



Woodfibre
LNG

Woodfibre LNG Project

Community Update 2016

Woodfibre LNG Project

WELCOME TO THE WOODFIBRE LNG PROJECT COMMUNITY UPDATE 2016. We have a lot to be proud of since the Woodfibre site was first identified as a good fit for an LNG facility back in 2012.

Woodfibre LNG Limited's purchase of the century old industrial site means we can contribute to the revitalization of Howe Sound. Thousands of truckloads of contaminated sediment and wood chips have already been removed from the foreshore of the site. We are also committed to removing about 3,000 creosote coated piles, which can harm fish, and creating a "green zone" around Mill Creek, which will help improve habitat for freshwater and marine fish, including herring.

Community consultation has led to meaningful changes to our project. In fact, community concern about our project's potential impact on air quality resulted in our decision to power our liquefaction facility with electricity from BC Hydro. Using electricity instead of natural gas will reduce our greenhouse gas (GHG's) emissions by about 80%, and make Woodfibre LNG one of the cleanest LNG facilities in the world.

The Woodfibre LNG Project team is also very proud of receiving a conditional environmental approval from the Squamish Nation.

The Woodfibre site is located in the traditional territory of the Squamish Nation, and we made it a priority to engage with them early in the development of our project as well as participate in this groundbreaking new process.

The Community Update 2016 is full of the latest information about our project. Thank you for taking the time to read it.

Sincerely,



Byng Giraud | Country Manager & Vice President Corporate Affairs | Woodfibre LNG Limited



Woodfibre LNG Project

THE PROJECT

The Woodfibre LNG Project is a proposed natural gas liquefaction and export facility located at the former Woodfibre Pulp and Paper Mill, about seven kilometres southwest of Squamish. The estimated capital cost is \$1.4 – 1.8 billion (CAD 2014).

The Woodfibre LNG Project is licensed to export approximately 2.1 million tonnes of liquefied natural gas (LNG) per year for 25 years.

WHO WE ARE

The Woodfibre LNG Project is owned and operated by Woodfibre LNG Limited, a privately held Canadian company based in Vancouver with a Community Office in Squamish.

We are a subsidiary of Pacific Oil & Gas Limited, which is part of the Singapore-based RGE group of companies. RGE, also known as Royal Golden Eagle, comprises a group of world-class companies focused on resource-based manufacturing industries.

OUR COMMITMENT

Woodfibre LNG Limited is committed to building a project that is right for Squamish, and right for B.C., by listening to the community and acting on its priorities. One example is our decision to power our facility with electricity from BC Hydro instead of natural gas. By choosing BC Hydro electricity, we can reduce our greenhouse gas emissions by about 80%, and make Woodfibre LNG one of the cleanest LNG facilities in the world.



Woodfibre LNG Project

THE LOCATION

In 2012, Woodfibre LNG Limited began looking for the right location to develop an LNG facility in British Columbia, and the Woodfibre site quickly moved to the top of the list. Once home to a bustling town and about a century of pulp and paper mill activities, the Woodfibre site meets the needs of an LNG project, which includes a sufficient land base; access to natural gas and electrical power supply; a deep water port; and, a location as close as possible to overseas markets.

