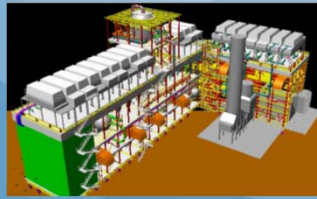


Alaska LNG™

Fueling Alaska's Future



SEPTEMBER 2015

Project Update

American Society of Drilling Engineers – September 16, 2015

Project Overview

Alaska LNG

An integrated liquefied natural gas export project that would provide access to gas for Alaskans

Gas Treatment Plant

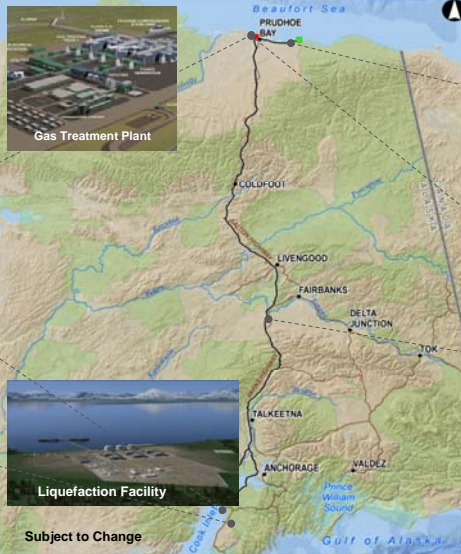
- 3.3 BCFD peak export rate
- Three trains
- CO₂ removed for injection at PBU

LNG Storage & Marine Terminal

- LNG storage tanks
- Two jetties for LNG carriers

Liquefaction Facility

- Natural gas is cooled to -260 degrees
- 3 trains dehydrate, chill and liquefy gas to produce up to 20 million tons of LNG each year



Point Thomson Transmission Line (PTTL)

- ~60 miles, 32" diameter above ground

Prudhoe Bay Transmission Line (PBTL)

- ~1 mile, 60" diameter above ground

Gas Pipeline

- 800+ mile 42" diameter below ground gas pipeline
- 6-10 compressor stations
- ~5 in-state off-take points

Artist's renditions of LNG and GTP



Potential Benefits



INCREASED REVENUE



15,000 ADDED JOBS



INVESTMENT IN LOCAL ECONOMY

- Could generate billions of dollars of new tax revenue for Alaska
- Would provide access to natural gas for Alaskans
- Estimated that it could create 9,000-15,000 jobs for design and construction
- Could provide ~1,000 jobs for operations
- Would be the single largest investment in Alaska's history: \$45B - \$65B

Challenges

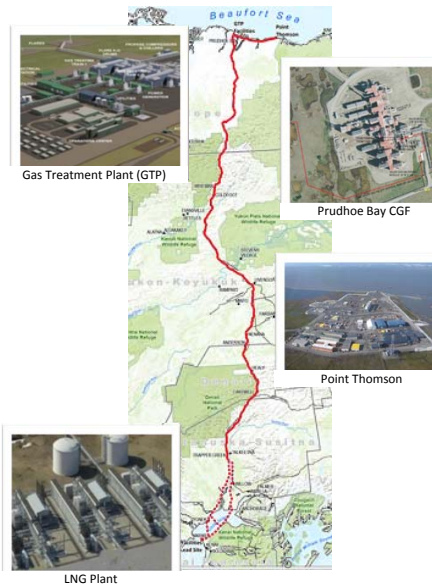
- Megaproject would require:
 - labor, resources and equipment that can handle Alaska's extreme, remote environment
- Complex commercial arrangements with foreign markets require long-term commitments
- Reducing environmental and socioeconomic impacts and risks
- Uncertainty related to permit timing/scope
- Working complex commercial and fiscal issues among Project participants, including the State of Alaska



Alaska LNG Project – 2015 Highlights

Alaska LNG

- Pre-FEED project spend - \$243 M through July 2015
- Finalizing project design (cost and schedule estimates)
- First draft Resource Reports to FERC
 - FERC feedback received
- Received DoE export authorization for Free Trade Agreement (FTA) and non-FTA nations
- Community open-house sessions
- Successful 2015 field program



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Alaska LNG Project – Liquefaction Plant Update

Alaska LNG

LNG Plant Overview

- Preferred site near Nikiski, adjacent to Cook Inlet
- Plant would cool gas to -260°F to condense volume by 600 times
- Would require three modularized LNG trains to dehydrate & chill gas

Storage & Loading would require:

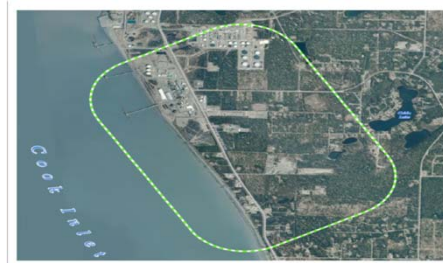
- LNG storage tanks
- Two jetties to accommodate 15-20 LNG carriers/month
- Specially designed LNG vessels transport chilled liquefied natural gas

Recent Progress / Focus

- Acquired approximately 550 acres to date
- Progressing geotechnical and geophysical site suitability analysis (onshore/offshore)



Initial LNG Plant Layout



Proposed LNG Plant Site

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Alaska LNG Project - Pipeline Update

