

# Alaska LNG Project Overview

## Matanuska-Susitna Borough

March 2021

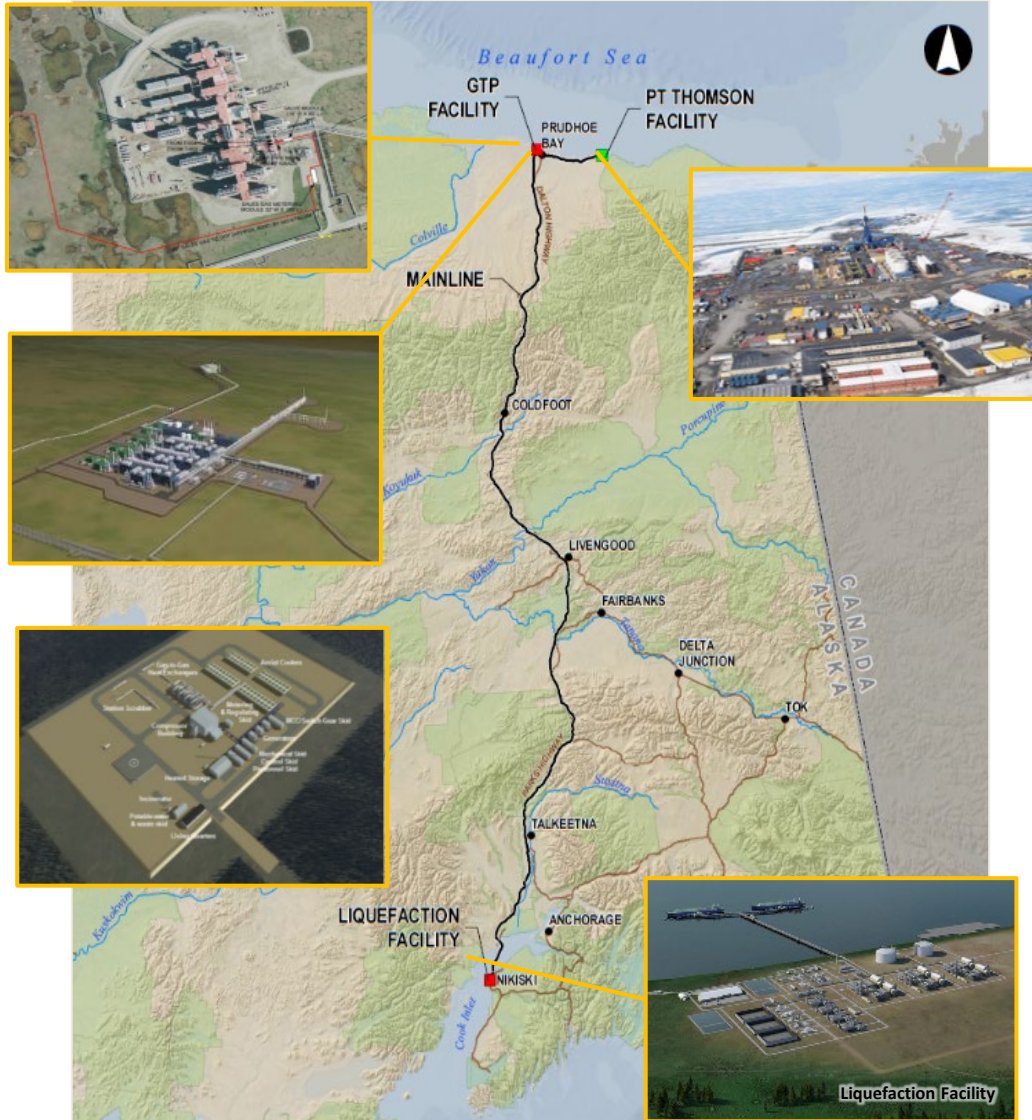


# Who is AGDC?

The Alaska Gasline Development Corporation (AGDC):

- Independent, public corporation owned by the State of Alaska
- Created by the Alaska State Legislature
- Currently lead party for developing the Alaska LNG Project
- Goal: Maximize the benefit of Alaska's vast North Slope natural gas resources through the development of infrastructure necessary to move the gas to local and international markets

# Alaska LNG Project - Overview



## Producing Fields

- ~35 TCF discovered North Slope resource
- Anchored by Prudhoe Bay and Point Thomson for 20 years
- Confirmed use of existing North Slope facilities
- Peak Workforce: 500-1,500 people

## Gas Treatment Plant

- Located at North Slope
- Remove CO<sub>2</sub> / H<sub>2</sub>S; Compress for re-injection
- Footprint: 150 - 250 acres
- Peak Workforce: 500-2,000 people
- Required Steel: 250k-300k tons

## Pipeline

- Large diameter: 42" operating at >2,000 psi
- Capacity: 3.3 billion cubic feet per day
- Length: ~806 miles (similar to TAPS)
- Peak Workforce: 3,500-5,000 people
- Required Steel: 600k-1,200k tons
- State off-take: 250-500 MCF/d

