

**CEDAR  
LNG**



# **Cedar LNG Project**

## **Project Overview**

**MARCH 2022**





## Cedars are the roots to our existence

The Cedar LNG Project will be the first Indigenous-majority-owned LNG export facility in Canada, which will provide unprecedented opportunities for both the Haisla Nation and the region.

Paul Windsor, a well-known Haisla artist was commissioned to design a piece of traditional Haisla art that reflects the charismatic features of Haisla Nation territory while providing guidance to the project team.

The eagle represents the unified vision and balance between the Haisla and the project development partners.

The feather of the eagle represents the shared stake, communication, respect, and liberty of the individuals within the project.

The simplified cedar trees and vibrant green hills / land symbolize the Haisla territory and align with the project name.

The Cedar LNG logo was inspired by key elements of Paul Windsor's art including the cedar trees, the green from Haisla territory, and the ovoid shape.

# Project Partners

The Cedar LNG Project brings together the Haisla Nation and Pembina Pipeline Corporation (Pembina) to develop the Haisla Nation-led Project. The Project is a key element of the Haisla Nation’s economic and social development strategy and will further advance reconciliation by allowing the Haisla Nation to—for the first time ever—directly own and participate in a major industrial development in its territory.



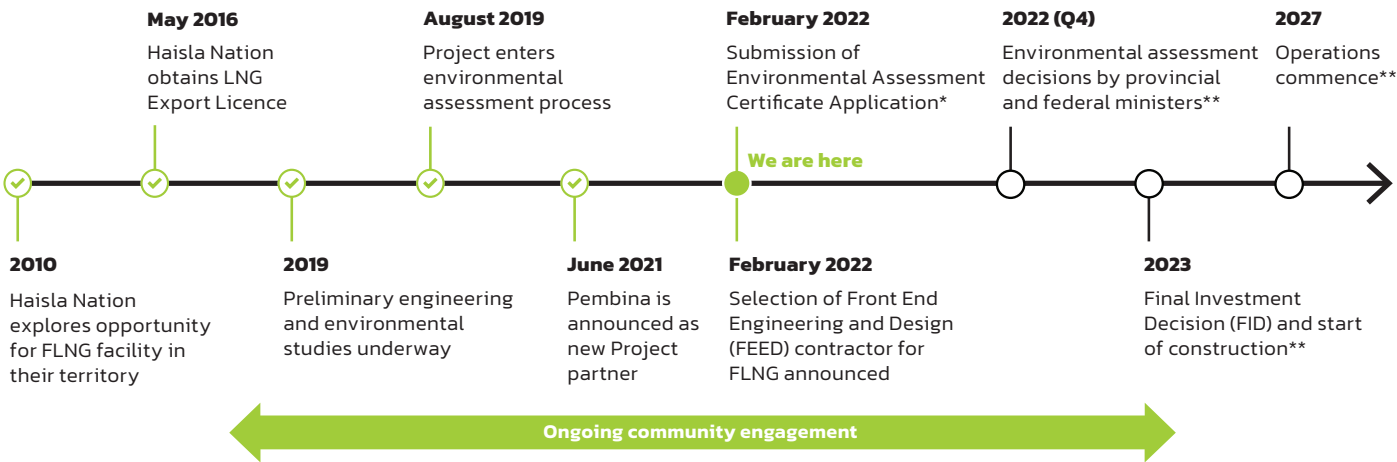
The **Haisla Nation Council** is the band government of the Haisla people. The Haisla Nation’s mission is to build a powerful, prosperous, and proud community, healthy in mind, body, and spirit.



**Pembina** is a leading transportation and midstream service provider that has been serving North America’s energy industry for more than 65 years.

