (John Hart Highway)	MOTI
TOTAL	**25.6**		



LEGEND

- Proposed Investigative Use Area
- Project Access
- Highway
- Road
- Railways
- Hydrology
- Parks, Ecological Reserves and Protected Areas
- First Nation Reserve
- City / Town

NOTES:

- The proposed project is partially within the Agricultural Land Reserve (ALR)
- The proposed project is within the following BCGS Sheets: 93J.017
- The proposed project is within the South West BCER Zone.
- Coal information covered under mineral tenure and reserve (Land Interest Table)
- Distances shown are in meters and decimals thereof, unless otherwise noted

Centre Coordinates of Investigative Use Area
UTM Zone 10 NAD 83

UTM	GEOGRAPHIC
N: 6003691.6 E: 524485.3	N: 54° 10' 50.52" W: 122° 37' 29.40"

LAND INTEREST TABLE

Caribou Range: None
Guide / Outfitter: 701183
Trapper: TR0724T013
Range Tenure: None
Mineral Reserve: 330210
Mineral Tenure: None
Ungulate Winter Range: None
Wildlife Habitat Area: None
Wildlife Tree Retention Area: Yes
Tree Farm License: None
Wood Lot / Community Forest: None

JX LNG Canada

DWG No.: FB-0021-23_JX_Investigative_Use_AccessMap_250K

ACCESS MAP SHOWING

PROPOSED INVESTIGATIVE USE PERMIT

WITHIN

BLOCK C DL 607, REM DL 678, REM DL 3994, DL 3996,
BLOCK B DL 3997, REM E 1/2 DL 3997 & REM DL 3997

CARIBOO DISTRICT

0 2.5 5 7.5 10 Kilometers

SCALE: 1:250,000

Paper size to scale: 11 x 17

REVISION	DESCRIPTION
0	Issued for Use, September 06, 2023

MSI Job No.: FB-0021-23
Document No.: N/A
Field Name: N/A
Drawn By: JAH

MIDWEST SURVEYS
LAND SURVEYING LTD.
10915 Alaska Road
Fort St. John, BC
V1J 6P3
Tel: 250-785-3902

Figure 1 – Location Map

6.2 Activities

The Project will consist of an LNG facility with supporting infrastructure for operation. Design of the proposed Project is ongoing and will be determined during the pre-front-end engineering design (pre-FEED) and front-end engineering design (FEED) phases. A breakdown for the multiple phases along with planned activities associated within each phase are provided below:

- Feasibility Study:
  - Site selection for the LNG facility and rail infrastructure.
  - Preliminary engineering studies.
  - Regulatory and environmental assessments.
  - Preliminary cost estimation.
- Pre-FEED (Pre-Front-End Engineering Design):
  - Technology selection for LNG processing and container loading.
  - Environmental impact assessment.
  - Safety and risks analysis.
  - Preliminary Project schedule and budget.
- FEED (Front-End Engineering Design):
  - Finalize engineering design details.
  - Detailed cost estimation.
  - Permitting and regulatory approvals ongoing.
  - Procurement planning for major equipment and materials.
  - Development of a detailed Project schedule.
- Detailed Engineering and Design:
  - Finalize detailed engineering drawings.
  - Complete procurement of major equipment and materials.
  - Environmental permits and regulatory compliance.
  - Construction planning and scheduling.
  - Detailed Project cost estimate.
- Procurement:
  - Procurement of major equipment and materials.
  - Contract negotiations and awarding.
  - Supplier and contractor management.
- Construction:
  - Site preparation and civil works.
  - Installation of major equipment.
  - Construction of rail loading/unloading facilities.
  - Safety and quality control.
  - Progress monitoring and reporting.
- Commissioning and Start-Up:
  - System testing and commissioning of LNG facilities.
  - Trial runs and performance testing.

  - Operator training.
  - Start-up of regular operations.
  - Handover to operations team.
- Operations and Maintenance:
  - Routine operations of the LNG facility.
  - Preventive operations of the LNG facility.
  - Preventive and corrective maintenance.
  - Continuous monitoring of safety and environmental compliance.
  - Regular reporting and optimization of operations.
- Decommissioning and Reclamation.

The Project location is key to the Project success. The Project requires access to the source gas for liquification, this gas is the Enbridge Westcoast Pipeline which connects with the primary natural gas production zone of the Western Canada Sedimentary Basin, as well as access to transportation routes to the west coast of BC. This includes rail and highway routes. The Project also has a large requirement for green electricity from BC Hydro.

The location in the Hart Industrial Area satisfies all these requirements.

It is important to JX LNG to not add to the infrastructure growth on the west coast of BC. So, when determining a location JX LNG considered options inland from the west coast. The LNG product will be transported in ISO shipping containers which mean that it is easily transported via rail or truck to the west coast where it will be stored within the RIELP project area and then subsequently loaded on ships utilizing exiting port infrastructure at the DP World Fairview Terminal. The packaged equipment imported from overseas will be shipped to either Port Prince Rupert or Stewart World Port and then transported via highway 97 to the plant site. Equipment manufactured and materials supplied inside Canada will be transported either by railway to Prince George or by highways to the plant site. In the case of certain urgent parts and materials, they will be transported to Prince George Airport via air parcels.

6.3 Proposed Equipment

The Project will be implemented in 2 phases. For Phase 1, a single train of gas processing and 2 trains of liquefaction will be installed. In Phase 2, an additional train of gas processing and 2 more trains of liquefaction will be installed. A general list of major equipment is as follows:

- Inlet gas separator.
- Amine unit.
- Acid gas compressor.
- Mole sieve dehydration units with inlet filter.
- Regeneration skid.
- Mercury removal skid with dust filters.
- Mixed refrigeration compressors.
- Heavies scrubber column.
- LNG cold box.

- De-propanizer.
- De-butanizer.
- LNG storage (100,000m^3 per phase for a cumulative total of 200,000m^3 of storage capacity).
- Condensate storage tank.
- Butane storage bullet.
- Propane storage bullet.

In addition, the following peripheral equipment will be installed:

- Critical service generator.
- Instrument air package.
- Heat medium package
- High pressure flare stack & flare knock out drum.
- Cryogenic flare stack and flare knock out drum.
- Truck out meter skids.
- Control room / office building.
- Warehouse / cold storage.

6.4 Components

The essential components of the Project will include inlet gas facilities, gas treatment facilities, liquefaction facilities, LNG storage facilities, product loading facilities, cooling systems, flare systems, fire and gas systems, and firefighting facilities.

Utilities for the Project consist of green electrical power and process water. Power for the Project will be supplied from the 230 KV or 138 KV BC Hydro powerline. According to the conceptual review completed by BC Hydro, the nearest interconnection location is the Salmon Valley substation which is located approximately 6 km south from the proposed Project site. A substation will be installed at the Project site. In addition, an emergency backup power generation system will be on-site for safety.

Other infrastructure includes construction of a new inlet pipeline from the new meter station to the Project that will be approximately 508 mm (NPS 20) diameter and approximately 2 km in length (include coordinates). Subject to the negotiation of certain agreements, JX LNG intends to receive feed gas from the existing Enbridge Westcoast Transmission System (Westcoast Pipeline) which is interlinked with the Westcoast Station 2 Gas Hub and TC NGTL system. Initial conversations with Enbridge indicate that, in order to align with the Phase 1 pipeline capacity of the current Westcoast Pipeline, a pipeline loop of under 40km could be required upstream of Compressor Station 4A within the existing Westcoast Pipeline system. The new Enbridge pipeline loop will be done as an independent project from the Project. JX LNG has engaged in discussions with Enbridge regarding the capacity of the current Westcoast Pipeline that is available for the Project. Based on the initial hydraulics assessment conducted by Enbridge, the additional looping to their existing Westcoast Pipeline is expected to be under 40Km in length. The exact dimensions of the loop will be confirmed in an upcoming and more comprehensive hydraulics study. Pipeline expansion for Phase-2 will be done after FID of Phase-1.

There will be a need for new rail track connecting the site to the Canadian National main line. There will be a requirement for approximately 10 km (include coordinates) of spur rail line divided into 4 rail lines, each designed to accommodate eighty flat deck rail cards (89 ft each) which will carry 160 LNG Containers. The 4 rail lines consist of: one outer circle rail line, one haul road, 2 rail lines, another haul road, the final rail line and an innermost haul road. There will be additional space left in the center area that would serve as storage space and potentially accommodate a shipping office.

Cooling will be accomplished primarily from aerial coolers, however there will be a requirement for some process water for use in the CO_2 removal process. The source of this water is to be determined. If possible JX LNG will drill a new source water well for this water, however if this is not possible a fresh water source would be considered. Treated makeup water is required for the Amine Unit and will be trucked in. In addition, the firewater system may include freshwater storage.

The inlet pipeline will deliver natural gas to the facility where it will enter the facility through the inlet separator to remove free water. Next, the gas will go through an amine sweetening unit to remove CO_2 and any Sulphur based gaseous compounds. Water will be removed via a molecular sieve dehydration unit and stored on-site in produced water tanks. The gas will then be diverted to an adsorption tower to remove mercury.

Once contaminants are removed, the gas will go through a liquefaction process that will chill the natural gas into LNG. During liquefaction, heavy hydrocarbons will be removed and stored in condensate tanks and trucked out for disposal. The LNG Product will be loaded on to rail cars on the Project lease, where it will be transported to the west coast (Prince Rupert) and loaded on to cargo ships for delivery overseas to international consumers of LNG.

Table 6-1 below provides an overview of each temporary and operational component associated with the Project:

Table 6-1 Project Components

Project Component	Description of Component
Temporary Construction Components	
Construction support facilities	• Modular construction offices. • Material offloading.
Construction laydown and storage	The majority of the modules will be constructed in foreign areas and shipped to The Project site. It is expected that these modules will be delivered via rail to The Project. The area on the southeast of the Project footprint has been identified as a potential area for construction laydown and storage. Land will be required for equipment laydown area.
Construction power generation	It is anticipated that the BC Hydro connection will be in place prior to construction, and so construction power will be sourced from the BC Hydro Salmon Valley substation.

Project Component	Description of Component
Self-contained Camps	Temporary construction workers will be housed at a temporary camp (construction facilities, trailers, etc.) that will be constructed near the Project site. Where workforce exceeds camp capacity, local hotels in the Prince George area will be used to house workers
Fuel storage tanks	Bulk storage of petroleum gasoline, fuel oil, gas or inflammable liquid/fluid
Concrete batch plant	Modular setup which includes aggregate bins for storing different materials, conveyors to transport them, and silos for storing cement.
Piping fabrication and modular construction shop	Temporary facility erected on site where workers use equipment to fabricate and assemble piping systems and modular components for industrial projects. The shop ensures that the produced materials meet Project specifications and industry standards through quality control measures.
Site construction office	Utilized by administration and security. Storage of construction plans, computers, and related documents.
Operation (Permanent) Components	
LNG Storage	Full containment storage tank with up to 200,000 m^3 (5 PJ) of storage capacity. 100,000 m^3 for each Phase. Components of the LNG storage include: • Ground improvements. • Foundation. • Fire suppression system.
Natural gas receiving	The Project will receive feed gas from the Enbridge Westcoast Energy pipeline. A new meter station take-off point will be installed south of Compressor Station 4A by Enbridge, and JX LNG will construct a new 2 km 508 mm (NPS 20) pipeline from the new meter station to the Project.
Power system	A transmission line to connect nearby BC Hydro existing substation and an emergency gas-fired electric generator.
Natural gas processing and liquefaction	Expected to be built in two phases for a total of 355 mmscfd, two trains for natural gas processing and four trains for liquefaction.
Rail loading facilities	Rail spur lines and LNG container loading/unloading facilities at the plant site and connected to the existing CN railway will be required. Once on the rail cars the product will be

Project Component	Description of Component
	conveyed to the west coast of BC, and shipped overseas, utilizing existing infrastructure. Building of the new spur line activities: Design and Engineering: Develop detailed engineering plans for the rail spur, including specifications for track layout, crossings, and other infrastructure. Construction: Begin construction based on the approved plans, laying tracks, and installing signalling systems. Safety: Implement safety measures, including signalling systems, crossing gates, and other features to ensure the safe operation of the rail spur. Testing and Commissioning: Conduct thorough testing of the rail spur's infrastructure and systems to ensure they meet safety and operational standards. Commission the rail spur for regular operations once testing is successful. During phase 1 of the operation, it is anticipated that 80 flatcar rail cars carrying 160 ISO containers per day will be transported. During Phase 2 of the operation, it is anticipated that the values from phase 1 will double in quantities, to 160 flatcar rail cars carrying 320 ISO containers per day. Due to these significant quantities, it is assumed that this is going to result in additional trains added to the current rail schedule.
Access road	A new access road is required from Highway 97 to the facility and an existing Forestry Service Road may require upgrading for additional expected traffic.
Supporting Infrastructure	The following components are required to support the safe operation of the facility: • Project Site administration, control room(s), site grading, roadways, lighting, security, and safety facilities. • Liquid hydrocarbon/chemical storage and handling facilities (including truck loading). • Electrical substation connected to BC Hydro power systems.
Auxiliary Components	

Project Component	Description of Component
LNG Storage prior to shipping	The ISO containers will arrive at the west coast via train and will need to be stored until they can be loaded on ships. JX LNG is working with CN and PRPA in utilizing the RIELP project space for this use. • The Prince Rupert Port Authority (PRPA) along with CN Rail have a project underway, the Ridley Island Export Logistics Platform (RIELP), which is a port infrastructure platform. The premise of this project is to enable and support the development of innovative, large-scale, export transloading facilities designed to increase efficiencies in export supply chains maximize value to Canadian exporters, along with support the growth of intermodal business in the Port of Prince Rupert. Has an overall land area of 46.5 hectares (ha), and the project began operation in Q4 of 2022. • This port has integrated railways, access roads, and utility infrastructure needed to support transloading operations on the platform. • The RIELP is designed to incorporate integrated large-scale bulk and breakbulk transload facilities, and an integrated off-doc container yard. The integrated off-dock facility will provide empty container storage for the port's container terminal operations. JX LNG is proposing to stack full ISO containers 3 high, and empty containers 5 high at the RIELP location. Full containers would move from RIELP to Fairview Terminal for onboarding and export via Ocean Vessel. The empty containers are then transported back to the RIELP. This is a viable option that we are pursuing but still considering other options as we are uncertain at this time.
Shipping	The ships will be dedicated for LNG ISO containers only with an estimation of 700-1500 (1400 – 3000 TEUs) containers per shipload – depending on vessel. The plan is to lease vessels from a shipping

Project Component	Description of Component
	line, for the 700-capacity vessel (estimated 7-8 vessels will be required per month).