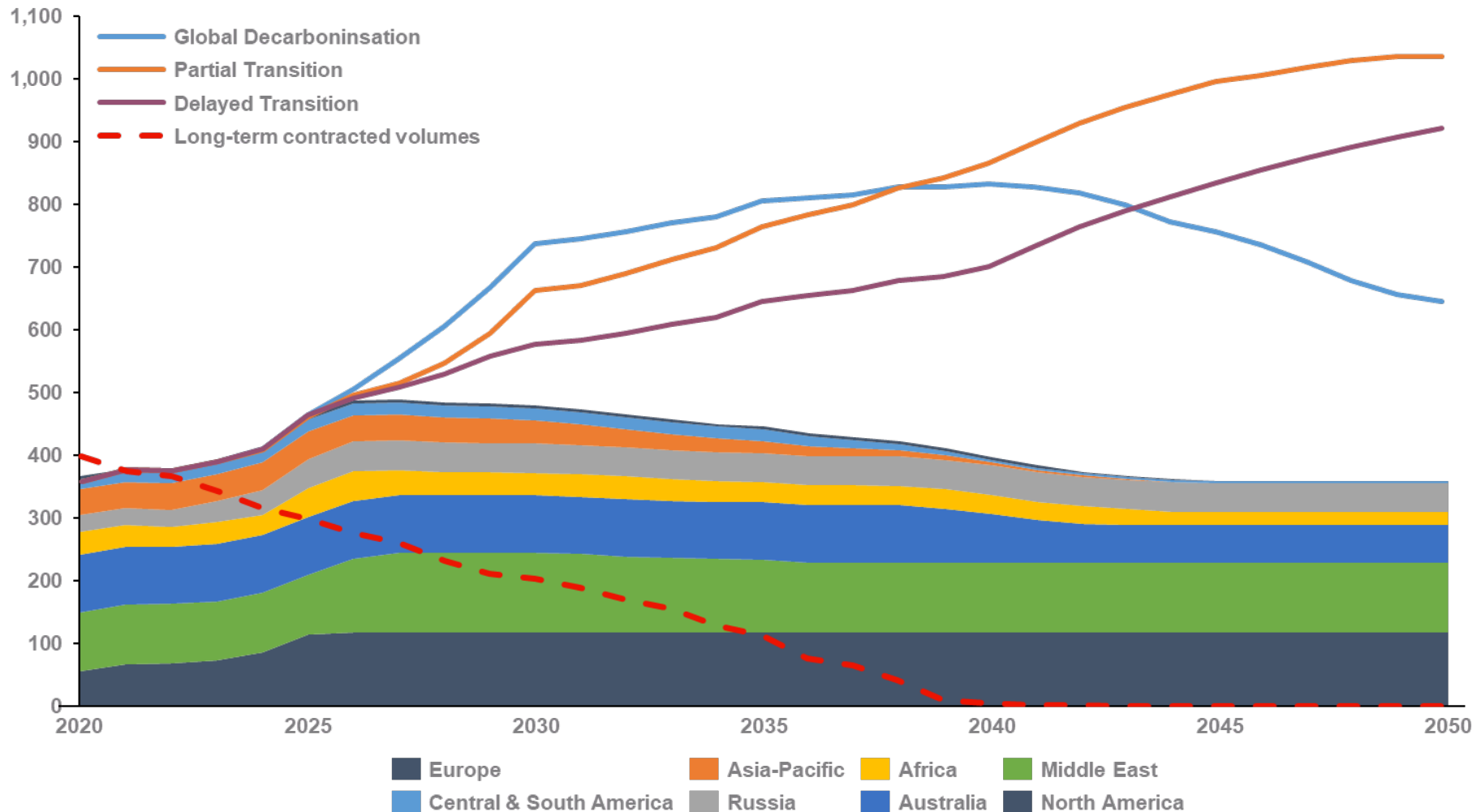
## Liquefaction Plant

- Capacity: up to 20 MTA
- 3 trains (6.67 MTA/train)
- Footprint: 640-1,000 acres
- Peak Workforce: 3,500-5,000 people
- Required Steel: 100k-150k tons

## Storage / Loading

- Terminal: 2 x 240,000 m<sup>3</sup> LNG Storage Tanks
- 1 loading jetty with 2 berths; 15-20 tankers per month
- Peak Workforce: 1,000-1,500 people

