

CAC Workshop

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Jesse Carlstrom, Communications Manager
Nick Szymoniak, Commercial Negotiator



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

- Public corporation owned by the State of Alaska.
- Empowered to expedite, finance, and build a gas project.



- **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.



Project Update

Clean energy for Alaskans. More Gas for Alaskans. More Jobs for Alaskans.

- **Gas Treatment Plant:**

In-service 2024 – 2025.

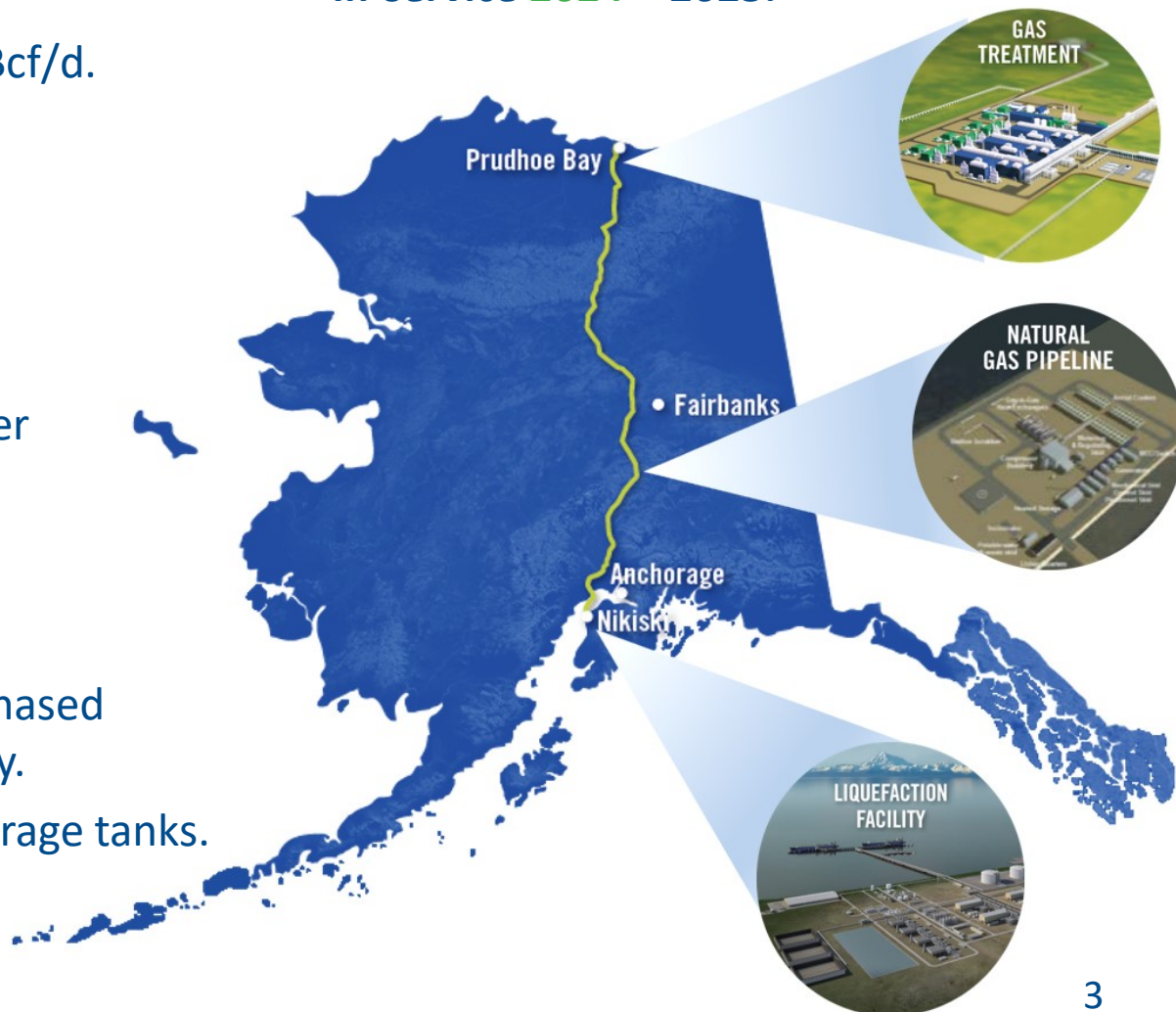
- Treat and compress 3.5 Bcf/d.
- Remove CO₂.