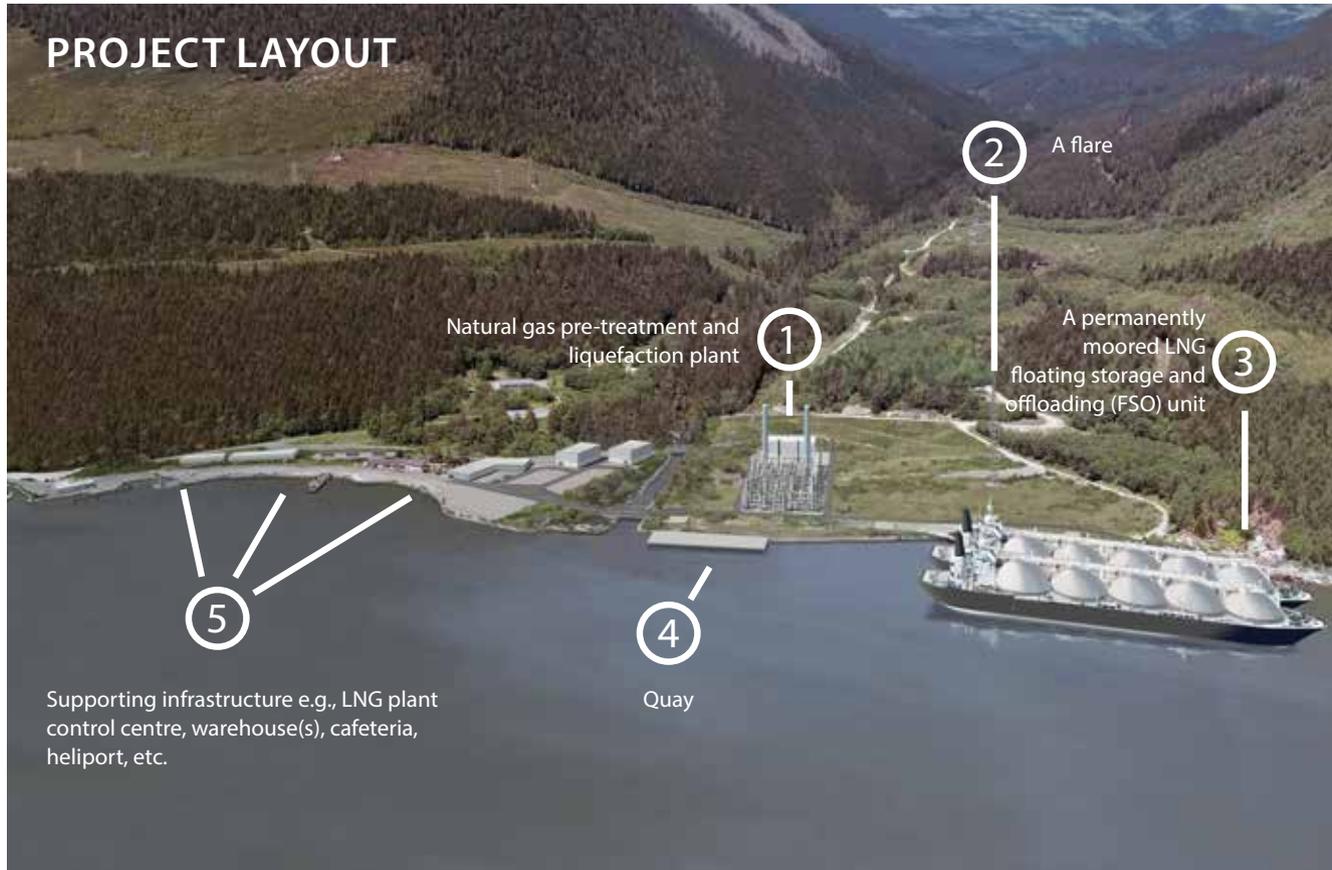
THE WOODFIBRE SITE IS A GOOD FIT FOR LNG

What we found at the Woodfibre site:

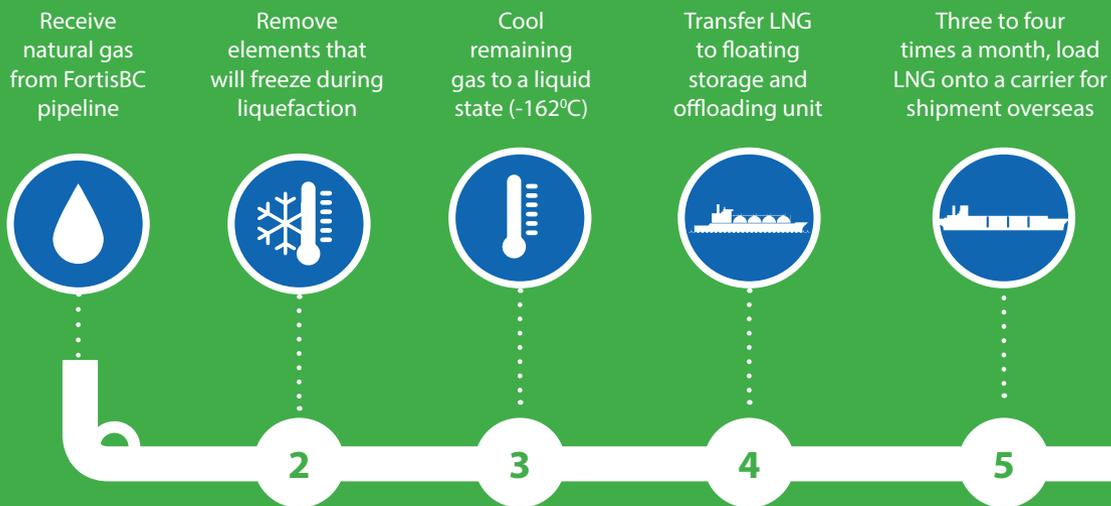
- Historical industrial site
- Zoned industrial
- Deepwater port
- Access to established commercial shipping routes
- Access to FortisBC pipeline
- Access to BC Hydro transmission grid
- Access to labour force



Woodfibre LNG Project



HOW WILL THE FACILITY WORK?



DOING OUR PART TO COMBAT CLIMATE CHANGE

Limiting air emissions where possible is a priority at Woodfibre LNG. We will use electric drive, instead of gas turbine, to power the liquefaction process. This will reduce greenhouse gas emissions by about 80%, and make Woodfibre LNG one of the cleanest LNG facilities in the world.

ESTIMATED ANNUAL EMISSIONS IN TONNES:

	ELECTRIC DRIVE	GAS TURBINE
GHG	80,000	450,000
NOx	20	310
SOx	17	17

THE FLARE

The flare will be used less than 3% of the time the plant is operating: during start-up; maintenance; and, following an unscheduled event like a significant power loss or emergency. The flare is a safety feature designed to relieve pressure at the facility. LNG is not stored under high pressure, so during regular operations, the flare will not be used.

WHERE WILL THE EMISSIONS COME FROM?

The majority of Woodfibre LNG's air emissions will come from elements removed from the natural gas prior to liquefaction, which are incinerated.



Woodfibre LNG Project

THE CLEAN-UP

Woodfibre LNG Limited's purchase of the century old industrial site means we can contribute to the revitalization of Howe Sound.

Thousands of truckloads of contaminated sediment and wood chips have already been removed from the foreshore of the site.

As the project moves forward, we are committed to removing about 3,000 creosote coated piles, which can harm fish, and creating a "green zone" around Mill Creek, which will help improve habitat for freshwater and marine fish, including herring.

On land, we will remove invasive plant species and plant native plant species.

By doing all of these things, we will help to create an ecologically functioning habitat; one that will support the rehabilitation of Howe Sound.



7 THINGS TO KNOW ABOUT LNG



WHAT IS LNG?

LNG stands for liquefied natural gas. It's essentially the liquid version of the same gas that most of us use in our homes and businesses for heating and cooking.



HOW DO YOU MAKE NATURAL GAS INTO A LIQUID?

You cool it in a big fridge until it reaches about – 162 degrees Celsius.



WHY MAKE NATURAL GAS INTO A LIQUID?

Because it shrinks the volume of gas by about 600 times – or the difference between a beach ball and a ping pong ball, and that makes the natural gas a lot easier to transport, and a lot easier to use as a fuel for things like ships and passenger ferries.



HOW DO YOU MOVE LNG?

LNG is moved around the world in specially designed boats and trucks that have storage tanks similar to thermoses to keep the LNG cool. Remember, LNG is just really cold gas; it is not stored under pressure and is very safe to move around.

FUN FACT

In June 2015, the World Wildlife Fund-Canada released the results of a study that found using LNG over heavy fuel oil in ships reduces pollutants by up to 97 per cent and greenhouse gas emissions by up to 25 per cent, and significantly reduces the risk of environmental damage from spills, as LNG dissipates into the atmosphere almost immediately.



