

# Nenana & Anderson Community Meeting

The Stars are Aligned for Alaska LNG  
2018

Rosetta Alcantra, Vice President 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.***



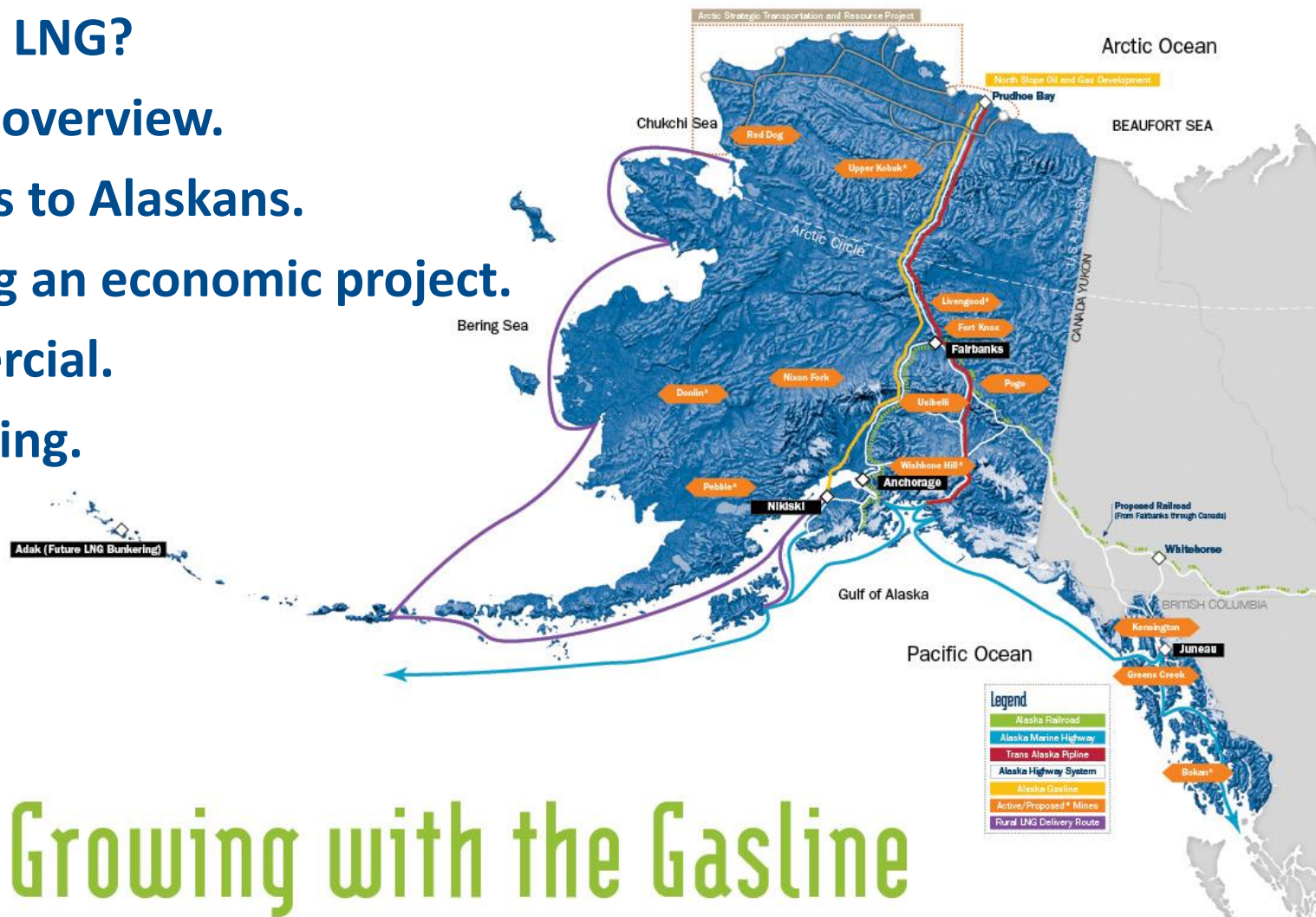
- **Vision:**

- 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.