# Global LNG Supply and Demand Forecast Relative to Carbon Neutral Policy Transitions\*



\* Graphic from: Gas Strategies 3/1/2021

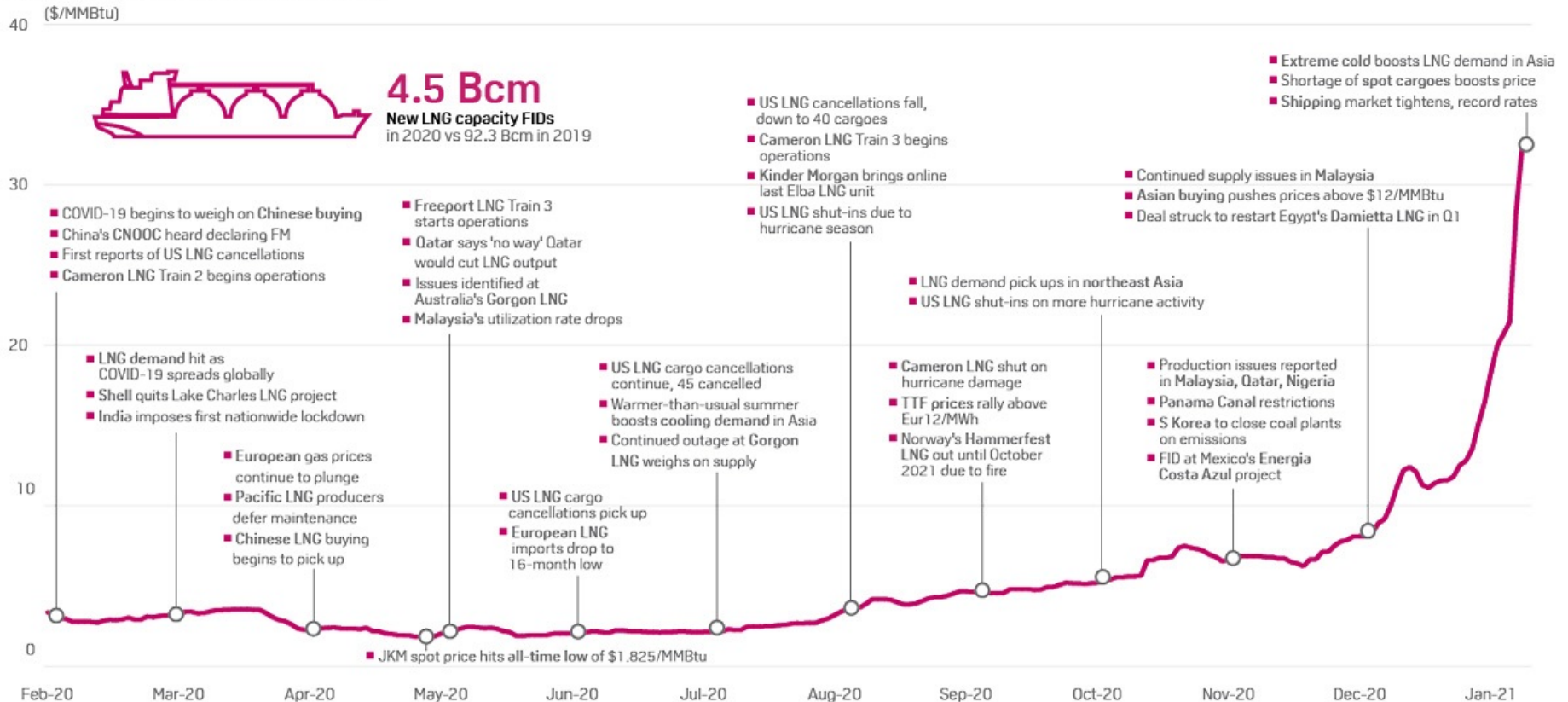


# Asian LNG Market Update

## LNG PRICE BONANZA: JKM SPOT PRICE RALLIES TO RECORD HIGH IN 2021

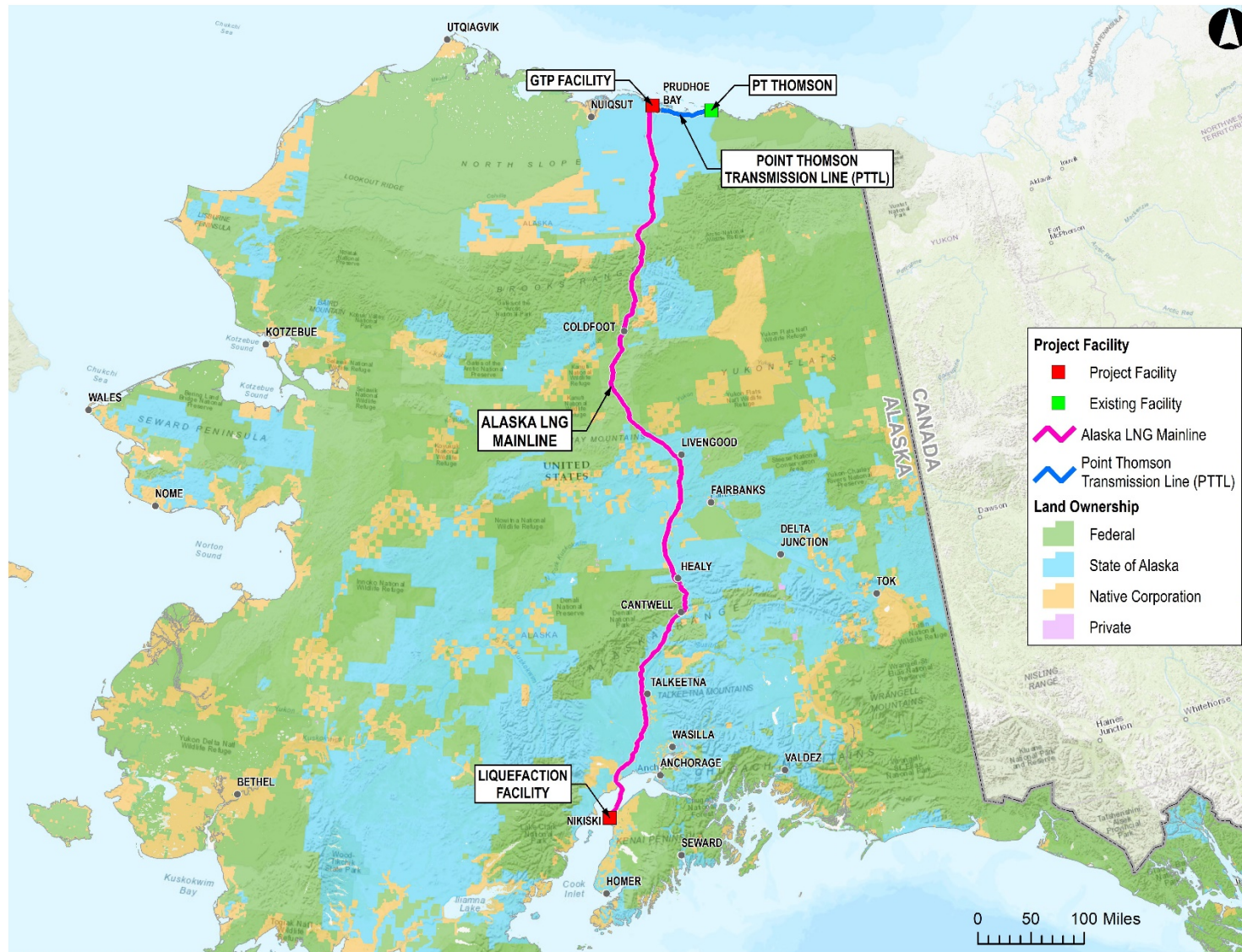
Since May, when the JKM Asian spot LNG price bottomed out below \$2/MMBtu due to oversupply, the market has enjoyed a remarkable rally, the JKM increasing more than 16-fold to a record high of \$32.50/MMBtu in January. This was driven first by an unprecedented supply-side response to low prices, with US LNG cancellations starting to rebalance the market through the summer, followed by strong winter buying demand from Asian buyers in the fall and a number of supply-side issues. Since the start of 2021, cargo shortages, transportation bottlenecks, record shipping rates, and plunging winter temperatures have lent further support to the market.