## Guided by our values, from start to end

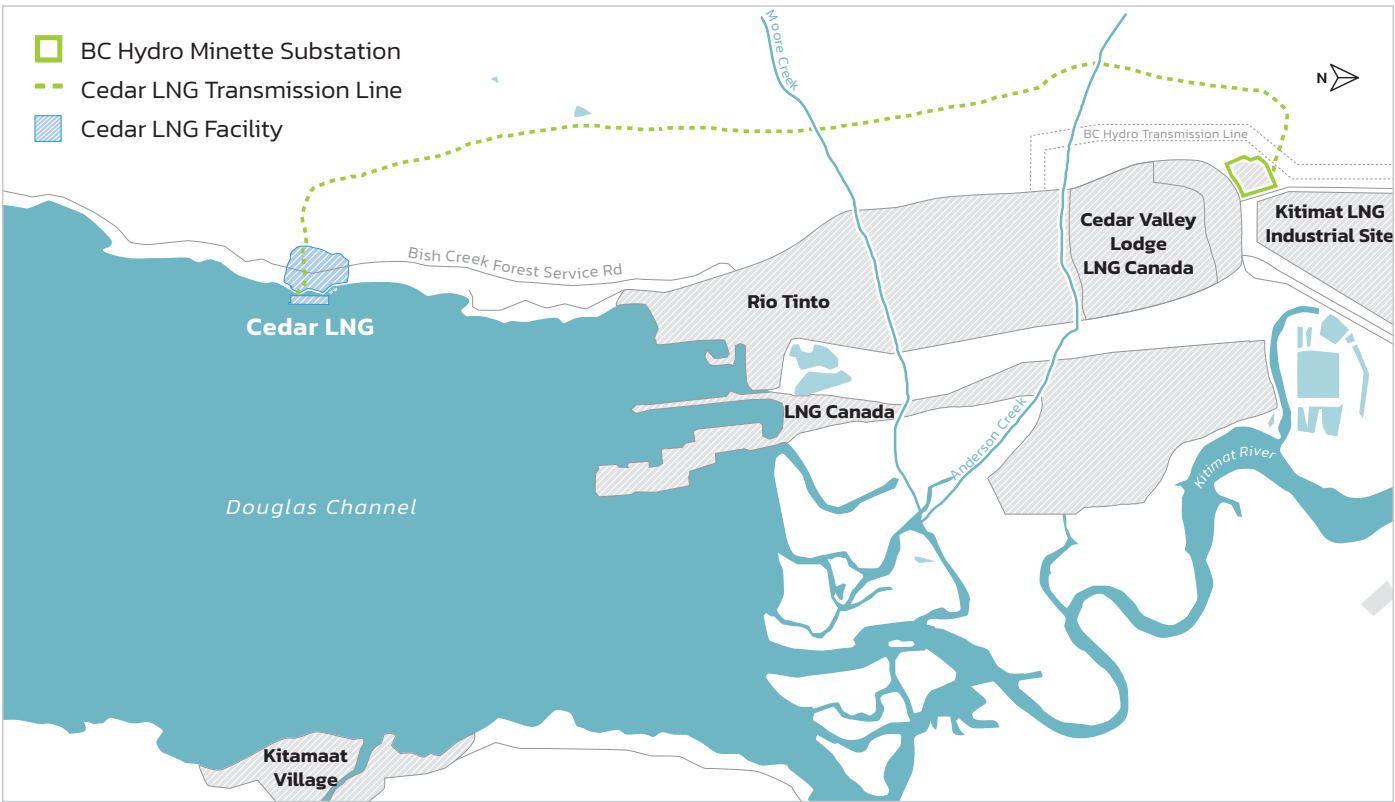
At Cedar LNG, we are committed to delivering a project that meets Haisla values, respects community interests, and delivers prosperity for the long-term. That is why the Haisla Nation have taken their time from the very beginning to understand the LNG industry, engage with their community and the surrounding region, and participate in extensive studies that ensure important environmental, cultural, and community values are protected.



\* Includes consultation (Public Comment Period and Information Session)  
\*\* Subject to change

# Environmental stewardship is at the heart of our project

The proposed Cedar LNG Project has benefitted from over a decade of technical and environmental studies undertaken in the region regarding LNG.



The Cedar LNG Project is located ~10 km southwest of Kitimat town centre and 3 km across Douglas Channel from Kitimaat Village, the home community of the Haisla people.

## Minimizing our environmental footprint

By using an innovative design philosophy that incorporates leading technology and fits the facility into the local environment, Cedar LNG will reduce the impact on the environment and the community:

- Powered by clean, renewable energy from BC Hydro
- Floating design to minimize terrestrial effects
- Use of air cooling to minimize effects on water use and quality
- Location selected to avoid culturally important watercourse and sensitive habitats
- Innovative marine terminal design, with strut mooring system, to reduce effects to the marine environment
- The FLNG facility constructed overseas, which will minimize impacts of construction

# Delivering significant benefits for the Haisla Nation and the region

Cedar LNG is a key element of the Haisla Nation's economic and social development strategy and will further advance reconciliation by allowing the Haisla Nation to—for the first time ever—directly own and participate in a major industrial development in its territory.

