What is LNG?

Perspectives Gathering Workshop
Artic 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\(^{(1)}\)
➢ ~13% Average Annual 20-Year Total Shareholder Return\(^{(1)}\)
➢ $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

- Odourless
- Mercaptan is added
  - Detectable at 1/5\textsuperscript{th} LEL
  - 1\% gas in air

\textit{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
LNG Safety Demo
Where is LNG Made?

- Tilbury 1 & 1a
- Mount Hayes
Cryogenics
The Challenge – Maintaining Liquid State

- Temperature
- Pressure
- Volume

Solid  Liquid  Gas
What is Cryogenics?
Double Walled Tanks
Double-Walled Steel Tanks
LNG ISO-Tankers
LNG ISO-Tankers
LNG Carriers
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