

Kotzebue Community Meeting

The Stars are Aligned for Alaska LNG
2018

Kathy Dunn, Marketing Manager
Jesse Carlstrom, Communications Manager



- **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.

Agenda

- What is LNG?
- Project overview.
- Benefits to Alaskans.
- Creating an economic project.
- Commercial.
- Permitting.



Gas Treatment Plant

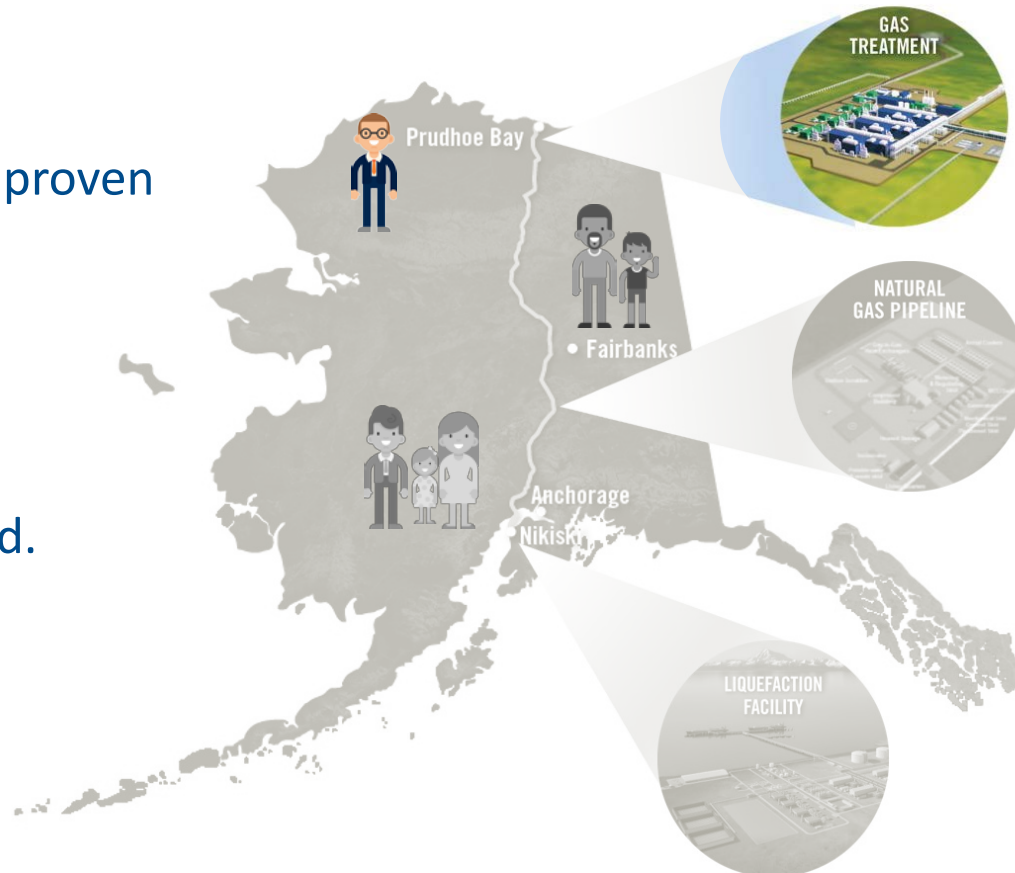
Alaska Gasline and Alaska LNG are part of a well planned and responsible development future for Alaska.

- **Alaska's North Slope:**

- 35 Trillion cubic feet (Tcf) of proven natural gas resources.
- Existing infrastructure and workforce.