Part of the Haisla Nation's commitment for the Cedar LNG Project is to ensure that neighbouring Indigenous Nations and communities also benefit from the Project.



## Construction jobs

- Up to 500 jobs during 4-year construction period
- Jobs will be prioritized for local residents



## Long-term employment

- Up to 100 stable, family supporting jobs will be available during operations
- Jobs will be prioritized for local members



## Local procurement

- Procurement and indirect job opportunities for local businesses, including Haisla-led Joint Ventures and other Indigenous businesses



## Economic activity

- Cedar LNG will generate positive economic growth throughout the Kitimat-Stikine region, and the province



## Skills training

- Cedar LNG will partner with local education and training facilities to develop and maintain a skilled workforce to support Kitimat's LNG industry





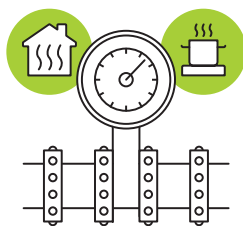


## About the Project

Cedar LNG is a proposed floating liquefied natural gas (FLNG) export facility. The facility will be located on private land owned by the Haisla Nation, which is zoned for industrial and port development by the District of Kitimat's Official Community Plan.

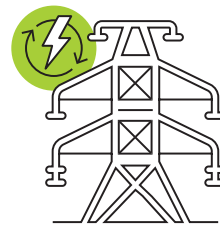
### Project Key Features

Natural gas will be delivered to the Cedar LNG site through an approximately 8.5-kilometre-long pipeline that connects to the Coastal GasLink pipeline. The Cedar LNG facility will treat the natural gas and chill it to  $-162^{\circ}\text{C}$ . The LNG will then be loaded onto an LNG carrier and travel through the Douglas Channel to Hecate Strait, using the existing deep-water shipping lane, to customers in the Asia Pacific.



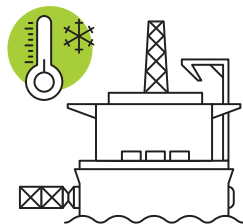
#### Natural Gas Pipeline

An approximately 8.5 km pipeline to connect Cedar LNG to the Coastal GasLink pipeline.



#### Renewable Electricity

A transmission line to connect Cedar LNG to BC Hydro's low-carbon electricity.



#### FLNG Facility

An FLNG facility to produce approximately three million tonnes of LNG per year.



#### LNG Carrier

An LNG carrier will dock at Cedar LNG about once every seven to 10 days.



## What will it look like?

The Cedar LNG facility will be located approximately 10 kilometres southwest of Kitimat town centre and 3 kilometres across Douglas Channel from Kitimaat Village, home community of the Haisla people.

The following renderings illustrate the preliminary design, including land-based infrastructure and the floating facility.