- **Pipeline:**

- 807-mile (1,299 km), 42-inch (1.1 m) pipe.
- Established corridor under State of Alaska control.
- Delivers over 3.3 Bcf/d.

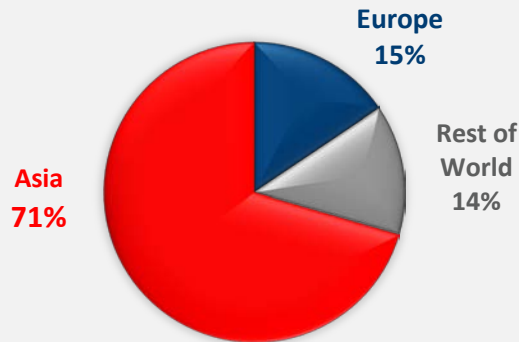
- **LNG Production Facility:**

- 20 MTPA; 3 trains with phased development opportunity.
- Two 240,000 m³ LNG storage tanks.
- Two berths, capable of 217,000 m³ vessels.



Stars are Aligned

Global LNG Demand 2016
(258 MTPA)



“Alaska’s political ties are with the United States, but our economic ties are with Asia.”
- ***The Hon. Walter J. Hickel***

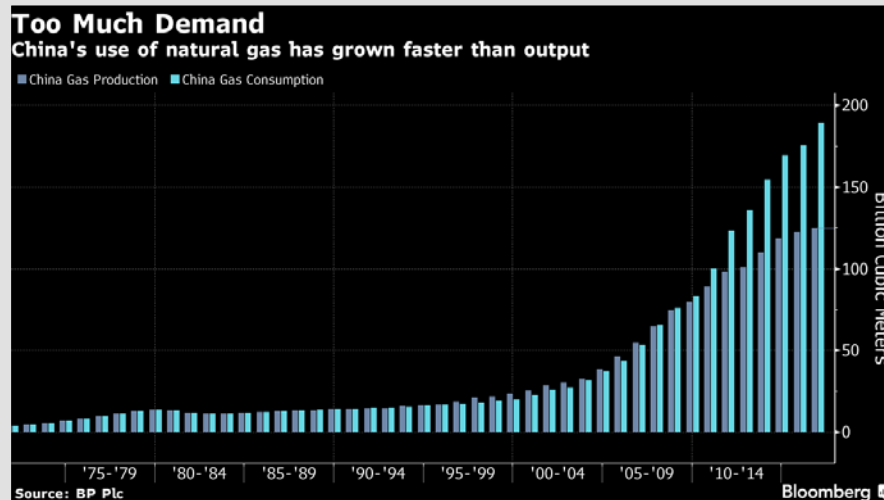
- Asia is Alaska’s regional market.
- Asia is the biggest LNG market.

Asia LNG Demand to Grow Rapidly

From 1 to 19 LNG Import Terminals in 10 years



- Demand for natural gas has grown dramatically, outpacing the ability to produce domestically.
- LNG import capacity is increasing rapidly to help satisfy future demand.

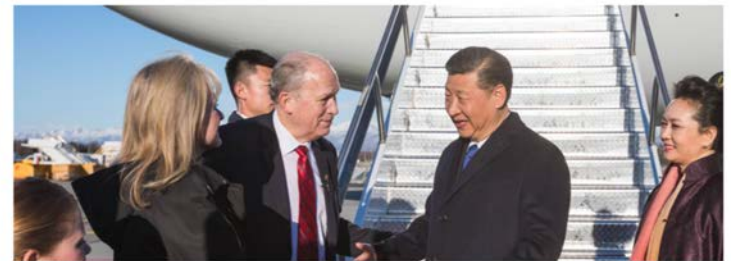


Alaska and China Establish Ties



A surprise guest: Chinese president makes Anchorage stopover, meets Gov. Walker and takes in some sights

Author: Jeannette Lee Falsey Updated: April 8 Published April 7



Join Development Agreement

- **Sinopec**

- Very large petroleum and petrochemical enterprise group.
- World's largest fully-integrated oil and gas company by revenue, with upstream, midstream, and downstream operations.
- China's largest producer and supplier of refined oil products.
- Largest oil refinery company.
- 2nd largest chemical company in the world.



