LNG is complementary to renewables!

25th January 2022
Cryopeak’s mission is to be the leading low carbon fuel provider in North America supporting a transition to cleaner more efficient energy sources.

Founded in 2012

- Cryopeak enables customers to make a successful transition to a lower carbon energy solution
- 30 Employees based out of Vancouver BC, Canada
- ISO 9001 - Expertise in Engineering, Project Management and Operations
- Proprietary onsite liquefaction, storage, and regasification technology
- Optimized LNG distribution using marine and land based transportation
- Portfolio Company of BP Energy Partners – Dallas, Texas

Virtual Pipeline Solutions

Liquefaction
Transportation
Storage & Vaporization
Northern Canada LNG Facility

Fort Nelson - Facility details

- Phase 1 – capacity 27,000 gpd
- Phase 2 – capacity 100,000 gpd
- 4” gas supply line from the Enbridge T-North Pipeline
- Single Mixed Refrigerant process
- 380m$^3$ LNG storage with truck loadout

The closest supply point to Northern Canada
Transportation

Optimized transport fleet ensures lowest transportation costs

- LNG transportation is a significant cost in the value chain
- Safely delivered 20,000,000 gallons and travelled over 7,000,000 kms
- Cryopeak maximizes the payload transported to customer sites minimizing transportation costs
- Proprietary fleet of LNG Super B-trains (40% extra payload)
Cryopeak can provide the largest LNG delivered payload in North America via Super B-Trains 18,500 Gallons / 1,600GJ per delivered load
Remote industrial Power Solutions

- Mobile LNG storage solutions for various applications
LNG for Utility Power Generation
LNG in Whitehorse - Utility Power Generation
LNG in Fairbanks AK (Heating)
### LNG advantage 1 – Emissions

Natural Gas has the lowest emissions
Also can fill both heating and power generation needs

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<table>
<thead>
<tr>
<th>Carbon Dioxide (CO₂) Factors</th>
<th>Pounds CO₂ Per Unit of Volume or Mass</th>
<th>Kilograms CO₂ Per Unit of Volume or Mass</th>
<th>Pounds CO₂ Per Million Btu</th>
<th>Kilograms CO₂ Per Million Btu</th>
</tr>
</thead>
<tbody>
<tr>
<td>For homes and businesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>12.61/gallon</td>
<td>5.72/gallon</td>
<td>138.63</td>
<td>62.88</td>
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<tr>
<td>Diesel and Home Heating Fuel (Distillate Fuel Oil)</td>
<td>22.46/gallon</td>
<td>10.19/gallon</td>
<td>163.45</td>
<td>74.14</td>
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<tr>
<td>Kerosene</td>
<td>21.78/gallon</td>
<td>9.88/gallon</td>
<td>161.35</td>
<td>73.19</td>
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<tr>
<td>Coal (All types)</td>
<td>4,027.93/short ton</td>
<td>1,827.04/short ton</td>
<td>211.06</td>
<td>95.74</td>
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<tr>
<td>Natural Gas</td>
<td>121.31/thousand cubic feet</td>
<td>55.03/thousand cubic feet</td>
<td>116.65</td>
<td>52.91</td>
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<tr>
<td>Gasoline</td>
<td>18.74/gallon</td>
<td>8.50/gallon</td>
<td>155.77</td>
<td>70.66</td>
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<tr>
<td>Residual Heating Fuel (Businesses only)</td>
<td>24.78/gallon</td>
<td>11.24/gallon</td>
<td>165.55</td>
<td>75.09</td>
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<td>Other transportation fuels</td>
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<tr>
<td>Jet Fuel</td>
<td>21.50/gallon</td>
<td>9.75/gallon</td>
<td>159.25</td>
<td>72.23</td>
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<tr>
<td>Aviation Gas</td>
<td>18.32/gallon</td>
<td>8.31/gallon</td>
<td>152.46</td>
<td>69.15</td>
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</table>
LNG Advantage – Cost and supply

- Northern BC has the lowest gas prices in North America
- Cryopeak buys natural gas from “Station 2”
- Possible to lock in prices for up to 10 years
- Volatile gas commodity is a small part of the delivered price to the customer
- When gas prices increased 100% in 2021, Cryopeak’s delivered price increased 7.5%
- LNG pricing was far more stable than other fuels
- In Canada Gas Powered Electrical generation expected to increase market share (at the expense of coal)

LNG PRICE BREAKDOWN

- Transport: 55%
- Liquefaction: 31%
- Natural gas input: 15%
LNG - Applications

Power Generation

• Renewable fuels are the best source of electrical power but have some challenges
• May be intermittent or can not keep up with demand growth or uneconomic to meet peak demands
• Back up power generation is normally required
• LNG can fill the gap as the cleanest and lowest cost fuel source

Heating

• Gas heating is highly efficient for space and water heating
• Local gas grid enables consumers to connect with a centralized facilities
• Local gas grids are common across Canada traditionally
• LNG / Natural Gas is good for very low temperature ambient environments

LNG enables communities not connected to the major gas pipelines to have access to natural gas
Further emissions reduction….

Possibilities in the future

- Renewable natural gas supply is increasing
- LNG as a carrier for Hydrogen (CH\(_4\))
- New processes can split LNG into hydrogen and solid carbon

Demonstration plants in Australia
A hybrid power plant

Gold Fields’ Agnew gold mine in Western Australia. The 56-megawatt (MW) Agnew hybrid renewable microgrid system
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