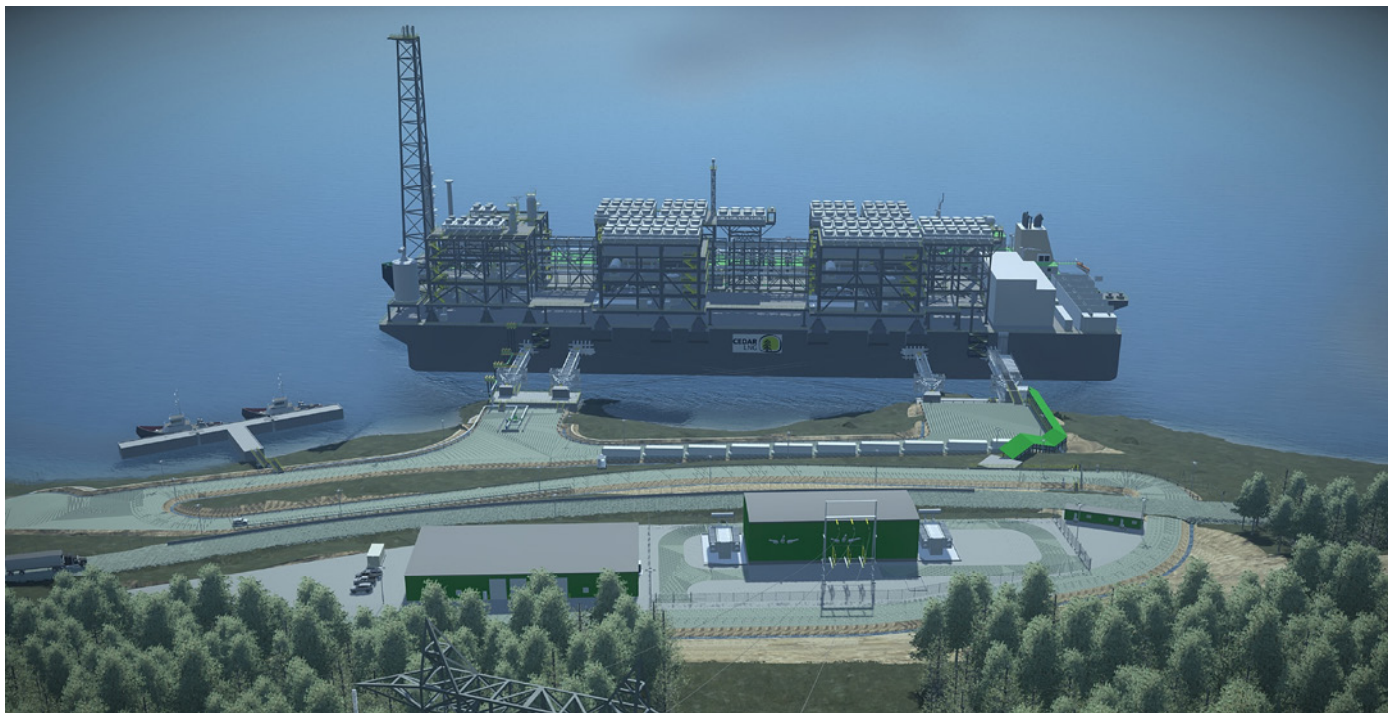


Figure 1 – Artist's rendering: View looking east from above the proposed facility

