

CGA Energy Nexus & Annual Technical Conference 2025

Liquefied Natural Gas as a Fuel for Canada

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Agenda

- About Cryopeak and what we do
- What is LNG?
- The LNG Value Chain
- LNG Applications in Canada

Cryopeak Snapshot

WHAT WE DO

Cryopeak is a market leader in providing low carbon energy solutions and cryogenic technologies. By displacing more carbon intensive fuels, Cryopeak supports multiple end use applications, enabling our Customers make a successful transition to a lower carbon fuels, reducing their operating costs and lowering emissions.

3 KEY BUSINESS LINES

- **Cryopeak LNG Fuels**
Fuel Distribution in Western Canada
- **Cryopeak Cryogenic Service**
Supporting End Use Applications in North America
- **Cryopeak Technologies**
International sales of cryogenic systems and equipment

KEY STATS



90,000,000
Gallons delivered



11,000,000
KWH from LNG



Cryogenic Technologies
50M Diesel gallons displaced



15,000,000
Kilometers driven



150,000 tonnes
CO₂ Emissions saved

1

Our Company Vision

Our vision is to lead our customers to net zero leveraging our expertise in LNG virtual pipelines and cryogenic technologies as a transition to new emerging energies

2

A Market Leading Platform

Delivery of low carbon energy fuels, solutions and services. Services include LNG production, transportation and onsite solutions.

3

Cryopeak Technologies Division

Cryopeak Technologies and intellectual property underpins our market leading platform. Providing customer focused solutions

4

Our Strategic Roadmap

Focused on integration, growth of the company within existing markets and growth into new emerging regions and market segments.

5

New Emerging Energies

Utilizing our platform, track record in virtual pipeline, we will create new opportunities with new emerging energies

Cryopeak LNG Fuels

Our Facilities & Transport Network



CryoPeak
energy solutions



Fort Nelson LNG terminal



Dawson Creek LNG terminal



Elmworth LNG terminal

LNG PRODUCTION

LNG TRANSPORTATION

ONSITE STORAGE AND REGAS
SOLUTIONS

Cryopeak Cryogenic Service

Core service offerings

- Pipeline integrity support
- Winter peak pipeline support
- Cryogenic gases – refrigerated ethane and liquid nitrogen
- Large mobile LNG storage and regas fleet in Canada
- Fleet of high-capacity vaporizers
- A highly skilled applications and field service team



PROJECT PLANNING

PROJECT DELIVERY

SPECIALIZED SERVICE TEAM

Cryopeak Technologies

Our Product Line

- Liquefaction systems
- Cryogenic storage systems
- Gas pre-treatment systems
- Cryogenic vaporization systems
- Cryogenic transportation equipment
- Cryogenic fuel transfer and loading systems
- Dispensing and fleet fuelling systems
- Carbon capture systems



SYSTEM DESIGN

MODULAR SYSTEMS

EFFICIENT PROJECT DELIVERY



What is LNG?

What is LNG?