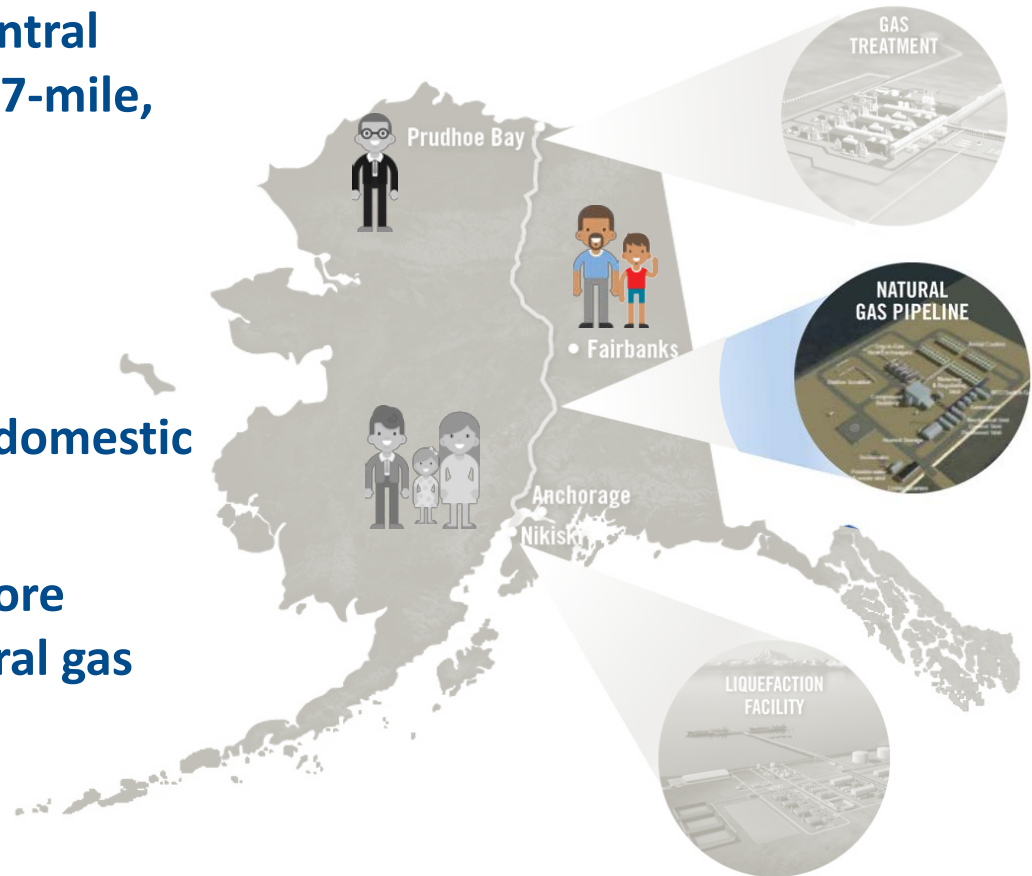
- **Gas Treatment Plant:**

- Treat and compress 3.5 Bcf/d.
- Remove carbon dioxide.



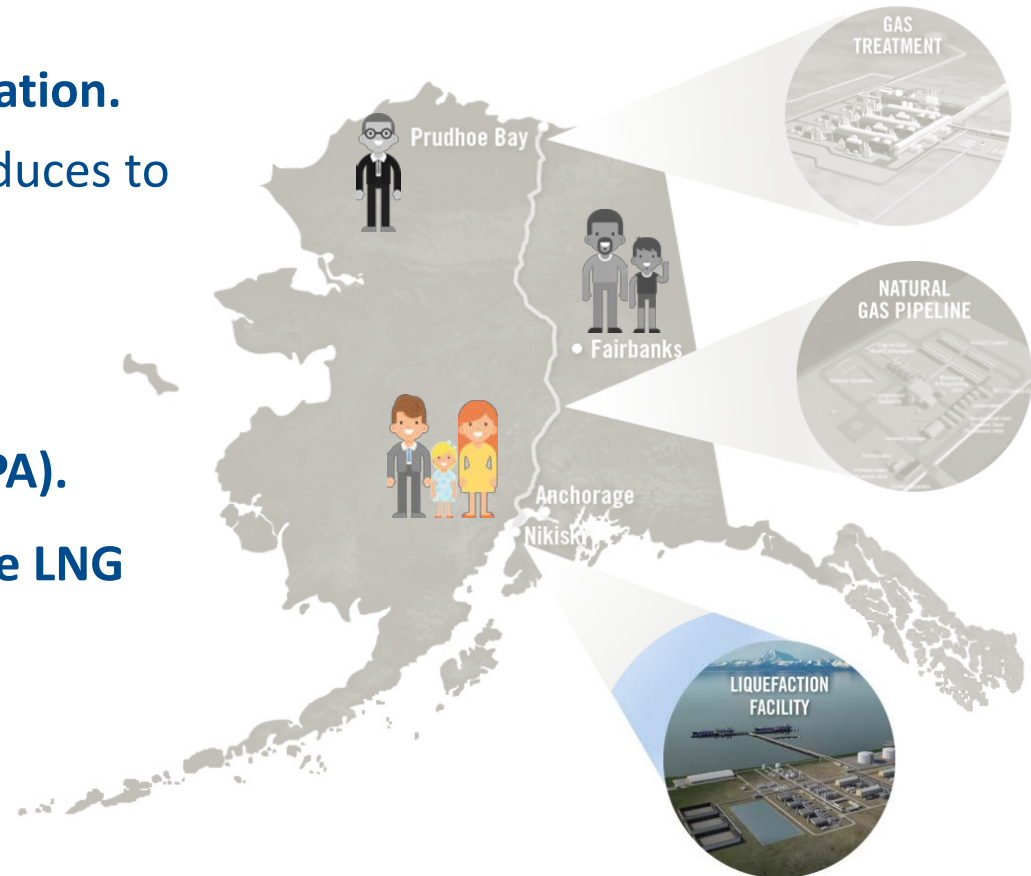
Pipeline

- Gas is transported to Southcentral Alaska via an underground 807-mile, 42-inch 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.