ALASKA  
GASLINE  
DEVELOPMENT CORP. ★

# Agenda

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

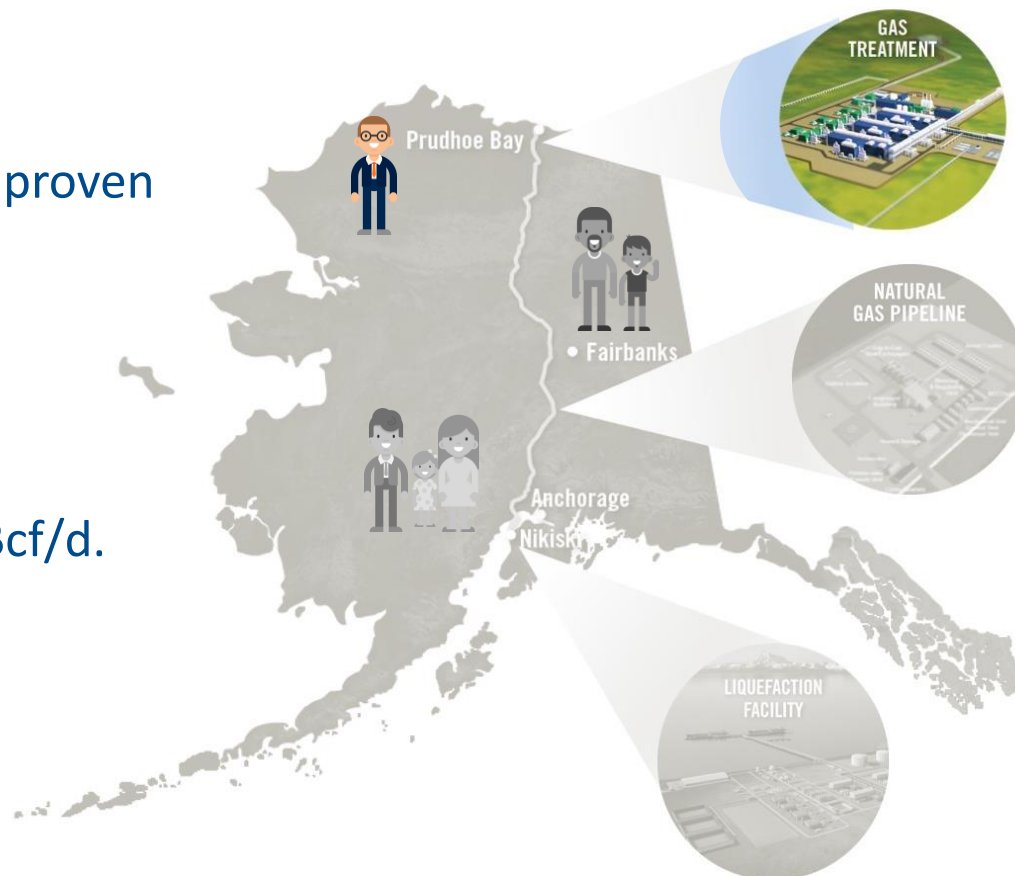


## Growing with the Gasline

# Gas Treatment Plant

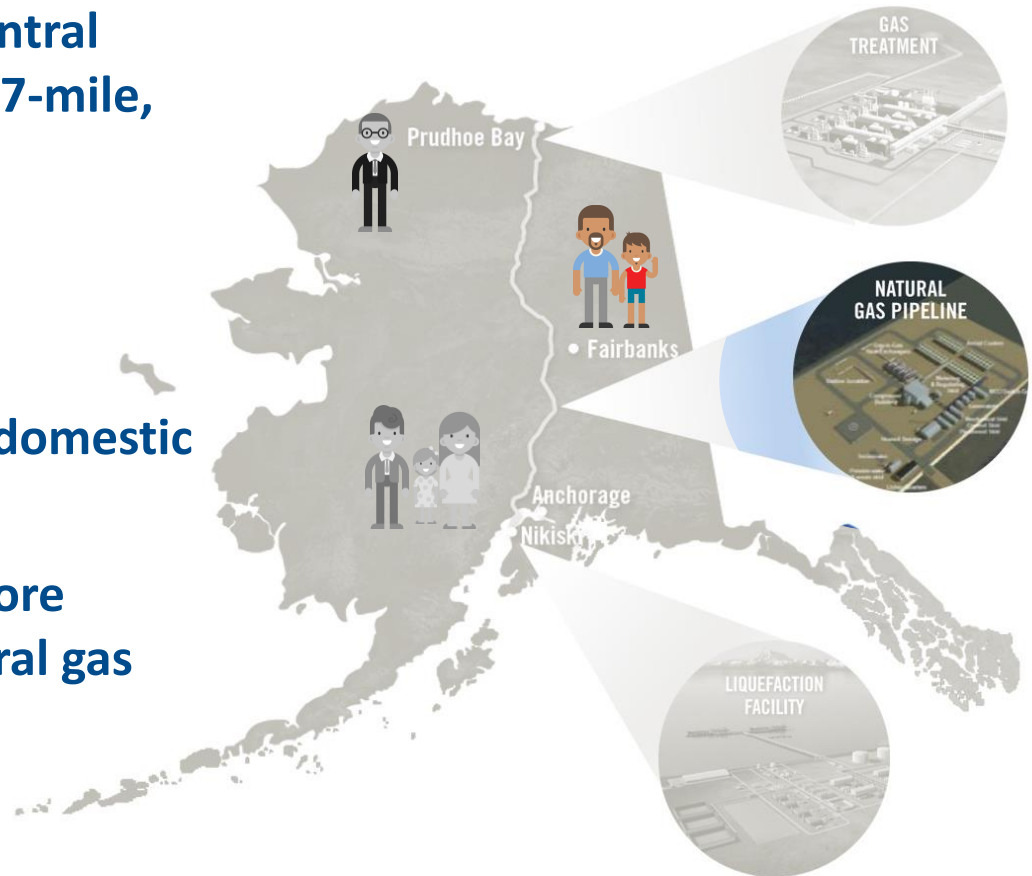
Alaska Gasline and Alaska LNG are part of a well planned and responsible development future for Alaska.

