

Tyonek Community Meeting

The Stars are Aligned for Alaska LNG
2018

Rosetta Alcantra, VP of Communications



- **Alaska Gasline Development Corporation (AGDC):**

- Public corporation owned by the State of Alaska.
- Empowered to expedite, finance, and build a gas project.
- ***AGDC is Alaska's natural gas infrastructure development company.***



- **Vision:**

- Maximize the benefit of Alaska's vast North Slope natural gas resources through the development of infrastructure necessary to move the gas into local and international markets.

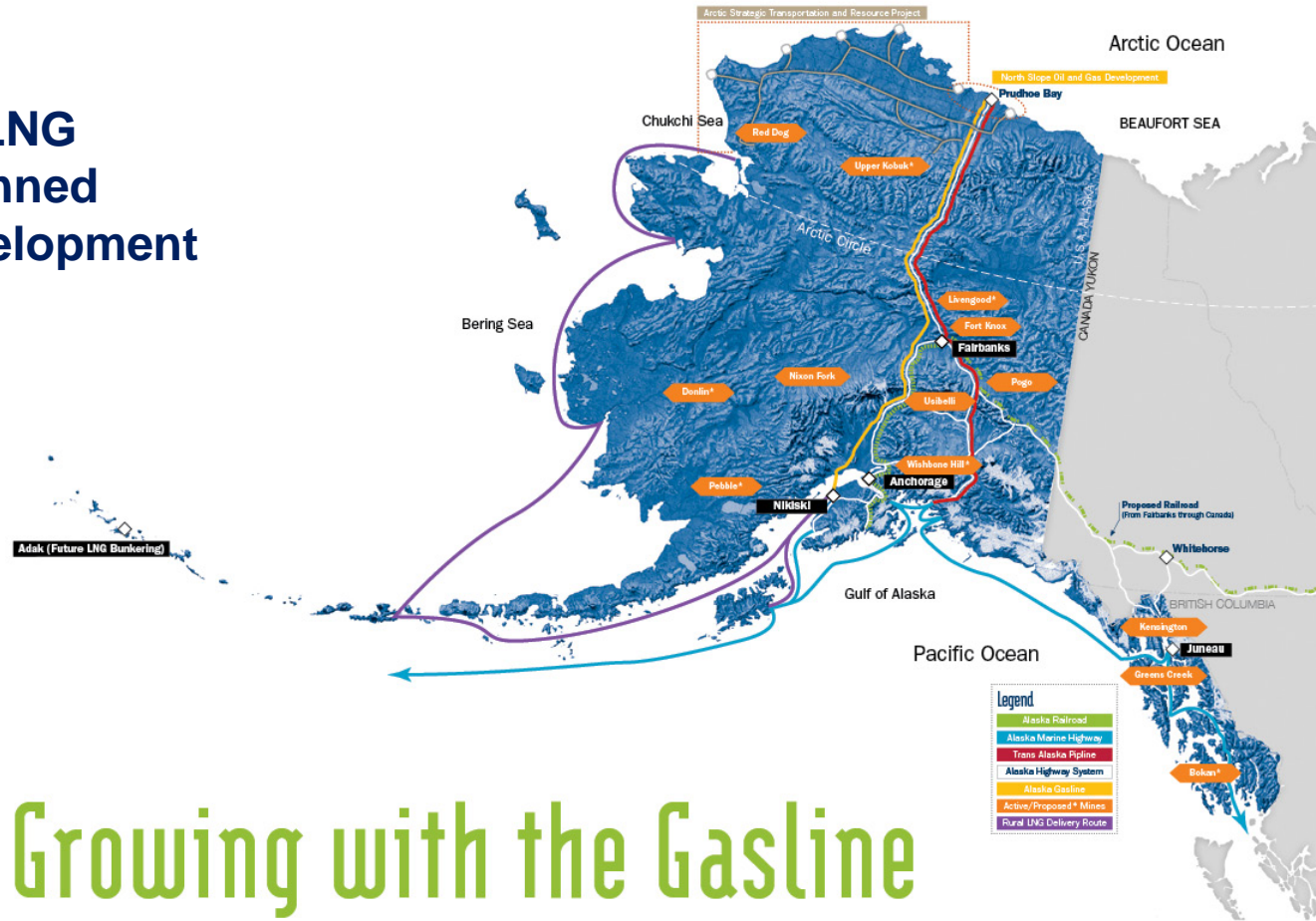
Presentation Agenda

- **Project Overview.**
- **Benefits to Alaskans.**
- **Supply, Demand, and Financing.**
- **Commercial and Permitting.**



Project Map

**Alaska Gasline and LNG
are part of a well planned
and responsible development
future for Alaska.**



Growing with the Gasline

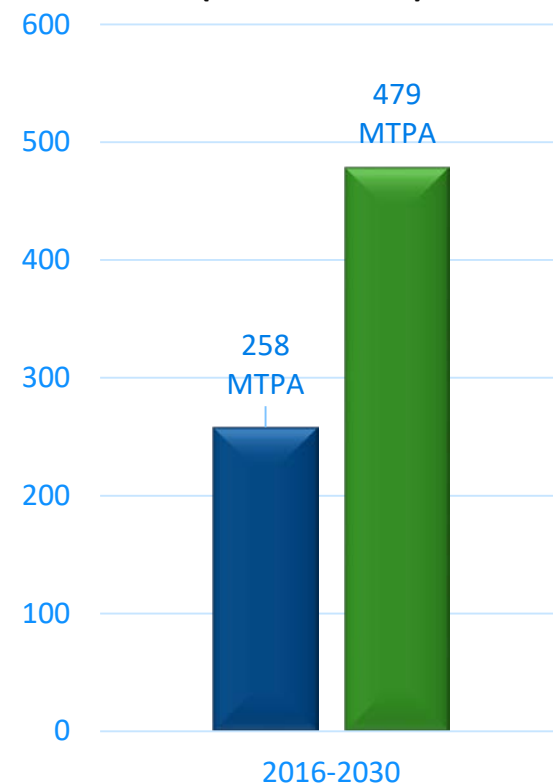
What is LNG?