Alaska LNG

Overview of project requirements

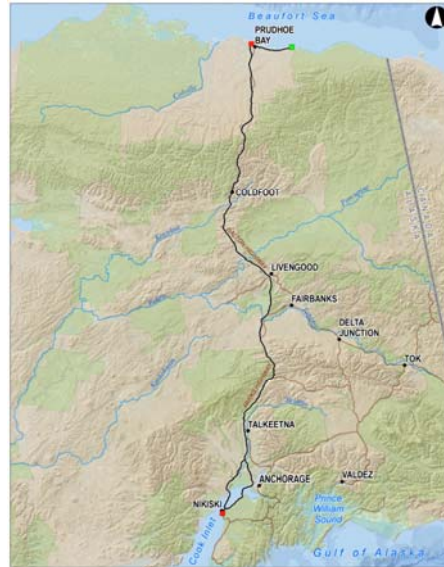
- 800-mile pipeline
- Will require ~1.2 million tons of steel
- Compressor stations will maintain pressure and temperature
- At least 5 off-take points to serve Alaska (determined by State)

Current status

- Continued collaboration with AGDC – aligned route
- Western route preferred Cook Inlet crossing
- Evaluate appropriate pipeline materials for each section
- Progressing work to evaluate SoA request for a 48" system

Forward plans

- Gathering/evaluating geotechnical and environmental baseline data
- Working with FERC and other agencies on permitting process
- Finalize design cost/schedule estimates



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Alaska LNG Project - Gas Treatment Plant Update

Alaska LNG

Overview of Plant Requirements

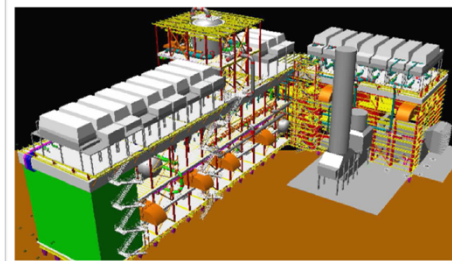
- 3.3 BCFD peak winter rate
- 3 process trains to remove impurities
- Modularized to reduce execution risk
- Facility will require ~250,000 tons of steel
- Facility will span ~200 acres
- CO₂ removed, captured and compressed for reinjection
- Located at Prudhoe Bay

Recent Progress / Focus

- Confirming large pressure vessel fabrication and shipping capabilities
- Support regulatory process/submittals



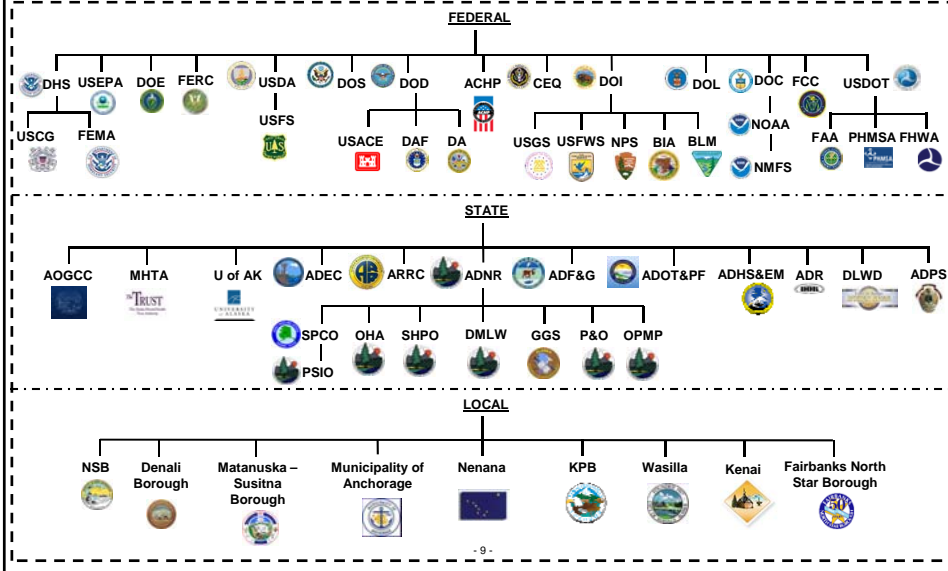
Initial GTP Layout



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Alaska LNG Project – Regulatory Overview (NEPA)

FERC leads NEPA process – umbrella for creation of all other permit applications; Requires collaboration with cooperating and reviewing federal, state, Alaska Native and local entities



External Engagement

Community

- + 90+ community sessions in last 12 months
- + Community meetings continuing to support summer field program
- + FERC scoping meetings planned for fall 2015
- + Legislative & media tours: 4
- + Communications tools: newsletter, ak-lng.com, toll-free line

Alaska Businesses

- + Using Alaska vendors, equipment, residents provides access to valuable local expertise, can reduce cost
- + Business information sessions in Barrow, Fairbanks, Kenai and Anchorage in April with ~ 700 participants
- + Over 500 businesses registered at ak-lng.com
- + Labor & logistics studies

Alaska Native Groups

- + Village and tribal outreach ongoing
- + Engagement with Alaska Native Regional Corporations
- + Involvement in 2015 AFN Conference



Alaska LNG by-the-numbers



Technical and field progress

- * \$243M + on pre-FEED through August 15
- * 570+ acres purchased in Nikiski, Alaska
- * 130+ full-time personnel on Alaska LNG Project
- * 200+ people in the field (80 scientists)
- * 950+ acres of topographic survey
- * 15,500+ acres of cultural surveys
- * 148,000+ feet of shallow seismic completed
- * 250 boreholes drilled
- * 100+ environmental site assessments completed
- * 2,000+ helicopter flying hours, 87,000+ miles driven
- * 1,100+ field check points set/confirmed



Regulatory

- * 2 DoE conditional export licenses (FTA / non-FTA)
- * 10,000+ pages of regulatory filings



Engagement

- * 90+ community outreach events
- * 100s of Alaska entities involved in logistics and labor studies
- * ~700 Alaska businesses – information sessions
- * 40+ meetings with Alaska Native regional and village corporations and tribal entities



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Questions