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



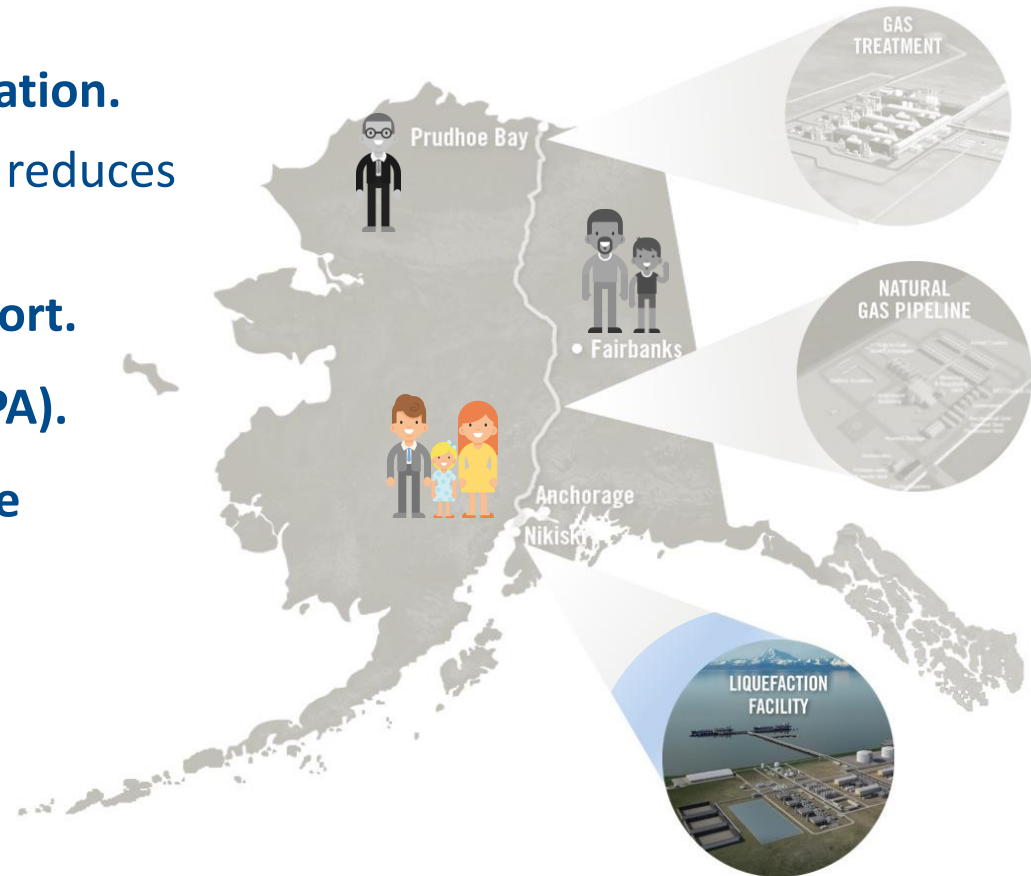
# Pipeline

- 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.

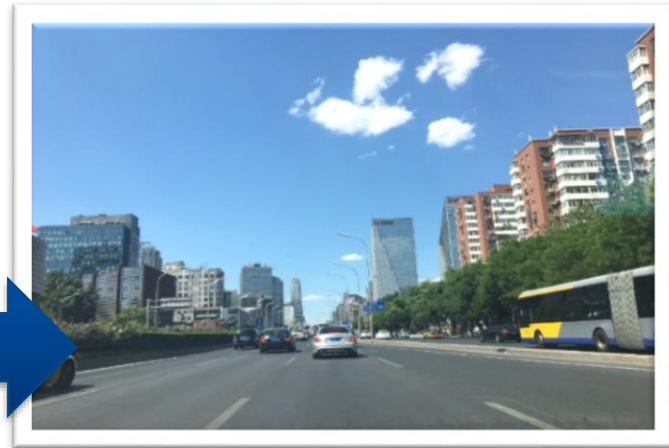


# LNG Plant

- Located in Nikiski.
- Natural gas liquefied for transportation.
  - Potential super chilled volume reduces to 1/600 its gaseous form.
- LNG is loaded into ships for transport.
- 20 million tonnes per annum (MTPA).
- Opportunity for small scale in-state CNG & LNG distribution.