- **Bank of China**

- World's 4th largest bank.
- China's most internationalized and diversified bank.
- Engages in commercial and investment banking and insurance and investment services.



- **CIC Capital**

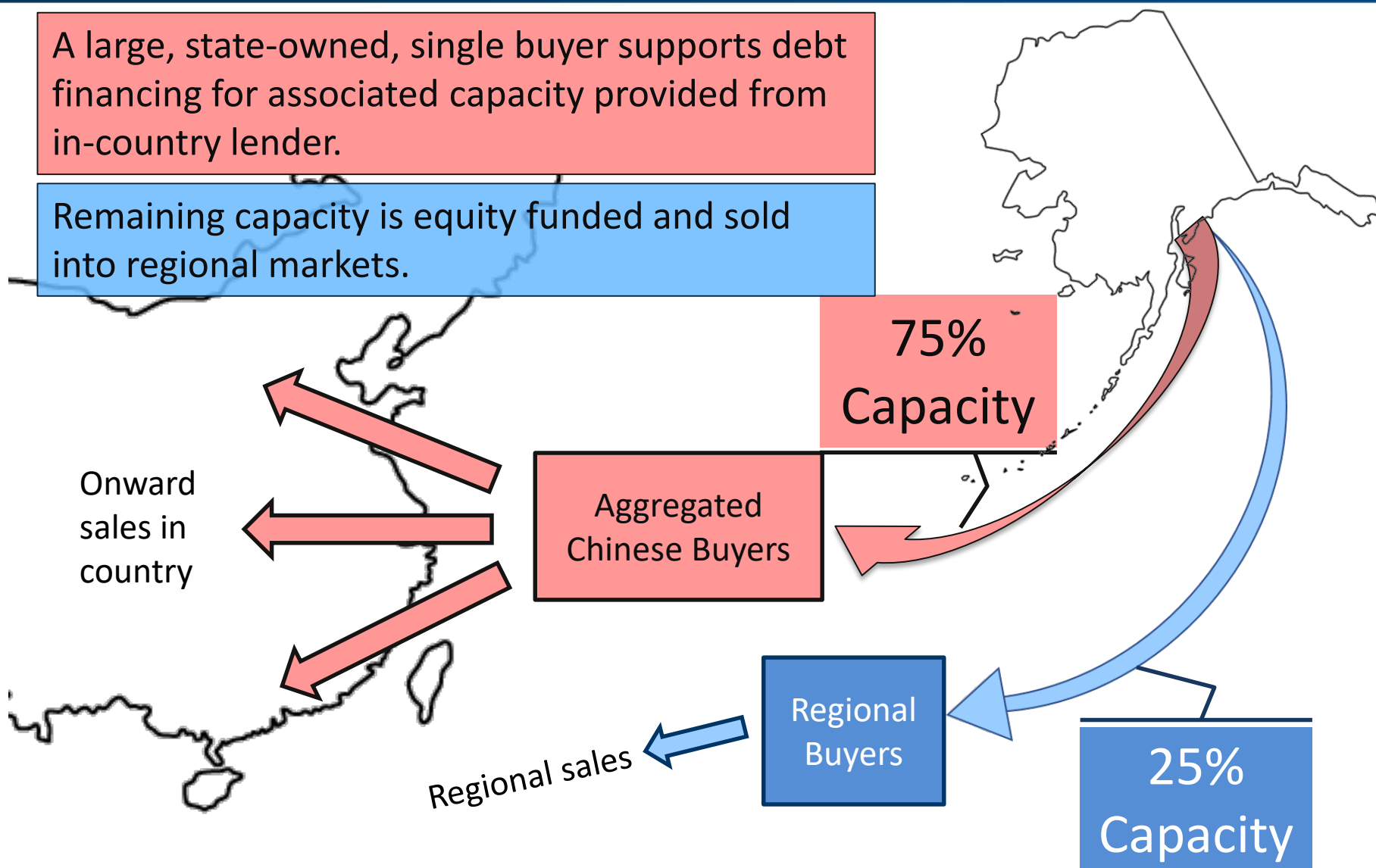
- World's 3rd largest sovereign wealth fund.
- CIC Capital is a subsidiary specializing in making direct investments in infrastructure, mining, and energy (oil and gas).
- Acquired a 10% stake in Teck Resources Limited, which operates Red Dog Mine.
- Acquired a stake in 1 New York Plaza office tower for \$700 million (1st direct U.S. investment).



