



huu ay aht

ANCIENT SPIRIT, MODERN MIND

## FACTSHEET LNG

### What is LNG?

Put simply, liquefied natural gas – or LNG – is purified natural gas that has been cooled to -162 degrees Celsius so it turns into a liquid. Natural gas is cooled to make it easier to store and transport. Cooling natural gas shrinks the volume by 600 times – that's like fitting the volume of a beach ball into a ping-pong ball. Once the LNG arrives overseas, re-gasification facilities warm it back up into natural gas that can be used as a cleaner energy source than oil and coal for power generation for homes and businesses. It's the same natural gas that we use in British Columbia to heat our homes and cook our meals.

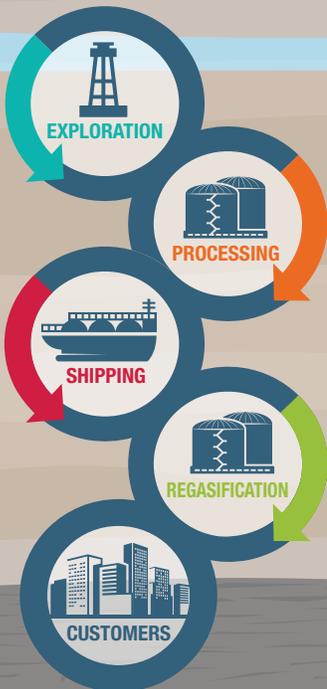
### Where does the natural gas come from?

Natural gas is a fossil fuel. This means it originates from the remains of plants and animals that lived many millions of years ago. These organisms were buried and exposed to heat as a result of being highly compressed underneath thousands of metres of soil and rock. These forces transformed the once living organisms into natural gas.

Natural gas is found in reservoirs beneath the surface of the earth. Large layers of rock trap the natural gas as it tries to float to the surface. Although the areas where the gas is trapped are referred to as pools, the natural gas molecules are actually held in small holes and cracks throughout the rock formation.

Natural gas is removed from an underground reservoir through a process known as hydraulic fracturing (**fracking**). The process begins by drilling a hole deep into the ground that is sealed with cement and perforated at the bottom where the gas-bearing rock is located. By forcing high pressure fluids into the hole, the rock can be cracked and held open so the gases can travel into the pipe and up to the surface, which is then transferred to a gas processing plant to remove impurities and by-products. Some of these by-products, including ethane, propane, butane, and sulphur, are extracted for other uses. After being processed, the clean natural gas (almost pure methane) is transported through a network of pipelines and delivered to its point of use.

The natural gas supply for the proposed Sarita LNG project would be sourced from northeastern British Columbia and northwestern Alberta, supporting significant employment and other economic opportunities in those regions.



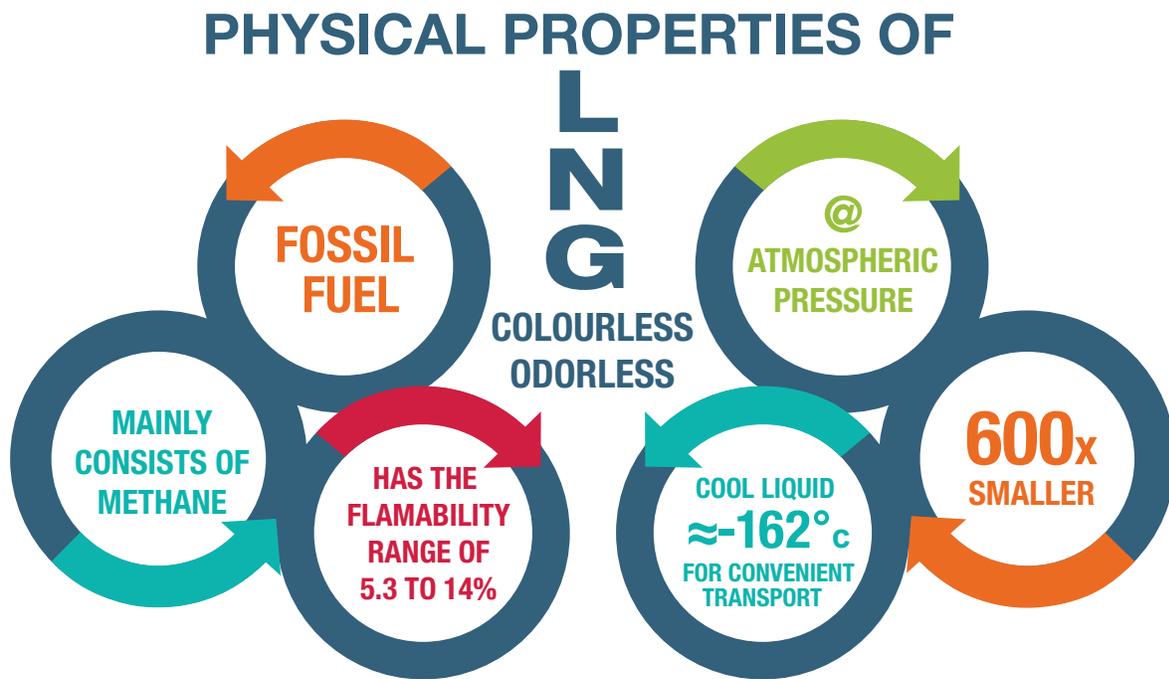
## How does a natural gas pipeline operate and are they safe?

The transportation system for natural gas consists of an extensive and elaborate network of pipelines, designed to quickly and efficiently transport natural gas from its origin, to its point of use. The natural gas is transported as a gas through a pipeline and delivered to a LNG facility. Natural gas is lighter than air so if a natural gas pipeline were opened, the gas would disperse into the air. For the proposed project on Vancouver Island, the natural gas would be delivered using a combination of existing and new pipelines. The exact route has not yet been determined.

## What happens at an LNG facility?

LNG facilities are like giant refrigerators. Impurities such as water, carbon dioxide, and other materials are removed from the natural gas that comes to the facility. From there it gets cooled and liquids such as propane and butane are separated and removed.

The final step is the liquefaction process, which chills the natural gas to  $-162\text{ C}$  turning it into LNG, which is stored at near atmospheric pressure before being loaded onto LNG carriers for shipment overseas.



## Are LNG facilities safe?

The LNG export industry has been in operation for more than 60 years, and LNG has been safely produced and used in British Columbia for more than 40 years. Major accidents at LNG facilities are rare during operation. The safety of the local community is a priority ensuring that the proposed facility would be developed and operated in a way that prioritizes the health, safety, and well-being of the local community and environment.