- **Liquefied Natural Gase**

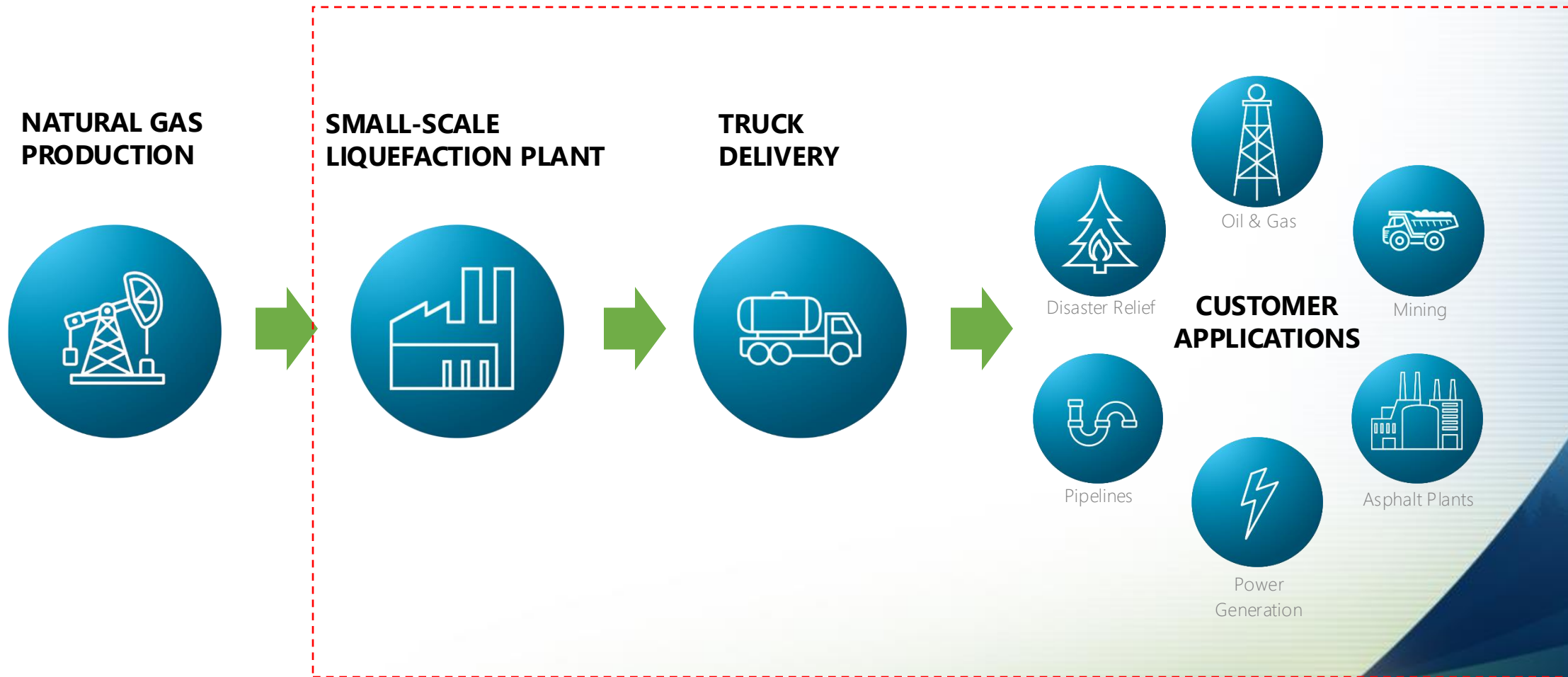
- A cryogenic liquid which boils at -259 deg F at atmospheric pressure
- Comprised of ~85 to 95% Methane
- Colorless, odorless, non-corrosive and non-toxic
- 600 times more energy dense as a liquid, than in its gaseous state
- Liquefying natural gas enables it to be transported and stored at low pressure
- Price: ~50% a diesel equivalent liter (DLE)
- Natural gas has the lowest emissions when compared to other conventional fuels
- Net 0 can be achieved through RNG and synthetic E-Gas





The LNG Virtual Pipeline

Small-Scale LNG Value Chain



LNG Production



- | | |
|-------------------------|---------------------------|
| 1. Gas supply pipeline | 6. LNG Storage |
| 2. Inlet metering | 7. Truck load out & scale |
| 3. Gas pre-treatment | 8. Flare |
| 4. Refrigeration system | 9. Grid Power |
| 5. Cold Box | 10. Control & Monitoring |

LNG Transportation

- Giant thermos flasks...
- Vacuum insulated trailers
- Design and construction to Transport Canada codes
- LNG transported at low pressure
- Emergency response plan with Transport Canada



Onsite Storage & Regas

- End use application drives specifications
- Efficient LNG storage and regassification designs
- Use of waste heat and highly efficient gas fired vaporizers
- Modular storage systems
- Control & Monitoring





LNG Applications in Canada

Power Generation & Heating



Power generation & heating

- LNG can be used for both power generation and heating
- LNG **compliments** renewable power sources to provide a reliable back-up power solution (especially in Winter)
- Gas is far more efficient and cost competitive than electrical heating via thermal power generation
- Up to 3 times the amount of electrical energy is required than direct gas heating
- For a community this gas results in less fuel being used for heating applications
- Additional loads such as population growth, use of electric vehicles, is driving demand and making the use of LNG a stronger case for back-up power and direct gas heating in the winter



The seasonal challenges of renewable generation

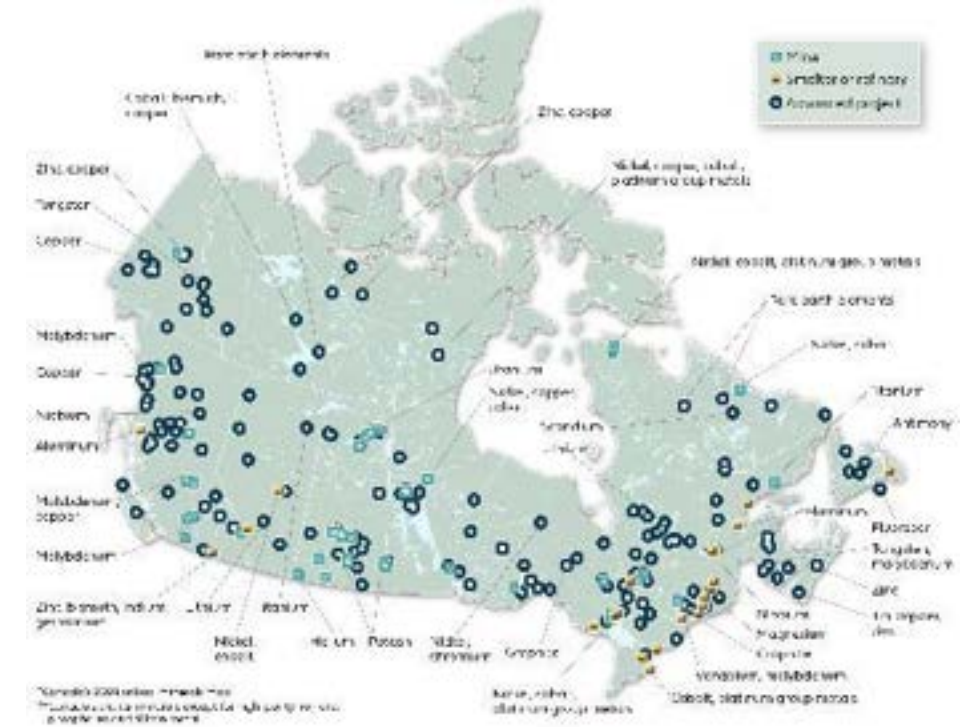
Alaska Gas Utility - LNG Supply (Fairbanks)