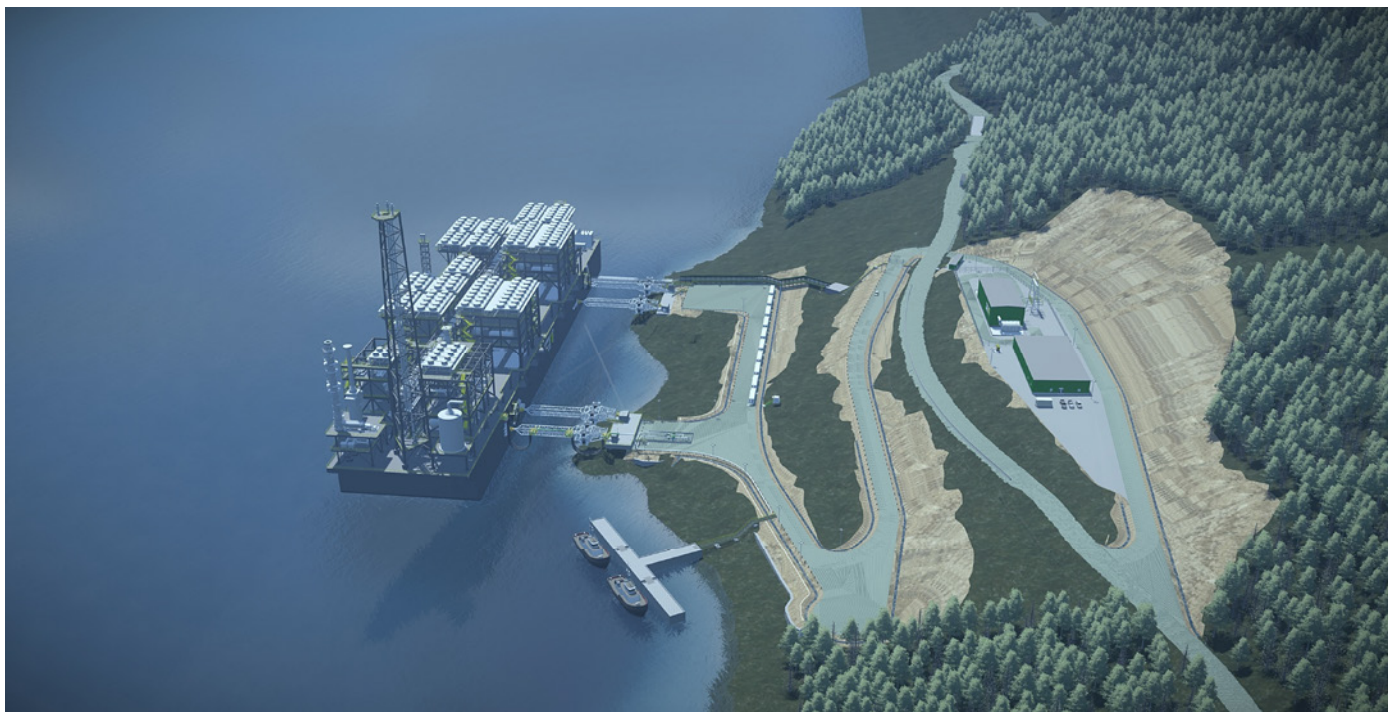


Figure 2 – Artist's rendering: View looking south from above Douglas Channel towards the proposed facility







# Our Environmental Assessment

Cedar LNG submitted its application for an Environmental Assessment Certificate (EAC) to the B.C. Environmental Assessment Office (EAO) in February 2022. This key project milestone comes following detailed studies, engineering, and meaningful engagement with Indigenous Nations and local communities.

Our environmental assessment studied the potential effects of the project on a number of land-based and marine-based valued components and topics, including:

Study area	What was assessed	Study area	What was assessed
Environmental	<ul style="list-style-type: none"><li>• Air Quality</li><li>• Acoustics</li><li>• Freshwater Fish</li><li>• Wildlife</li><li>• Marine Resources</li><li>• Vegetation Resources</li></ul>	Social	<ul style="list-style-type: none"><li>• Infrastructure and Services</li><li>• Land and Resource Use</li><li>• Marine Use</li></ul>
Economic	<ul style="list-style-type: none"><li>• Employment and Economy</li></ul>	Heritage	<ul style="list-style-type: none"><li>• Heritage, including archaeology</li></ul>
Health	<ul style="list-style-type: none"><li>• Human Health</li></ul>	Effects on Indigenous Interests	<ul style="list-style-type: none"><li>• Assessment of Indigenous interests of nine Nations</li></ul>
Greenhouse Gas Emissions	<ul style="list-style-type: none"><li>• Project-related and upstream emissions</li></ul>	Malfunctions and Accidents	<ul style="list-style-type: none"><li>• Potential risks associated with all project phases</li></ul>