# Benefits: Cleaner 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 CO<sub>2</sub> per year.



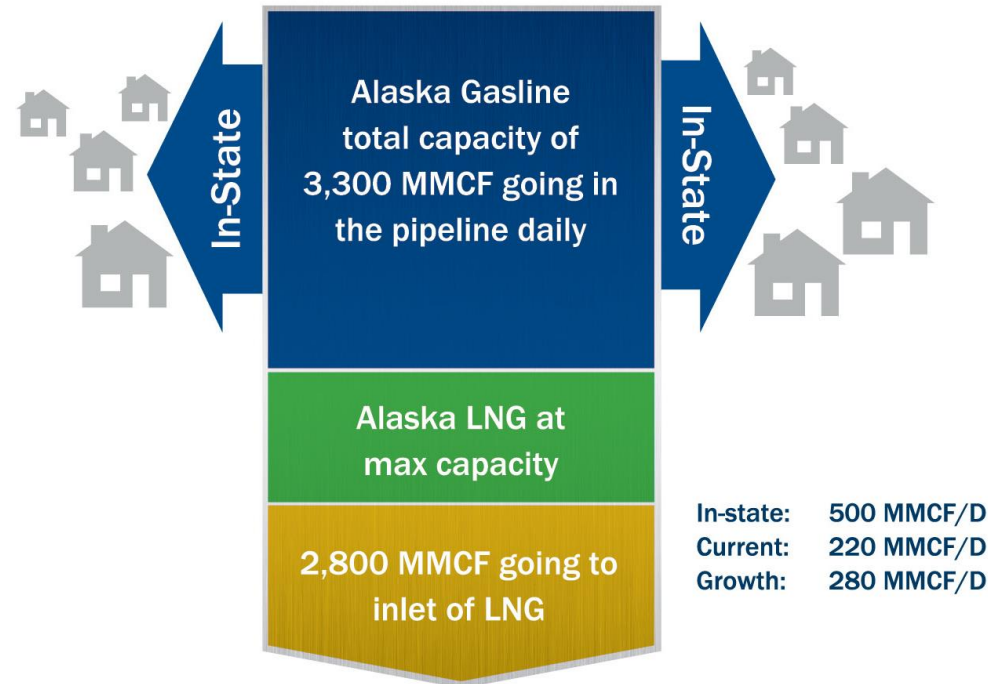
# Benefits: Gas for Alaskans

## TOP PRIORITY: GAS FOR ALASKANS

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

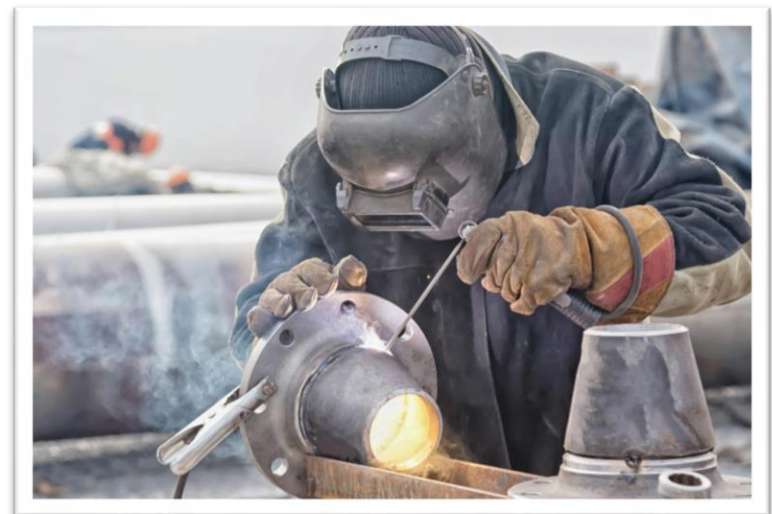
- **Stable Prices.**
- **Energy for all of Alaska:**
  - Offtakes to communities and projects along the Alaska Gasline.
  - No risk of Alaskans' gas going to Asia.

**Alaska LNG System Design Guarantees Gas for Alaskans:**



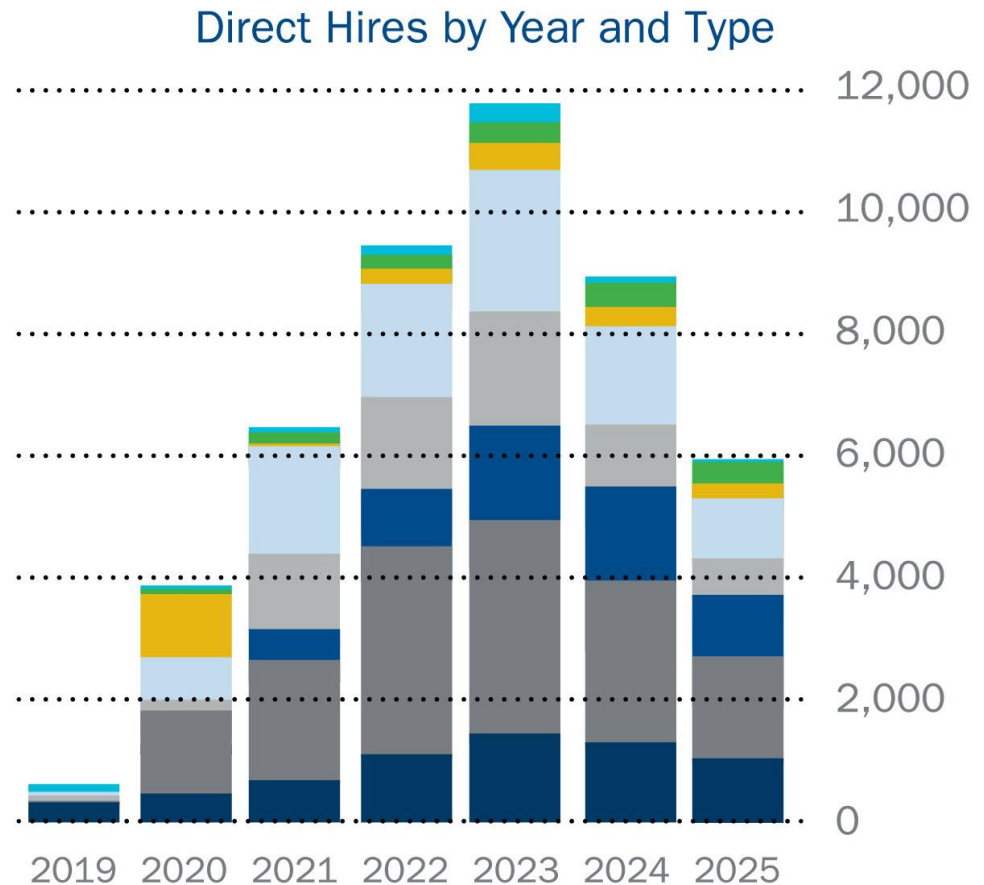
# Benefits: Training and Jobs

- **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.