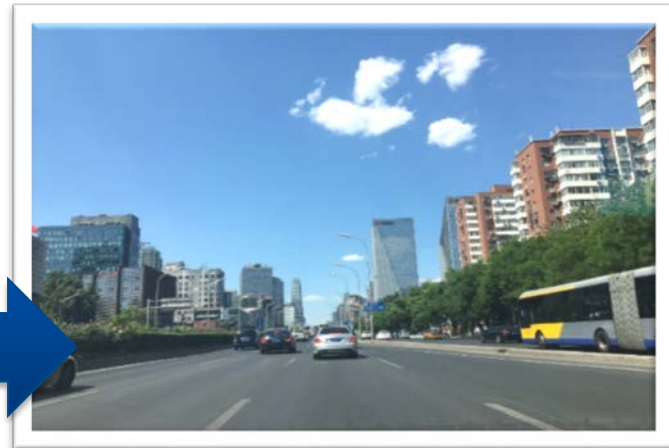


LNG Plant

- 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.



Benefits: Clean Energy for Alaskans

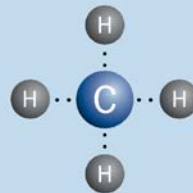


The Alaska Gasline will provide clean fuel to reduce particulate pollution.

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

Did you know?

Natural gas is mainly methane which is the simplest and cleanest burning hydrocarbon molecule on the planet.



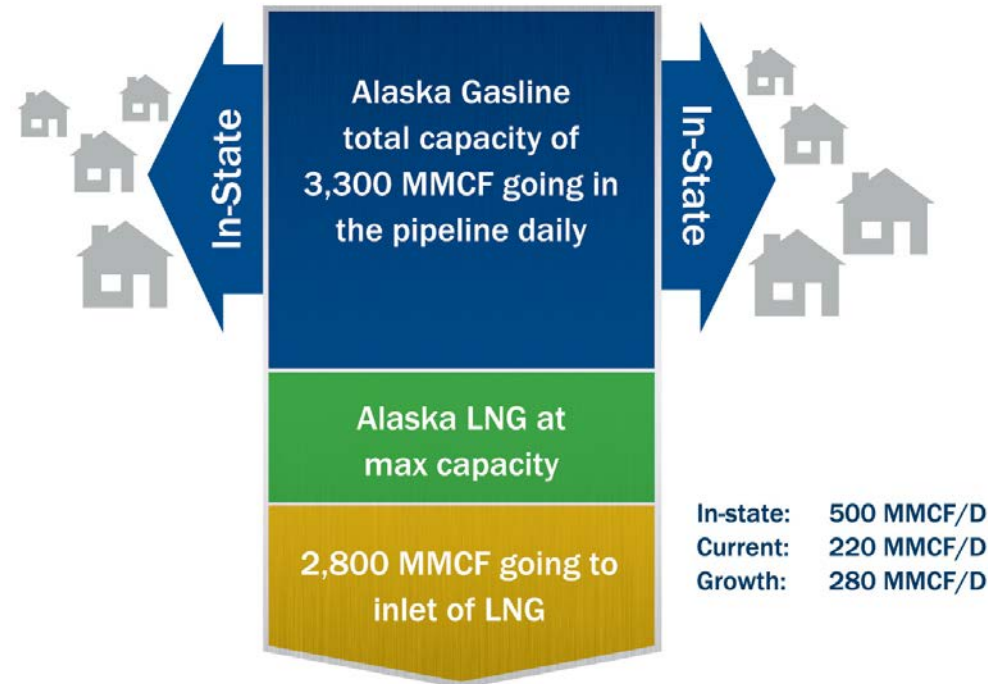
Benefits: Gas for Alaskans

TOP PRIORITY: GAS FOR ALASKANS

Gas for Alaskans
Anticipated Price: **\$5-6** PER MMBTU

- **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:



Benefits: Training and Jobs

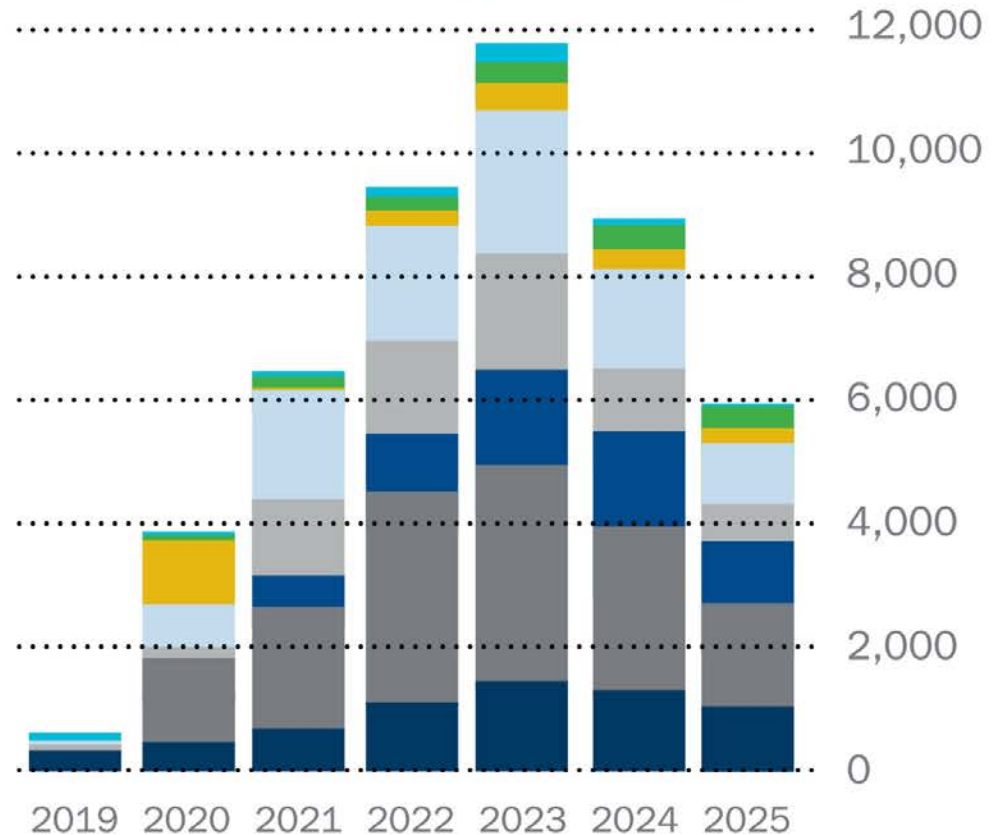
- **Alaska LNG will create a construction employment boom with a long-term employment future:**
 - **12,000** jobs during construction.
 - **1,000** long-term operations jobs.
 - See handout for information on jobs in your area.



Benefits: Jobs

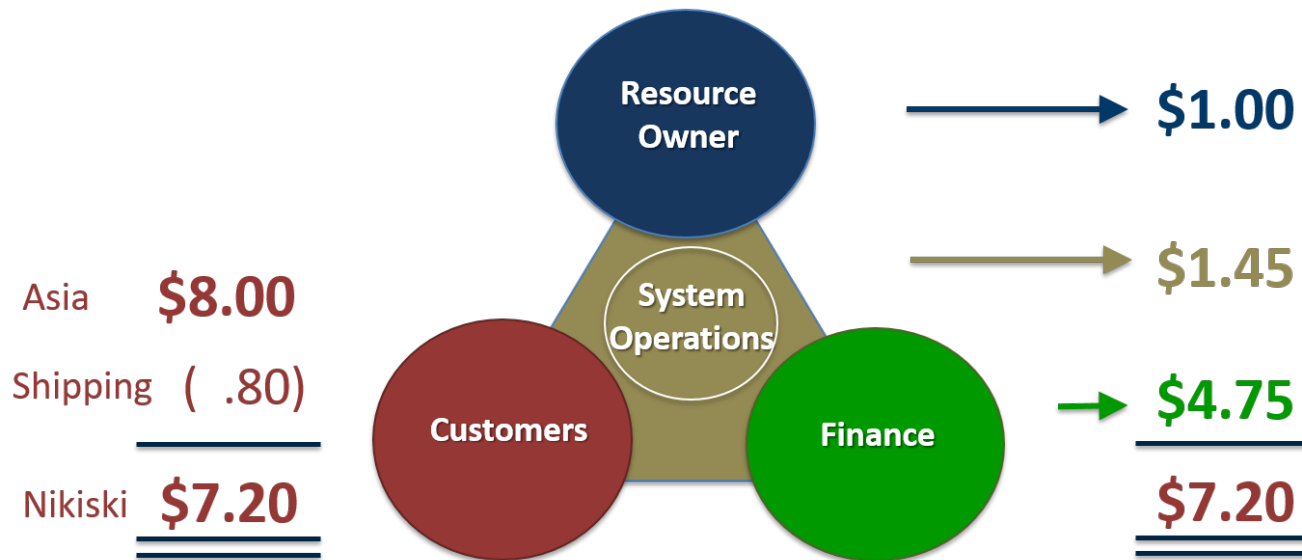
Carpenters	295
Electricians and Instrument Fitters	397
Ironworkers	447
Laborers	2,311
Engineers	1,864
Teamsters	3,519
Pipefitters, Welders, and Insulators	1,566
Other	1,452
Total	11,850