DID YOU KNOW?

BC Ferries has commissioned three ships to be fuelled by natural gas.



HOW SAFE IS LNG SHIPPING?

LNG shipping is safe. In 50 years of LNG shipping, there has never been a major loss of containment of LNG.

In the very unlikely event LNG is spilled on the ground or water, there is no environmental cleanup. LNG doesn't mix with soil or water, so it would turn back into a gas and quickly dissipate.

For a fire to occur, a number of things would have to happen simultaneously: there must be a loss of containment of LNG, the right fuel to air ratio (five-to-15 per cent) and there must be a spark. These conditions are highly unlikely to occur given the complex containment systems, double-hull protection, emergency shut off and fire protection systems on LNG carriers, the local marine expertise and the weather conditions that are common in a fjord like Howe Sound.



WHAT WOULD A NEW LNG INDUSTRY MEAN FOR BC?

A new LNG industry in B.C. would mean being able to sell our natural gas to overseas customers, and more well-paying jobs and opportunities for people in B.C.

Woodfibre LNG Project

SHIPPING

Shipping safety is a priority for Woodfibre LNG Limited. LNG carriers travelling to and from the Woodfibre LNG terminal will take a number of precautions to ensure safe LNG shipping in Howe Sound, and to/from international waters.

- Three to four LNG carriers per month.
- LNG carriers will travel at eight to 10 knots in Howe Sound.
- Each carrier will be escorted by at least three tugboats, with at least one tethered to the carrier.
- Tugboats will act as a dynamic safety awareness zone (up to 50 metres on either side of the vessel and up to 500 metres in front).
- Each LNG carrier will have two BC pilots on board, who are experts on our coast.

SHIPPING AND LNG CARRIERS

Woodfibre LNG will operate in accordance with Canadian legislation, including the Canada Shipping Act, and international best practices, including International Marine Organization (IMO) guidelines.

Woodfibre LNG Limited is an associate member of the Society of International Gas Tanker and Terminal Operators Ltd. (SIGTTO). We will have full membership once Woodfibre LNG is in regular operation



Woodfibre LNG Project

SQUAMISH NATION ENVIRONMENTAL ASSESSMENT AGREEMENT

On October 14, 2015, Squamish Nation Council voted to approve an Environmental Assessment Agreement with Woodfibre LNG Limited and issued an Environmental Assessment Certificate for the Woodfibre LNG Project.

SQUAMISH NATION PROCESS

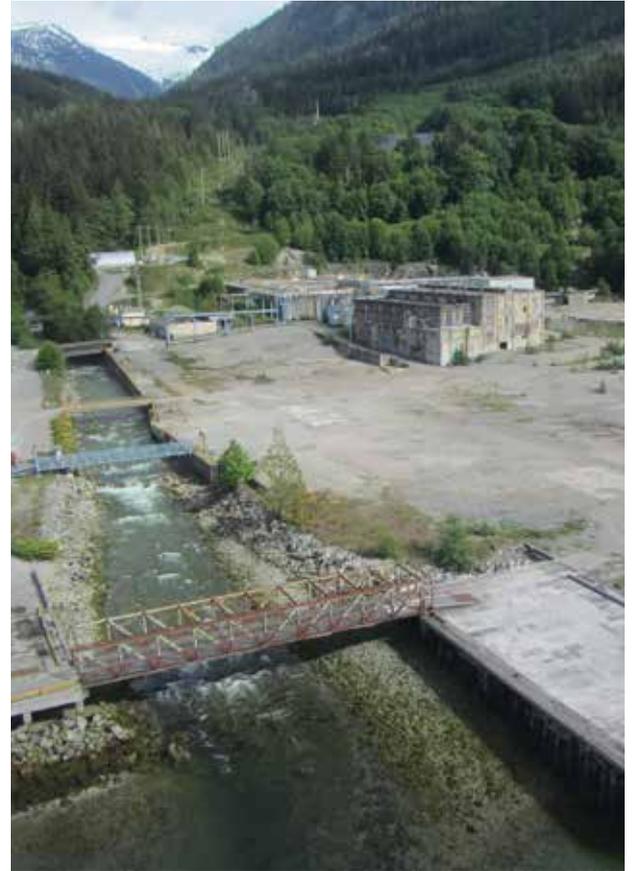
The Woodfibre site is located in the traditional territory of the Squamish Nation, and we sought their input early on in the development of the Woodfibre LNG Project.