6.5 Decommissioning

The decommissioning process for the Project is set to commence after a minimum of 30 years after the anticipated phase 1 construction year. The plan for decommissioning and abandonment of the Project will include consultation with all indigenous parties and land lease owners that are affiliated with the Project. Engagements with applicable regulatory authorities will also be completed during that time.

Dependent on the laws/regulations in effect at that time, the decommissioning and abandonment process will include:

- Dismantling/recycling ancillary facility equipment and infrastructure.
- Transporting and disposal or recycling of materials.
- Reclamation of the anthropogenically altered areas of the Project site and adjacent areas to restore ecological values and function.
- Follow pipeline and facility abandonment processes.
- Discontinue power transmission.

Following the decommissioning and abandonment of the Project, as per the applicable agreements with indigenous parties involved and land lease owners, the area will be restored.

7. Early Engagement Plan Process

JX LNG is dedicated to initiating early and open engagement with effected Indigenous groups, public stakeholders, municipalities, federal and provincial governments, and government agencies. JX LNG's primary objective for engagement on the Project is to keep the groups mentioned above and other concerned parties informed about the Project. They aim to make project-related information easily accessible to all and encourage feedback throughout the duration of the Project. To ensure successful engagement, JX LNG intends to consult with each Indigenous Group on their preferred engagement methods, which may include policies, protocols, and traditional approaches, as well as foster effective and meaningful collaborations with public stakeholders, municipalities, federal and provincial governments, and government agencies. These engagements will follow and be in liaison with the First Nations Leadership Council's (FNLC) climate strategy and action plan and the Early Engagement Policy (EAO 2019).

7.1 Indigenous Groups engagement methods

The following is a list of principles that will guide Indigenous engagement on the Project:

- Recognition and affirmation of Indigenous rights and title.
- Respect for Indigenous laws, traditions, and knowledge.

- Ensuring free, prior, and informed consent of Indigenous communities is obtained before proceeding with any project or activity that could affect their rights or interests.
- Building relationships based on trust, mutual respect, and open communication.
- Collaboration and partnership with Indigenous communities throughout all stages of decision-making and project development.
- Ensuring that Indigenous peoples benefit from any economic development that occurs on their lands or territories.
- Recognition of the unique and diverse cultural identities of Indigenous peoples and the need to protect and promote their cultural heritage.
- Incorporate the gender-based analysis plus analytical process for all Indigenous communities involved.

During the Early Engagement phase, the Project will update the Indigenous Nations to be engaged to reflect all "Participating Indigenous Nations", within the meaning of the BCEAA. The BCEAO will provide a list of the "Participating Indigenous Nations" to the Project at the end of the Early Engagement phase. The Project will also work with the Impact Assessment Agency of Canada (IAAC) to ensure that the Indigenous Nations identified reflect the Indigenous Nations that the IAAC has identified as potentially affected by the Project.

The following Table provides a list of the Indigenous Groups identified for engagement, along with their representatives' titles, a preferred method of engagement, and frequency. In the early engagement phase, JX LNG will verify the accuracy of the listed representatives and request permission to include their names in Project materials, including the Detailed Project Description. Until confirmation of specific individuals during the early engagement phase, JX LNG will provide the name of the contact to date to the EAO in a separate document.

Table 7-1 Summary of Engagement with Indigenous Groups

Indigenous Group	Representative	Methods of Engagement
Lheidli T'enneh First Nation (LTN)	Gbenga Ayansola Assistant Manager, Natural Resources	• Primary method of correspondence is via email. • Meeting scheduled to formally introduce the Project and have a discussion about indigenous impacts. • An in-person meeting occurred on May 24, 2023. During the meeting, the Project was reviewed with positive initial feedback. • Second in person meeting occurred on June 26, 2023, and a letter of support was discussed to proceed with the BCEAO and BCER application. • JX LNG received a preliminary letter of support and interest in the Project from LTN (Included in Appendix D).

Indigenous Group	Representative	Methods of Engagement
		• Discussions on work opportunities and partnerships occurred in September and October. JX LNG committed to working with EDI Environmental and Archer (both LTN partnerships) on the Project. • PO signed with Archer for archaeological work in November 2023. • Email sent to LTNE and EDI in January 2024, reaffirming the intent to partner with them in the next phases of the Project. • Draft initial project description provided to the community in January 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.
McLeod Lake Indian Band (MLIB)	Main Administrative Office	• Primary method of correspondence is via email. • An in-person meeting was held on May 10, 2023, to formally introduce the Project and have a discussion about indigenous impacts. • An in-person meeting was held on July 11th, 2023, and the Project was discussed. Does not have any issues with the Project. • An in person meeting was held on September 13 and the Project was discussed, MLIB did not have any issues with the Project and expressed an interest in working together regarding construction opportunities. • Draft initial project description provided to the community in January 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.
Nazko First Nation (Nazko)	Main Administrative Office	• Primary method of correspondence is via email. • On July 11, 2023, provided a Project description and shapefiles of the plant, rail spur, and pipeline via email. • Nazko Natural Resource Manager reached out via email August 8, 2023, to request to be engaged and informed throughout the application process. Expressed concerns around the Fraser River Watershed.

Indigenous Group	Representative	Methods of Engagement
		• An in-person meeting was held on September 21, 2023, and the Project was discussed. Interest in the Project, specifically around potential contamination in the River. • Draft initial project description provided to the community in January 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.
West Moberly First Nation	Main Administrative Office	• Primary method of correspondence is via email. • Provided a Project description, shapefiles and other Project files (i.e. diagrams) for review via email. • Working toward a meeting in early 2024. • Draft initial project description provided to the community in January 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.
Nak'azdli Whut'en (Nak'azdli)	Main Administrative Office	• Primary method of correspondence is via email. • Provided a Project description, shapefiles and other Project files (i.e. diagrams) for review via email. • An in-person meeting was held on October 25, 2023, and the Project was discussed. Expressed interest in the Project. No specific concerns at this time, but would like to be included in the EA Process. Nak'azdli has a development corporation of small band-owned companies and they would like to be utilized for the project as well as they have an environmental stewardship plan that they would like to be incorporated into the EA where possible. Nak'azdli would like to be notified of any negative impacts to waterways and be informed of mitigations moving forward. The Nak'azdli are concerned about the potential impacts on the Salmon population. They are concerned about increased cost to their communities due to the perceived increased draw on BC Hydro by the Project. Nak'azdli wants to work

Indigenous Group	Representative	Methods of Engagement
		with industry and wants the industry to be a good corporate citizen. Learn about their culture, build relationships, and ask questions if you don't know as they want to help in the process. They would like to see long/short-term corporate support for projects in the community. As well "Impact Benefit Agreement". Some corporate sponsorship may include but is not limited to: ○ Hatchery funding. ○ Cultural center. ○ Administration building. ○ Youth camps/center. ○ Museum. ○ Health unit. ○ "This is our way of life your past is our future, it's not just buildings but it's for future generations……it's for the children". Racism is an issue. They want to make sure we have cultural awareness, understand reconciliation, and cultural training, ask questions, and let us know they are fun, proud people who want to protect the lands for future generations. They would also like to know if there is any training available for work opportunities with JX LNG. • Draft initial project description provided to the community in January 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.
Metis Nation BC	Main Administrative Office	• Primary method of correspondence is via email. • Provided a Project description, shapefiles and other Project files (i.e. diagrams) for review via email. • Draft initial project description provided to the community in January 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.

Indigenous Group	Representative	Methods of Engagement
British Columbia Metis Federation	Main Administrative Office	• Primary method of correspondence is via email. • Provided a Project description, shapefiles and other Project files (i.e. diagrams) for review via email. • Draft initial project description provided to the community in January 2024. • BC Metis expressed interest in the Project and are working toward a meeting in February or March 2024. • JX LNG will continue to provide milestone updates via email and participate in meetings if requested.

An email notification of upcoming early engagement activities was sent to Indigenous Groups. The purpose of this notification was to introduce the Project and request meetings. All Early Engagement activities will be documented for inclusion in the Detailed Project Description. JX LNG plans to engage the participating Indigenous Nations on Project-specific design changes, commitments, and mitigation standards for potential effects by integration of Indigenous Knowledge and local information into the EA.

Engagement is currently ongoing, and JX LNG is committed to building effective Indigenous relationships and incorporating feedback received during Early Engagement process.

7.2 Stakeholders and Public engagement methods

The Project is committed to implementing the following best practices to early and transparent engagement with identified stakeholders and the public. The following is a list of principles that will guide all engagement on the Project:

- Use of plain language to communicate the potential impacts, opportunities, and possible solutions associated with the Project to the public, Indigenous Groups, government, and other stakeholders.
- Provide timely and relevant updates on the Project to allow for input from Indigenous Groups, the public, the government, and other stakeholders during the impact assessment and regulatory processes.
- Gather feedback from Indigenous Groups, the public, government, and other stakeholders regarding the Project's impact on the community and their interests related to the Project. Where feasible, refine the Project or establish mitigation measures.
- Meet the Indigenous and public consultation requirements of the new provincial EA process. This will include public comment periods where the public can learn more about the Project through its website, ask questions at information sessions, and provide feedback.
- Collaborate with the community to ensure that engagement is comprehensive and designed to reach diverse members within the community.

- Incorporate the gender-based analysis plus analytical process for Indigenous Groups, the public, government, and other stakeholders regarding the Project.

The following Table provides a list of the stakeholders, jurisdictions, and agency groups identified for engagement, along with their representatives' titles, a preferred method of engagement, and frequency. Until confirmation of specific individuals during the early engagement phase, JX LNG will provide the name of the contact to date to the EAO in a separate document.

Table 7-2 Summary of Engagement with Stakeholders, Jurisdictions and Agency Groups

Stakeholder/Government	Representative	Engagement Activities
BCEAO	Fern Stockman / Brennan Hutchison	• JX LNG submitted an email with a formal introduction document and a request to meet. • A meeting was held with BCEAO and BCER on March 17, 2023, to discuss the regulatory process. • A second meeting was held on Nov 3, 2023 to discuss the Project. • A meeting was held on December 21, 2023 to review the regulatory process in anticipation of submission.
BCER	Marc Chawrun	• JX LNG submitted an email with a formal introduction document and a request to meet. • A meeting was held with BCEAO and BCER on March 17, 2023, to discuss the regulatory process.
Federal IAA	Andrea Raska / Nicola Cook	• JX LNG submitted an email with a formal introduction document. • A meeting was held on October 11, 2023, to discuss the regulatory process. • A second meeting was held on Nov 3, 2023 to discuss the Project. • A meeting was held on December 21, 2023 to review the regulatory process in anticipation of submission.
Regional District of Fraser Fort George	Mayor and Council	• JX LNG submitted an email with a formal introduction document and a request to meet. • A meeting was held with RDFFG on March 22, 2023, to discuss the regulatory process.
City of Prince George	Mayor and Council	• JX LNG submitted an email with a formal introduction document and a request to meet.

Stakeholder/Government	Representative	Engagement Activities
		• An in-person meeting was held at the mayor's office in Prince George on May 23, 2023, to discuss the Project. • An in-person meeting was held with the Mayor at Prince George on July 10, 2023, to discuss the Project and update the progress.
CN Rail	Alexandre Shaughnessy Brittany Sciangola Linda Vergata Lyndon Jacak etc.	• Meeting scheduled to formally introduce the Project and discuss the regulatory process. • The meeting was held on April 10, 2023, to review specific details of the Project and lands for the rail spur. • Meetings on March 12, 30, May 02, June 01, 12, July 06 and 31, August 18, October 13, 2023 having discussions on the site railway layout, operation plans, risk assessments. • CN is undergoing a risk assessment with their internal risk management division. The expected duration of the Risk Assessment is 5 months. The risk assessment commenced in October 2023 and is expected to be completed by late February or early March 2024. • Meeting held on January 17, 2024 to update CN Rail on the Project. Discussion items included; storage requirements at the coast; design of the rail spur at the main plant location; land access at the main plant location; update on Risk Assessment. Risk Assessment is on track and to be complete in spring 2024.
BC Hydro	Glen Thompson Alison Wilson Zach Osman	• JX LNG submitted an email with a formal introduction document and to discuss next steps. • A meeting was held with BC Hydro on April 12, 2023, to discuss the connection application process. • On April 18, 2023, an application for an initial feasibility study and confirmation of POI was submitted. • On September 26, 2023, BC Hydro issued a Conceptual Review Report for the Project indicating that two

Stakeholder/Government	Representative	Engagement Activities
		interconnection options are technically feasible. • On October 13, 2023, a meeting was hold with discussions of the Conceptual Review Report and next steps for the interconnection system impact study.
Agricultural Land Commission (ALC)	Connor Newcombe	• JX LNG confirmed via email that non-farm use status has been granted for the lands for the Project.
Enbridge Pipeline	Mattew Wilpert	• A meeting in-person was held on June 6, to discuss the Project capacity demand on Enbridge West Coast Pipeline. • A meeting in-person was held on October 23 with discussions of the preliminary Westcoast Pipeline expansion plan (size and length) and general financial requirement by Enbridge for the Project.
Prince Rupert Port Authority (PRPA)	Michael Inman	• A meeting was held with PRPA on July 31, 2023, to introduce the Project and discuss port capacity and a potential site for receiving and storage of LNG Containers. • Currently discussions with PRPA are through CN Rail.
Ministry of Energy, Mines and Low Carbon Innovation (BC MoEMLI)	Mark Urwin	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project. • Virtual meeting was held Nov 24.
Ministry of Environment and Climate Change Strategy (BC MoEC)	TBD	• Introductory email was sent Nov 1, 2023, offering a meeting to discuss the Project.
Ministry of Forest (BC MoF)	TBD	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project.
Ministry of Land, Water, and Resource Stewardship (BC MoLWR)	TBD	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project.
Ministry of Jobs, Economic Development and Innovation	TBD	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project.
Ministry of Municipal Affairs	TBD	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project.

Stakeholder/Government	Representative	Engagement Activities
Fisheries and Oceans Canada (DFO) – potential	Tessa Richardson	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project. • Email received with offer to engage if expertise is required.
Ministry of Transportation and Infrastructure (BC MoTI)	Shaun Holahan	• Introductory email was sent Nov 2, 2023, offering a meeting to discuss the Project. • A meeting has held January 25, 2024 to introduce the Project. • MoTI would be looking for discussion on use and upgrade of the existing forestry road in place of a new access.

The table below is the initial list of potential public stakeholders and groups to be consulted with after submission of the final IPD and EEP. These groups have been identified and included because of their known or anticipated interest in the Project, and/or anticipated effects of the Project. These groups include business associations and community organizations with known and/or anticipated interest in the Project. JX LNG acknowledges that this list may not be complete and anticipates the list to change throughout the early engagement period.