LNG = Liquefied Natural Gas.

- Natural gas is the cleanest burning fossil fuel.
- 50 percent less carbon dioxide than coal when you burn it.
- Global energy demand is expected to double by 2050.
- LNG is a growth industry.

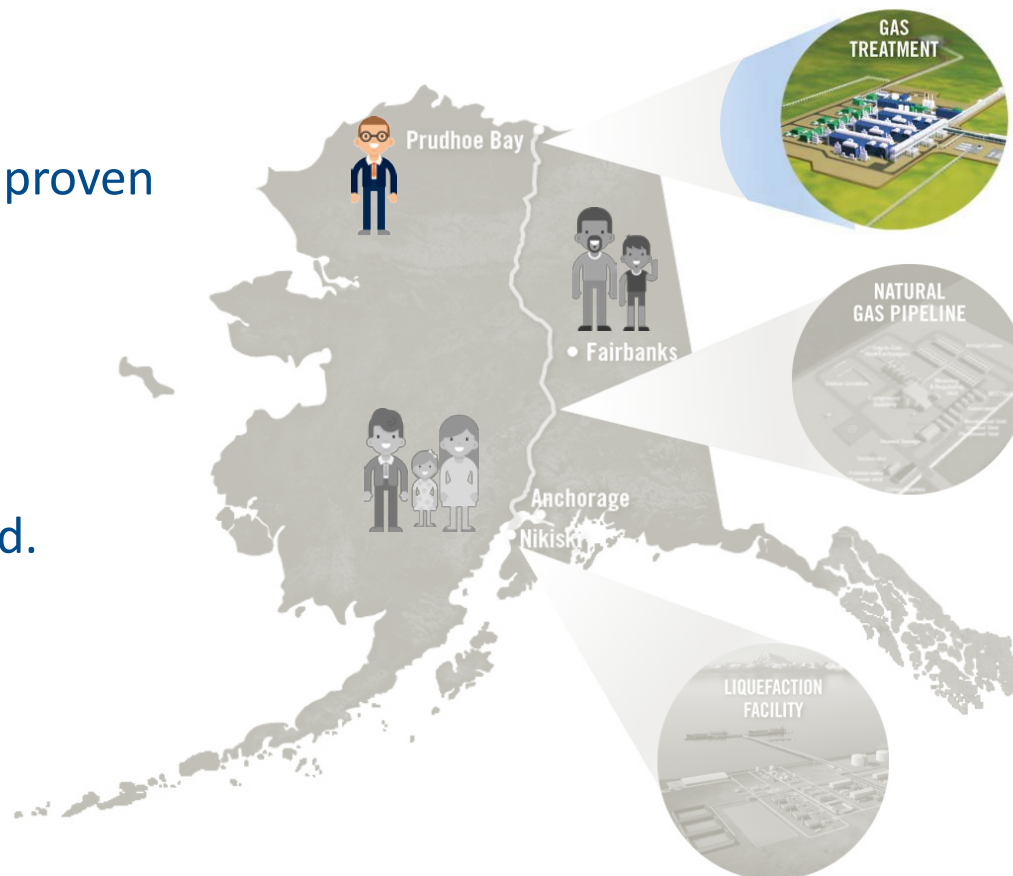


Global LNG Demand
(86% increase)



Gas Treatment Plant

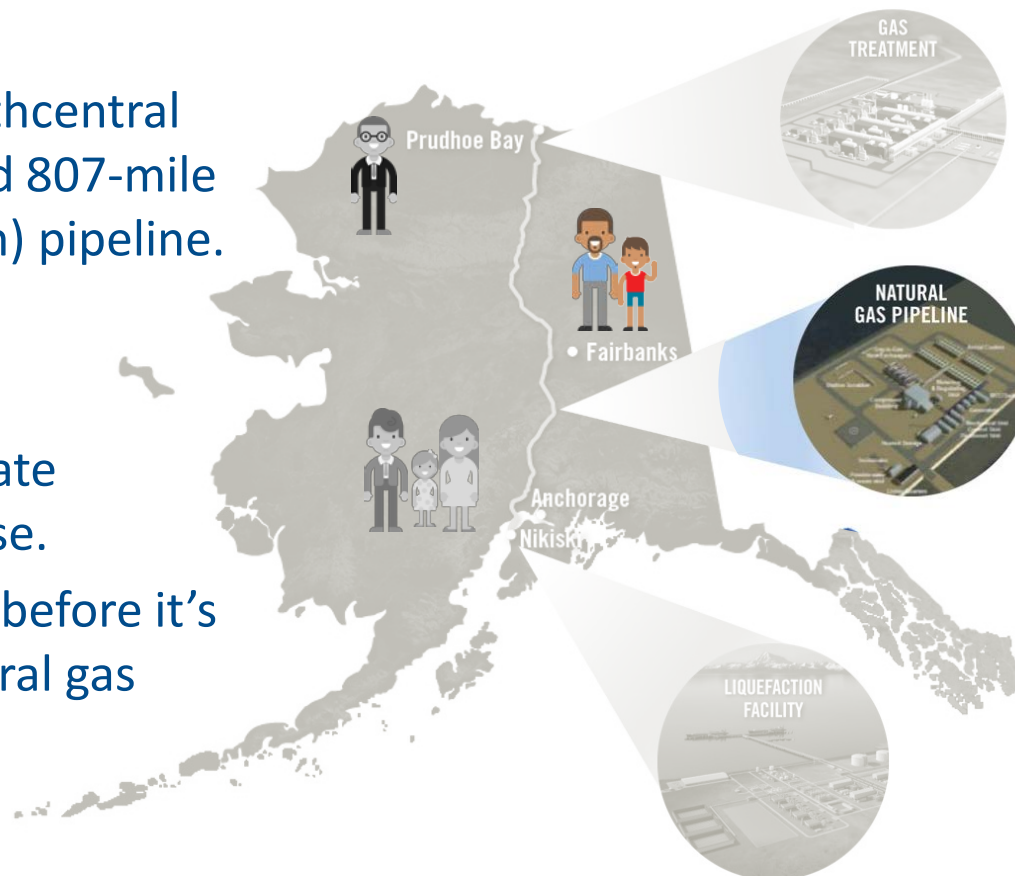
- **Alaska's North Slope**
 - 35 Trillion cubic feet (Tcf) of proven natural gas resources.
 - Existing infrastructure and workforce.
- **Gas Treatment Plant:**
 - Treat and compress 3.5 Bcf/d.
 - Remove carbon dioxide.