All natural gas supply is trucked in and stored in the large tank as LNG

Mines

- **LNG has a bullish outlook in the Mining sector**
 - Natural Gas continues to be adopted by Mines as a practical approach to lower emissions
 - With recent geopolitical factors many projects are being fast tracked
 - Remote off-grid mines require power generation and onsite heating
 - On-grid mines also may require peak supply of LNG
- **Critical Minerals in the Clean Energy Transition**
 - Growing demand for nuclear driven by decarbonization and Energy security
 - Uranium and nuclear energy are critical to the clean energy transition
 - Saskatchewan – hope to some of the worlds highest grade uranium mines



Low-Carbon Fuel For Oil and Gas Operations

Increasing power requirements and greater diesel displacement for drilling and well completion work

Utility Applications



Utility Pipeline Support

- **Peak capacity solutions**

- Limited pipeline capacity results in constraints and challenges to infrastructure development
- LNG provides a practical way to increase load on existing pipelines for communities and industry
- Quicker response for industry – LNG infrastructure deployment is faster than pipeline build-out

- **Pipeline integrity work & temporary supply**

- LNG can provide a continual gas supply while a pipeline is taken out of service for inspection and integrity activities



Datacenters



Winter Peaking

Transportation



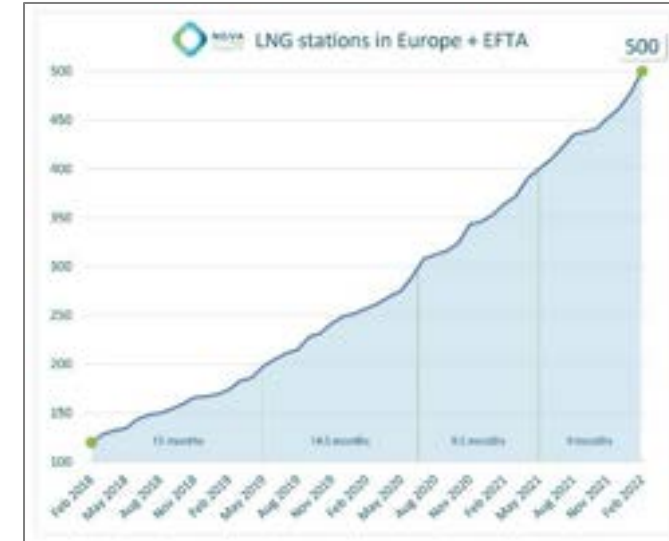
Transportation

Marine industry

- Driven by stringent IMO standards there is significant adoption of LNG as a marine fuel
- Main adoption is within ferries, container vessels, cruise ships, car carriers

Highway Transportation

- New viable Class 8 natural gas engine technology will drive growth
- CNG is proven for smaller engines but has the following challenges;
 - Access to high pressure / capacity pipelines
 - Pipeline build out constraints
 - Trucks have limited range
- LNG is a trucked in fuel and has the following advantages;
 - Provides options for fleet fueling – no pipelines needed
 - LNG can be dispensed as LNG or CNG through LCNG technology providing flexibility and fueling options
 - Easy & scalable infrastructure deployment
- Renewable Natural Gas (“RNG”) or E-Gas provides a pathway to Net 0



Europe has 30,000 LNG fuelled trucks in operation today with 750 filling stations



Future for LNG

- Canada has an abundance of low-cost natural gas
- Technology for end use applications exists today to support LNG as a mainstream fuel
- Canada's economy can benefit from a cost effective, domestic energy source
- Net zero is possible to achieve through RNG and also synthetic E-gas
- At Cryopeak we are super excited with the gas story and are working hard to support new applications for LNG as a fuel!





Questions?



Thank you!

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