

# What is LNG?

Perspectives Gathering Workshop  
Arctic LNG Feasibility Study

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# FORTIS INC – A PREMIUM ENERGY DELIVERY BUSINESS

## 93% TRANSMISSION & DISTRIBUTION ASSETS



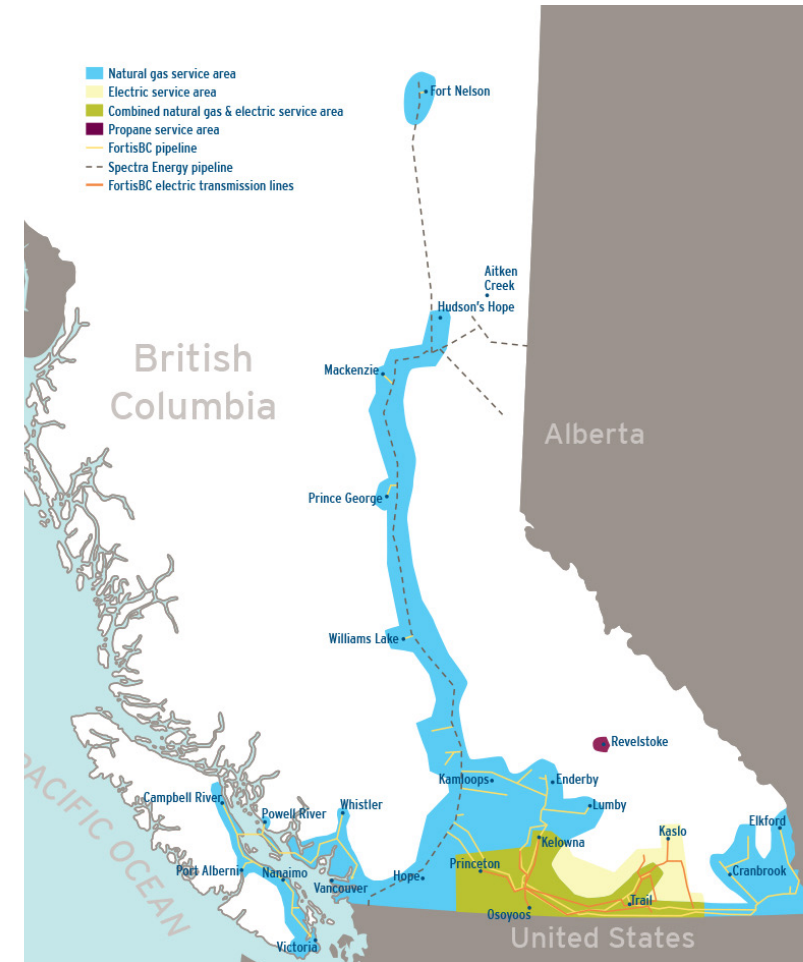
### High Quality Portfolio

- **10** Regulated Utility Businesses
- **3.3M** Electric & Gas Customers
- **~9,000** Employees
- **99%** Regulated Utility Assets
- **\$24B** Market Capitalization<sup>(1)</sup>
- **~13%** Average Annual 20-Year Total Shareholder Return<sup>(1)</sup>
- **\$30.5B** 2020 Rate Base

(1) As of January 31, 2021

# FortisBC

- Serving **1.2 million customers** in **135 communities**
- Investing over **\$590 million annually** in B.C.'s energy assets
  - 50,000 km of pipelines
  - 7,200 km of electric lines
  - 2 LNG facilities
  - 4 hydroelectric generating plants
  - Underground gas storage
- Delivering **21% of B.C.'s energy needs**
  - Electricity
  - Natural gas
  - Renewable natural gas
  - Compressed & liquefied natural gas
  - Alternative energy solutions



# What is 30BY30?

It is our target to reduce our customers' GHG emissions by 30% overall by the year 2030



# Four pillars of Our Clean Growth Pathway



Energy efficiency



Renewable  
Natural Gas



Global LNG



Zero and  
low carbon  
transportation

# Existing Tilbury LNG Facility already supplying LNG To B.C. Ferries and Seaspan



# Acronyms - Markings

- NG
  - Natural Gas
- CNG
  - Compressed Natural Gas
- LNG
  - Liquefied Natural Gas
- RNG
  - Renewable Natural Gas