Pipeline

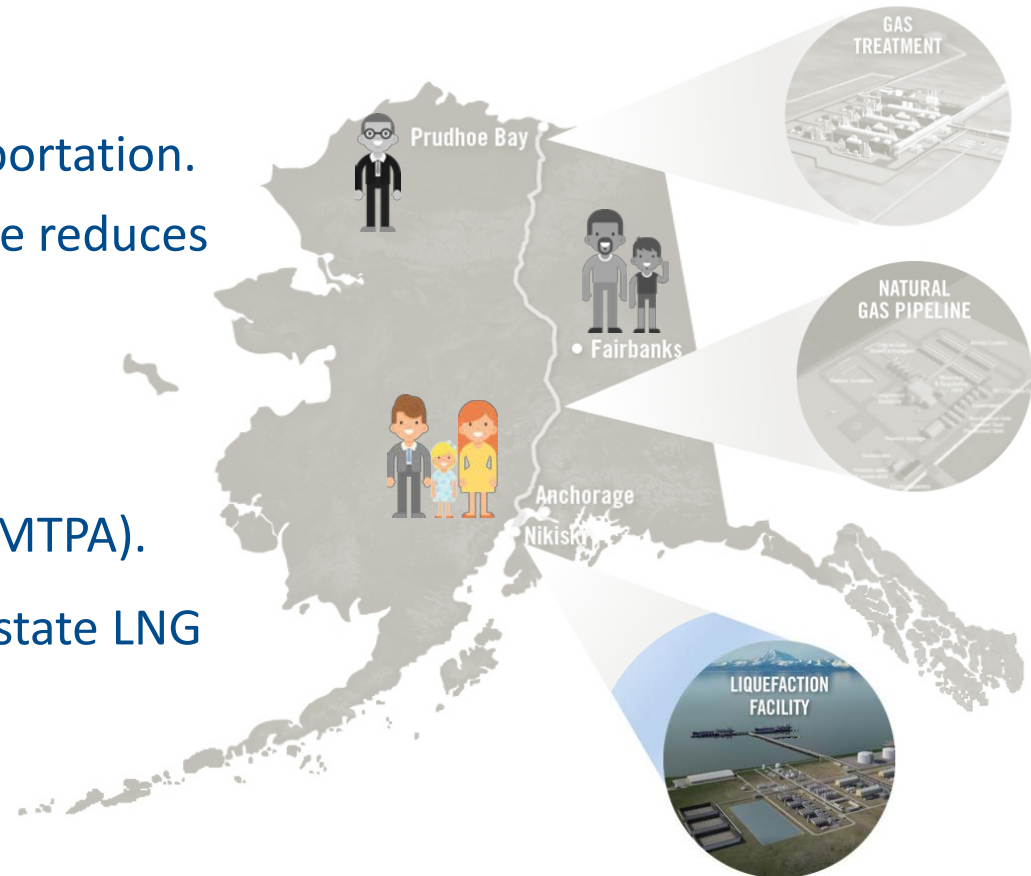
- **Pipeline:**

- Gas is transported to Southcentral Alaska via an underground 807-mile (1,299 km), 42-inch (1.1 m) pipeline.
- Established corridor.
- Delivers over 3.3 Bcf/d.
- Multiple offtakes for in-state domestic and industrial use.
- Alaskans will get gas first, before it's turned into liquefied natural gas (LNG) for export.



LNG Plant

- **LNG Plant:**
 - Located in Nikiski.
 - Natural gas liquefied for transportation.
 - When super chilled volume reduces to 1/600 its gaseous form.
 - LNG is loaded onto specialized ships for transport.
 - 20 million tonnes per annum (MTPA).
 - Opportunity for small scale in-state LNG distribution.



The Alaska LNG Project

- **Needed:**

- Asia market will face a supply deficit within seven years.
- Alaska LNG is well positioned to target this supply deficit.

- **Competitive:**

- Alaska can deliver LNG at a competitive price.
- Alaska LNG will provide stable, predictable, long-term security.
- Project phasing reduces risk and exposure.