### JKM spot LNG price rallies from summer lows



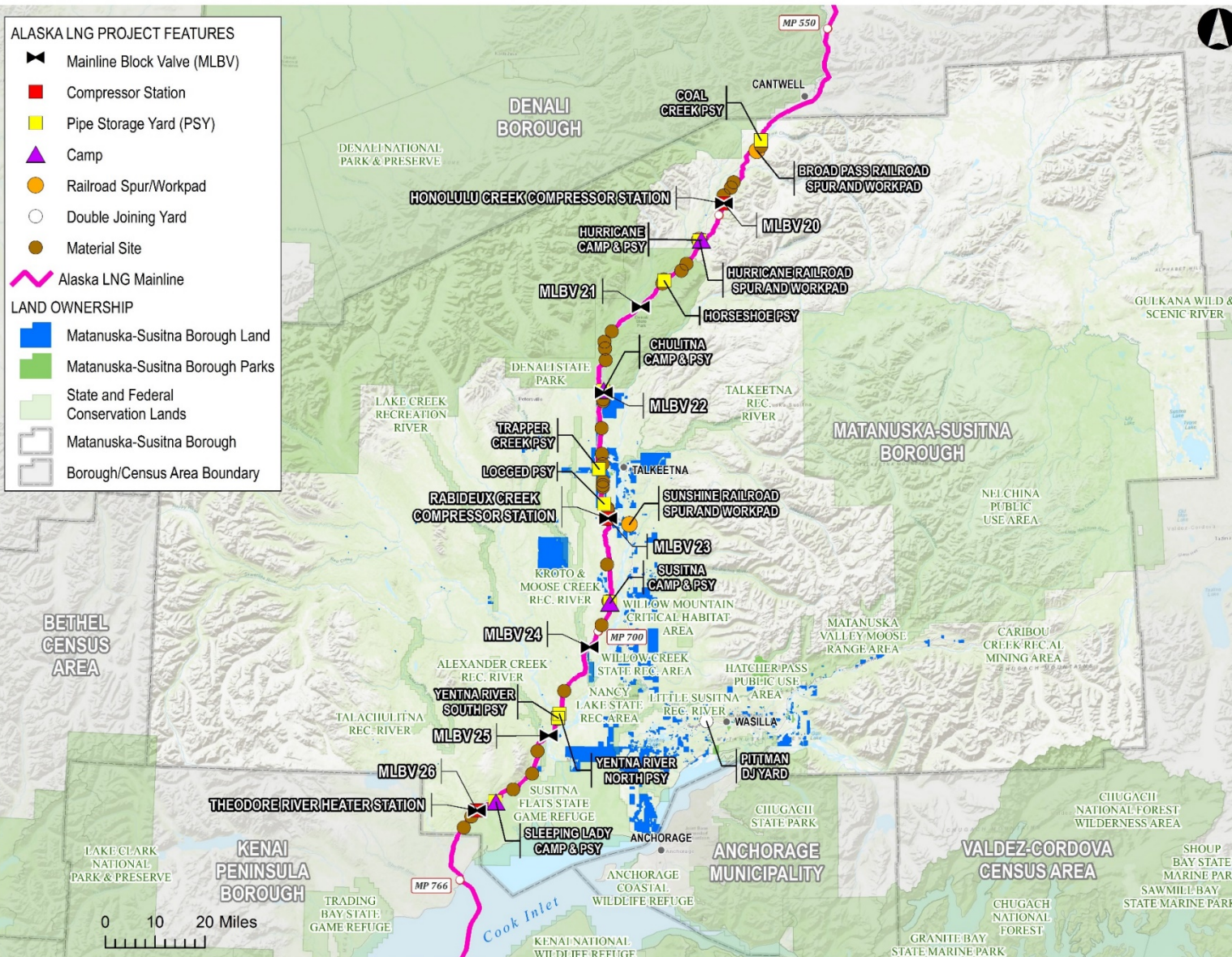
- Completed
  - Federal Energy Regulatory Commission (FERC) Final Environmental Impact Statement and Section 3 Order
  - Federal ROWs: Bureau of Land Management, National Park Service
  - All 35 Major Federal permits & authorizations completed
  - Alaska DEC Air Permit for the Gas Treatment Plant (GTP)
- Remaining:
  - Alaska DNR State Land ROW Lease
  - Alaska DEC Air Permit for the Liquefaction Facility
  - Cultural Resource Management Plan
  - Shorter lead time State/local permits and approvals
    - Obtained as-needed
    - Closer to construction and typically after or during final engineering