# Environmental Assessment Areas of Study

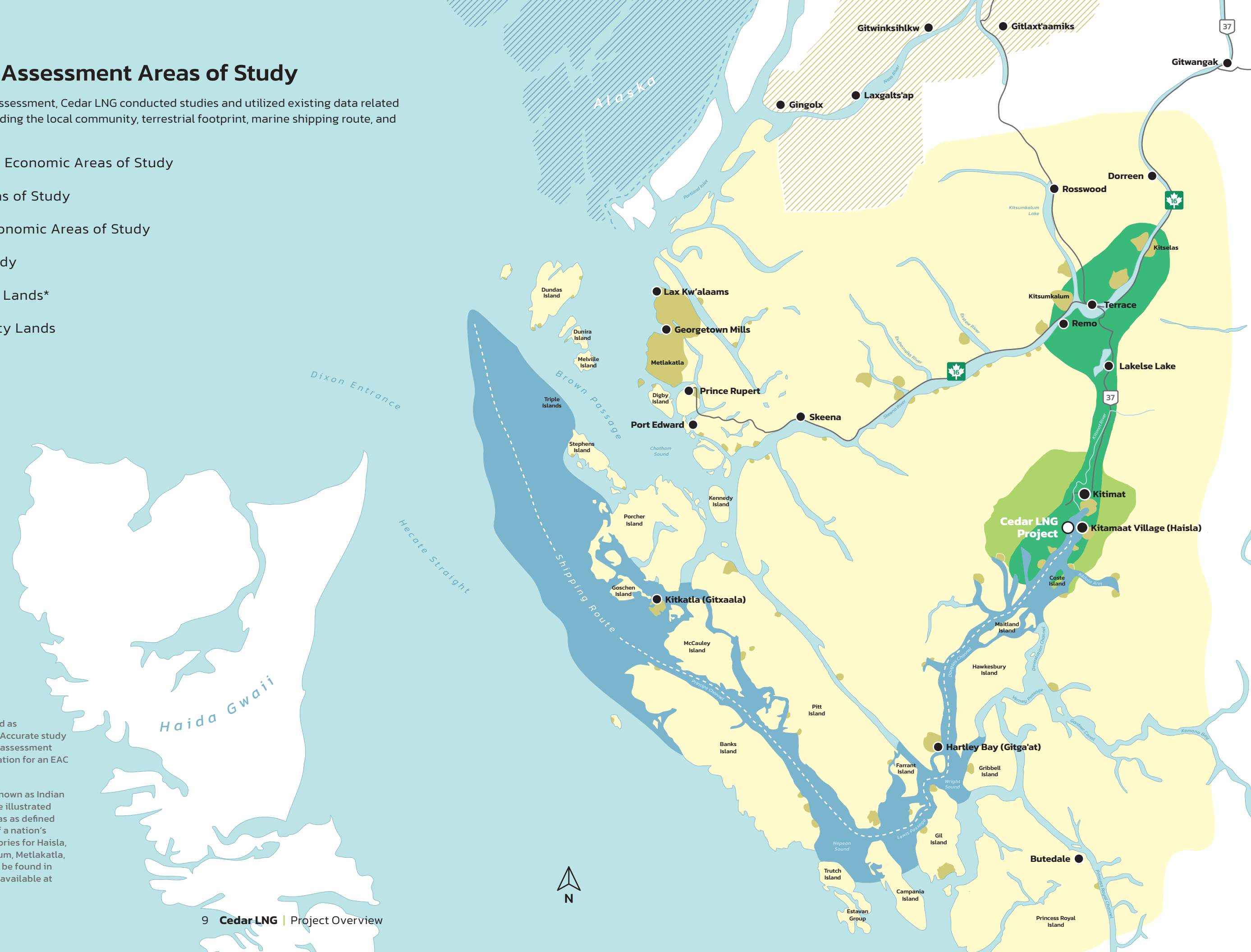
To support its environmental assessment, Cedar LNG conducted studies and utilized existing data related to several different areas, including the local community, terrestrial footprint, marine shipping route, and Indigenous communities.

- Regional Social and Economic Areas of Study
- Environmental Areas of Study
- Local Social and Economic Areas of Study
- Marine Areas of Study
- Indigenous Reserve Lands\*
- Nisga’a Nation Treaty Lands
- Shipping Route

**Edited disclaimer:**

Identified areas of study are illustrated as representative of approximate areas. Accurate study areas for the project’s environmental assessment can be found in the Cedar LNG Application for an EAC available at [projects.eao.gov.bc.ca](https://projects.eao.gov.bc.ca).

\* Indigenous Reserve Lands (legally known as Indian Reservations under the Indian Act) are illustrated as representative of approximate areas as defined by the Indian Act, and a component of a nation’s traditional territory. Traditional territories for Haisla, Gitga’at, Gitxaala, Kitselas, Kitsumkalum, Metlakatla, Lax Kw’alaams and Haida Nations can be found in the Cedar LNG Application for an EAC available at [projects.eao.gov.bc.ca](https://projects.eao.gov.bc.ca).







## What We’ve Heard and What We’re Doing

Cedar LNG understands the importance of understanding and considering community interests and values as we progress the project.

The following table provides an overview of what we have heard to date, and what we have done to consider feedback in our environmental assessment, in our design refinements, and how we will operate the project.

What we’ve heard	What we’re doing
Air Quality	
<p>We understand air quality is an important issue for Indigenous nations and the local community.</p> <p>Specifically, we’ve received questions about potential cumulative effects of air emissions from the Cedar LNG Project when considered with other industry in the area.</p>	<p>Cedar LNG is committed to building and operating an innovative facility with a low emissions profile.</p> <p>Understanding and responsibly managing air emissions is a fundamental priority for Cedar LNG and we have considered the following in our project design and our environmental assessment to understand, and minimize, effects on air quality:</p> <ul style="list-style-type: none"><li>• Use of clean, renewable energy to power the facility</li><li>• Incorporating leading technology to minimize emissions during the life of the project, including shipping</li><li>• Analyzed the potential effects of project air emissions and considered cumulative effects project emissions could have on human health, freshwater fish, and vegetation</li><li>• We bolstered our air quality assessment based on input from Indigenous groups and local communities to assess air emissions from shipping of LNG</li><li>• Ongoing monitoring and reporting of our emissions, as required by regulatory agencies</li></ul> <p>You can read our Air Quality Assessment in <a href="#">section 7.2</a> of the Application to learn more.</p>