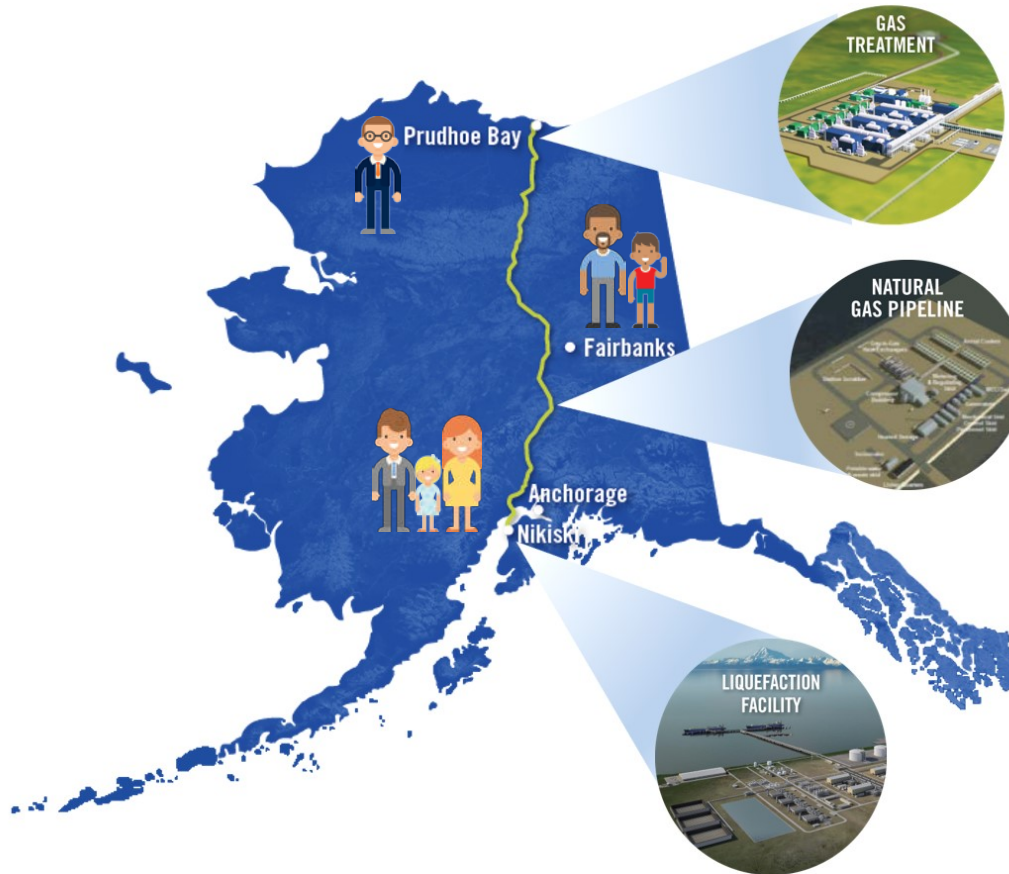
- **Achievable:**

- Pre-FEED engineering completed.
- FERC.
- First cargo in 2024/2025.



Benefits for Alaskans

CLEAN ENERGY. STABLE GAS SUPPLY. JOBS FOR ALASKANS.



First cargo in 2024 – 2025.

Clean Energy for Alaskans

- Clean air in Alaska.
- Blue skies in China.
- Alaska LNG will improve China's air quality and offset 80 million tonnes of CO₂ per Year.



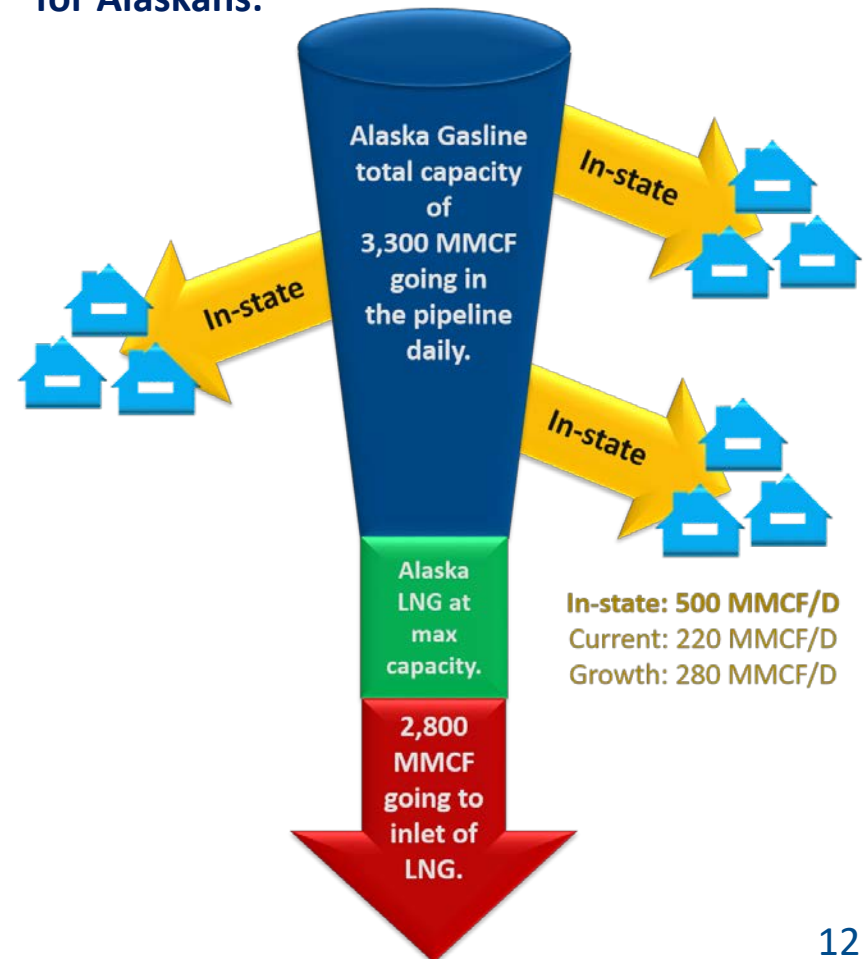
The Alaska Gasline will provide clean fuel to reduce particulate pollution.