# Project Footprint





# Project Footprint in Mat-Su Borough



- State: 71.5%
- Mat-Su Borough: 16.13%
- Native Corporation: 5.59%
- Private: 3.31%
- Alaska Railroad: 2.97%
- Federal: 0.40%
- University of Alaska: 0.11%



# Alaska LNG Project – Positive Impacts

## NEW SOURCE OF REVENUE:

The Alaska LNG project will generate a recurring new source of state revenue from royalty and production taxes on the natural gas produced.

## JOBS FOR ALASKANS:

Alaska LNG will create 12,000 construction jobs and 1,000 permanent operational jobs. A significant boost for Alaska's highest-in-the-nation unemployment.

## LOWER ENERGY COSTS:

Alaska has some of the steepest residential and commercial energy costs in the nation. Bringing North Slope gas to Alaskans will result in lower prices.

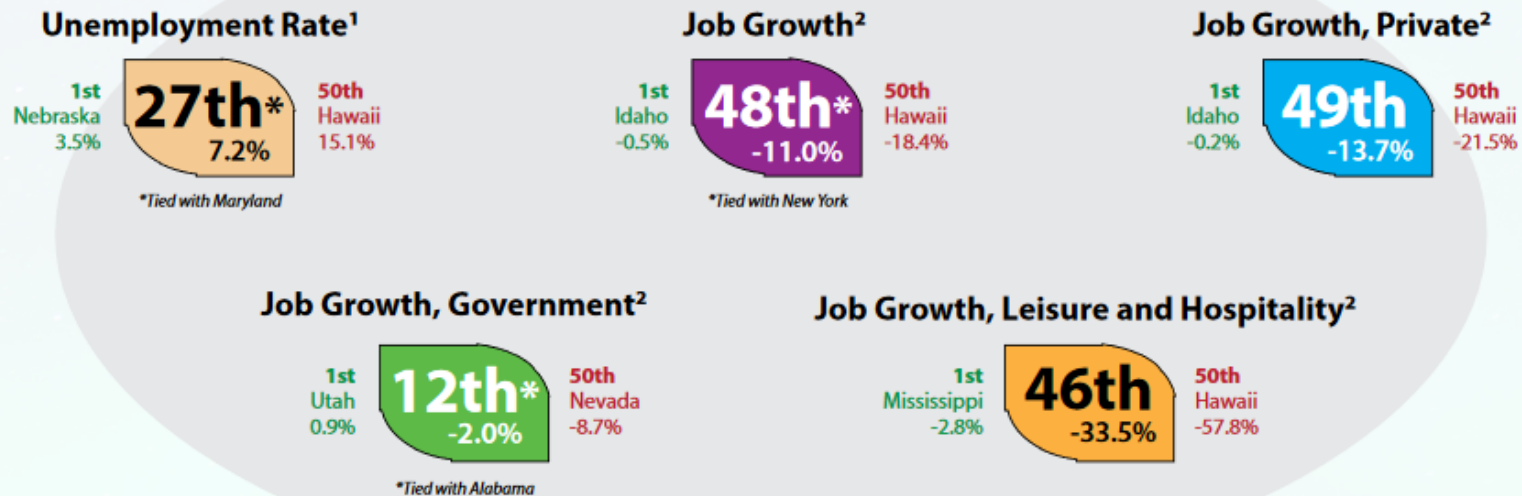
## RESOURCE DEVELOPMENT:

Alaska LNG will drive significant infrastructure investment and economic development across numerous Alaska industries, including mining, oil & gas exploration, transportation, tourism, and fisheries.

## CLEANER ENVIRONMENT:

Natural gas will reduce emissions for Alaskans suffering from air quality problems stemming from wood, diesel, and other high-emission sources of energy and heat.

## How Alaska Ranks



Note: Government employment includes federal, state, and local government plus public schools and universities.