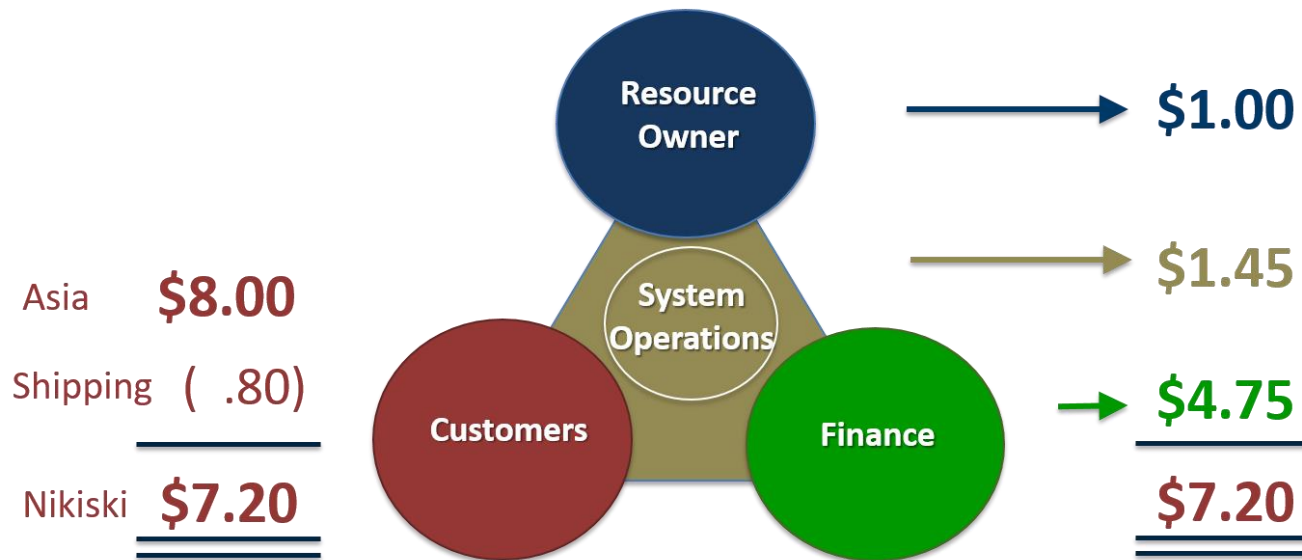
# Benefits: Jobs

|                                      |               |
|--------------------------------------|---------------|
| 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         |
| <b>Total</b>                         | <b>11,850</b> |



# Creating an Economic 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.



## Frequently Asked Question:

***“Will all the natural gas be shipped to Asia-Pacific markets?”***

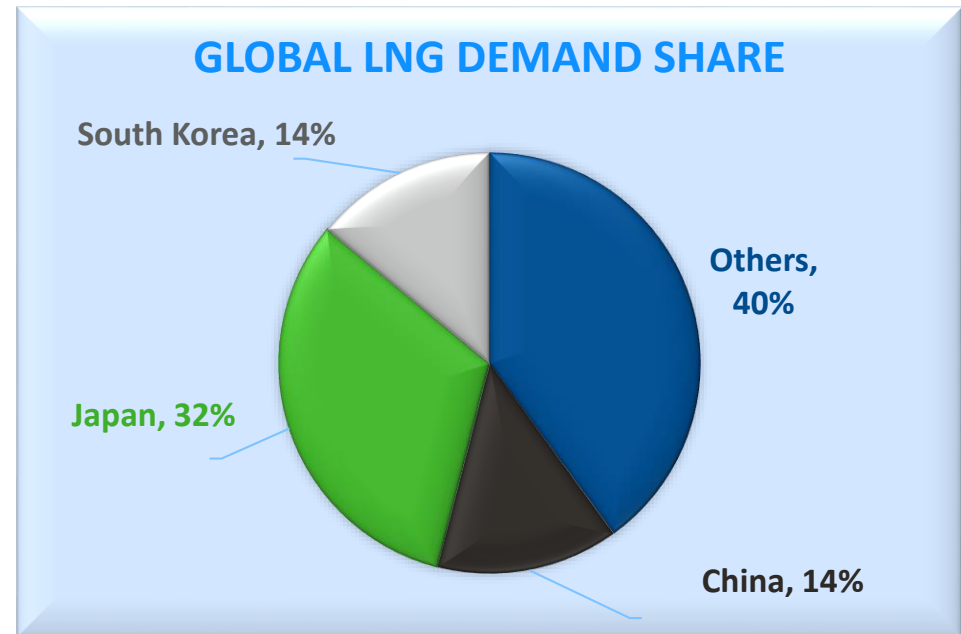
### **Answer:**

Under Senate Bill 138, AGDC is statutorily obligated to deliver gas to Alaskans first,

***“...develop and have primary responsibility for developing natural gas pipelines, an Alaska liquefied natural gas project, and other transportation mechanisms to deliver natural gas in-state for the maximum benefit of the people of the state.”***