## What we've heard

## What we're doing

### Greenhouse Gas Emissions

Greenhouse Gas (GHG) emissions from both the facility and from the source of natural gas upstream has been raised as a community concern

Cedar LNG's majority owner, the Haisla Nation, has studied the LNG industry for over a decade and understands the role natural gas can play in helping to reduce global greenhouse gas emissions, while also securing prosperity of future generations.

The Cedar LNG Project will use clean, renewable electricity from BC Hydro to power the facility, making it one of the lowest carbon intensity LNG facilities in the world, with a GHG intensity that is 50 % lower than the emission limit established in the Province of British Columbia's *Greenhouse Gas Industrial Reporting and Control Act*.

While the upstream development of natural gas is not part of the scope of Cedar LNG's environmental assessment, we are committed to delivering a project that promotes environmental responsibility and sustainable development.

As part of this commitment, we will continue to look for ways to reduce GHG emissions from our operations over the life of the project.

You can read our GHG Emissions Assessment in [section 8.0](#) of the Application to learn more.







## What we've heard

## What we're doing

### Community Way of Life

We recognize some have concerns about the potential impact of an increased, non-local workforce.

Concerns raised to date include potential impacts on the local road network from increased traffic, housing impacts, and health care facilities.

At peak construction, Cedar LNG will require a workforce of up to approximately 500 workers. Our commitment to hiring local workers first will reduce the number of workers from outside the community. Additionally, the construction of the FLNG will take place overseas, minimizing disruption to the local community.

To minimize the strain on the local community, including infrastructure and services, the following measures will be in place:

- House out of town workers in existing lodging, similar to what is currently provided at open lodges in Kitimat
- Provision of amenities such as laundry, recreational facilities, and internet will be provided in workforce lodging to encourage workers to remain on site when not on shift
- Transportation provided to and from work site, and airport to improve safety and minimize impacts on local roads
- On-site first-aid stations, medical rooms with beds and certified first-aid staff to limit the demand on local health services

You can read our Infrastructure and Services Assessment in [section 7.11](#) of the Application to learn more.





## What we've heard

## What we're doing

### Shipping & Marine Use

The Douglas Channel and area off the coast of Kitimat is highly valued by commercial and recreational fishers, as well as Indigenous communities for a variety of uses.

We understand there are concerns about the potential effects of shipping on marine resources and mammals, as well as safety issues related to the increased interactions between LNG ships and others who use the channel.

Some have also asked about the potential effects from wake of the LNG vessels.

Our environmental assessment analyzed a number of potential shipping impacts—from underwater noise, impacts to marine life, wake effects, among others.

We have also consulted with Indigenous Nations along the proposed shipping route and have considered their interests as part of our environmental assessment.

To minimize the potential project effects on marine use, the following measures will be implemented:

- LNG carriers will follow established shipping routes and have BC Coast Pilots on board, who are familiar with local conditions, including the presence of smaller vessels and marine mammals
- All carriers will be escorted by tugs between Triple Islands and Kitimat in accordance with Transport Canada requirements
- Regular communication of project activities will be provided to marine users
- Shipping schedule notifications will be shared with Indigenous Nations

You can read both our Marine Resources Assessment in [section 7.7](#) and our Marine Use Assessment in [section 7.10](#) of the Application for more information.





## What we've heard

## What we're doing

### Safety

While the LNG industry is a highly regulated industry with stringent safety protocols, concerns have been raised regarding the safety of operating a floating LNG facility in Kitimat.

Key interests include potential effects from spills, facility failure, and other scenarios.

The safety of the community and the environment is of paramount importance to us.

Cedar LNG's design philosophy is to fit the Project into the local environment to minimize the impact to the local community and environment. Central to this design philosophy is safety, including the adoption of leading design standards for the safe construction and operation of the Project.

Key safety elements of the Project include:

- Strut mooring system designed to withstand tsunamis, with the ability to move with the changing water levels
- Location of the transmission line high along the ridge to avoid landslides and other geohazards
- Automatic valves that isolate portions of the equipment on the FLNG facility
- A flare stack to depressurize portions of the FLNG facility

We will also work with local first responder groups to reflect local expertise and coordinate emergency response.