Direct Hires by Year and Type

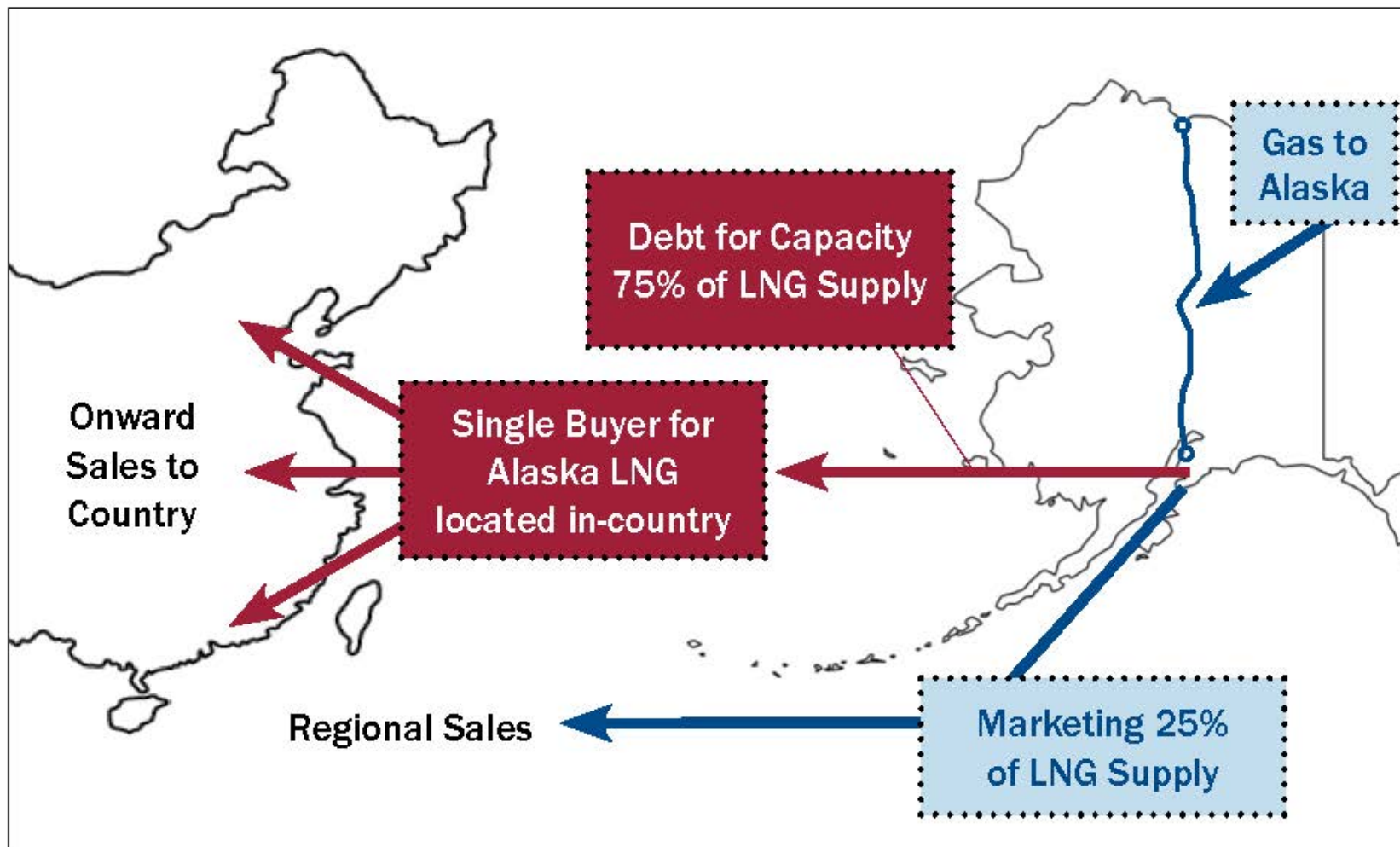


Creating an Economical Project

- **Balancing three drivers to make the project economic to all stakeholders:**
 - Alaskans first with in-state gas.
 - Asia being the largest LNG market.
 - Commercial agreements.