TOP PRIORITY: GAS FOR ALASKANS

- **Stable Prices.**
- **Energy for all of Alaska:**
 - Offtakes to communities and projects along the Alaska Gasline.
 - Small scale LNG distribution.
 - No risk of Alaskans' gas going to Asia.

Alaska LNG System Design Guarantees Gas for Alaskans:



- **Alaska LNG will create a construction employment boom with a long-term employment future:**
 - **12,000** jobs during construction.
 - **1,000** long-term operations jobs.

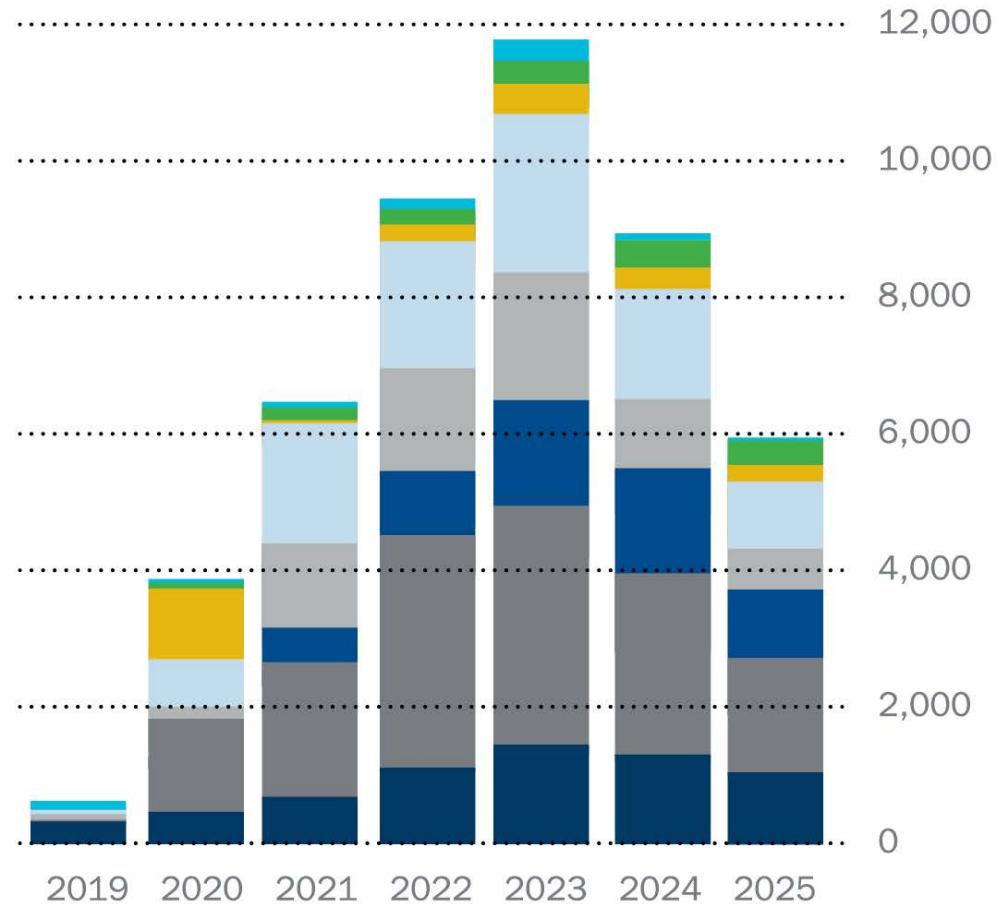


Jobs for Alaskans

Direct Hires at Peak



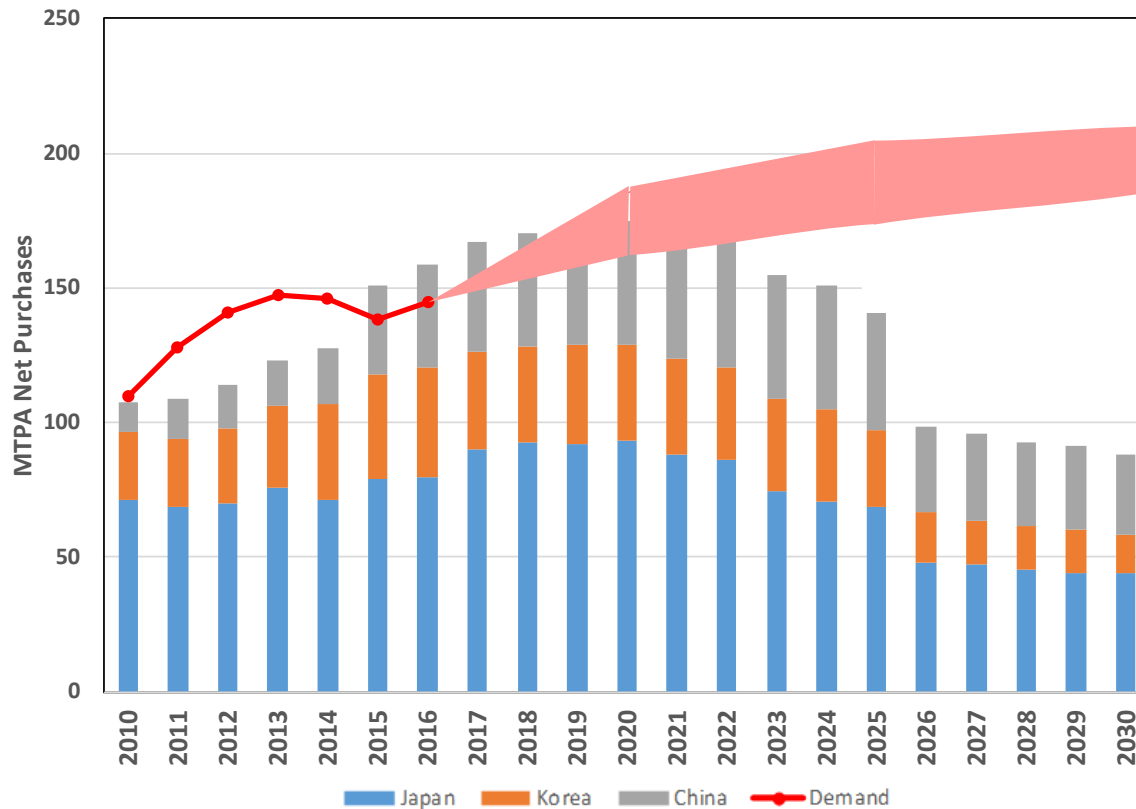
Direct Hires by Year and Type



Every trade will be needed to construct the Alaska LNG.