You can read our Malfunctions and Accidents Assessment in [section 9.0](#) of the Application to learn more.





## What we've heard

## What we're doing

### Local Benefits

Many community members have asked about the potential benefits of the project, including availability of jobs and training for local residents.

Local businesses have also asked about potential contracting opportunities related to project construction and operations.

Cedar LNG will create jobs, contracting, and other economic opportunities for the local community and region.

To ensure Haisla members, neighbouring Indigenous Nations, and the local community have the ability to benefit from employment, Cedar LNG will:

- Identify partnerships with local education and training facilities in the region to develop and maintain a local, skilled workforce
- Host local community information sessions to share details about what kinds of jobs are available and the training required
- Maintain a database of local workers and businesses to share information with as the project advances, including hiring and contracting

You can read our Employment and Economy Assessment in **section 7.8** of the Application that details project benefits and measures that will be in place to maximize benefits for the local community.

We also encourage you to register **here** to get updates as we move through the planning process, including timing for job fairs and training opportunities.

## Our EAC Application – Reference Guide

For ease of access, the following table provides key study areas and topics, and the corresponding sections of the Application where those topics are discussed in more detail.

Study Area	Corresponding Section in Application (Hyperlink)
Introduction and Executive Summary	<a href="#"><b>Introduction</b></a>
Acoustics	<a href="#"><b>Section 7.3</b></a>
Air Quality	<a href="#"><b>Section 7.2</b></a>
Effects to Current and Future Generations	<a href="#"><b>Section 23</b></a>
Employment and Economy	<a href="#"><b>Section 7.8</b></a>
Freshwater Fish	<a href="#"><b>Section 7.6</b></a>
Greenhouse Gas Emissions	<a href="#"><b>Section 8.0</b></a>
Heritage	<a href="#"><b>Section 7.13</b></a>
Human and Community Well-Being	<a href="#"><b>Section 22</b></a>
Human Health	<a href="#"><b>Section 7.12</b></a>
Infrastructure and Services	<a href="#"><b>Section 7.11</b></a>
Land and Resource Use	<a href="#"><b>Section 7.9</b></a>
Malfunctions and Accidents	<a href="#"><b>Section 9.0</b></a>
Marine Resources	<a href="#"><b>Section 7.7</b></a>
Marine Use	<a href="#"><b>Section 7.10</b></a>
Project Overview	<a href="#"><b>Section 1</b></a>
Vegetation Resources	<a href="#"><b>Section 7.4</b></a>
Wildlife	<a href="#"><b>Section 7.5</b></a>



# There are a number of ways you can get involved:

The B.C. EAO is hosting a 45-day public comment period from February 28 to April 14. As part of this comment period, you are invited to learn more and provide your feedback.

Activity	Details
Participate in an Information Session hosted by the EAO	<b>March 16, 2022</b> <b>5:30 p.m. to 7 p.m. (PDT)</b> To join the Virtual Information Session, please visit: <a href="https://projects.eao.gov.bc.ca">projects.eao.gov.bc.ca</a> , click on 'List of Projects,' then search 'Cedar LNG.'
View the Application	<b>Online:</b> <a href="https://projects.eao.gov.bc.ca">projects.eao.gov.bc.ca</a> (Click on 'List of Projects,' and search 'Cedar LNG Project.')
	<b>In person:</b> Hardcopies are available for viewing at the Kitimat and Terrace Public Libraries
Learn more about Cedar LNG's project	Visit <a href="https://cedarlng.com">cedarlng.com</a> to learn more about the Project
Submit your comments between February 28 and April 14	Online form: <a href="https://www.eao.gov.bc.ca">www.eao.gov.bc.ca</a> Fax: 250-356-7477 Mail: PO Box 9426 St Prov Govt, Victoria, BC V8W 9V1





## Let's stay connected

We look forward to continuing our work together as we move Cedar LNG forward. Reach out with any questions or feedback for the Cedar LNG Team:

Web: [cedarlng.com](https://cedarlng.com)

Email: [info@cedarlng.com](mailto:info@cedarlng.com)

Sign up for project updates at [cedarlng.com/contact](https://cedarlng.com/contact)