Table 7-3 Potential Public Stakeholders and Groups for Engagement

Stakeholder	Rationale
Northern Health Authority (NHA)	Potential for increased service demands
RCMP – Prince George Detachment	Potential for increased service demands
Prince George Fire Department	Potential for increased service demands
Prince George Airport Authority	Potential for increased service demands
Goodsir Nature Park	Potential interactions with Project
Salmon Valley Community Association	Potential interactions with Project
Summit Lake Community Association	Potential interactions with Project
Willow River Recreation Association	Potential interactions with Project
University of Northern BC (UNBC)	Potential interactions with Project
College of Caledonia	Potential interactions with Project
Prince Geroge Community College	Potential interactions with Project
Summit Log Corporation	Cut Block Tenue holder
Prince George Natural Resource District	Forest Map Notation Tenure holder
District Manager Prince George	Forest Service Road Tenure holder
Stephen Saunders	Guide Outfitter Tenure holder
BC Rail	Land Ownership – Crown Agency Tenure holder
The Wright Investment Company Limited	Land Ownership – Crown Provincial Tenure holder
Saunders Falling Ltd.	Land Ownership – Private Tenure holder
Province of BC	Mineral Reserve Tenure holder
Summit LNG Corporation	Occupant Licence to Cut Tenure holder Investigative Use Permit Tenure holder
Ainsworth Lumber Co Ltd.	Opening (Cutblock) Tenure holder

Stakeholder	Rationale
Point Creek Contracting	Opening (Cutblock) Tenure holder
Regional District of Fraser-Fort George	Reserve Notation – Notation of Interest Tenure holder
BC Hydro	Right of Way Tenure holder
Ministry of Transportation	Surveyed Roadway Tenure holder
Ivan Lizotte	Trapline Tenure holder
Susan Spears	Trapline Tenure holder
Joseph Nedoborski	Trapline Tenure holder
Gordon Lizotte	Trapline Tenure holder
Nearby outfitters and trappers	Potential interactions with Project
Nearby Freehold landowners	Potential interactions with Project
Local Forestry Road user groups (FSR)	Potential interactions with Project

8. Indigenous Nations Interest

A review of the Consultative Areas Database (CAD) has identified 1 Indigenous Group who's established or asserted traditional territories overlap with the Project. The Lheidli-T'enneh First Nation is located approximately 20 km from the proposed Project. Figure 2 shows the First Nation Traditional Territory that is within 30 km of the Project site.

JX LNG is engaging with First Nations groups and are committed to working with First Nations on the development of the Project and understanding Indigenous knowledge that is pertinent to the Project through all phases from design to reclamation. To date, JX LNG has engaged with Lheidli T'enneh First Nation, McLeod Lake Indian Band, Nazko First Nation, Nak'azdli Whut'en, and West Moberly First Nation. Engagement details can be found in the Early Engagement Plan.

8.1 Lheidli-T'enneh First Nation

The Project is located on Lheidli T'enneh (formerly known as the Fort George Indian Band) territory. The Lheidli T'enneh sub-group of the "Dakelh" people whose traditional territory includes the city of Prince George, British Columbia. The name "Lheidli" means "The People from the Confluence of the River" in the Carrier language, referring to how the Nechako River enters the Fraser River at Prince George. There are over 400 members of the Lheidli T'enneh First Nation.

The Lheidli T'enneh are currently negotiating with Canada and British Columbia in the BC Treaty Process. They are at Stage 5 of the process which is the Final Agreement Stage.

8.2 McLeod Lake Indian Band

The Project is located approximately 7 km south of McLeod Lake Indian Band (MLIB) territory near Summit Lake. McLeod Lake Indian Band is part of the Tse'khene group of Aboriginal peoples that also includes bands at Fort Ware (Kwadacha) and Ingenika (Tseh Kay Dene). MLIB signed on as a member of the Treat 8 Nations in 2000. The traditional territory of MLIB is approximately 108,000 km^2. There are 515 members

of MLIB with 200 members living in the MacKenzie, Chetwynd and Prince George areas. McLeod Lake Indian Band's main Community is located at the North end of McLeod Lake. McLeod Lake Indian Band is very progressive First Nation and wholly owns Duz Cho Logging and Duz Cho Construction businesses that operates throughout McLeod Lake Indian Band's Traditional Territory. McLeod Lake Indian Band also has a very active Development Corporation and has multiple partnerships thought the McLeod Lake Indian Band Territory.

8.3 Nazko First Nation

The Project is located approximately 30 km north of Nazko First Nations (Nazko) traditional territory. Nazko is a First Nation government of the Dakelh people. Nazko Nations reserves are located around the community of Nazko, British Columbia, which is 120 km west of Quesnel and southwest of Prince George. Nazko Nation is part of the Carrier Nation.

8.4 West Moberly First Nations

The Project is located approximately 10 km south of a small area of West Moberly Fist Nations (WMFN) territory near Summit Lake. Summit Lake is reserve land that was recently transferred to the WMFN through a historic treaty land entitlement settlement. At this point in time there are no Land Codes related to the Summit Lake reserve. WMFN is a member of the Treaty 8 Nations. West Moberly First Nation Main Community is Located in the Peace River District at the West end of Moberly Lake. West Moberly First Nation has had consistent leadership over the past 20 years and is very active throughout Treaty 8 Territory in Northeastern British Columbia. West Moberly First Nation owns a number of their own business and have multiple partnerships throughout BC and Aberta.

8.5 Nak'azdli Whut'en

The Project is located approximately 8 km east of a Nak'azdli Whut'en (Nak'azdli) territory. Nak'azdli is a non-treaty First Nation in the Fort James area of BC. There are currently approximately 2000 members of Nak'azdli, with approximately 700 living on the reserve. Nak'azdli Whut'en First Nation's main reserve is located in the town for Fort St. James. Nak'azdli is a member of the Carrier Nation of the Dene. Nak'azdli Nations Society is based on the Clan System and has four clans which include: Lhts'umusyoo (Beaver); Lusilyoo (Frog); Kwun Ba Whuten (Caribou); Lohjabou (Bear). Nak'azdli Whut'en has an active Natural Resource Centre that works on the communities behalf to ensure the highest level of environmental stewardship of activity within their territory. Nak'azdli owns a few small businesses and has developed partnerships with business to take advantage of activities within their traditional territory.

8.6 Metis Nation of British Columbia

The Metis Nation of British Columbia (MNBC) represents the section 35 rights of over 24,000 Métis citizens who are registered with MNBC and advocates for the over 98,000 self-identified Métis in British Columbia. MNBC represents thirty-nine (39) Métis Chartered Communities in British Columbia. Métis Nation BC is recognized by the Métis National Council, Provincial Government of British Columbia, and

the Federal Government of Canada, as the Governing Nation for Métis in BC. Métis Nation British Columbia envisions a future where Métis people, communities and children thrive. We are connected to our rich Métis culture, heritage and languages; we achieve strong socio-economic outcomes; and our Métis rights as an Indigenous people are recognized. To achieve our vision and mission, we commit to upholding our Métis cultural values in our work together at MNBC, in our communities, and in all our relationships. We embrace the values of integrity, kindness, innovation, respect, teamwork, humility and resilience. As the Métis government in British Columbia, we represent Métis citizens and promote the rights, recognition, priorities and interests of all Métis in BC. We create opportunities for our people, communities, and children to flourish, and work to ensure access to a range of programs and services to bridge socioeconomic gaps and increase overall well-being for Métis in BC.

8.7 British Columbia Metis Federation

The British Columbia Metis Federation (BCMF) are a distinct people, and it can be complicated to define Métis Identity. “Being Métis” is as unique as each individual human. We share European and Indigenous Ancestry. We lived off of the land and travelled all over the continent of “North America” acting as guides, interpreters, trappers and entrepreneurs. We are hunters, gatherers, artists, musicians, dancers, and most of all, family. In other words, there are many ways to be Métis. Métis people can trace their heritage back to the mixing of First Nations people and European settlers. However, due to their nomadic lifestyle and the aggressive and violent practices of the Canadian Government and the colonization of Canada, ancestry and documentation can be difficult to prove. Living off of the land meant that we were hunters, gatherers, trappers and fishermen. As such, we followed the seasons travelling all across the continent in search of buffalo, fishing grounds, and harvesting areas. Some of these trap lines and harvesting grounds are still active today. We have recorded history and traditional knowledge from Métis individuals and self-determining Métis communities throughout what is now called British Columbia to repatriate this knowledge for future generations.

9. Potential Interactions with Indigenous Nations

Potential interactions with and effects on Indigenous interests associated with the Project components and activities include, but are not limited to:

- Effects on traditional practices including hunting, trapping, fishing, and plant gathering.
- Effects on access to traditionally harvested resources.
- Effects on access to traditional land use sites.
- Effects on cultural transmission and experience.
- Opportunity for training and employment.
- Opportunity for business.

9.1 Biophysical Impacts

Through ongoing communication with the First Nations groups potentially impacted by the Project, some biophysical concerns were expressed.

The LTN is concerned about the cumulative effects and the potential impacts on/to traditional practices/use.

Nazko has concerns surrounding the Fraser River Watershed regarding potential spills, water contamination, or water diversion. The Project's location within this watershed could potentially impact the water quality, quantity, and aquatic environment, including but not limited to fisheries, species at risk and biodiversity.

The Nak'azdli would also like to make sure that waterways are protected during the construction and operation of the Project. Salmon is very important traditionally to the Nak'azdli and the current fish stock population is already in decline.

Nak'azdli has an environmental stewardship plan that they would like to be incorporated into the EA where possible. Once the Environmental reporting is completed for the Project Nak'azdli would like the opportunity to review and provide comments.

JX LNG has reached out to the LTN for a list of preferred contractors to help with the Environmental Assessments and Archaeology. The goal is to ensure that the LTN is a part of the EA process and that their concerns will be addressed. JX LNG has spoken to Nak'azdli regarding notification of any negative impacts on waterways and of any mitigation measures that may be required.

The McLeod Lake Indian Band, West Moberly First Nation, Metis Nation of British Columbia and British Columbia Metis Federation have not expressed any concerns around Biophysical Impacts at this time, but JX LNG will continue to keep communication open and address any concerns that maybe raised further along in the process.

9.2 Socioeconomic Impacts

The communication received from the First Nations groups around socioeconomic impacts has touched on training opportunities, construction, and development opportunities that would be provided by the Project. The LTN and Nak'azdli have both expressed an interest in training opportunities for their communities so that they may becoming part of the work force long term.

The MLIB is interested in working together on construction opportunities, and the Nak'azdli has a development corporation of small band-owned companies they would like to be utilized for the Project. Nak'azdli has also made JX LNG aware that they have office space available for rent in Prince George (1515 2nd Avenue Prince George).

The Nak'azdli has proposed an Impact Benefit Agreement that could provide long/short term corporate support to their community. They have suggested potential sponsorships including Hatchery funding, Cultural center, Administration Building, Youth camps/center, Museum and a Health unit.

Concerns regarding increased cost to the Nak'azdli community due to the perceived increased draw on BC Hydro by the Project have been raised to JX LNG. JX LNG believes that the additional draw will not be sufficient enough to negatively impact the communities.

The Nazko, West Moberly First Nation, Metis Nation of British Columbia and British Columbia Metis Federation have not commented on the Socioeconomic Impacts at this time. JX LNG aims to have a positive socioeconomic impact on the surrounding First Nations communities and will continue to engage with them throughout the process.

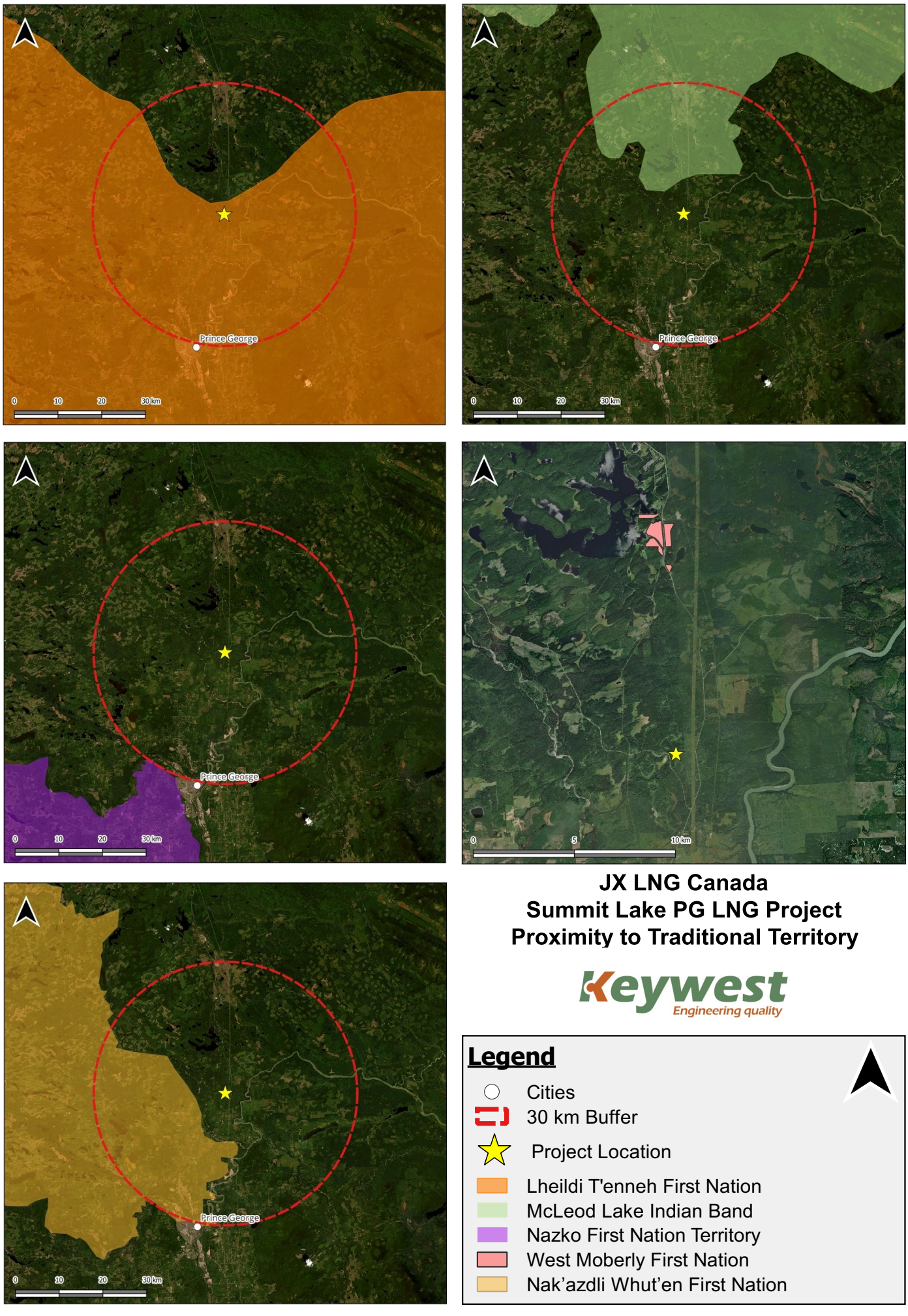


Figure 2 – Indigenous Territories within 30 km

10. Biophysical Environment

10.1 Physical Environment

The Project is located on a previously undisturbed, greenfield site that is within the Nechako Lowland Ecosection. This area is flat with some dissection by rivers and past glaciation. The climate is sub-boreal and typically humid in the summer due to moist Pacific air from the west, and intensely cold with high snowfall in the winter months.