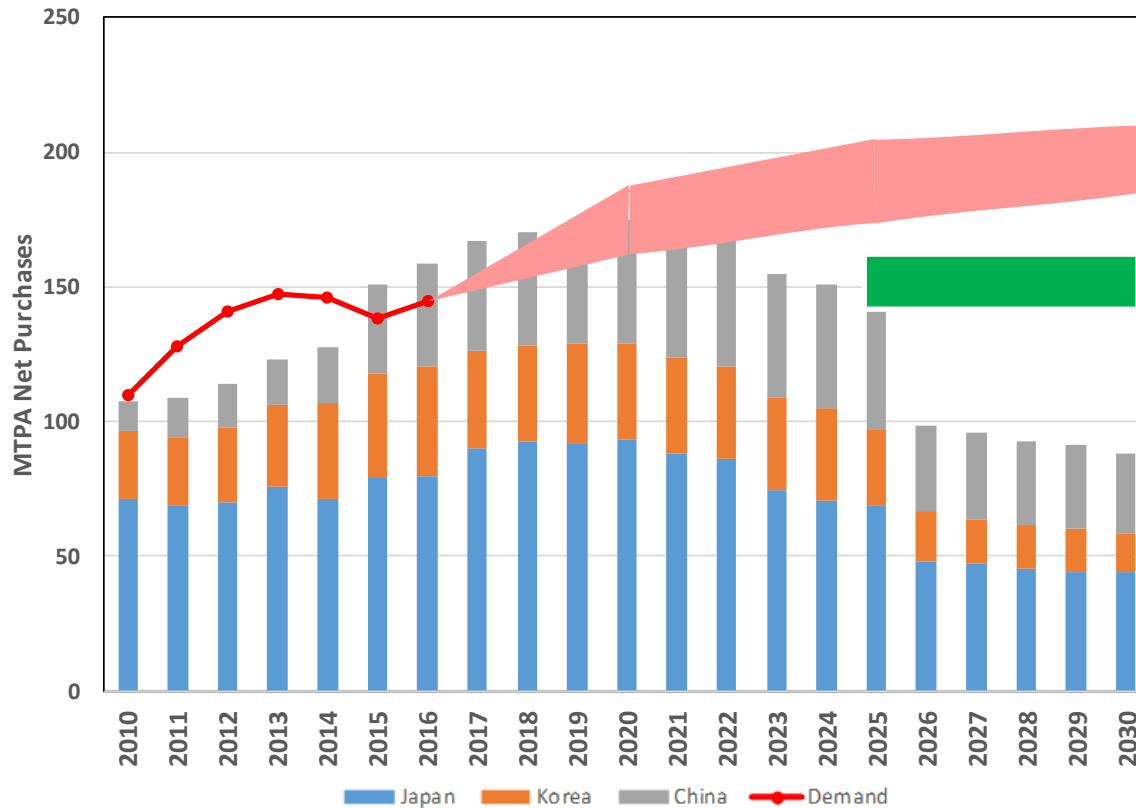
# Asia's LNG Demand

- Asia is the largest LNG market.
- Environmental concerns in China have 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.
- By 2040, China's coal consumption is projected to decrease by 26%.
- "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.**
- **For example, China is building 10 LNG receiving terminals in its ports, ready to receive Alaska LNG.**

# 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 4<sup>th</sup> largest bank.
    - CIC Capital: World's 3<sup>rd</sup> largest sovereign wealth fund.



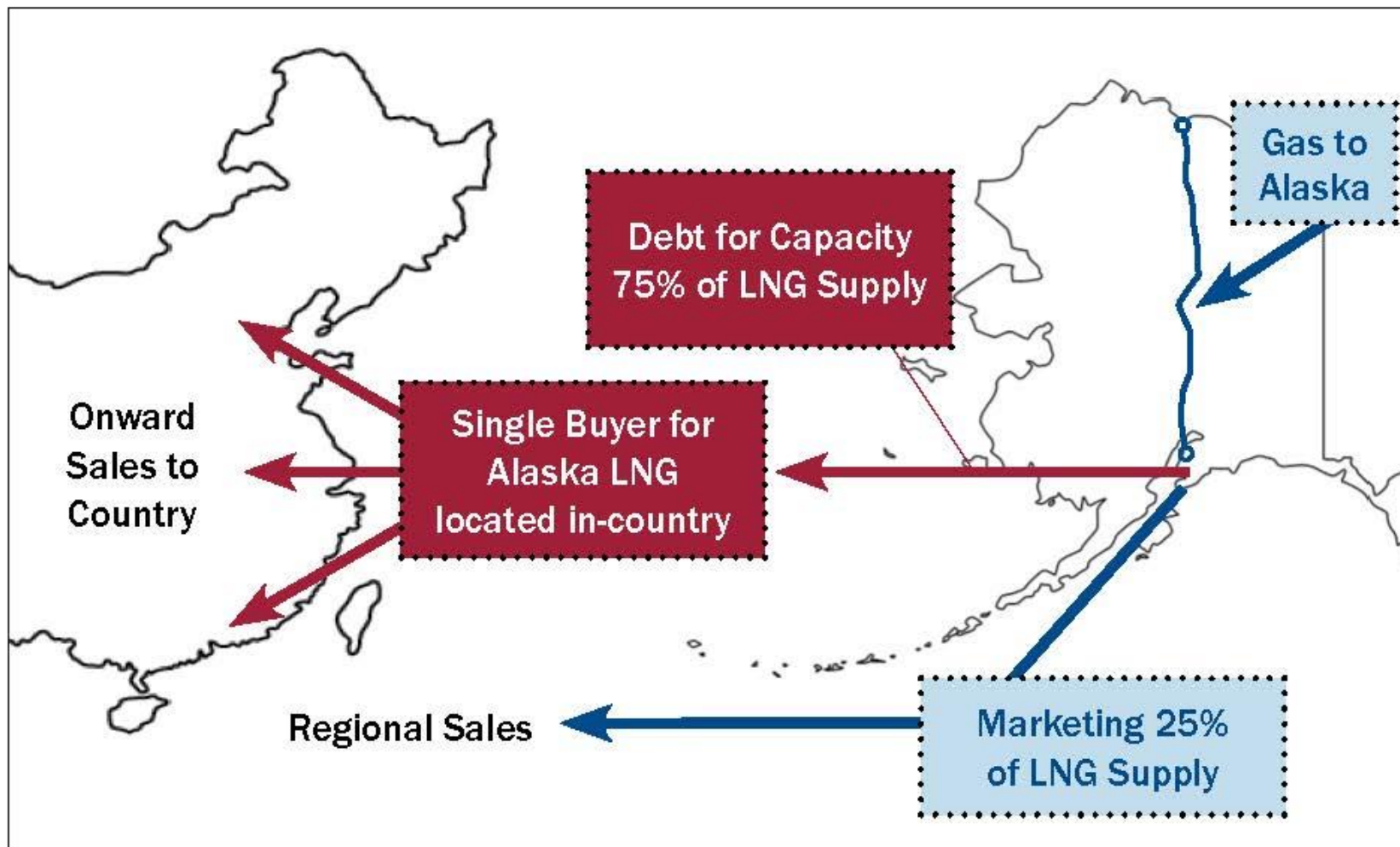
AGDC and Tokyo Gas Co., Ltd. sign LOI in Tokyo, Japan;  
December 4, 2017.