<sup>1</sup>September seasonally adjusted unemployment rates

<sup>2</sup>September employment, over-the-year percent change

Sources: U.S. Bureau of Labor Statistics and Alaska Department of Labor and Workforce Development, Research and Analysis Section

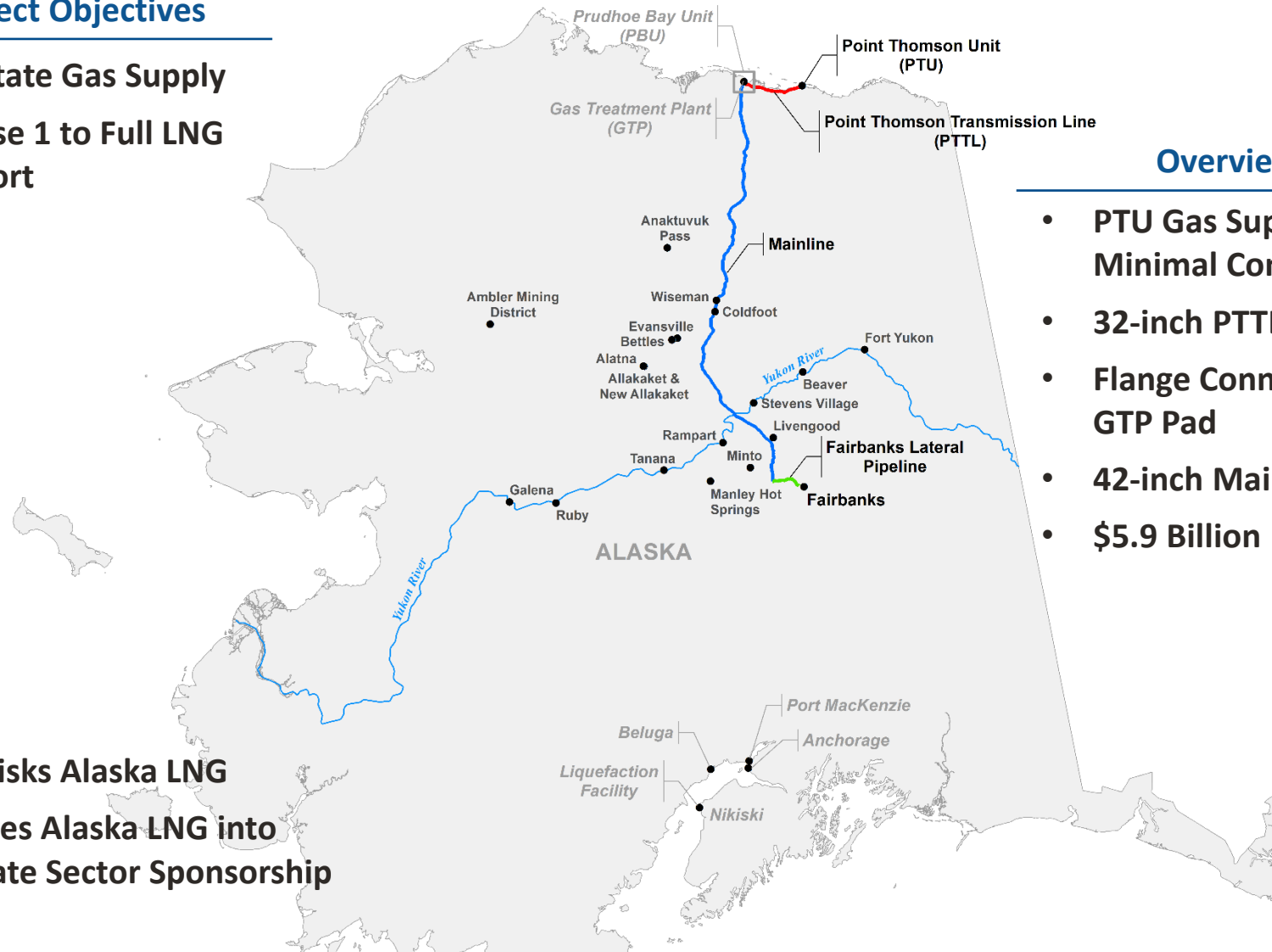
- Alaska has an energy infrastructure project that can immediately ignite our economy, put thousands of Alaskans back to work, clean our air, improve health, and reduce energy bills
- The Alaska LNG Project can be phased, starting with a \$5.9 billion U.S. clean energy infrastructure initiative that will resolve longstanding climate, pollution, and energy problems affecting vulnerable rural populations and strategically located Department of Defense installations
- Attracting stimulus and private funding in the near future for the initial phase of the Alaska LNG Project will quickly revitalize Alaska
- Alaska LNG is unique: the project has major permits required to start work now



# Phase One - Infrastructure Opportunity

## Project Objectives

- In-State Gas Supply
- Phase 1 to Full LNG Export
- De-risks Alaska LNG
- Moves Alaska LNG into Private Sector Sponsorship



## Overview

- PTU Gas Supply with Minimal Conditioning
- 32-inch PTTL
- Flange Connection at GTP Pad
- 42-inch Mainline
- \$5.9 Billion

# Phase One - Alaska Economic Stimulus

- Propels a near-term economic recovery for Alaska:
  - ✓ \$1.5 billion impact in first 24 months
  - ✓ 1,400+ high-paying direct jobs
  - ✓ 20,000+ indirect jobs
- Immediate benefit to hardest-hit service industries (e.g., restaurants, hotels, transportation, etc.)
- Delivers natural gas to Interior Alaska in 2025
- The private sector would build, own, and operate