The Canada Land Inventory rates Agricultural capability on the site as 20% Class 5 and 80% Class 7 with stoney soil deficiencies. There are some areas with varying degrees of grade change, however these changes in grade are minimal and take place over large distances. Most of the southern portion of the site is not located within the Agricultural Land Reserve. The portion in the Agricultural Land Reserve has an active approval for non-farm use dated 2016 from the Regional District. In consultation with the Agricultural Land Commission, this approval is transferrable to JX LNG. Some of the sites are located within the Provincial Forest, which would require amendment during the Crown Land disposition process.

This site is accessed directly from Highway 97 or from the Salmon Valley Forest Service Road which bisects the area. The Forestry Road is well maintained and is in good condition year-round. The major 500KV BC Hydro line runs east of the property. The CN Rail passes along the west portion of the site at a grade which will make railway extension into the site relatively easy. There does not appear to be any topographical constraint which would limit the extension of a spur throughout this site. The Integrated Land Management Bureau of the Province of BC has secured approval from the Agricultural Land Commission for a line extension into the potential industrial area. This site is located on a plateau and as such reduces the potential for inversions and calm air conditions to cause pollution to build up. Hart North is the best all round industrial site in the Prince George area.

10.1.1 Geology and Soils

As this site is undeveloped and still in its natural state a desktop review of the soils was completed and it was found that the soil is Orthic Humo-Ferric Podzol, which is comprised of moderately drained, sandy loam. Soil surveys will be conducted prior to construction to ensure a stable surface for construction of the needed infrastructure.

10.1.2 Water and Aquatic Systems

The Project is sited 3.5 km east of the Salmon River and 4.7 km west of the Fraser River. Per desktop review, there are two tributaries located within the Project site, Tay Creek and one unnamed tributary. The Project will be designed to have no permanent impact to these streams. Any potential effects will be minimized during construction and operations through mitigation measures such as silt fencing, berming, and grading away from water surfaces.

10.1.3 Climate

The Project is located 30 km north of the nearest town, Prince George. As per desktop review, Prince George has a yearly mean temperature of 5 °C (23 °C High temp -11 °C Low Temp) and an average

precipitation of 354m per year. The area has a humidity of 72% with an average Dew Point of -1 °C. The wind in the area has a yearly average of 10km/h. On average, the hottest and coldest months of the year are July (16 °C) and January (-7 °C), respectively. On average, the wettest and windiest months are October (40.3 mm precipitate) and November (12 km/h), respectively. Although Prince Geroge is 30km south of the Project site, similar numbers and ranges are to be expected for the climate and weather averages of the area. The equipment and infrastructures used will account for these climatic parameters to withstand construction and operations for this Project.

10.1.4 Air Quality

A desktop study review of Air Quality for the Prince George area was completed. The study presented that the pollutant sources included but are not limited to industry, wood stoves, motor vehicles and wildfires and how these sources can have respiratory and cardiovascular health effects. Some of these specific pollutants include Particulate Matter (PM) - fire particulates and coarse material), Total Reduced Sulphur (TRS), SO_2, NO_2, and ground-level O_3. The topography of the Project site should also be considered since many interior communities in BC are susceptible to high levels of air pollution during temperature inversions and wildfires during dry summer conditions. Luckily, the site is located on a plateau and as a result, reduces the potential for inversions and calm air conditions to cause pollution to build up. The site will do its due diligence to reduce emissions as much as possible to reduce the risk of further pollution.

10.1.5 Vegetation

The Project is situated in the Sub-Boreal Spruce Biogeoclimatic Zone. This zone is known for cold winters with deep snow cover and warm summers. The Project site is currently not cleared of vegetation, however there is a history of logging in the area.

A desktop study review of plant communities at the Project site was completed. The results identified a number of provincially and federally regulated plant communities or species that may be present at the Project site (Table 10-1).

Table 10-1 Vegetation at the Project Site

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Slender Sedge / Common Hook-Moss	*Carex lasiocarpa / Drepanocladus aduncus*	N/A	N/A	Blue
Shore Sedge - Buckbean / Peat-Mosses	*Carex limosa - Menyanthes trifoliata / Sphagnum spp.*	N/A	N/A	Blue
Crumpled Tarpaper	*Collema coniophilum*	Threatened	Threatened	Red
Truncated Quillwort	*Isoetes x truncata*	Not listed	Not listed	No Status
Pebbled Paw	*Nephroma isidiosum*	Not listed	Not listed	Blue
Small White Waterlily	*Nymphaea leibergii*	Not listed	Not listed	Red
Whitebark Pine	*Pinus albicaulis*	Endangered	Endangered	Blue
Northern Jacob's-Ladder	*Polemonium boreale*	Not listed	Not listed	Blue
California Jacob's Ladder	*Polemonium californicum*	Not listed	Not listed	Red

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Douglas-Fir - Hybrid White Spruce / Knight's Plume	*Pseudotsuga menziesii - Picea engelmannii x glauca / Ptilium crista-castrensis*	N/A	N/A	Blue
Short-Flowered Evening-Primrose	*Taraxia breviflora*	Not listed	Not listed	Red

Mitigation measures will include:

- surveying for Provincially and Federally listed plant species prior to construction.
- preventing the spread of Noxious weeds and invasive, non-native species.
- preparing an EMP following completion of detailed design.

10.1.6 Wildlife

A number of species that could potentially occur at or near the Site have conservation statuses as identified by the Species at Risk Act, Canada (SARA), the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and or the BC Conservation Data Centre (Table 10-2).

Table 10-2 Wildlife at the Project Site

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Birds				
Northern Goshawk, atricapillus subspecies	*Accipiter gentilis atricapillus*	Not listed	Not at Risk	Blue
Short-eared Owl	*Asio flammeus*	Special Concern	Threatened	Blue
Great Blue Heron, herodias subspecies	*Ardea herodias herodias*	Not listed	Not listed	Blue
Upland Sandpiper	*Bartramia longicauda*	Not listed	Not listed	Red
American Bittern	*Botaurus lentiginosus*	Not listed	Not listed	Blue
Rough-legged Hawk	*Buteo lagopus*	Not listed	Not at Risk	Blue
Broad-winged Hawk	*Buteo platypterus*	Not listed	Not listed	Yellow
Swainson's Hawk	*Buteo swainsoni*	Not listed	Not listed	Red
Smith's Longspur	*Calcarius pictus*	Not listed	Not listed	Blue
Lark Sparrow	*Chondestes grammacus*	Not listed	Not listed	Blue
Common Nighthawk	*Chordeiles minor*	Threatened	Special Concern	Blue
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern	Special Concern	Yellow
Olive-sided Flycatcher	*Contopus cooperi*	Threatened	Special Concern	Yellow
Black Swift	*Cypseloides niger*	Endangered	Endangered	Blue
Bobolink	*Dolichonyx oryzivorus*	Threatened	Special Concern	Red
Rusty Blackbird	*Euphagus carolinus*	Special Concern	Special Concern	Blue

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Peregrine Falcon	*Falco peregrinus*	Special Concern	Special Concern	No Status
Peregrine Falcon, anatum subspecies	*Falco peregrinus anatum*	Not listed	Not at Risk	Red
Gyrfalcon	*Falco rusticolus*	Not listed	Not at Risk	Blue
Barn Swallow	*Hirundo rustica*	Threatened	Special Concern	Yellow
Caspian Tern	*Hydroprogne caspia*	Not listed	Not at Risk	Blue
Yellow-breasted Chat	*Icteria virens*	Endangered	Endangered	Red
California Gull	*Larus californicus*	Not listed	Not listed	Red
Lewis's Woodpecker	*Melanerpes lewis*	Threatened	Threatened	Blue
Surf Scoter	*Melanitta perspicillata*	Not listed	Not listed	Blue
Double-crested Cormorant	*Nannopterum auritum*	Not listed	Not at Risk	Blue
Long-billed Curlew	*Numenius americanus*	Special Concern	Special Concern	Yellow
Band-tailed Pigeon	*Patagioenas fasciata*	Special Concern	Special Concern	Blue
American White Pelican	*Pelecanus erythrorhynchos*	Not listed	Not at Risk	Red
Red-necked Phalarope	*Phalaropus lobatus*	Special Concern	Special Concern	Blue
American Golden-Plover	*Pluvialis dominica*	Not listed	Not listed	Blue
Eared Grebe	*Podiceps nigricollis*	Not listed	Not listed	Blue
Bay-breasted Warbler	*Setophaga castanea*	Not listed	Not listed	Red
Cape May Warbler	*Setophaga tigrina*	Not listed	Not listed	Blue
Black-throated Green Warbler	*Setophaga virens*	Not listed	Not listed	Blue
Winter Wren	*Troglodytes hiemalis*	Not listed	Not listed	Blue
Sharp-tailed Grouse, columbianus subspecies	*Tympanuchus phasianellus columbianus*	Not listed	Not listed	Blue
Terrestrial				
Wolverine	*Gulo gulo*	Special Concern	Special Concern	No Status
Wolverine, luscus subspecies	*Gulo gulo luscus*	Special Concern	Special Concern	Blue
Mountain Goat	*Oreamnos americanus*	Not listed	Not listed	Blue
Bighorn Sheep	*Ovis canadensis*	Not listed	Not listed	Blue
Stone's Sheep	*Ovis dalli stonei*	Not listed	Not listed	Blue
Fisher	*Pekania pennanti*	Not listed	Not listed	No Status
Meadow Rams-horn	*Planorbula campestris*	Not listed	Not listed	Blue
Caribou (Southern Mountain Population)	*Rangifer tarandus pop. 1*	Threatened	Endangered	Red

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Caribou (Northern Mountain Population)	*Rangifer tarandus pop. 15*	Special Concern	Special Concern	Blue
Caribou (Central Mountain Population)	*Rangifer tarandus pop. 18*	Threatened	Endangered	Red
Grizzly Bear	*Ursus arctos*	Special Concern	Special Concern	Blue
Long-eared Myotis	*Myotis evotis*	Not listed	Not listed	Yellow
Little Brown Myotis	*Myotis lucifugus*	Endangered	Endangered	Blue
Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	Blue
Long-legged Myotis	*Myotis volans*	Not listed	Not listed	Yellow
Hoary Bat	*Lasiurus cinereus*	Not listed	Not listed	Blue
Silver-haired Bat	*Lasionycteris noctivagans*	Not listed	Not listed	Yellow
Big Brown Bat	*Eptesicus fuscus*	Not listed	Not listed	Yellow
Insects				
Western Meadow Fritillary, sigridae subspecies	*Boloria epithore sigridae*	Not listed	Not listed	Blue
Hairy-necked Tiger Beetle	*Cicindela hirticollis*	Not listed	Not listed	Blue
Mead's Sulphur	*Colias meadii*	Not listed	Not listed	Blue
Jutta Arctic, chermocki subspecies	*Oeneis jutta chermocki*	Not listed	Not listed	Blue
Quebec Emerald	*Somatochlora brevicincta*	Not listed	Not listed	Blue
Forcipate Emerald	*Somatochlora forcipata*	Not listed	Not listed	Blue
Kennedy's Emerald	*Somatochlora kennedyi*	Not listed	Not listed	Blue
Mormon Fritillary, eurynome subspecies	*Speyeria mormonia eurynome*	Not listed	Not listed	Yellow

Construction activity would likely temporarily displace small mammals and birds from using nearby adjacent areas during the construction phase; however, alternative habitat is available in the surrounding area. Furthermore, clearing and logging activities would be completed outside of the migratory bird window to ensure the resulting potential effects are minimal.

Operation of the LNG facility is expected to pose little threat to wildlife populations in the area. Increased traffic along nearby roads and activity in and around the Project area footprint may temporarily discourage use by small mammals and birds during periods of activity. However, these species can habituate to routine human activities and adverse effects on wildlife use of nearby areas are expected to be minimal.

10.1.7 Fish

There are two tributaries present at the Project site, Tay Creek, and an unnamed Tributary.

Tay Creek

The following fish species have been observed in Tay Creek: Bridgelip Sucker, Burbot, Chinook Salmon, Lake Chub Longnose Dace, Mountain Whitefish, Peamouth Chub, Rainbow Trout, and Slimy Sculpin. None of the observed species are on provincial or federal sensitivity lists.

Unnamed Tributary

No fish species have been observed at this location.

At Risk Fish and Aquatic Species

The fish and aquatic species that could potentially occur at or near the Site have conservation statuses as identified by the Species at Risk Act, Canada (SARA), the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and or the BC Conservation Data Centre (Table 10-3).

Table 10-3 At Risk Fish and Aquatic species at the Project Site

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Fish				
Bull Trout	*Salvelinus confluentus*	Not listed	Special Concern	Blue
White Sturgeon	*Acipenser transmontanus*	Endangered	Endangered / Threatened	No Status
White Sturgeon (Upper Fraser River Population)	*Acipenser transmontanus pop. 5*	Endangered	Endangered	Red
Aquatic species				
Western Toad	*Anaxyrus boreas*	Special Concern	Special Concern	Yellow
Golden Fossaria	*Galba obrussa*	Not listed	Not listed	Blue
Pygmy Fossaria	*Galba parva*	Not listed	Not listed	Blue
Frigid Lymnaea	*Lymnaea atkaensis*	Not listed	Not listed	Blue
Rocky Mountain Physa	*Physella propinqua*	Not listed	Not listed	Blue
Sunset Physa	*Physella virginea*	Not listed	Not listed	Blue
River Peaclam	*Pisidium fallax*	Not listed	Not listed	Blue
Striated Fingernailclam	*Sphaerium striatinum*	Not listed	Not listed	Blue
Threeridge Valvata	*Valvata tricarinata*	Not listed	Not listed	Red

11. Potential effects of Project-Related Changes

JX LNG intends to identify the Project related changes and account for the effects that may occur towards valued components throughout the various phases of the Project. The table below displays a list of potential changes that may occur as a result of carrying out the project. Some of these changes include the various components that can interact with physical, aquatic, terrestrial, human, social, cultural and economic areas.