Joint Development Agreement signing in Beijing, China; 2017.



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



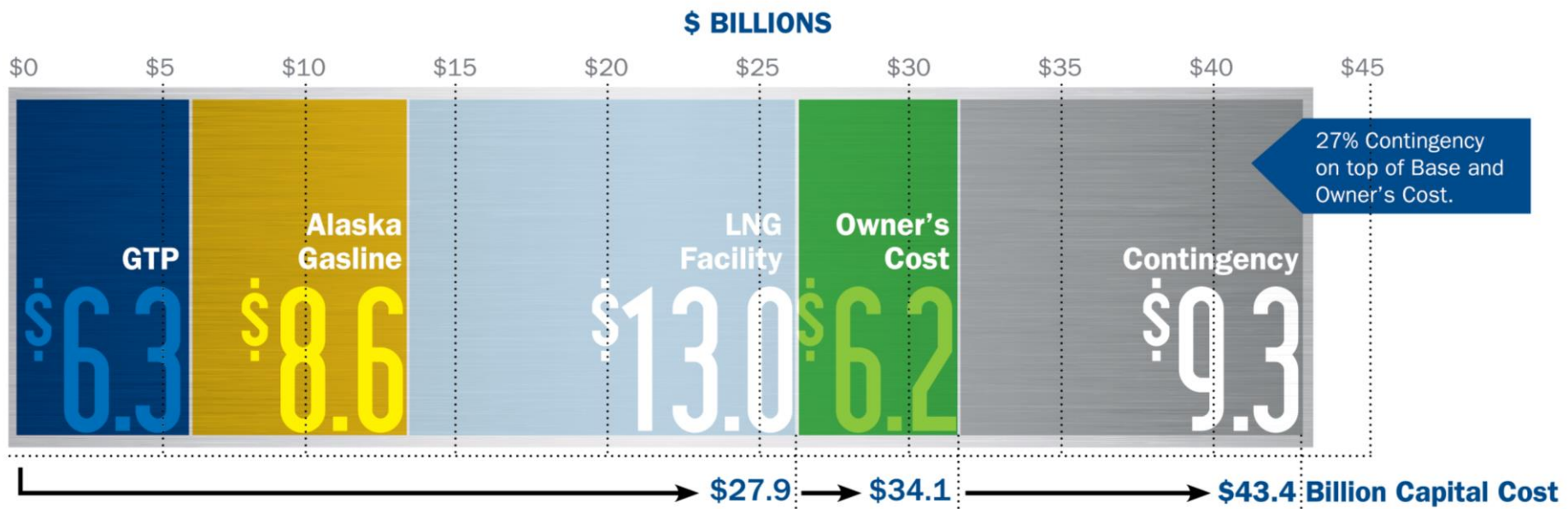
# Commercial and Technical

- **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.**
  - Alaska's Department of Natural Resources continues its Royalty-in-Kind evaluation process.