- Will significantly decrease energy costs
  - Alaskans with limited income spend a disproportionate amount of their money for heat and light,
    - Yet we sit on one the largest untapped natural gas reservoirs in the world
  - Lower bills by 25% in rural communities with construction of initial phase; as much as 75% when the Alaska LNG Project is complete
- Will provide cleaner air in Fairbanks and Interior Alaska
  - Some of the worst air quality in the nation
  - Bring relief to residents with no alternative to diesel or wood
- Will boost military readiness and efforts to alleviate climate impacts
- Will reduce costs for producing minerals for renewable energy and electric vehicle components



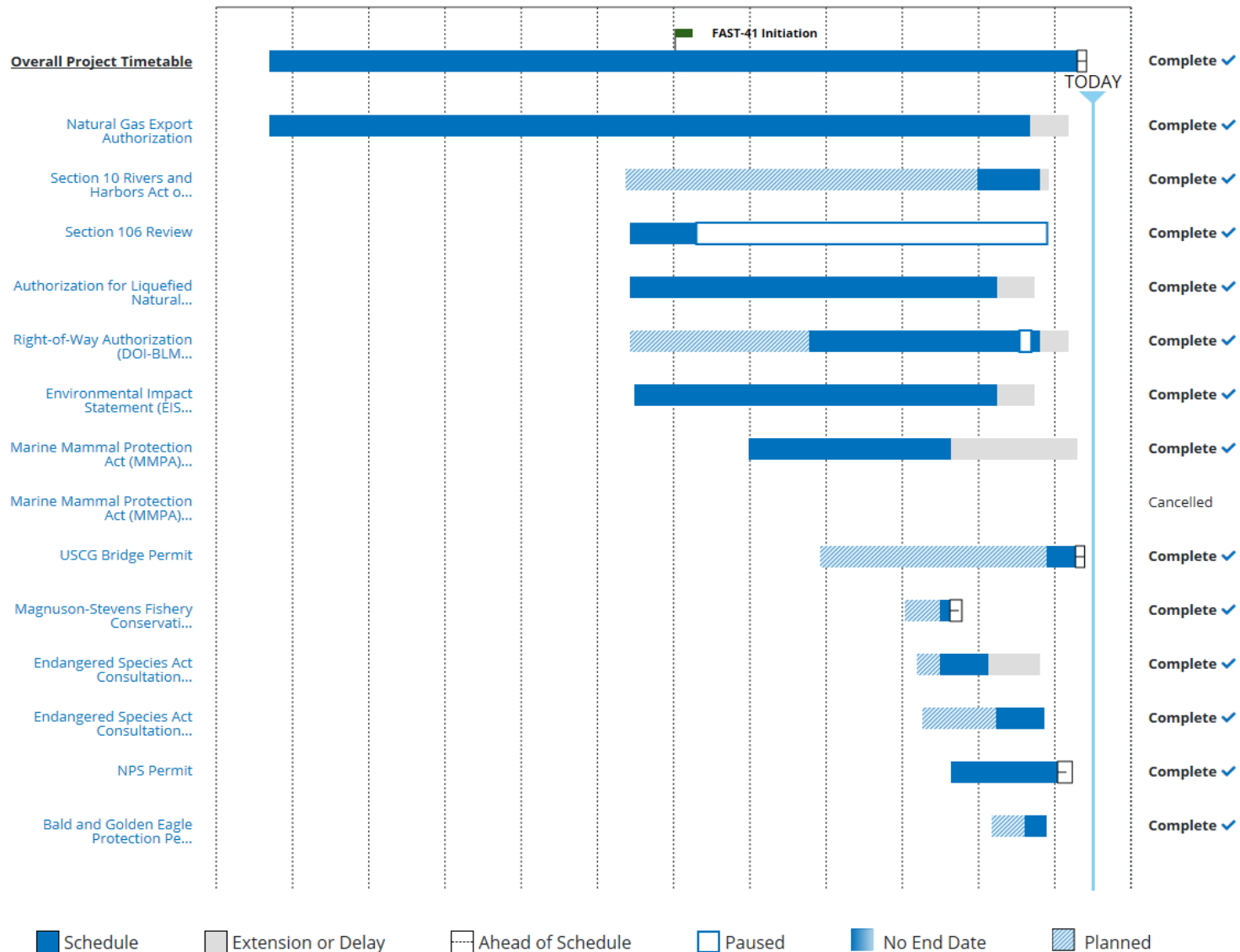
- Completing major permits and approvals
- Working with private-sector investment partners and seeking Federal infrastructure funds
- Encouraging Alaskans to rally behind the project that will bring positive impacts to Alaska for generations



ALASKA  
GASLINE  
DEVELOPMENT CORP.