Table 11-1 Project Changes and Valued Components

Project related change	Valued Components
Fish, Aquatic Plants, water, and sediment (Freshwater)	• Fish, refer to section 10.1.7 (Tay creek section and Table 10.3) for specific species • Freshwater aquatic plants (Shore Sedge - Buckbean / Peat-Mosses, Truncated Quillwort, Small White Waterlily) • Water Quality and Sediment Quality • Water Quantity and Sediment Quantity
Wildlife	• Wildlife, refer to section 10.1.6 (Table 10.2 – terrestrial) for specific species
Migratory birds	• Migratory birds, refer to section 10.1.6 (Table 10.2 – Birds) for specific species
Botanical Forest Products	• Slender Sedge / Common Hook-Moss • Crumpled Tarpaper • Pebbled Paw • Whitebark Pine • Northern Jacob's-Ladder • California Jacob's Ladder • Douglas-Fir - Hybrid White Spruce / Knight's Plume • Short-Flowered Evening-Primrose
Lands	• Visual Quality, air quality, aesthetic quality, quality and quantity of potable water • Other land related interests (Giscome Portage Trail and other protected areas) • recreation areas; licences; traplines; water reservation for domestic and agricultural uses
Social impacts	• Migration and population • Infrastructure and services • Occupational health & accident risks • Human health, Family, and community well-being
Economic impacts	• Employment and contracting opportunities • Natural resource activities: economic effects • Future economic opportunities and development
Cultural effects	• Cultural sites and artifacts (spiritual sites, current/historical cultural sites, etc.)

Project related change	Valued Components
	• Effects of changing work patterns on cultural activities and practices • Natural resources activities: cultural effects

11.1 Potential Effects in Relation to Requirements of the Impact Assessment Act

Section 19 of the Information and Management of Time Limits Regulation requires the assessment of potential effects of Project activities on fish and fish habitat, as defined in subsection 2(1) of the Fisheries Act, aquatic species, as defined in subsection 2(1) of SARA, and migratory birds, as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994. The following describes potential changes as they pertain to these components of the environment:

Fish and Fish Habitat – the Project has the potential to affect fish and fish habitat as defined by the Fisheries Act as a result of:

- The harmful alteration, disruption, and destruction of fish habitat under the Project's aquatic areas from the construction and operation of the Project.

Aquatic Species – the Project has the potential to affect aquatic species as defined by SARA as a result of:

- Mortality or physical injury due to physical impact due to construction activities (e.g., by machinery or covering by sediment).

Migratory Birds – the Project has the potential to affect migratory birds as define by the Migratory Bird Convention Act, 1994, as a result of:

- Changes to migratory bird movement patterns due to an increase in traffic (via Railroads and highways).
- Loss or alteration of habitat due to the construction and operation of the Project.
- Increased risk of mortality due to the construction and operation of the Project.

12. Human Environment and Community Wellbeing

12.1 Socio-Economic Setting

The Project is located in Central BC, mainly within electoral area G, Crooked River-Parsnip of the Regional District of Fraser Fort-George (RDFFG). The Proposed powerline does cross into electoral area A, Salmon Valley of the RDFFG. As of the 2021 Canada Census the RDFFG has a population 96,979 people, with most of the population concentrated in the Prince George Census Agglomeration (92.3%), which has a population of 89,490. Most residents within the RDFFG live in the City of Prince George (79.2%), which

alone has a population of 76,708. Electoral area G of the RDFFG has a population of 365 people and 3,471 people live in electoral area A of RDFFG.

The closest community to the Project is the community of Salmon Valley, located approximately 9 km south of the Project (54° 05′ 00″ N 122° 42′ 00″ W) and 20 km north of the city of Prince George. Salmon Valley is an unincorporated community with a rural population and limited resources. The area relies on Prince George as the economic center of the region.

Economic activities in the Prince George area are primarily centered on forestry, recreation, mining, oil and gas and recreational and subsistence hunting and fishing. The City of Prince George has historically developed from a mainly forest-based economy to an economy that has diversified across various sectors. For example, the 2021 Canada Census showed construction, transportation and manufacturing employing more workers in the area than forestry. Major employers in Prince George include the Northern Health Authority, School District No. 57, Government of British Columbia, University of Northern British Columbia, College of New Caledonia, and Canfor.

The Project area is located within one provincial administrative region, Region 7A – Omineca, consisting of multiple wildlife management units (WMU) for the purpose of game management. General open seasons in the Omineca region are available for numerous big game and mammal species as well as wild game birds. Waterbodies and watercourses located within the region support a recreational sport fishery.

A desktop study of the current socio-economic conditions of the area found:

- Between 2016 and 2021 the population in Prince George increased 3.7%.
- In 2021, the unemployment rate in the RDFFG was 9.1%.
- The major drivers of social, economic, and environmental importance to the area relate to opportunities provided by construction, manufacturing, agriculture, resource harvesting activities, and recreation and tourism activities. Cultural and heritage resources also contribute to social well-being.
- Prince George plays a major role as a supply and service hub for local and regional industries
- Hunting, outfitting, and trapping occur within the regional WMU with opportunities (i.e., outfitting areas, trapping areas) available.
- Recreation and tourism are important industries in the region focused on the natural environment
- Opportunities relate to various attractions, provincial parks and natural areas, regional parks, recreation and scenic values, and heritage sites.

12.2 Proximity to Local Communities, Important or Sensitive Community and Natural Places

The Project site is within the boundaries of the Regional District of Fraser-Fort George. There are no schools or hospitals within 20 km of the Project site. The Project is located adjacent to Canadian National Rail infrastructure and is located approximately 7 km from the Giscome Portage Trail Protected Area.

The nearest communities to the Site, as measured on Google Earth, and listed in proximity order are:

- Community of Salmon Valley, BC – approximately 9 km south.
- Community of Summit Lake, BC – approximately 11 km north.
- Community of Willow River, BC – approximately 15 km southeast.
- Community of Giscome, BC – approximately 20 km east-southeast.
- Community of Shelley BC – approximately 20 km south.
- Community of Shady Valley, BC – approximately 22 km south.
- Community of Ferndale, BC – approximately 23 km southeast.
- Community of Foreman, BC – approximately 26 km south.
- Community of Nukko Lake, BC – approximately 26 km west-southwest.
- Community of Chief Lake, BC – approximately 27 km west-southwest.
- Community of Newlands, BC – approximately 28 km east-southeast.
- Community of Miworth BC – approximately 29 km southwest.
- Community of Bear Lake, BC – approximately 35 km north.
- Community of Reid Lake, BC – approximately 39 km southwest.
- Community of Aleza Lake, BC – approximately 40 km east.

The nearest administration offices and community centers, as measured on Google Earth, and listed in proximity order are:

- Lheidli T'enneh First Nation community – approximately 20 km south.
- Lheidli T'enneh First Nation Administration Office – approximately 30 km south.
- City of Prince George, BC – approximately 30 km south.
- McLeod Lake Indian Band Community Center – approximately 95 km northwest.
- Nak'azdli Whut'en Administration – approximately 110 km west-northwest.
- Nazko First Nation Community Center – approximately 150 km southwest.
- West Moberly First Nation Administration – approximately 190 km northeast.

The nearest registered reserve lands listed in proximity order are:

- Fort George 2 Reserve (Lheidli T'enneh First Nation) – approximately 16 km south.
- Clesbaoneecheck 3 Reserve (Lheidli T'enneh First Nation) – approximately 30 km southwest.
- Fort George Cemetery (Lheidli T'enneh First Nation) – approximately 30 km south.

Prince George will become the supply and services center for the Project as there is existing infrastructure and services in place to support construction and operation of the Project.

12.3 Workforce

At this time, the number of onsite construction workers is unknown, however it is anticipated that the Project during Phase-1 construction will have a peak workforce of 400 to 550 workers. As part of the GBA Plus initiative, efforts will be made to recruit local workers (not excluding age, ethnicity, education, religion, disability, gender) and Indigenous workers to the extent possible. Construction worker details and estimates will be developed in Pre-FEED and FEED. At this point in planning, temporary construction workers will be housed at camps that will be constructed near or on the Project site. The camps will be

self-contained with providing potable water, electrical power, communications, and waste containment systems. Where workforce exceeds camp capacity, the existing accommodation facilities near Prince Geoge area will be used to house workers. In Phase 2, we anticipate a peak workforce of up to 200 to 250 individuals, as the site and certain utility facilities essential for Phase 2 will have been completed during Phase 1. The estimated average operational staff numbers are 60-75 when Phase 1 is commissioned, and this is expected to increase to 80-100 upon the completion of Phase 2.

12.4 Archeological and Heritage Setting

Baseline studies including a desktop assessment, acquisition of indigenous knowledge, and first person interviews to understand the archaeological and heritage setting of the Project are proposed to occur in late 2023 and 2024. This information can be included in the Detail Project Description.

12.5 Health Setting

Baseline studies including first person interviews to understand the human health setting of the Project (including both biophysical determinants of health and social determinants of health) are proposed to occur in 2024. This information can be included in the Detail Project Description.

12.6 Social and Economic Effects

Construction, operation and decommissioning of the Project has the potential to result in effects (both adverse and positive) on social and economic conditions. Activities and associated effects may include:

- Project construction activities may place pressure on local and regional infrastructure and services. Population changes associated with the Project may increase the demand for housing and accommodation.
- Construction and operation of the Project has the potential to affect employment, cost of living and economic trends.
- Increased highway traffic from the Prince George area to the Project Site may lead to an increased risk and frequency of motor vehicle accidents on Highway No. 97 leading to increased pressures on regional emergency services.

12.7 Potential Heritage Effects

Ground disturbance activities and tree clearing associated with the Project have the potential to result in adverse effects on heritage as a result of the alteration, disturbance, or destruction of archaeological or heritage resources. These potential effects would be managed by completing an archaeological impact assessment in advance of Project construction and the development of mitigation measures and management plans, such as the implementation of measures to avoid or reduce potential impacts on documented sites if present and develop of change find procedures.

12.8 Potential Health Effects

Human health can be affected by the inhalation of air emissions from combustion sources and increases in noise levels. Human health may also be affected by changes to the quality and quantity of traditional foods and drinking water. Food and water can be altered as a result of direct effects (e.g., effluent discharges) or indirect effects (e.g., air particulate depositions that affect soil and water quality).

Potential effects of the Project on human health will be evaluated by identifying pathways of potential effects. If viable pathways are identified, these pathways will be investigated and assessed. If a pathway is unlikely to affect human health, a rationale will be provided explaining why the pathway has not been included in the assessment.

The Project has the potential to contribute to cumulative effects on health due to contributions of emissions to the air shed and effects on the quality and quantity of traditional foods. Cumulative effects are anticipated to be relatively small and will be managed through the implementation of mitigation measures, best practices and management.

13. Emissions, Discharges, and Waste

The Project will comply with all provincial and federal regulatory requirements and guidelines when dealing with the variety of wastes, emissions, and effluents that it produces over its lifetime. An environmental management plan will be developed based on the outcome of the EA-IA and the requirements laid out in the permitting process.

By tying into the BC Hydro transmission system, the Project can achieve very low LNG facility carbon emissions, and to further limit the amount of carbon emissions JX LNG is considering carbon credits, the feasibility/possibility of CCSU and new technological advancements on carbon capture.

The production of waste and emissions will occur during the construction of the site as well as during operation and decommission. Waste products and emissions are assumed to be very similar regarding construction and decommission considering the use of similar equipment required for set up and take down.

Construction waste is anticipated to be generated from the clearing and levelling of the site resulting in biomass waste and organic material waste. As well as from the construction process and materials themselves i.e., wood, concrete, scrap metal etc. Sanitary wastewater will be produced by the temporary work force but will be managed through truck in/out operations. All waste produced will be contained and removed from site to be disposed of at approved locations. The equipment that is required for construction, operation, and transportation will be the main contributors to air emissions in the construction phase.

- Potential air contaminants generated during construction include nitrogen oxide (NO_X), carbon monoxide (CO), particulate matter (PM), and volatile organic compounds (VOC) from vehicles, diesel-powered portable electricity generators (back up) and construction equipment emissions.
- GHG emissions of CO_2, methane, and nitrous oxide may also be emitted from construction equipment, and vehicle traffic.
- Used oils and solvents will be managed during construction in compliance with provincial hazardous waste management requirements.

During the operation of the Project, air emissions will be low due to the acquiring of electricity from BC Hydro, and permits will be obtained for the air emissions that are produced. To ensure compliance with environmental regulations, the Project will obtain a permit for air emissions produced during operation under the Environmental Management Act. The Project is committed to implementing measures to minimize air emissions, including the use of low-emission equipment, monitoring of emissions, and implementing mitigation measures where necessary.

The operation of the Project will result in NO_X, and CO_2 being released into the atmosphere from combustion associated with:

- Amine regen boiler – assuming there is no electric option, the Amine reboiler will emit small amounts of NO_X and CO_2 from the combustion of natural gas.
- Safety flares (used to manage emergency or maintenance activities) – these are required for safety, the only continuous source will the maintenance of a pilot on the flare.

During transportation there will be small amounts of natural gas vented from the ISO containers to ensure safe transportation.

Operating waste may come in the form of paper, cardboard, cartridges, batteries or domestic waste due to administrative/office/warehouse duties or as wood and scrap metal from maintenance duties. The operation of the site will lead to the production of sanitary wastewater which will be stored and trucked off site accordingly.

Additionally, small amounts of Propane, Butane, and Condensate will be produced as by-products. These will be captured, stored and sold as separate commodities.

The GHG emissions produced by the Project will be limited due to power being supplied by the BC Hydro transmission system. The Project does have a CO_2 stream that is produced. JX LNG is evaluating options for this stream including but not limited to carbon sequestration and storage, sale as a byproduct and venting with appropriate carbon offsets to neutralize the Project.

It is estimated that the total amount of CO_2 emissions for full Project build out (both Phases) will be approximately 99,669 tonnes CO_2e per year. A breakdown of the total of estimated GHG emissions calculations can be found in Appendix C.

The total net estimated emissions is equal to:

Direct GHG Emissions + Acquired Energy GHG Emissions – Avoided Domestic GHG Emissions – OFFSET Measures

Emissions associated with land clearing reflect decay of biomass, which is not reflected in GHG estimates but contributes to the total CO_2e existing site for plant already developed. For the Project , the rail terminal loop area to be cleared assumed as 3.5km^2. Canadian forests are as likely to be a source as a sink therefor no impact was taken into consideration.

14. Public and Environmental Safety

The EA application will provide a summary of potential accidents or malfunctions which could occur in connection with the Project, the potential effect of such incidents on the environment, and mitigation measures that will be implemented as part of the Project design.