LNG Supply-Demand Forecast

Japan, Korea, China LNG Contracts and Demand

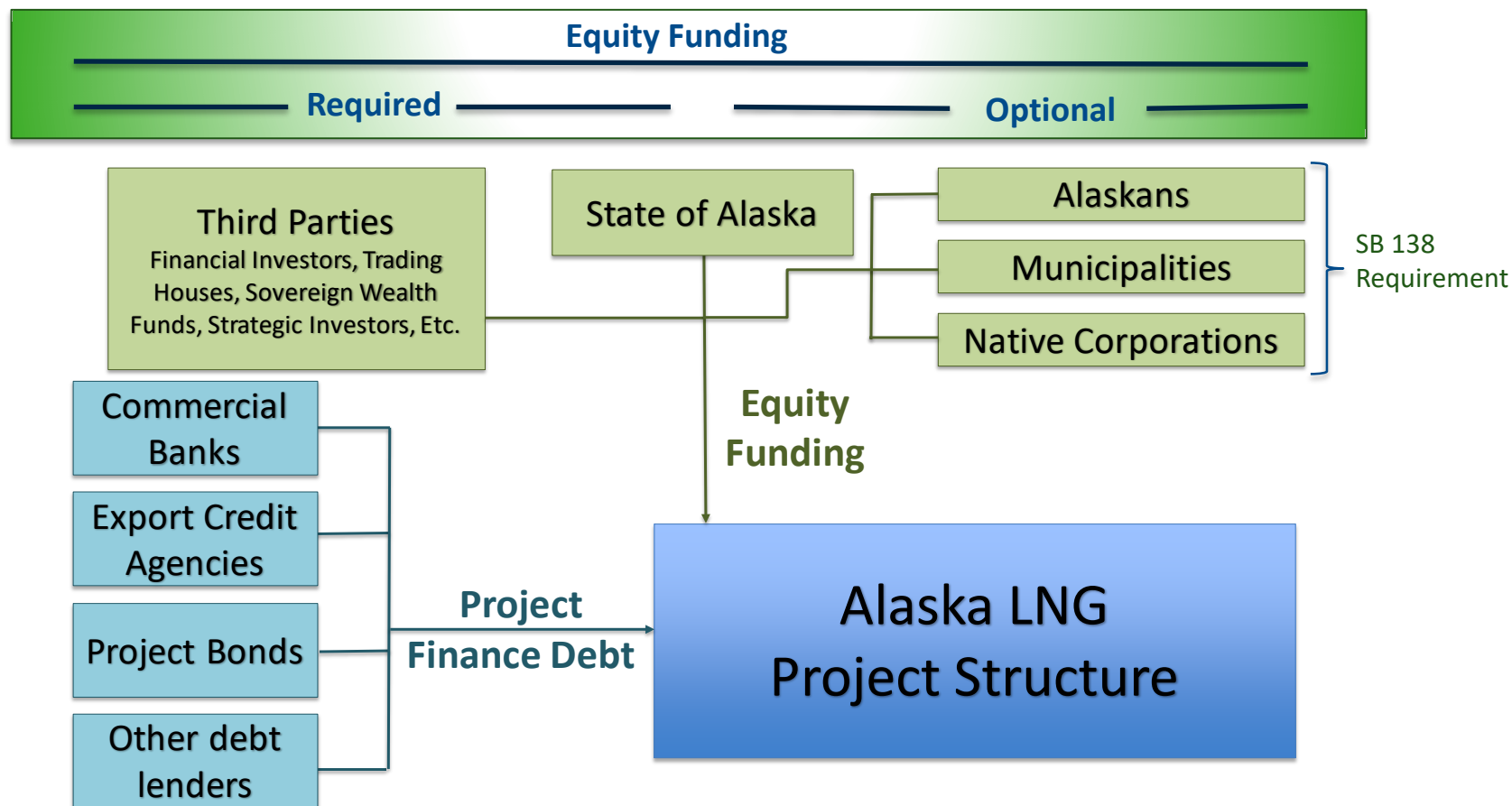


- Projected demand forecast has been expanded to show the range of data from multiple sources.
- 3-train Alaska LNG can be phased into the gap to fit the market.

Source: Global NatGas Advisors, Jan 2018; KPMG Global Energy Institute; IHS Markit.

