### Alaska LNG - Project Update

# ALASKA \*\* **GASLINE** \*\* DEVELOPMENT CORP.

December 1 - 4, 2021





- Outreach to Whaling Captains Associations
- Project Update
  - Overview
  - Regulatory Status
  - Federal Infrastructure Package and Loan Guarantee
  - LNG Market Update
  - Alignment of Strategic Parties
- Greenhouse Gas Lifecycle Assessment
- Moving Forward

# **North Slope Whaling Captains**

- AEWC Recommendation November 2020
- AGDC Outreach
  - Barrow Whaling Captains January 2021
  - Kaktovik Whaling Captains August 2021
  - Nuiqsut Whaling Captains November 2021

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## **Project Overview**

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#### **Producing Fields**

- Anchored by Prudhoe Bay and Point Thomson
- Right now more gas is already produced (8 bcfd) than the project will use (4 bcfd peak), but it is 'stranded' – no way to get it to market, so it is compressed and reinjected
- Peak Workforce: 500 1,500 people

#### **Gas Treatment Plant**

- Located at North Slope
- Remove CO<sub>2</sub> / H<sub>2</sub>S; use for re-injection
- Footprint: 150-250 acres
- Peak Workforce: 500 2,000 people

#### **Mainline Pipeline**

- Large diameter: 42"
- ~800 miles (similar to TAPS)
- Pipeline is onshore (other than Cook Inlet crossing)
- Land portion: 99.7% fully buried and 69.54% within existing corridors i.e. within a mile of existing TAPS, TAPs fuel gas, highway or within the PLO 5150 utility corridor
- 8 compressor stations and 1 heater station

#### Liquefaction Plant and Terminal

- Located in Nikiski, Alaska, capacity: up to 20 MTA
- 3 trains (6.67 MTA/train), footprint: 640-1,000 acres
- Terminal: 2 x 240,000 m<sup>3</sup> LNG Storage Tanks
- 1 loading jetty with 2 berths; 15-20 tankers per month

**Location** 

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# Permits & Approvals: 7 Years of Work RLASKA GASLINE \*\*

- Completed
  - Federal Energy Regulatory Commission (FERC) Final Environmental Impact Statement (FEIS) and FERC Order
    - Huge piece of work over 100,000 pages of application and responses
    - FEIS 1,534 pages plus 3,550 pages of appendices
  - <u>All</u> 36 Major Federal permits & authorizations
  - Federal ROWs: Bureau of Land Management, National Park Service
  - Alaska State Land Leases and Gas Treatment Plant Air Permit
- Supplemental EIS by Dept. of Energy Draft May 2022
  - In response to Center for Biological Diversity and Sierra Club challenge
  - Two Studies
    - Upstream analysis of potential environmental impacts associated with natural gas production on the North Slope
    - Lifecycle analysis calculating greenhouse gas emissions from the Alaska LNG Project

## **Federal Loan Guarantee**

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The full faith and credit of the United States will be pledged to pay all of the principal and interest on \$25.6 billion of Alaska LNG debt in the event of a default.

- The Infrastructure Bill includes a loan guarantee for Alaska LNG
  - Principle amount of debt guaranteed up to \$25.6 billion (adjusted for inflation)
  - Up to 80% of the capital cost
  - Term of up to 30 years
- Loan guarantee will be subject to credit terms and requirements of the loan program
- Benefits of the loan guarantee
  - Reduced cost of supply
  - Completion risk mitigation
  - Federal government support and "skin in the game"

### **Reduced Cost of Supply**

- Interest rate reduction of between 1 and 2.5%
- Potential for longer term debt
- Potential for higher debt/equity ratio



### **LNG Market**



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# **LNG Market – Global Forecasts**

LNGmt

- Two LNG demand scenarios based on different speeds of the energy transition
- Under both scenarios, global LNG demand grows through 2040 and outpaces supply beginning in 2025
- Demand for new LNG supply is driven by Asia coal-to-gas switching and growth in Southeast Asia and India
- Significant levels of LNG capacity will be needed as LNG demand doubles by 2040



Individual nations' net-zero emissions are met while LNG demand increases in developing countries without net-zero targets.

#### Partial Transition Scenario:

Net-zero targets are met with a 10-year delay with an increased near-term focus on coal-to-gas switching.



#### Global LNG Supply/Demand Balance Forecast, 2021-2050\*

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Source: Gas Strategies

### Alaska LNG Impact on Alaska Production





- Prudhoe Gas will be sold instead of reinjected
- Selling Point Thomson gas unlocks condensate production

- **Key Assumptions:**
- Peak 60k b/d at PTU
- No PBU liquids impact
- \$70 Oil
- \$1.00 Gas

## **Alignment of Strategic Parties**

- Advancing the structure and leadership of the project with Strategic Parties consisting of:
  - North Slope producers
  - A major pipeline developer
  - LNG buyers
  - Banks and financial corporations
- These parties have the technical and financial capacity to bring this project to completion
- Strategic parties have a combined market capitalization of \$1.25 trillion
- New potential Strategic Parties with significant market capitalization and an LNG development track record have approached AGDC

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## **Greenhouse Gas Study**

• AGDC contracted with independent third-party providers to provide a GHG lifecycle assessment of the Alaska LNG project

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 Realistic assessment using publicly available data and Department of Energy methodology

### Components of the full lifecycle



## Alaska LNG Compared to Other LNG



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## **Alaska LNG Compared to Asia Coal**



CO<sub>2</sub>e MMtonnes/yr

ALASKA <mark>Gasline</mark> Development co <u>Reducing</u> global greenhouse gas emissions by more than 77 million metric tonnes per year is equivalent to....

### Eliminating emissions from:

- 16.8 million passenger vehicles driven for a year
- Powering 9.3 million homes for a year
- 19 coal-fired power plants
- Burning 8.7 billion gallons of gasoline

### Carbon sequestered by:

- 1.3 billion tree seedlings grown for 10 years
- 94 million acres of U.S. forests in a year

Greenhouse Gas Equivalencies Calculator | Energy and the Environment | US EPA

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- Working with world-class private-sector Strategic Parties to provide investment and lead the Alaska LNG project forward
- Continuing to optimize project economics through Federal and state support
- Providing public data to demonstrate to stakeholders that Alaska LNG is the least carbon intensive export project in North America and will significantly reduce global carbon emissions
- Following through on commitments
- Encouraging Alaskans to rally behind the project that will bring positive impacts to Alaska for generations

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Fiscal Stability	<ul> <li>It is difficult to imagine a scenario where the private sector would invest \$38 billion, when any future legislature can essentially change contract terms at any time.</li> <li>Most other resource owner states are able to offer a Fiscal Stabilization Clause.</li> <li>Compounding this issue is the fact that the State can change it's election for royalty and tax between "in-kind" and "in-value" – this project relies on long-term, 20+ year contracts to work and that requires fiscal stability.</li> </ul>
Payment in Lieu of Tax (PILT)	<ul> <li>Property tax for the project is an order of magnitude higher than other projects in North America (\$0 – 50 MM p.a.).</li> <li>Competing projects globally don't pay property tax, or it is back loaded in the project life.</li> </ul>

### And ultimately decide on level of participation

- State equity participation can help facilitate the project.
- State participation helps create alignment between the state and the project.

#### • It is not uncommon to see sovereign ownership in infrastructure.

- The State should only have a minority stake and not an operatorship role.
- Equity participation will also increase the State's take from the project.

### State Participation

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