# What is Natural Gas?

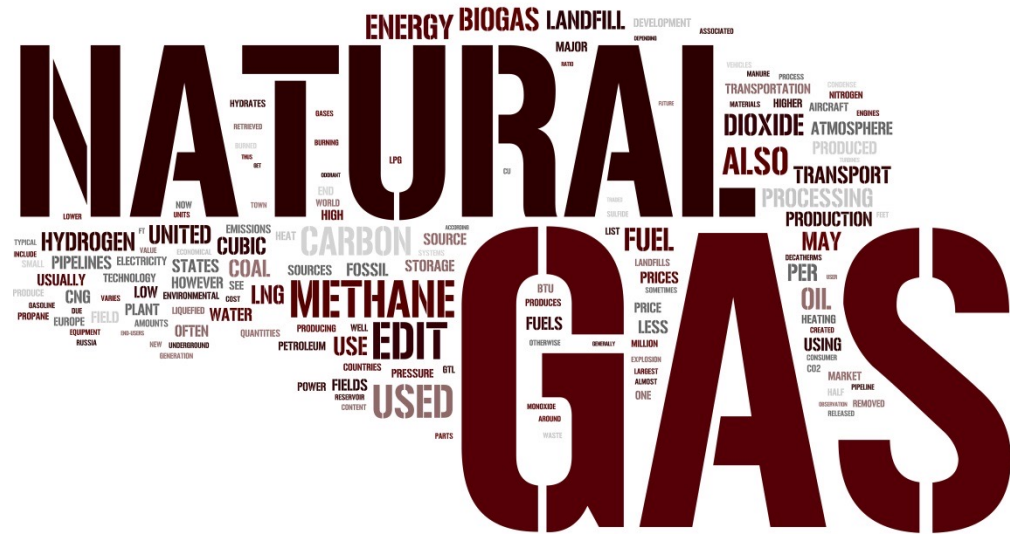
- Use for heating and cooking
- Fossil fuel
- Found in
  - Petroleum deposits
  - Coal beds
  - Shale deposits
- Biogas
  - Decomposing organics
  - Bio-digesters





# What is Natural Gas?

- Odourless
- Colourless
- Non-Corrosive
- Non-Toxic
- Lighter than air
  - Dissipates quickly



# Safety Considerations - Odour

Energy at work  FORTIS BC



Smell rotten eggs?  
It could be a gas leak.  
Go outside. Then call us.  
**1-800-663-9911**

[> Learn more](#)

- Odourless
- Mercaptan is added
  - Detectable at 1/5<sup>th</sup> LEL
  - 1% gas in air

*Leaking natural gas smells like rotten eggs*



# Safety Considerations - Ignition

- Safe
  - Not easily ignited
- Range 5% to 15%
  - < 5% too lean
  - 15% > too rich
- Gasoline 1.4%
- Propane 2.1%