Potential accidents or malfunctions could result in release of LNG, flammable liquids, or pressurized gas from ruptured piping or equipment during commissioning or operation resulting in the risk of overpressure, fire, and injury to personnel. Natural gas, the refrigerants used in the liquefaction process, and LNG vapours are flammable in a specific range of fuel to oxygen ratio. Methane, the main component in natural gas and LNG, is flammable in a range of between approximately 5 to 15 percent methane gas to air ratio. In this ratio the mixture would burn if there were an ignition source present. LNG is a cryogenic liquid, meaning it is extremely cold and if spilled or released can cause localized freezing and/or burns on contact with skin. The design, construction and ongoing operation/maintenance of LNG facilities shall meet stringent codes and all locally governed standards & requirements. Hazard Identification, Hazard and Operability Studies, and Safety Integrity Level Studies are conducted during phases of engineering and design. Permitting is done through BCER including reviews of design and risk assessments.

A breakdown of a risks assessment associated with potential accidents or malfunctions are provided in the table below:

Table 14-1 Potential Accidents or Malfunctions associated with the Project

Risk ID	Risk Statement	Risk Description
1	LNG Spilling	LNG is very cold and can immediately vaporize when exposed to the environment. Spills can occur during transportation, loading and unloading, or during storage.
2	Cryogenic Burns	Being in contact with LNG or its cold equipment is possible at all stages of operation, and if not handled with care, malfunctions may occur and can cause severe cryogenic burns to personnel.
3	Failure of cryogenic piping	Cryogenic piping used to transport LNG can experience failures due to corrosion, stress, or other factors. A rupture or leak in any piping can lead to LNG releases.
4	Failure to detect leaks of cryogenic liquids	Leakage detecting systems are programmed to monitor for LNG leaks, and failure of monitoring systems can result in potential safety hazards.

Risk ID	Risk Statement	Risk Description
5	Fires and Explosions	LNG is flammable and can easily catch fire and cause explosions if an ignition source existed at any point. This risk exists during all stages of operation including transportation, storage, and handling.
6	Storage tanks Rupturing	Rupturing in storage tanks can be caused by many reasons, including equipment failure, structural weaknesses, or external impacts.
7	Accumulation and Ignition of Boil-Off Gas	LNG storage tanks experience some amount of boil-off gas generation due to heat leakage. If this gas is not dealt with in a proper manner and vented, it may accumulate and create hazardous unsafe situations.
8	Failure of LNG Pumps and Compressors	Malfunctions or operational failure in pumps and compressors can cause issues and interrupt the process of transferring LNG.
9	Human Error	Human error can lead to accidents in various stages of LNG operations, including loading, unloading, and maintenance.
10	Natural Disasters	Natural disasters such as earthquakes, storms, floods, or other possibilities of force majeure can damage LNG facilities and disrupt operations.
11	Maritime transport Collisions	LNG tankers can collide with other structures during the process of maritime transportation.
12	Structural Failures	Structural components such as supports, bridges, or loading arms in LNG facilities may fail during different stages of operation, including the loading and unloading processes.
13	Failure of Pressure Relief Valves	Pressure relief valves are crucial safety devices to prevent overpressure in tanks and other equipment, and could possibly fail due to several reasons, including corrosion, wear and tear, and improper maintenance.
14	Operational Upset	Operational conditions can suddenly change, and if not managed and addressed properly, can cause accidents.

In all of these activities, prevention is a key focus; however, at the same time emergency management plans are also developed to develop response plans according to industrial codes / standards and in partnership with local emergency responders. Training, drills, and practice emergency exercises are conducted with emergency responders to ensure response plans are effective and ready throughout the life of the Project.

15. Alternative Means of Carrying Out the Project

When considering the Project, alternative means of executing it will be explored. This will include a range of factors, such as the use of best available technologies, the technical and economic feasibility of different approaches, and the potential effects, risks, and uncertainties associated with those alternatives. Various factors such as lifecycle cost, effectiveness, and environmental impact will be evaluated.

Current alternatives for review include site location/selection, power supply, pipeline options, technology/equipment selection, construction processes and management of operations. The best available technology for the maximization of operational efficiencies and the reduction of Project emissions will be assessed. This will be balanced with Project cost economics and mitigating Project risks and uncertainties. The assessment of these alternatives will be informed by engagement with local Indigenous communities, regulators and the public.

The Project design will accommodate measures to avoid or mitigate negative impacts of the Project.

Current major Project decisions include:

Fresh Water vs Air Cooling

The process of cooling natural gas to form LNG requires the waste heat to be dissipated into the surrounding environment. Two primary cooling technologies for the Project are freshwater cooling and air cooling. Freshwater cooling towers are the preferred method for dissipating excess process heat in many industrial facilities. For LNG production, freshwater would be pumped through heat exchangers to absorb the heat from the liquefaction process, and the resulting warm water would be sent to a cooling tower. These systems require a substantial freshwater supply and if the required volumes are not readily available, then this option for cooling would likely not be considered further.

Air cooling is the second cooling technology option assessed. Air coolers use air as the cooling medium with warm gas from the liquefaction process sent through a heat exchanger cooled by ambient air. Air cooling has relatively low capital costs and is a well-proven technology in industrial applications. However, the efficiency of air cooling is generally lower than that of freshwater cooling methods. Due to the limited availability of freshwater in the Project Area, air cooling was determined to be the most feasible cooling technology option for the Project.

Electric vs Gas Drive Equipment

Electric-powered gas treatment and liquefaction equipment is selected because it offers several potential benefits over the more common gas-fired power generation system used in many LNG facilities. Firstly, if the electric power is generated from a Hydro-Electric source such as BC Hydro, then the energy produces lower greenhouse gas emissions compared to gas-fired power generation.

Secondly, the use of electric power for the gas treatment and liquefaction equipment offers better flexibility and control compared to gas-fired power generation. Electric motors can quickly respond to changes in demand, providing better reliability and reduced downtime. This is critical in LNG facilities as any downtime can result in significant financial losses. Additionally, electric-powered equipment is easier to maintain, requiring less maintenance compared to gas-fired equipment.

Finally, the use of electric power is expected to result in lower operating costs over the lifetime of the Project. Although the upfront capital costs of installing electric-powered equipment are

higher than gas-fired equipment, the lower operating costs over the lifetime of the equipment are expected to offset these initial costs. The use of electric power can also reduce the risks associated with the volatility of gas prices, which can affect the operating costs of gas-fired power generation systems. Overall, the use of electric-powered equipment offers significant potential benefits for the Project.

Plant Siting

The area identified for the plant is larger than required. Through investigative techniques such as geo technical studies, JX LNG will determine the best options for placement of the plant equipment. Through consultation with local stakeholders and indigenous groups JX LNG will further determine the ideal placement of the equipment for the plant.

Pipeline and Powerline Routing

The routing for the pipeline and powerline are very preliminary. The exact routing will be determined through field studies of the areas, consultation with local stakeholders including indigenous groups, and agreement with the third party tie ins; Enbridge and BC Hydro.

16. Alternative To of Carrying Out the Project

The alternative to the Project will be executed and explored as well. An LNG facility at a different location such as the coastal BC, with a different proponent or different company led economic opportunity could lead towards three major objectives of the Project. Those objectives are to:

- Enable the export of rich natural gas deposits of the Western Canadian Sedimentary Basin (WCSB) to serve the growing demand for natural gas across the globe.
- Create direct and indirect benefits for Indigenous parties involved and overall citizens of BC and Alberta.
- Assist all parties involved in meeting objectives to address global climate change due to GHG emissions.

During this time, no alternatives to the Project have been identified. Currently, this Project is the most technical and economically feasible and will contribute towards each of the major objectives listed above. Ultimately, the decision for the Project location to take place in the central interior region pertains to reducing impact and effects that go along a coastline location.

17. Effects of the Environmental on the Project

Climate change has the potential to affect the frequency and intensity of severe weather events in the Project area. The following events have the potential to affect the Projects physical infrastructure:

- Seismic events.
- Flooding.

- Hailstorms.
- Lightning.
- Wildfires.
- Erosion.

Geotechnical studies are planned during the early stages of the Project. During these studies, the geotechnical stability of the Site will be documented. Appropriate mitigations to severe weather events will be incorporated into Project design and plans.

18. Land and Water Use

Figure 3 depicts the proposed ground disturbance required for the LNG facility, rail area, access road, powerline and the pipeline. The LNG facility site will be located on provincial crown land, and the pipeline will be constructed on private land. No components of the Project are sited on federal or Indian Reserve lands.

This site is located approximately 30 km north of central Prince George and is situated between the Hart Highway 97 North and the Canadian National Railway (CNR). The Salmon River lies approximately 1 to 2 km to the west of the site while the Fraser River lies approximately 3 km east of the site. There is a 70-100m elevation change between the site and both the Fraser and Salmon Rivers.

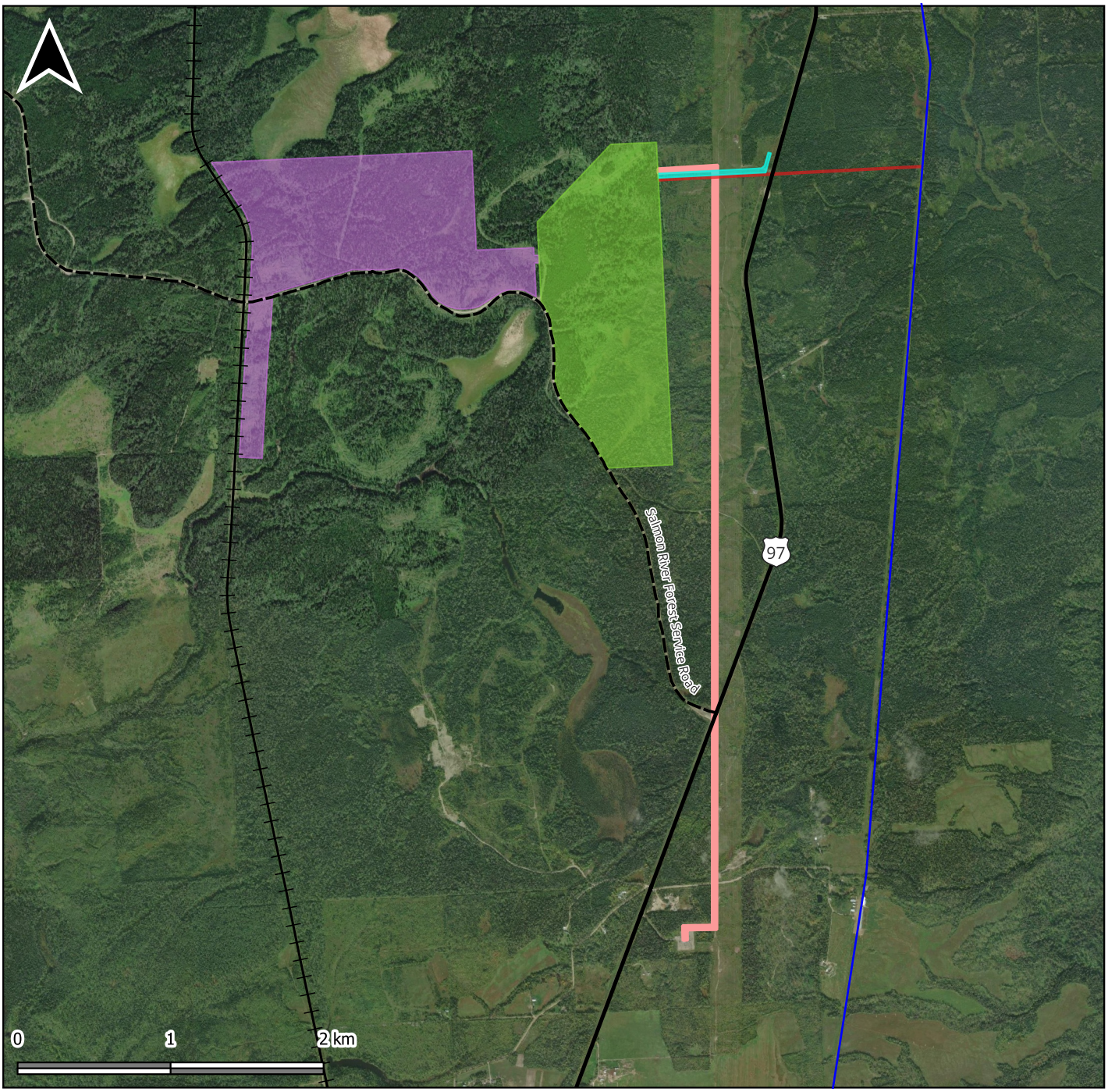
The Canada Land Inventory rates Agricultural capability on the site as 20% Class 5 and 80% Class 7 with stoney soil deficiencies. There are some areas with varying degrees of grade change, however these should not provide a deterrent to the development of the site. These changes in grade are minimal and take place over large distances. Some of the sites are located within the Provincial Forest, which would require amendment during the Crown Land disposition process.

This site is accessed directly from Highway 97 or 6 Km south from the Salmon Valley Forest Service Road which bisects the area. The Forestry Road is well maintained and is in good condition year-round. The major 500KV BC Hydro line runs east of the property. The CN Rail passes along the west portion of the site at a grade which will make railway extension into the site relatively easy. There does not appear to be any topographical constraint which would limit the extension of a spur throughout this site. The Integrated Land Management Bureau of the Province of BC has secured approval from the Agricultural Land Commission for a line extension into the potential industrial area. This site is located on a plateau and as such reduces the potential for inversions and calm air conditions to cause pollution to build up.

The Project site is zoned as Rural 2 and Rural 3 under the RDFFG Zoning Bylaw 2892, 2014 and designated for Heavy Industrial Use under the RDFFG Official Community Plan for the Crooked River – Parsnip Area.

Portions of the Project site is located within the Agriculture Land Reserve as shown in Figure 4, however development in the area is supported by the Land Commission, and there is an active approval for non-farm use in place for these lands.

Water use for The Project construction and operations is expected to be quite low and will be trucked in as needed.