Financing Structure

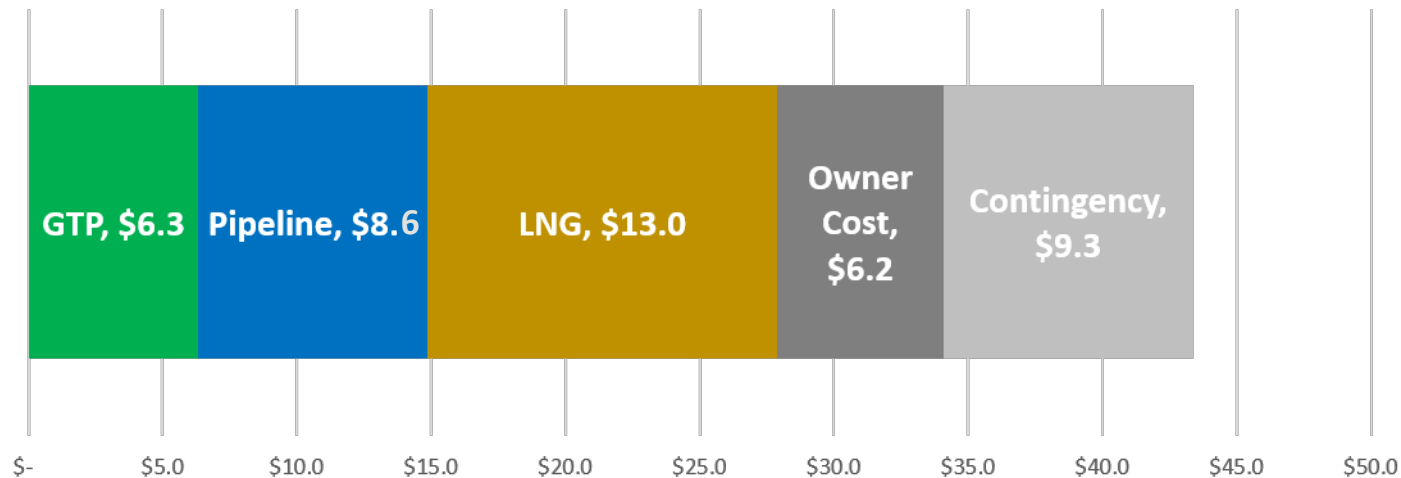
The project company must be structured to enable third parties to invest in the company.