# History of LNG



# History of LNG



# LNG Safety Demo



# Where is LNG Made?



# Cryogenics





# The Challenge – Maintaining Liquid State

- Temperature
- Pressure
- Volume



Solid

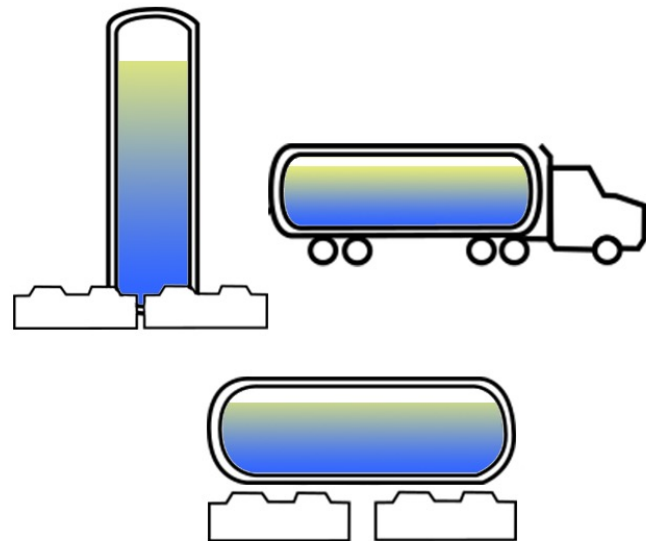


Liquid

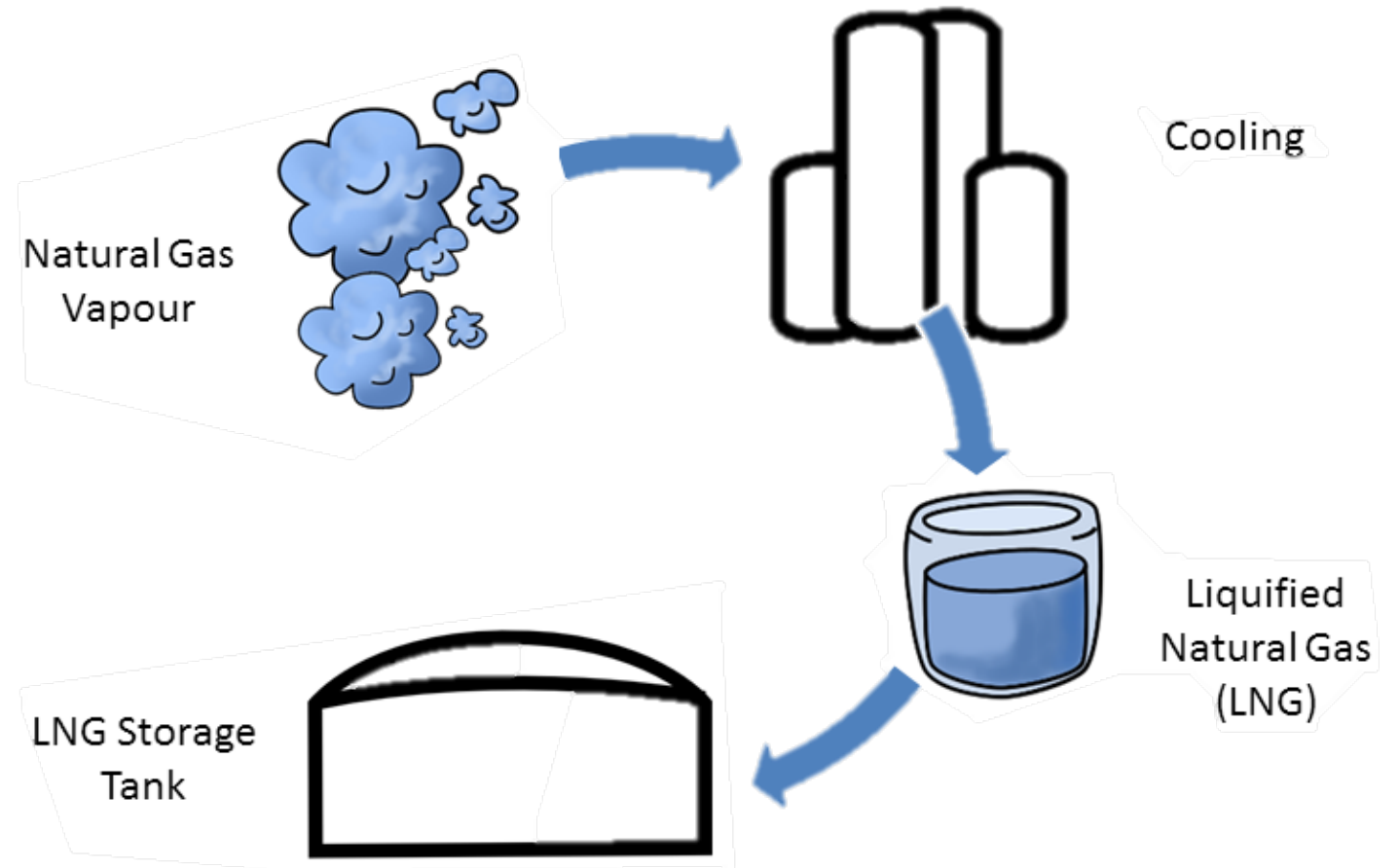


Gas

# What is Cryogenics?



## Making LNG



# Double Walled Tanks



# Double-Walled Steel Tanks



# LNG ISO-Tankers

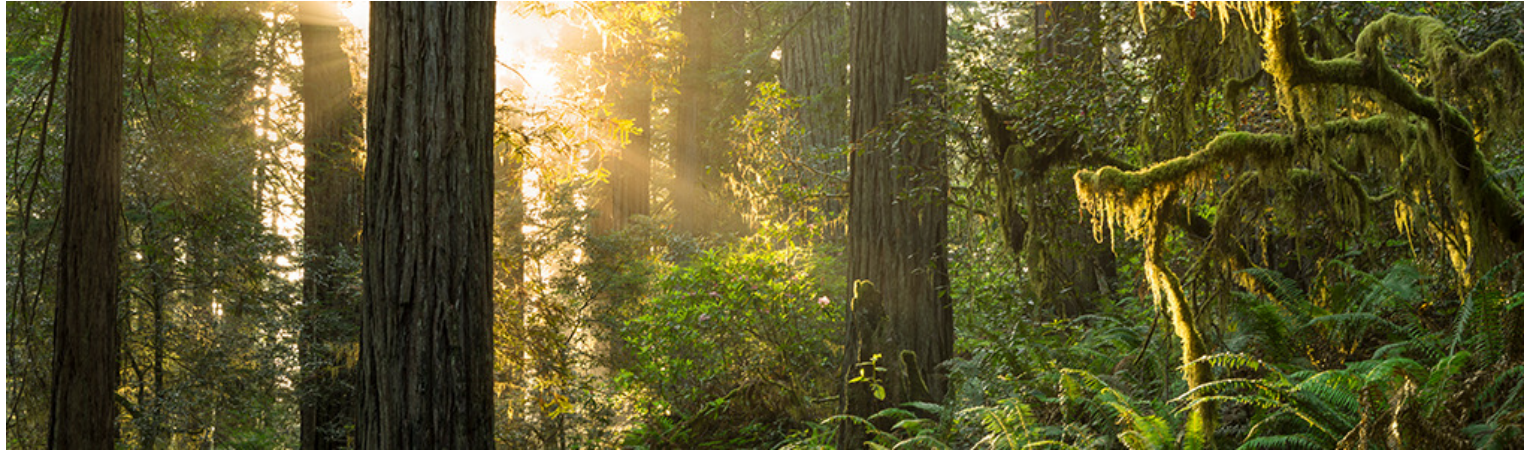


# LNG ISO-Tankers



# LNG Carriers





*Energy at work*  **FORTIS BC™**

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