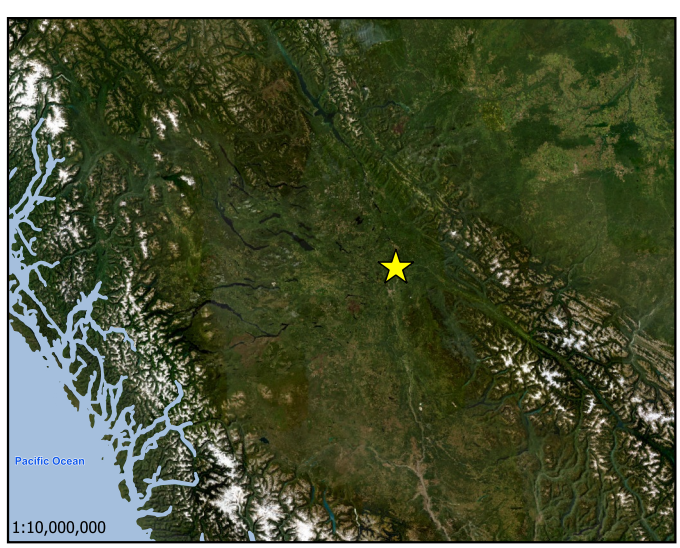


JX LNG Canada

JX LNG Canada
Summit Lake PG LNG Project
Project Location

Legend

- Highways
- Resource / Recreation Road
- Rail
- LNG Plant Area
- Storage / Rail Loading Area
- Access Road Right of Way
- Pipeline Right of Way
- Power Line Right of Way
- Enbridge Westcoast Pipeline



Coordinate System: NAD 1983 BC Environment Albers
Data Sources: DataBC, Government of British Columbia, Natural Resources Canada, JX LNG Canada

Figure 3 – Project Area Map

CROSSING / REFERENCE DRAWINGS:			
Crossing No.	Owner	Description	Location
1	BC HYDRO	TRANSMISSION LINE - UNKNOWN WIRES - HEIGHT: UNKNOWN	N = 6004608.3, E = 525268.9

ROAD SEGMENT TABLE:											
Seg No	Length	Max Width	Existing Clearing	New Cut	Total Area	Start Location	End Location	Start NAD 83 UTM Zone 10	End NAD 83 UTM Zone 10	Land Type
1	815.0	30.0	2.100 ha	0.240 ha	2.340 ha	c-29-I, 93-J-2	d-30-I, 93-J-2	N = 6004723.3 E = 525529.5	N = 6004604.6 E = 524796.2	Private & Crown

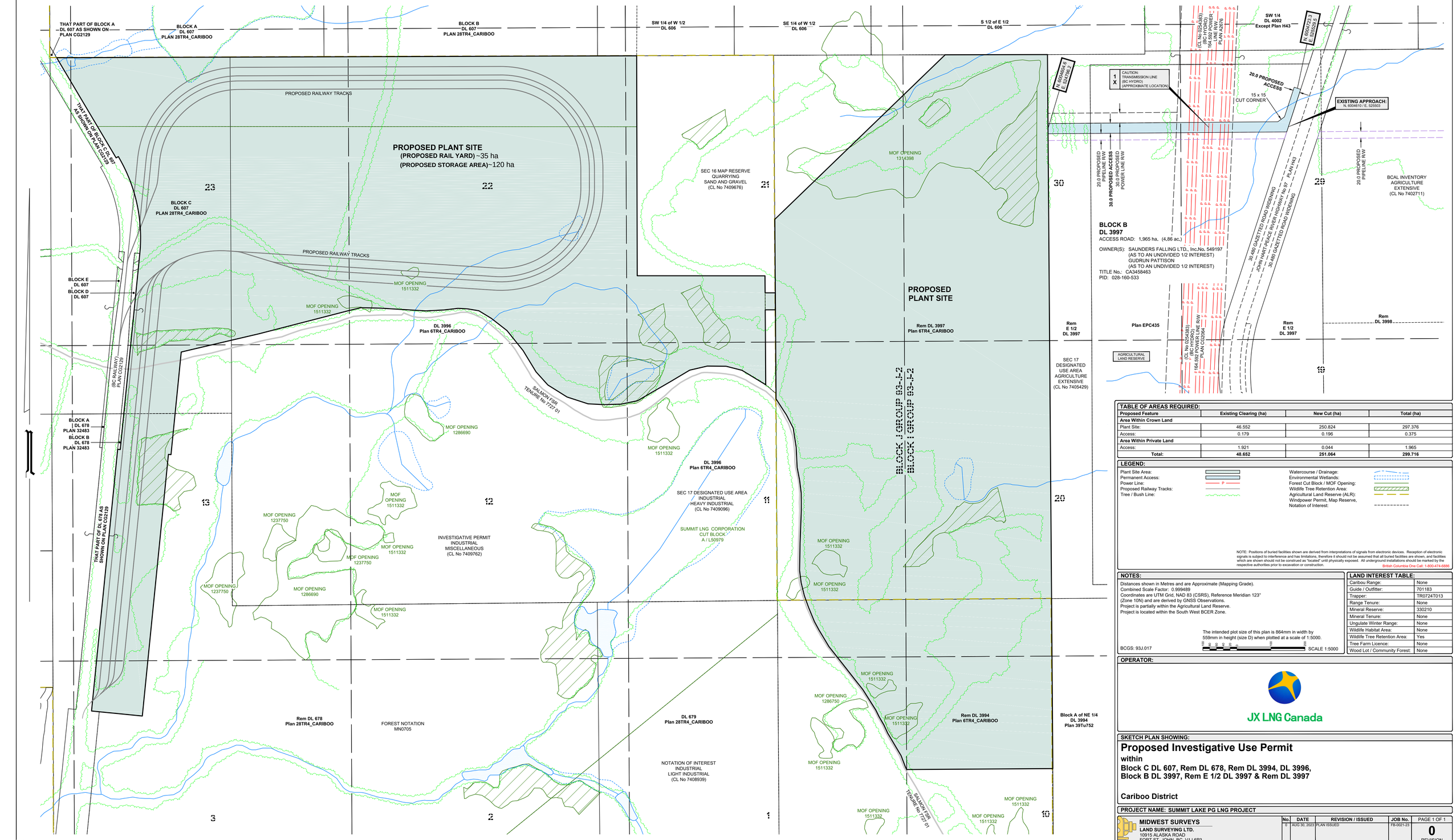


TABLE OF AREAS REQUIRED:			
Proposed Feature	Existing Clearing (ha)	New Cut (ha)	Total (ha)
Area Within Crown Land			
Plant Site:	46.552	250.824	297.376
Access:	0.179	0.196	0.375
Area Within Private Land			
Access:	1.921	0.044	1.965
Total:	**48.652**	**251.064**	**299.716**

LEGEND:

Plant Site Area:
Permanent Access:
Power Line:
Proposed Railway Tracks:
Tree / Bush Line:
Watercourse / Drainage:
Environmental Wetlands:
Forest Cut Block / MOF Opening:
Wildlife Tree Retention Area:
Agricultural Land Reserve (ALR):
Windpower Permit, Map Reserve, Notation of Interest:

NOTE: Positions of buried facilities shown are derived from interpretations of signals from electronic devices. Reception of electronic signals is subject to interference and has limitations, therefore it should not be assumed that all buried facilities are shown, and facilities which are shown should not be construed as "located" until physically exposed. All underground installations should be marked by the respective authorities prior to excavation or construction.
British Columbia One Call: 1-800-474-6886

NOTES:

Distances shown in Metres and are Approximate (Mapping Grade).
Combined Scale Factor: 0.999489
Coordinates are UTM Grid, NAD 83 (CSRS), Reference Meridian 123° (Zone 10N) and are derived by GNSS Observations.
Project is partially within the Agricultural Land Reserve.
Project is located within the South West BCER Zone.

The intended plot size of this plan is 864mm in width by 559mm in height (size D) when plotted at a scale of 1:5000.

BCGS: 93J.017 SCALE 1:5000

LAND INTEREST TABLE:	
Caribou Range:	None
Guide / Outfitter:	701183
Trapper:	TR0724T013
Range Tenure:	None
Mineral Reserve:	330210
Mineral Tenure:	None
Ungulate Winter Range:	None
Wildlife Habitat Area:	None
Wildlife Tree Retention Area:	Yes
Tree Farm Licence:	None
Wood Lot / Community Forest:	None

OPERATOR:

JX LNG Canada

SKETCH PLAN SHOWING:

Proposed Investigative Use Permit

within

Block C DL 607, Rem DL 678, Rem DL 3994, DL 3996, Block B DL 3997, Rem E 1/2 DL 3997 & Rem DL 3997

Cariboo District

PROJECT NAME: SUMMIT LAKE PG LNG PROJECT

MIDWEST SURVEYS
LAND SURVEYING LTD.
10915 ALASKA ROAD
FORT ST. JOHN, BC, V1J 6P3
TEL: 250-785-3902

No.	DATE	REVISION / ISSUED	JOB No.	PAGE 1 OF 1
1	AUG 30, 2023	PLAN ISSUED	FB-0021-23	0 REVISION

SURVEYED BY: | CAL'D BY: BAT | DRAWN BY: SE | FB-0021-23-J1-SKE-1

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Figure 4 – Land Use Map

19. Land Use Plans

The Project site is located within the Regional District of Fraser-Fort George and subject to Zoning Bylaw No. 2892 as well as the Official Community Plan. The site is not subject to any Indigenous land use plans, or other municipal or local government plans.

As described in the Crooked River – Parsnip Official Community Plan, the Project occupies an area intended for Industrial Land Use. As per RDFFG bylaws, the land is zoned as Rural and will require a rezoning permit.

There is an active non-farm use approval from the Regional District of Fraser-Fort George which is honored by the Agricultural Land Commission. There is a portion of the land that is Forestry and will require an amendment of the Crown Land.

20. Project Interactions

A comprehensive effects assessment will be prepared for the application of the Project, following the Readiness Decision. Detailed methodology and rationale used to determine if the Project is expected to have significant adverse cumulative effects on the biophysical environment, human environment, and Indigenous interests.

The EAC Application and the Effects Assessment will be informed by current land use plans, baseline studies, historical information, and other sources of data that are relevant to the Project Area.

The proponent has met with local stakeholders and Indigenous groups to inform the development of the Project during the Early Engagement phase of the Project. In addition, they will apply for an investigative use permit to conduct geotechnical surveys to support the design of the Project.

21. Federal Funding and Lands

This Project does not anticipate requiring the use of federal funding, lands, or reserves for the purpose of carrying out the Project.

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Appendix A: Tables of Concordance with Provincial Requirements

Information Requirement	Document Section	Tables & Figures
Executive Summary		
A plain language summary of the IPD that is clear and concise	Executive Summary	
General Information and Contacts		
Project name	Section 1	
Project location	Section 1 and 6.1	Figure 1, 3 and 4
Project industrial sector and type	Section 1 and 3.1	
Proponent name, mailing address, phone numbers, email address and website URL	Section 1.2	Table 1-1
Purpose and Rationale		
A general rationale for why the project has been proposed	Section 2	
Potential project benefits.	Section 2.1	
Legislative and Regulatory Context		
The type and size of the project, with specific reference to EA Regulatory Triggers [e.g., the BCEAO Reviewable Project Regulations and Impact Assessment Act (Canada) thresholds];	Section 3 and 3.1	
A list of anticipated authorizations and permits;	Section 3.3	Table 3-2
Consider the requirements of any applicable agreements between the Province and Indigenous nations, including treaties;	Section 3.4	
Consider the requirements of any applicable international agreements between the Province and state or federal governments;	Section 3.5	
A description of relevant government policies that the project may not be compatible with;	Section 3.6	
Proposed timing for conducting the provincial EA and federal EA, if applicable.	Section 3.2.1	Table 3-1
Project Status and History		
Project history, including past ownership;	Section 4	
State if it is a new project or a modification to an existing project;	Section 4	
A list of any existing permits or tenure in place;	Section 4	
A description of any previous proposal(s) for the project or a similar proposal and the outcomes and history of the proposal(s), if applicable	Section 4	
If the project was previously declined or terminated, a description of how this proposal differs and how the issues for which the previous proposal was declined or terminated have been addressed.	Section 4	
Project Timing		
A list of proposed project phases (e.g. construction, operation, decommissioning, and reclamation) and the anticipated timing and duration of each phase	Section 5	Table 5-1
Include any known seasonal timing constraints.	Section 5.1	
Project Location, Activities and Components		
A description of the proposed project's location in a local and regional context, including proximity to communities or locations of interest to the public, government, or Indigenous nations, and key designated or protected areas such as parks or Wildlife Habitat Areas	Section 6.1 and 11.2	
Proposed on and off-site facilities and equipment;	Section 6.3	Table 6-1
A brief description of proposed activities related to processing, transportation and/or shipping of materials to/from the site;	Section 6.2	Table 6-1
A description of any other project(s) that are needed for the proposed project to proceed and be feasible (e.g. a pipeline would be needed for an oil and gas facility to proceed);	Section 6.4	
A description of the work that has been conducted to arrive at the proposed project as described in the IPD;	Section 6	
A list of design or siting constraints that are flexible and those that are not flexible;	Section 6	
A list of other design or siting options that may be considered; and	Section 6 and 14	
Anticipated daily and annual maximum production or operational capacity of the project (if applicable)	Section 6	
Indigenous Nation Interests		
A description of the proximity of the proposed project to Indigenous nations' territory, communities, locations of interest, Indian Act reserve lands, lands subject to a Treaty, or other relevant agreements;	Section 7 and 8	Figure 2
A description of potential project interactions with any identified Indigenous interests;	Section 7 and 20	

Information Requirement	Document Section	Tables & Figures
A description of alignment of the IPD with Indigenous nation laws, customs and policies; and	Section 7 and 8	
A list of any issues, concerns, or questions raised by Indigenous nations during engagement on the draft IPD or other information shared in relation to the proposed project	Section 9	Table 7-1
Biophysical Environment		
A description of the natural setting characteristics, including coastal, foreshore, riparian, mountainous, watersheds, and agricultural land;	Section 10.1	
A description of disturbed area characteristics, including: brown field; contaminated site(s), and any history of development;	Section 10.1	
Identification of sensitive or vulnerable species, ecosystems, and/or habitats in the project area; and	Section 10.1.5, 10.1.6, and 10.1.7	Tables 10-1, 10-2 and 10-3
A list of existing data, including monitoring reports, previous EAs, regional studies, and/or other sources of information that support the understanding of the existing biophysical conditions.	Section 10	
Human and Community Wellbeing		
A description of the proposed project's proximity to local communities, including seasonal or temporary residences;	Section 12	
Identification of the local governments within which the proposed project is located or where effects may occur;	Section 12	
A description of the proposed project's proximity to important or sensitive community and natural places such as: municipal boundaries, parks, schools, hospitals, housing, water supplies, roads, railways, and protected and recreational areas;	Section 12	
A list of existing data, including monitoring reports, previous EAs, regional studies, and/or other sources of information that support the understanding of the existing human environment conditions;	Section 12	
Identification of any sensitive or vulnerable economic, social, heritage, or health values that may be affected by the project; and	Section 12.6, 12.7 and 12.8	
A preliminary understanding of the anticipated size of the workforce for each project phase, where the workforce will be drawn from, and where the workforce will be housed. Refer to the Human and Community Wellbeing Guidelines for further information.	Section 12.3	
Emissions, Discharges, and Waste		
A high-level outline of anticipated direct project waste and emissions to land, air, and water, including estimated greenhouse gas (GHG) emissions.	Section 13	
A description of proposed mitigation measures and/or project design changes to address emissions, including GHGs.	Section 13	
Public and Environmental Safety		
A description of potential malfunctions or accidents associated with the industry or specific to the proposed project and how they will be managed.	Section 14	Table 14-1
Alternative Means of Carrying out the Project		
A high-level description of the alternative options for the proposed project, including a rationale for the preferred option that demonstrates how positive and negative effects and/or issues raised during engagement have been considered;	Section 15 and 16	
The alternative means of undertaking the proposed project may include information related to:	Section 15 and 16	
(a) the use of best available technologies;	Section 15 and 16	
(b) the technical and economic feasibility;	Section 15 and 16	
(c) the potential effects, risks and uncertainties of those alternatives;	Section 15 and 16	
(d) the preferred option and a rationale for this preference; and,	Section 15 and 16	
(e) the different options for the project location, project routing, technologies, mitigation, or design.	Section 15 and 16	
Effects of the Environment on the Project		
An overview of potential effects of natural hazards or processes and climate change on the proposed project.	Section 17	
Land and Water Use		
An outline of the anticipated project footprint and proposed area of disturbance;	Section 18	Figure 4
A description of the land required for the proposed project, including whether the project is located on private lands, provincial or federal Crown lands, or Indian Reserve lands;	Section 18	
Include the applicable zoning, Agriculture Land Reserve designation, land and resource management plans, and other land use designations (e.g. parks and protected areas) and the legal land descriptions and/or tenure numbers of those lands, if known;	Section 18	Figure 4