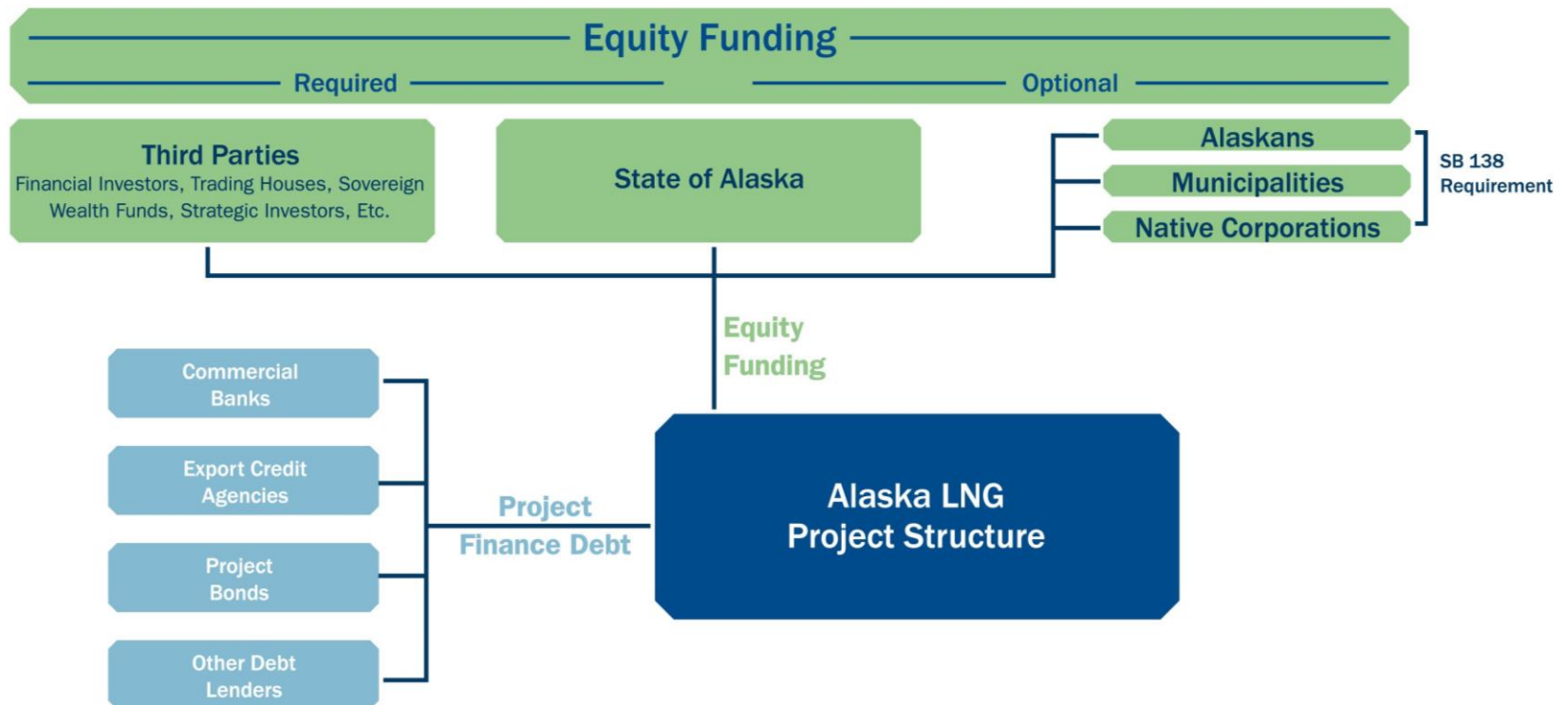
# Total Project Cost

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



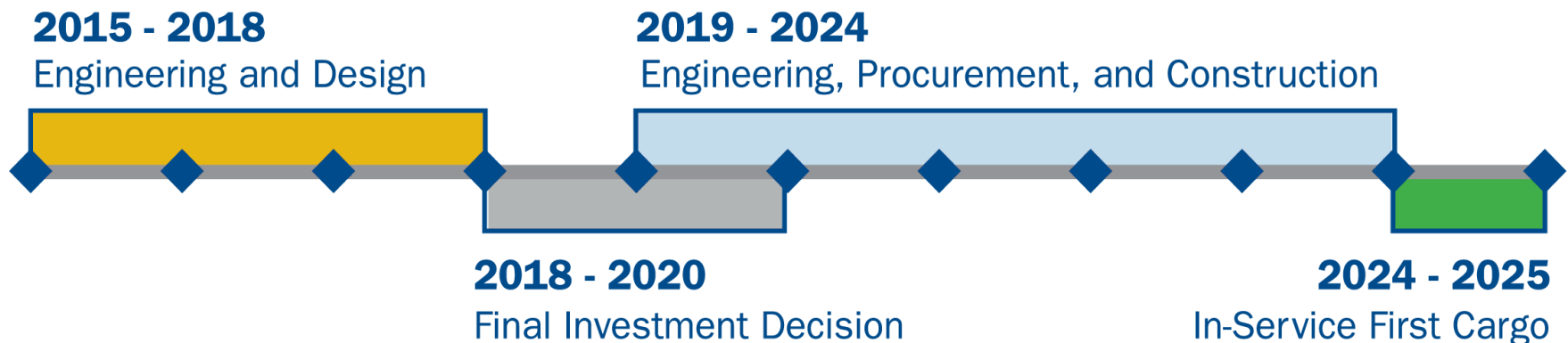
# Financing Structure

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.
- Works closely with the United States Coast Guard to review the safety, security, and environmental impacts of proposed LNG terminals and associated shipping.

- **FERC Letter**
  - Federal Energy Regulatory Commission (FERC) application submitted.
  - In the request, FERC asks AGDC to respond to 289 questions.
  - Currently reviewing FERC's request for additional information.
- **Alaska Stand Alone Pipeline Project:**
  - U.S. Army Corps of Engineers publishes Final Supplemental Environmental Impact Statement in May 2018.
  - Complete wetlands mitigation plan.
  - USACE issued Record of Decision.
  - Bureau of Land Management Grant of Right-of-Way (ROW) and State ROW leases.



## Frequently Asked Question:

***“When do I learn about local impacts?”***

### **Answer:**

In March 2019, FERC will publish a Draft Environmental Impact Statement. It will:

1. Identify potential impacts and proposed mitigation for subsistence resources and wetlands.
  2. Detail the safety features designed into the buried pipeline.
  3. Identify potential impacts and details for rights of way access on state, federal, and private lands.
- Sign up for notifications at: [www.ferc.gov/docsfiling/esubscription.asp](http://www.ferc.gov/docsfiling/esubscription.asp).

# 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.



# 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](mailto: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](mailto:e1willia@blm.gov).

**facebook.com/AKGaslineDevelopmentCorp**

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