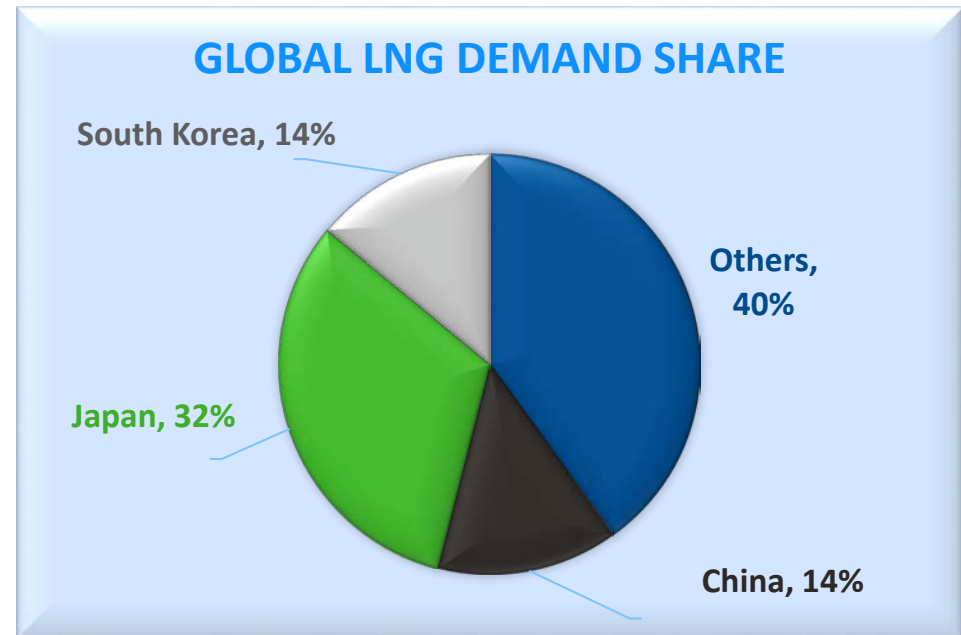


Alaskans First



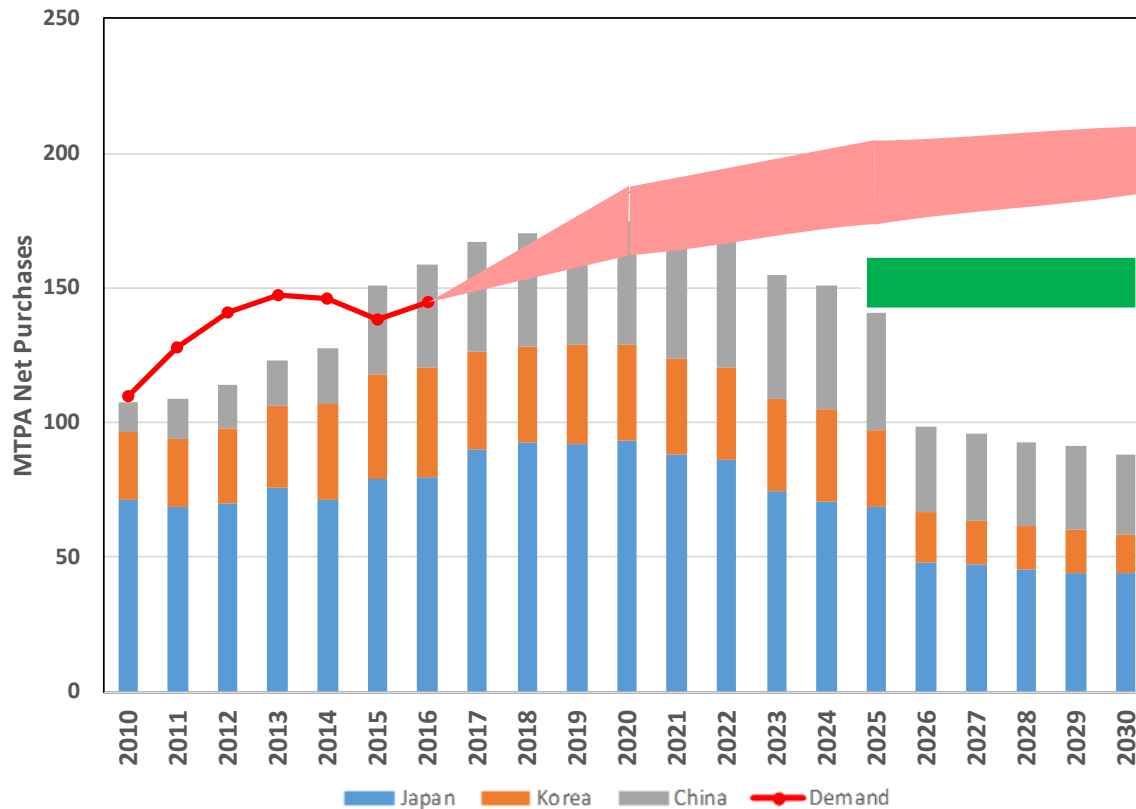
Asia's LNG Demand

- Asia is the largest LNG market.
- Environmental concerns in China mandated a shift to gas.
- Demand for natural gas has grown dramatically, outpacing the ability to produce domestically.
- 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.



LNG Supply-Demand Forecast

Japan, Korea, China LNG Contracts and Demand



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

- **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.**