The Squamish Nation has established its own environmental assessment process, which we volunteered to participate in more than two years ago.

The process involved a close review of our environmental assessment application and supplemental materials by third-party independent experts on behalf of the Squamish Nation, as well as community consultation.

THREE ENVIRONMENTAL REVIEWS

In addition to undergoing the Squamish Nation environmental review process, the Woodfibre LNG Project underwent provincial and federal environmental reviews. To learn more, see Provincial Environmental Approval and Federal Environmental Approval in this booklet.



HOW THE SQUAMISH NATION AGREEMENT WILL WORK

The Squamish Nation Environmental Assessment Agreement is legally binding, and outlines the conditions Woodfibre LNG Limited must meet for the project to move forward.

Some examples are:

- We will formally recognize Woodfibre LNG is located on the former Squamish Nation village of Swiyat.
- Squamish Nation has a direct say on our cooling technology.
- We will create a Green Zone around Mill Creek.
- No LNG carrier for the Woodfibre LNG Project will transfer bunker fuel in the Squamish Nation traditional territory, including English Bay and Howe Sound.
- We will provide controlled access to the surrounding area for Squamish Nation members to practice Aboriginal rights.
- The Squamish Nation will co-manage our environmental plans to make sure we meet our commitments.

For more information on the Squamish Nation environmental assessment process, visit squamish.net.



Woodfibre LNG Project

PROVINCIAL ENVIRONMENTAL APPROVAL

On October 26, 2015, Woodfibre LNG Limited received environmental approval from the provincial government and was issued an Environmental Assessment Certificate (EAC) for the Woodfibre LNG Project.

The EAC includes 25 legally enforceable conditions and our application contains 119 mitigation measures so that the project will be constructed, operated and decommissioned in a way that *no significant adverse effects are likely to occur*.

Some examples are: underwater noise and marine mammal management and monitoring plans, construction and operation phase marine transport management and monitoring plans, and an air quality mitigation and monitoring plan.

To learn more about our environmental assessment application, and our Environmental Assessment Certificate, please visit the BC Environmental Assessment Office Public Information Centre (e-PIC) at eao.gov.bc.ca.

The screenshot shows the website interface for the Woodfibre LNG Project. At the top, there is a search bar and navigation links for 'All B.C. Government' and 'Environmental Assessment'. The main header includes the 'Project Information Centre (e-PIC)' logo and a navigation breadcrumb: 'B.C. Home > Environmental Assessment Office > e-PIC'. Below the header, the page is divided into several sections:

- Project Information:** A large banner image showing a landscape with a flag.
- Project Details:**
 - Type:** Typical EA Process (Active and Complete)
 - Category:** Energy
 - Status:** Certificate Issued
 - Pre-application Start Date:** 2013/11/27
 - Comments:** Woodfibre LNG Limited (Proponent) proposes to construct and operate a liquefied natural gas export facility on the previous Woodfibre Pulp and Paper Mill site located approximately 7 km west-southwest of the urban centre of Squamish, British Columbia. The facility would have a storage capacity of 250,000 m3 and would produce up to 2.1 million tonnes per year of liquefied natural gas.
 - Location:** Approximately 7 km W-SW of Squamish
- Feedback:** A section with a link to 'e-PIC Disclaimer' and a message: 'We welcome your feedback about our Web site.'
- Navigation:** Links for 'List of Contacts' and 'Document Index'.
- Folders:** A table of document folders categorized by project stage:

Pre-Application	Under Review	Certificate Issued
Application Terms of Reference/Information Requirements	Aboriginal Comments/Submissions	EA Certificate
EAQ Generated Documents	Application and Supporting Studies	EAQ Generated Documents
Federal Comments/Submissions	Federal Comments/Submissions	Records - News Releases
Notices - News Releases	Local Government Comments/Submissions	
Proponent Comments/Correspondence	Local Government Notices - News Releases	
Public Comments/Submissions	Other Jurisdictions Comments/Submissions	
	Proponent Comments/Correspondence	
	Provincial Govt Comments/Submissions	
	Public Comments/Submissions	

FEDERAL ENVIRONMENTAL APPROVAL

On March 18, 2016, Woodfibre LNG Limited received environmental approval from the federal government for the Woodfibre LNG Project.

The Minister of Environment and Climate Change Catherine McKenna issued a decision statement, saying that the Woodfibre LNG Project is *not likely to cause significant adverse environmental effects*.

The decision statement includes 12 legally enforceable conditions, which include 30 overarching mitigation measures and five follow-up program requirements that Woodfibre LNG Limited is obligated to comply with throughout the life of the project.

Some examples are: implementation of measures to mitigate adverse environmental effects on fish and fish habitat, migratory birds and human health; development of a communication protocol related to marine transportation in consultation with Aboriginal groups and other marine users; and, publication of an annual report on how the Woodfibre LNG Project is complying with the federal conditions.

For information about the Canadian Environmental Assessment of the Woodfibre LNG Project, visit ceaa-acee.gc.ca.

WHAT'S NEXT

The next steps for our Project include, but are not limited to, obtaining various permits and regulatory authorizations from agencies like Fisheries and Oceans Canada and Transport Canada.



Woodfibre LNG Project

ECONOMIC BENEFITS

CONSTRUCTION JOBS

- Create 650+ jobs each year of construction
- Create an additional 1,080+ jobs (indirect* and induced** employment) during the construction phase of the project

LONG-TERM OPERATION JOBS

- Create 100+ local jobs during operation
- Create an additional 330+ local jobs (indirect* and induced**)

* Indirect impacts arise from changes in activity for suppliers

** Induced impacts arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses



\$83.7 MILLION:

Estimated tax revenue for all three levels of government during the construction phase of the project.

\$86.5 MILLION:

Estimated tax revenue for all three levels of government per year of operation.

\$243.3 MILLION:

Estimated increase in gross domestic product (GDP) for the District of Squamish, Resort Municipality of Whistler, Electoral Area D of Squamish-Lillooet Regional District, Squamish First Nation communities, and Metro Vancouver during construction and more than

\$122.8 MILLION

in GDP per year during operation.

Woodfibre LNG Project

WOODFIBRE LNG LIMITED IN THE COMMUNITY

Woodfibre LNG Limited is committed to supporting local events, charities and community groups that play an important role in contributing to a vibrant and growing Squamish.

From 2013 to March 2016, Woodfibre LNG invested more than

\$192,000 INTO THE COMMUNITY

COMMUNITY EVENTS: \$31,000+

YOUTH SPORTS: \$72,500+

RESEARCH/EDUCATION/ENVIRONMENT: \$89,000+

COMMUNITY SPONSORSHIP PROGRAM

In May 2015, Woodfibre LNG Limited kicked off the Community Sponsorship Program in support of local charities and community groups that work in the areas of youth education and sports, and the environment in Squamish. The Community Sponsorship Program offers grants of up to \$5,000 per year to successful applicants. To learn more about the program, visit our website (woodfibrelng.ca/community), where criteria and the application form can be found.



Woodfibre LNG Project

KEEP THE CONVERSATION GOING

COMMUNITY OFFICE

38134 Cleveland Avenue, Squamish

PROJECT INFO LINE

1-888-801-7929

MAIL

Woodfibre LNG Project
PO Box 280, Squamish, BC, V8B 0A3

EMAIL

info@woodfibrelng.ca



Woodfibre LNG Facebook



Woodfibre LNG YouTube channel



Woodfibre LNG LinkedIn

woodfibrelng.ca

askwoodfibrelng.ca

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