Information Requirement	Document Section	Tables & Figures
A description of past uses of the land required for the proposed project, including whether the site has been previously developed	Section 18	
A description of water requirements for the proposed project, if applicable, and the proposed source of water	Section 18	
Land Use Plans		
A list of all relevant land use plans, including provincial land use plans, Indigenous land use plans, and relevant municipal or local government plans;	Section 19	
An identification of any rezoning or changes in land designations that would be required for the proposed project.	Section 19	
Project Interactions		
A description of potential interactions between the proposed project and the biophysical and human environments, including Indigenous interests. It may be helpful to present this information in a table format, refer to the Effects Assessment Policy for examples of interaction tables;	Section 20	
A summary of any biophysical feasibility studies undertaken that may be pertinent to understanding potential interactions, if applicable;	Section 20	
A list of any activities proposed to be undertaken during the Early Engagement period to inform the development	Section 20	

Appendix B: Tables of Concordance with Federal Requirements

Information Requirement	Document Section	Tables & Figures
Part A - General Information		
The project's name, type or sector and proposed location.	Section 1 and 6.1	Figure 1, 3 and 4
The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.	Section 1.2	Table 1-1
A summary of any engagement undertaken with any jurisdiction or other party, including a summary of the key issues raised and the results of engagement and brief description of any plan for future engagement.	Section 7	Table 7-1, 7-2 and 7-3
A list of Indigenous groups that may be affected by the carrying out of the project, a summary of any engagement undertaken with the Indigenous peoples of Canada, including a summary of key issues raised and the results of the engagement, and a brief description of any plan for future engagement.	Section 7 and 8	Figure 2
Any study or plan relevant to the project that is being or has been conducted of the region where the project is to be carried out, including any Regional Assessment carried out under the Impact Assessment Act, or by any jurisdiction including by or on behalf of an Indigenous governing body, where the study or plan is available to the public.	N/A	
Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the Act.	N/A	
Part B - Project Information		
A statement of purpose of and need for the project, including any potential benefits.	Section 2	
The provisions in the schedule to the Physical Activities Regulations describing the project, in whole or in part	Section 3.2	
A list of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation, decommissioning of the project.	Section 6	
An estimate of maximum production capacity of the project and a description of the production processes to be used.	Section 6	
The anticipated schedule for the project's construction, operation, decommissioning, and abandonment, including any expansions of the project.	Section 3 and 5	Table 3-1
A list of potential:		
(a) alternative means that the proponent is considering and that are technically and economically feasible, including through the use of best available technologies; and,	Section 15	
(b) alternatives to the project that the proponent is considering and that are technically and economically feasible, and directly related to the project.	Section 16	
Part C- Location Information and Context		
Provide a description of the designated project's proposed location including:		
(a) Proposed geographic coordinates including, for linear development projects (e.g. pipelines, transmission lines), the proposed locations of major ancillary facilities that are integral to the project, and a description of the spatial boundaries of the proposed study corridor;	Section 6.1	Figure 1, 3 and 4
(b) Site maps produced at an appropriate scale, in order to determine the project's proposed general location and the spatial relationship of the project components.	Section 6	Figure 1, 3 and 4
(c) The legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot. The level of detail should be appropriate for the project type.	Section 6.1 and 18	Figure 4
(d) The project's proximity to any permanent, seasonal or temporary residences and proximity to the nearest affected communities.	Section 12.2	
(e) The project's proximity to land used for traditional purposes by Indigenous peoples of Canada; land in a reserve as defined in subsection 2(1) of the Indian Act; First Nation land as defined in subsection 2(1) of the First Nations Land Management Act; land that is subject to a comprehensive land claim agreement or a self-government agreement; and any other land set aside for the use and benefit of Indigenous peoples of Canada	Section 8 and 12.2	
(f) The project's proximity to any federal lands.	Section 21	
A brief description of the physical and biological environment of the project's location, based on information that is available to the public.	Section 10	
A brief description of the health, social and economic context in the region where the project is located, based on information that is available to the public and/or derived from any engagement undertaken.	Section 12	
Part D: Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects		
A description of any financial support that federal authorities are, or may be, providing to the project.	Section 21	
A list of any federal land that may be used for the purpose of carrying out the project.	Section 21	
A list of any jurisdictions that have powers, duties or functions in relation to an assessment of the project's environmental effects.	Section 3 and 12	
Part E: Potential Effects of the Project		
A list of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:		
(a) fish and fish habitat as defined in subsection 2 (1) of the Fisheries Act;	Section 11	Table 11-1

Information Requirement	Document Section	Tables & Figures
	Section 10.1.7	Table 10-3
(b) aquatic species, as defined in subsection 2 (1) of the Species at Risk Act (marine plants); and	Section 11 Section 10.1.7	Table 11-1 Table 10-3
(c) migratory birds, as defined in subsection 2 (1) of the Migratory Birds Convention Act, 1994.	Section 11 Section 10.1.6	Table 11-1 Table 10-2
A list of any changes to the environment that, as a result of carrying out the project, may occur on federal lands, in a province other than the province in which the project is proposed to be carried out; or, outside of Canada.	N/A	
With respect to the Indigenous peoples of Canada, a brief description of the impact—that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment—on physical and cultural heritage, the current use of lands and resources for traditional purposes and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada	Section 9	
A brief description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with the Indigenous peoples of Canada.	Section 9	
An estimate of any greenhouse gas (GHG) emissions associated with the project.	Section 13	Appendix C
A list of the types of waste and emissions that are likely to be generated - in the air, in or on water and in or on land - during any phase of the project.	Section 13	
Part F: Summary		
A plain-language summary of the information in parts A to E is required in English and in French.	Executive Summary	

Appendix C: Emissions Calculations

Table 0-1 – Preliminary Estimates of Annual Direct Energy GHG Emissions for all Phases

Project Phase	Duration (years)	Emission Sources	Emissions (tonnes per year)				Percentage of BC Emissions	Notes
			CO_2	CH_4	N_2O	CO_2e		
PHASE 1								
Construction	2 to 3	Land clearing, construction power generation (e.g., diesel),construction equipment and vehicle traffic	1,687.5	0.07	0.43	5,406	0.01%	**1**
Sink Removal		Cleared land for new rail terminal	-	-	-	-	-	**2**
Operations	30	Combustion in acid gas incinerators, direct-fired process heaters as well as vented, flared and fugitive sources.	40,550	0.84	0.17	40,618	0.07%	
Fugitive Emissions	30	Estimated by package type and emission source	1.00	113		3,397	0.01%	**4**
Acquired	30	From Table 0-2	4,656	-	-	4,656	0.01%	
PHASE 2								
Construction	1	Land clearing, construction power generation (e.g., diesel),construction equipment and vehicle traffic	1,687.5	0.066	0.425	1,802	0.01%	
Operations	30	Combustion in acid gas incinerators, direct-fired process heaters as well as vented, flared and fugitive sources.	40,550	0.84	0.17	40,618	0.07%	
Fugitive Emissions	30	Estimated by package type and emission source	1.00	113		3,171	0.01%	
Decommissioning	2	Construction and demolition equipment and vehicles as well as disposal of materials	n/a	n/a	n/a	n/a	n/a	
Emissions Reduction Opportunities								
CO_2 Capture and storage	Future Opportunities will be evaluated as part of FEED							
Fuel Gas Generation to electric	Heating systems will be evaluated on a case by case basis in FEED to replace fuel gas generated heat with Electrical Grid Power							
Avoided Domestic GHG Emissions	Should JX LNG choose to market domestically, LNG can displace heavier hydrocarbon fuels for Domestic offsets. This option, and potential for domestic emissions reduction will be evaluated further in FEED							
					Total	99,669	0.17%	

NOTES:

1 Construction estimates are factored from other similar scale projects.

2 Emissions associated with land clearing reflect decay of biomass, which is not reflected in CO_2, methane (CH_4), or nitrous oxide (N_2O) estimates but contributes to the total CO_2e Existing site for plant already developed. Rail terminal loop area to be cleared assumed as 3.5km^2. Canadian forests are as likely to be a source as a sink - no impact

3 It is assumed that Boil Off Gas from storage will be captured and recycled back to plant inlet for re-liquefaction

4 Boil off gas from production is being consumed in the fuel gas system to minimize GHG impact

5 Assumed 5 PPM NO_X for a typical fired burner unit - per Canadian Emissions Factor. Impact potential of 265 used per IPCC Fifth Assessment Report

6 Methane equivalent assumed at 28 times that of CO_2 per IPCC Fifth assessment report

7 Per Gov Canada Emissions Factors for Natural gas - industrial use for Methane CH_4 = 0.037 g GHG/m^3 and N_2O = 0.033 g GHG/m^3

8 The average annualized construction emissions over a two and one half-year construction period are estimated to be approximately 8,020 tCO_2e/year, or a total of approximately 24,060 tCO_2e (e.g., 3 year) when considering all construction activities. The annualized direct construction emissions will depend upon the construction period duration and sequencing of activities, which are yet to be developed in detail.

9 n/a – insufficient information available for this stage of engineering; however, emissions are expected to be similar to or less than construction.

10 All values rounded to 3 significant figures; numbers may not add due to rounding.

11 It is assumed BC Hydro Grid Connection Sufficient BC Hydro grid power is available to meet the maximum electrical power requirement for Project operations.

12 BC GHG total from 2021 is 59,400,000 t CO_2e from *National Inventory Report 1990-2021* (ECCC 2023).

13 Annual emissions are estimated to be approximately 99,669 tCO2e/year.

14 The Greenhouse Gas Industrial Reporting and Control Act includes a Schedule of Regulated Operations and Emission Limits with an annual limit of greenhouse gas emissions for Liquefied Natural Gas Operations of 0.16 carbon dioxide equivalent tonnes per tonne of LNG produced (0.16 tCO_2e/tLNG).

15 Estimated emissions intensity for both phases 0.074 tCO_2e/tLNG based on numbers in 13 and 14 above

Table 0-2 – Preliminary Estimates of Annual Acquired Energy GHG Emissions per Phase

Project Phase	Duration (years)	Emission Source(s)	Emissions (tCO_2e/year)	Note
Construction	2 to 3	Electrical power expected to be provided only for power connection for lighting, heating, tools onsite fabrication and electrical work.	7	1
Operations (Base Case)	30	Acquired energy emissions of CO_2, CH_4, N_2O and SF_6 due to full electrical power acquired from BC Hydro grid	4,649	2
Decommissioning	2	Use of electrical equipment during decommissioning will be determined in FEED and addressed in Detailed Engineering	0	

NOTES:

1 Construction and Decommissioning load expected to be equivalent to a 225kW generator running 12 hours /day for duration.

2 7.6 grams of CO_2e per kilowatt-hour (g of CO_2e per kWh) electricity generated in 2020.

3 Additional emissions can occur that are associated with the commencement of operations. At this juncture, these are difficult to forecast and have not been included for the DPD at this early stage. Emissions during decommissioning are expected to be similar to those associated with construction, as both Project phases will rely on similar types of equipment, however, these have not been estimated at this time

Appendix D: Letter of Support from Indigenous Groups

LHEIDLI T'ENNEH - MAIN BAND OFFICE
1041 Whenun Road | Prince George, BC V2K 5X8 | p: (250) 963-8451 or 1-877-963-8451 | f: (250) 963-6954
www.lheidli.ca

Lheidli T'enneh

August 31, 2023.

JX Energy
Suite 900, 717 7th avenue SW
Calgary, Alberta, Canada T2P 0Z3

Attention: *Binyou Dai, Chief Operating Officer*

Dear Mr. Dai,

Lheidli Tenneh First Nation (LTN) would like to inform the Federal and Provincial Government that the Lheidli Tenneh Chief and Council, on behalf of the Lheidli Tenneh membership, has a special interest in the proposed JX LNG Canada Ltd. (the project) as the project is located solely in the unceded and ancestral Territory of the Lheidli Tenneh (see Appendix A).

JX LNG Canada Ltd. is proposing a liquified natural gas (LNG) facility in the Caribou Region of British Columbia. The Project will be located approximately 30 km north of Prince George at the Hart North Industrial Site. The site is located approximately 20 km from Lheidli-T'enneh First Nation Community.

The Project is preliminarily projected to utilize approximately 250 hectares of land. The proposed facility will be constructed in two phases. Phase 1 will produce up to 1.35 million tonnes per year (mtpa) and Phase 2 will produce an additional 1.35 mtpa for a total of 2.70 mtpa. Commercial operations are expected to commence in 2027. As part of the Project, JX LNG Canada Ltd. will construct an approximately 2-kilometre pipeline to deliver natural gas to the facility.

The project is in the early stages, but we believe there can be significant benefits that this project could bring to our region, British Columbia, Canada and the Lheidli Tenneh people. These benefits include a reduction in Greenhouse Gas as LNG produces less CO2 than other fossil fuels. Socio-economic benefits that would include job creation, local economic benefits, new business development opportunities and would also assist the struggling forest industry by providing construction jobs for displaced forest workers. Most importantly, the JX Canada LNG Ltd. facility will have best in class environmental standards and will not directly impact water courses or aquatic life and will produce minimal air emissions.

JX LNG Canada Ltd. understands our relationship must be based on shared values and beliefs of equality and fairness. As a result of these shared principles the Lheidli Tenneh First Nation has considerable value in seeing the JX LNG Canada Ltd. enter the regulatory process for the Federal *Impact Assessment Act* and the Provincial *Environmental Assessment Act.*

Please feel free to contact our offices through our Executive Director, Mr. Joseph Gosnell email executivedirector@lheidli.ca

Sincerely,

On behalf of:

Lheidli T'enneh First Nation

<original signed by>

Authorized Signatory