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.

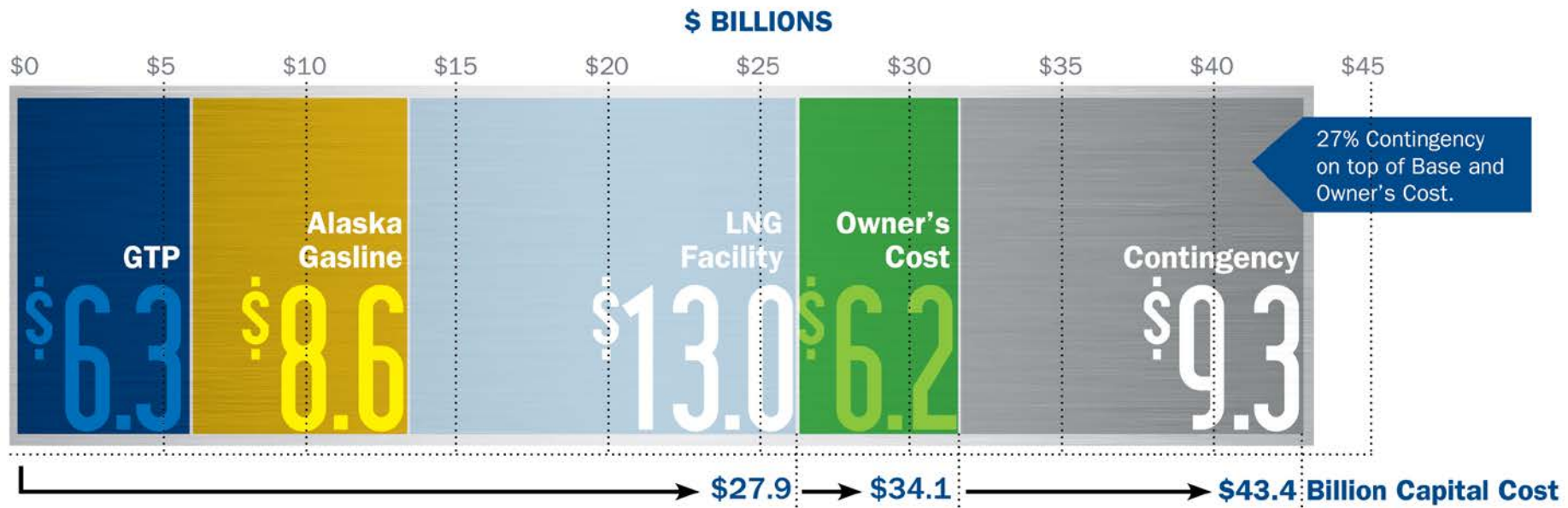
Commercial and Technical

- **No longer seeking LOI's or MOU's except for select regional customers:**
 - 4 announced (Sinopec, Tokyo Gas, Kogas, PV Gas).
 - 7 confidential.
- **Focus will be on specific customer contracting:**
 - LNG sale and purchase agreements.
 - Underlying tolling agreements.
 - Gas supply agreements.
- **AGDC is actively engaging in negotiations with Alaska's North Slope producers regarding gas supply contracts.**