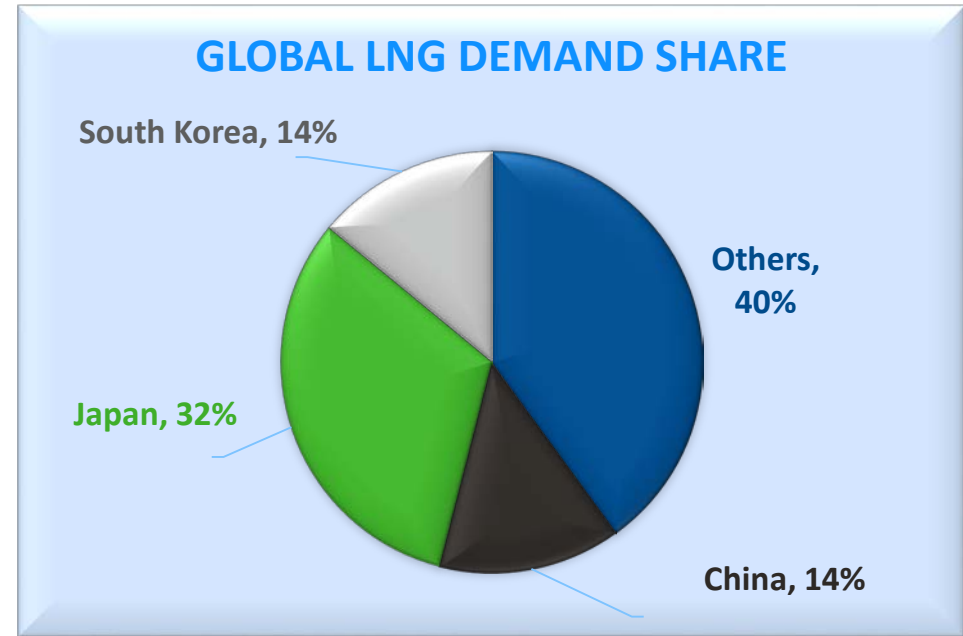
Total Project Cost

**Project cost, including contingencies,
totals \$43.4 Billion*.**

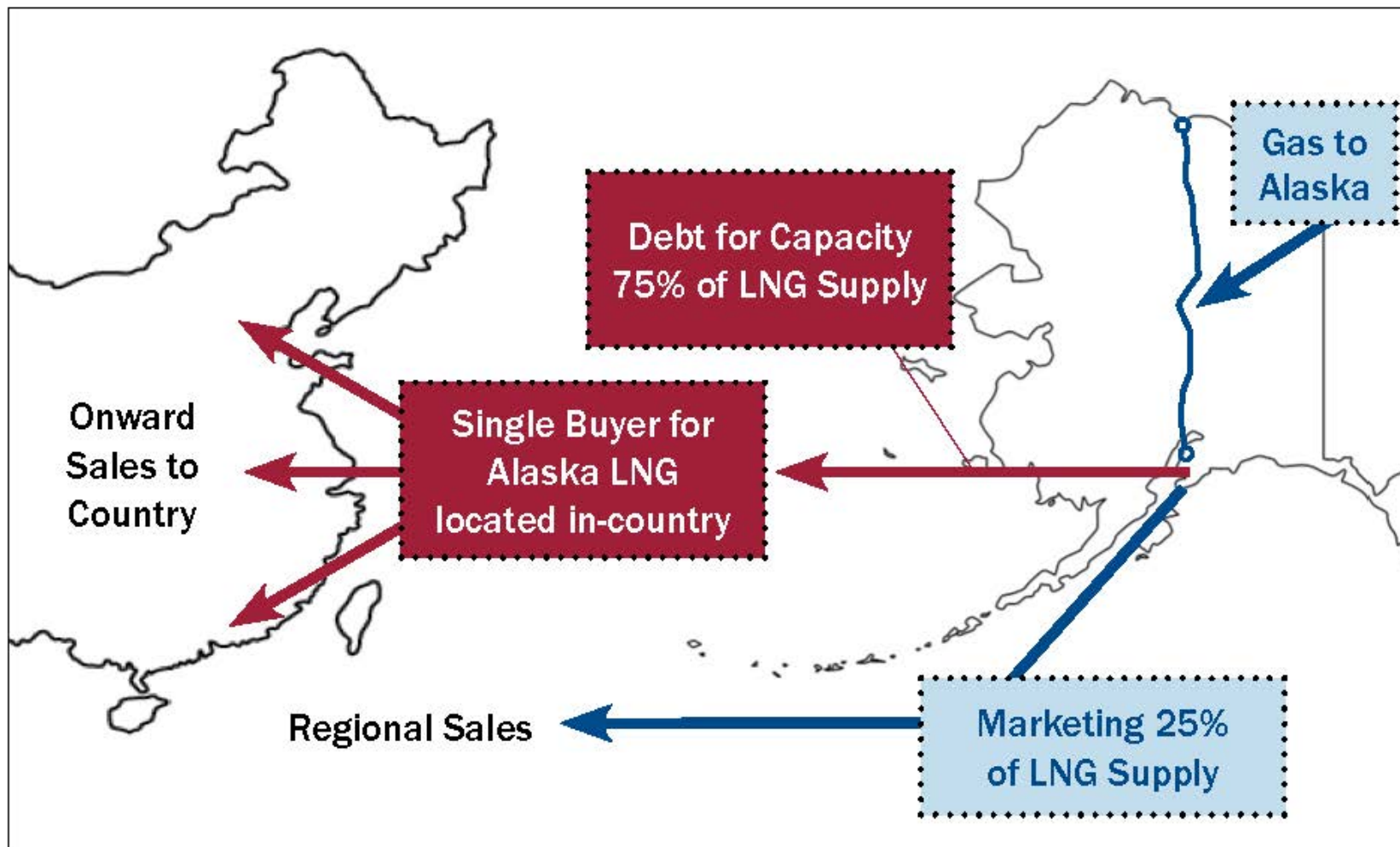


Asia's LNG Demand

- Asia is the largest LNG market.
- Environmental concerns in China have caused a mandated shift to gas.
- Demand for natural gas has grown dramatically, outpacing the ability to produce domestically.
- LNG import capacity is increasing rapidly to help satisfy future demand.
- Chinese President Xi's address to the 19th Party Congress mentioned "environment" 89 times.
- "China is very serious about constructing an ongoing, mutually beneficial relationship with Alaska," Chinese Deputy Consul General Ren Faqiang.



Alaskans First



Commercial Agreements

- **AGDC has signed agreements with:**
 - Japan – Tokyo Gas Co., Ltd.
 - Vietnam – PetroVietnam Gas.
 - South Korea – Korea Gas Corporation (KOGAS).
 - China:
 - Sinopec: World's largest integrated oil company.
 - Bank of China: World's 4th largest bank.
 - CIC Capital: World's 3rd largest sovereign wealth fund.



AGDC and Tokyo Gas Co., Ltd. sign LOI in Tokyo, Japan;
December 4, 2017.



Joint Development Agreement signing in Beijing, China; 2017.



AGDC and KOGAS sign MOU in Washington,
D.C.; June 28, 2017.

- **In-state Gas:**

- Discussions with in-state gas users to advance initial commercial agreements.

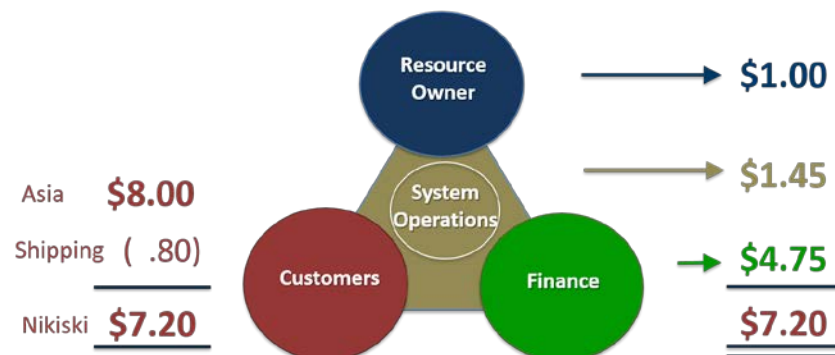
- **Agreements:**

- Long-term contracts are still being, and will continue to be, beneficial to both buyers and sellers.
- Alaska LNG can compete on a variety of fronts as demonstrated by the agreements signed thus far.

- **Asia is the largest LNG market:**

- Demand for natural gas has grown dramatically, outpacing the ability to produce domestically.
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Balancing three drivers to make the project economic to all stakeholders:



- **FERC Letter**
 - Federal Energy Regulatory Commission (FERC) application submitted.
 - In the request, FERC asks AGDC to respond to 289 questions in order for the agency to continue analysis of the Alaska LNG project.
 - Currently reviewing FERC's request for additional information and will provide the agency with a schedule for submitting responses to their questions.
- **Alaska Stand Alone Pipeline Project:**
 - U.S. Army Corps of Engineers publishes Final Supplemental Environmental Impact Statement.
 - Complete wetlands mitigation plan.
 - USACE and other federal agencies issue Records of Decision.
- **Alaska LNG Project:**
 - Kenai Spur Highway:
 - Currently evaluating alternatives two proposed alternatives: West and East.



For More Information

907-330-6300

- Questions? Give us a call.

agdc.us

- Learn more about who we are, what we do, and what the project means for Alaska.
- Commercial and financing information.

Alaska-LNG.com

- Updated project and permitting information.
- Interactive route map.

facebook.com/AKGaslineDevelopmentCorp

- Follow us on Facebook to track our progress and get breaking news.

Joint Development Agreement