Unified Buyer/Lender Proposal

A large, state-owned, single buyer supports debt financing for associated capacity provided from in-country lender.

Remaining capacity is equity funded and sold into regional markets.



Supporters

- **Alaska Senators**
 - Senator Dan Sullivan
 - Senator Don Young
 - Senator Lisa Murkowski
- **Potential customers:**
 - China, Japan, Korea, SE Asia.
 - Meetings in Asia and Alaska.
- **In addition to a Joint Development Agreement (JDA), there are 11 other companies that are interested in Alaska LNG including KOGAS, Tokyo Gas, and PetroVietnam Gas.**



- In addition to China, AGDC has signed agreements with:
 - Japan.
 - Vietnam.
 - South Korea.

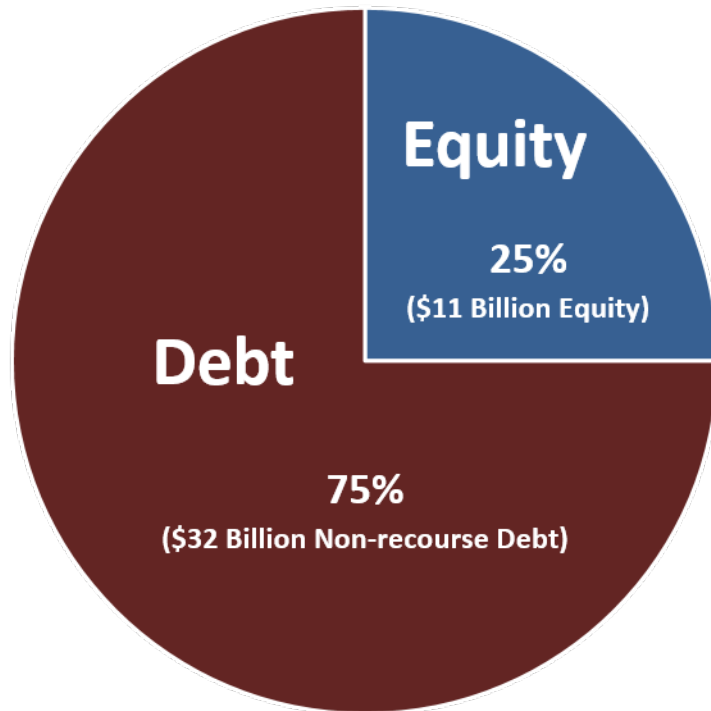


AGDC and KOGAS sign MOU in Washington, D.C.; June 28, 2017.

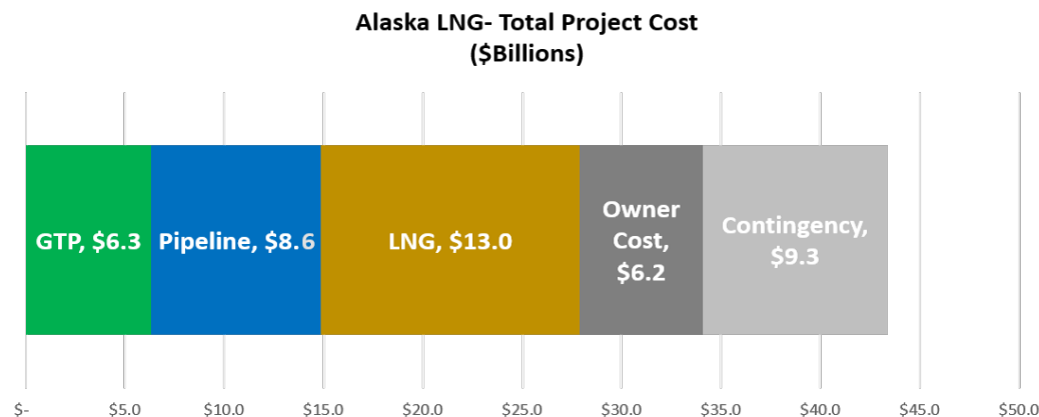


AGDC and Tokyo Gas Co., Ltd. sign LOI in Tokyo, Japan; December 4, 2017.