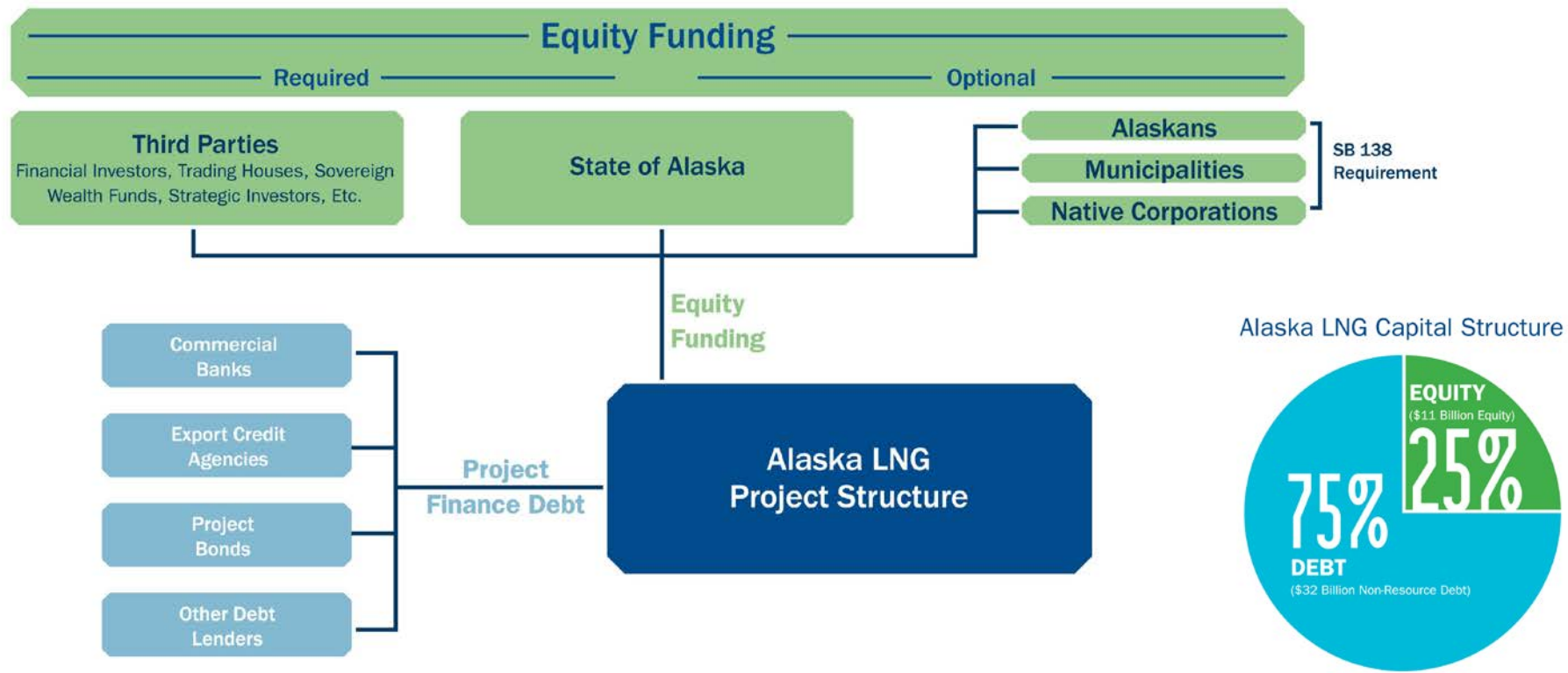
Total Project Cost

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



Financing Structure

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



- The Federal Energy Regulatory Commission (FERC):
 - A United States federal agency.
 - Regulates the transmission and wholesale sale of electricity and natural gas in interstate commerce and regulates the transportation of oil by pipeline in interstate commerce.
- Reviews proposals to build:
 - Interstate natural gas pipelines.
 - Natural gas storage projects.
 - Liquefied natural gas (LNG) terminals.



- **FERC Letter**

- April 2017- Federal Energy Regulatory Commission (FERC) application submitted.
- 2017- Responded to FERC comments.
- March 2018- FERC schedule released.
- March 2019- Draft Environmental Impact Study (DEIS).
- December 2019- Final Environmental Impact Study (FEIS).
- March 2020- Final Record of Decision (ROD).



- **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.

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 gas in 2024/2025.



Frequently Asked Questions

Will Alaskans have preference in hiring?

Yes

Will there be a project labor agreement?

Yes

Will Alaska contractors be hired?

Yes

Will Alaskans have access to gas at reasonable prices?

Yes

Is the gasline strategic to Alaska?

Yes

Will large contractors be used?

Yes

Will this project generate revenue for the state?

Yes

Can Alaska manage large contractors?

Yes

Will it be controlled by foreign companies?

NO

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.
- Questions? Submit a request of information to Lisa Parker of AGDC at lparker@agdc.us.

Land Right-of-Way

- State lands- contact State Pipeline Coordinator's office at 907-269-6403.
- Federal lands- contact Earle Williams of Bureau of Land Management at e1willia@blm.gov.

facebook.com/AKGaslineDevelopmentCorp

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

Joint Development Agreement