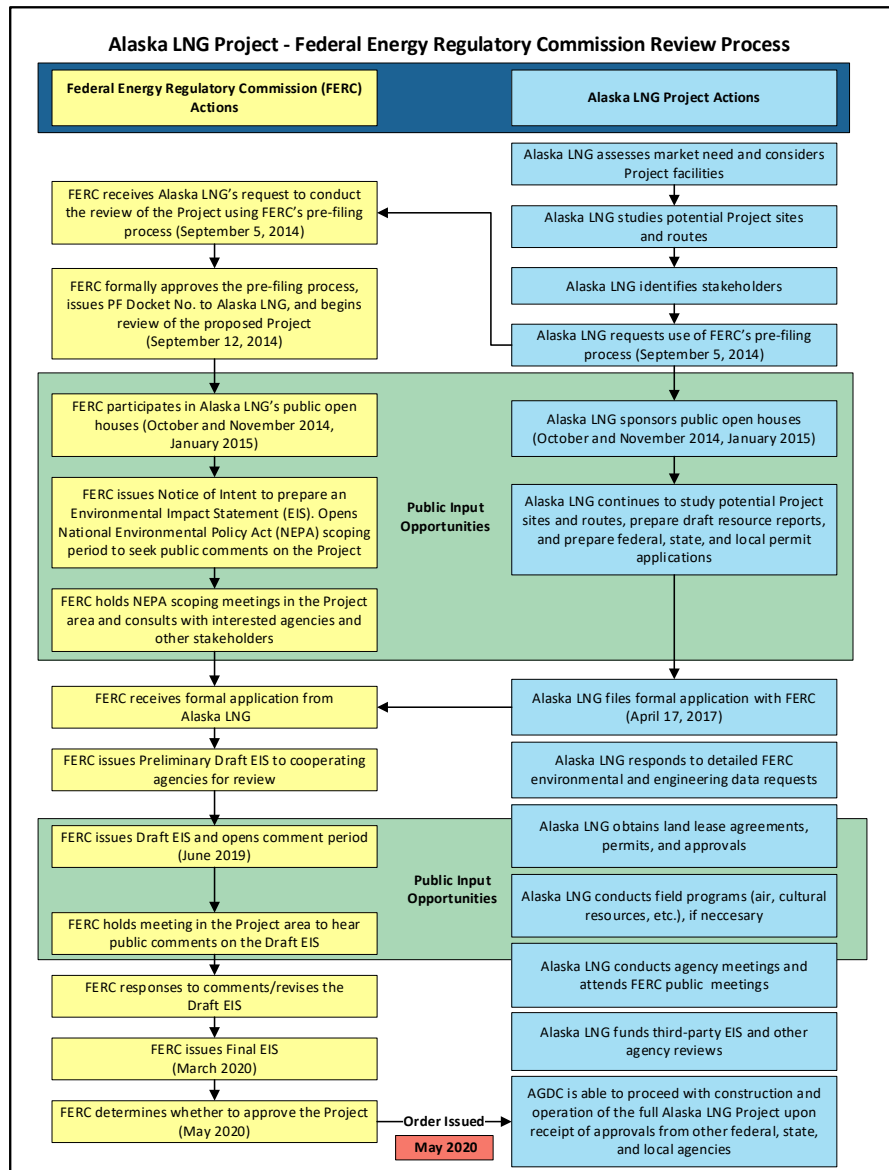


# FAST-41: Fully Complete





# FERC Review Process Diagram



## Federal Energy Regulatory Commission (FERC): Lead Agency

### Six Year Process

- Started in 2014

### Iterative

- Initial application
- Requests for information
- Over 150,000 pages of material submitted

### Conclusion

- FERC Order issued May 2020

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- University of Alaska
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“...launch a national effort aimed at creating the jobs we need to build a modern, sustainable infrastructure now and deliver an equitable clean energy future.”

- Build a Modern Infrastructure
- Achieve a Carbon Pollution-Free Power Sector by 2035
- Make Dramatic Investments in Energy Efficiency in Buildings, including Completing 4 Million Retrofits and Building 1.5 Million New Affordable Homes
- Pursue a Historic Investment in Clean Energy Innovation
- Advance Sustainable Agriculture and Conservation
- Secure Environmental Justice and Equitable Economy Opportunity
- Position the U.S. Auto Industry to Win the 21st Century with technology invented in America

*Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future  
January 2020*



- On Feb. 8, the Department of Energy projected that coal and natural gas will still contribute nearly 40% of U.S. electricity generation in 2050
- Wind and solar power will increase but they aren't ready to meet the huge demand for electricity without fossil fuels and nuclear power in the mix
- China is the world's biggest polluter, generates 28% of the planet's yearly carbon dioxide emissions, and won't even start to cut back carbon emissions until 2030

“Natural gas will play an indispensable role in managing the risk that a precipitous leap to renewables will make electricity more expensive and potentially less reliable”

“Political debate around energy and climate policy often presents Americans with a false choice between natural gas and renewable energy - the two are intertwined”

*Progressive Policy Institute*

*Wind, Solar, and Gas: Managing the Risks of America's Clean Energy Transition*

*December 2020*

“Responsible production of natural gas and practices like hydraulic fracturing have improved our nation's energy security while supporting the nearly 1.5 million hardworking Americans the industry employs, including in rural communities across our great nation...”

I encourage you to bear in mind these many benefits of responsible domestic natural gas production as you consider any future executive or administrative action, and I look forward to working with you to achieve our shared goals of energy security, economic growth, and global emissions reductions.”

*Letter from Sen Joe Manchin III to President Joseph R. Biden  
February 11, 2021*

“VOICE recognizes that oil and gas will play a less prominent role in powering America’s next generation, but a conversion to more renewable energy sources will take time. There will be continued demand for traditional energy development in the decades to come and Alaska can meet the country’s needs for the foreseeable future. “

“It’s our responsibility to preserve the sovereign rights and powers of Alaska Native tribes, and so we must work with the President to ensure our voices are heard and respected.”

*Voice of the Arctic Iñupiat (VOICE)*

*Press Release: North Slope leaders react to Biden’s executive orders*

*January 27, 2021*