Alaska LNG Capital Structure



- Base case: 42-inch, three train, 20 Mtpa design.
- Total Capital Cost = \$43.4 Billion.
- Potential for phased development.

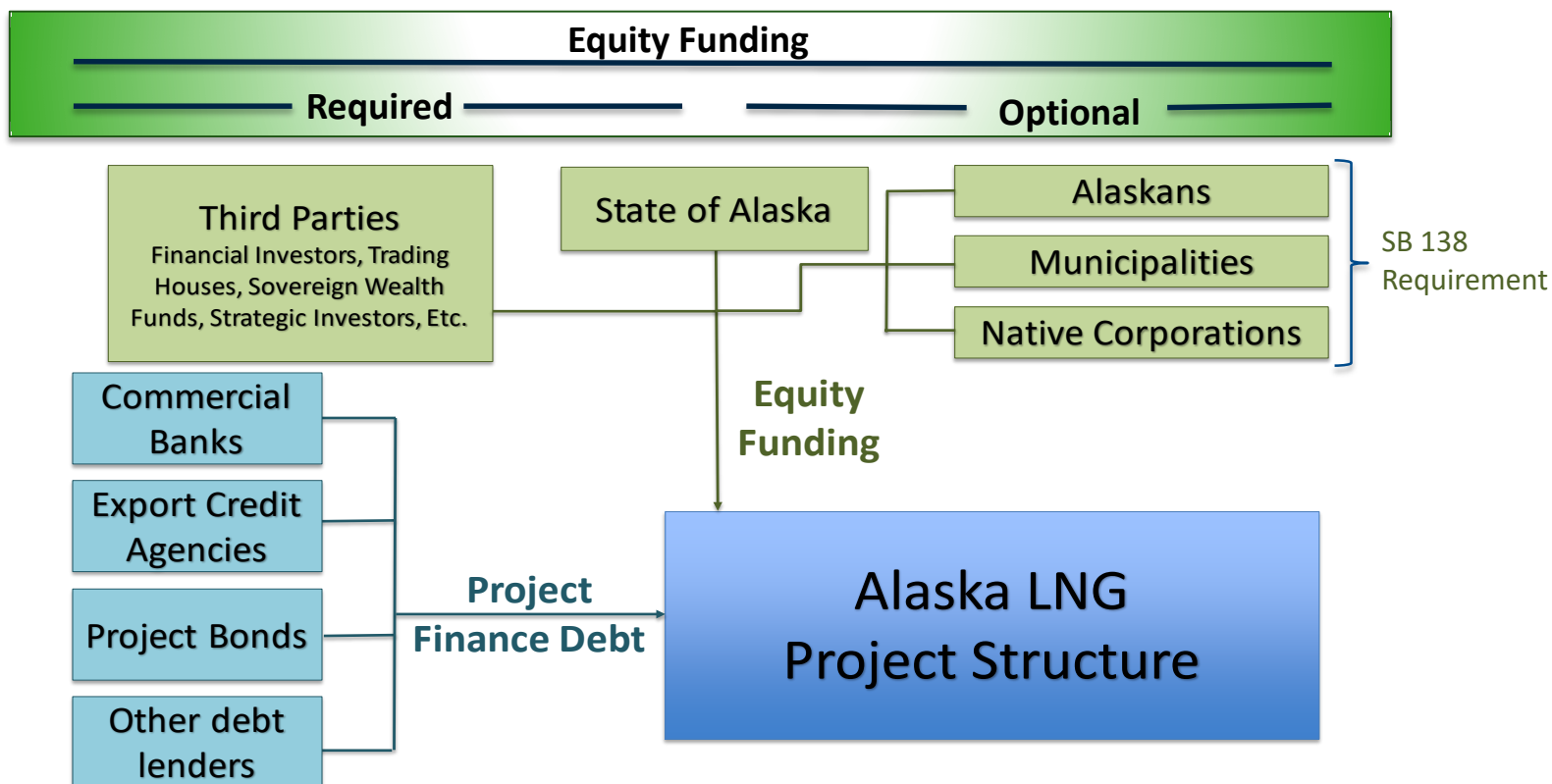


Total Project Cost = \$43.4 Billion

Financing Structure

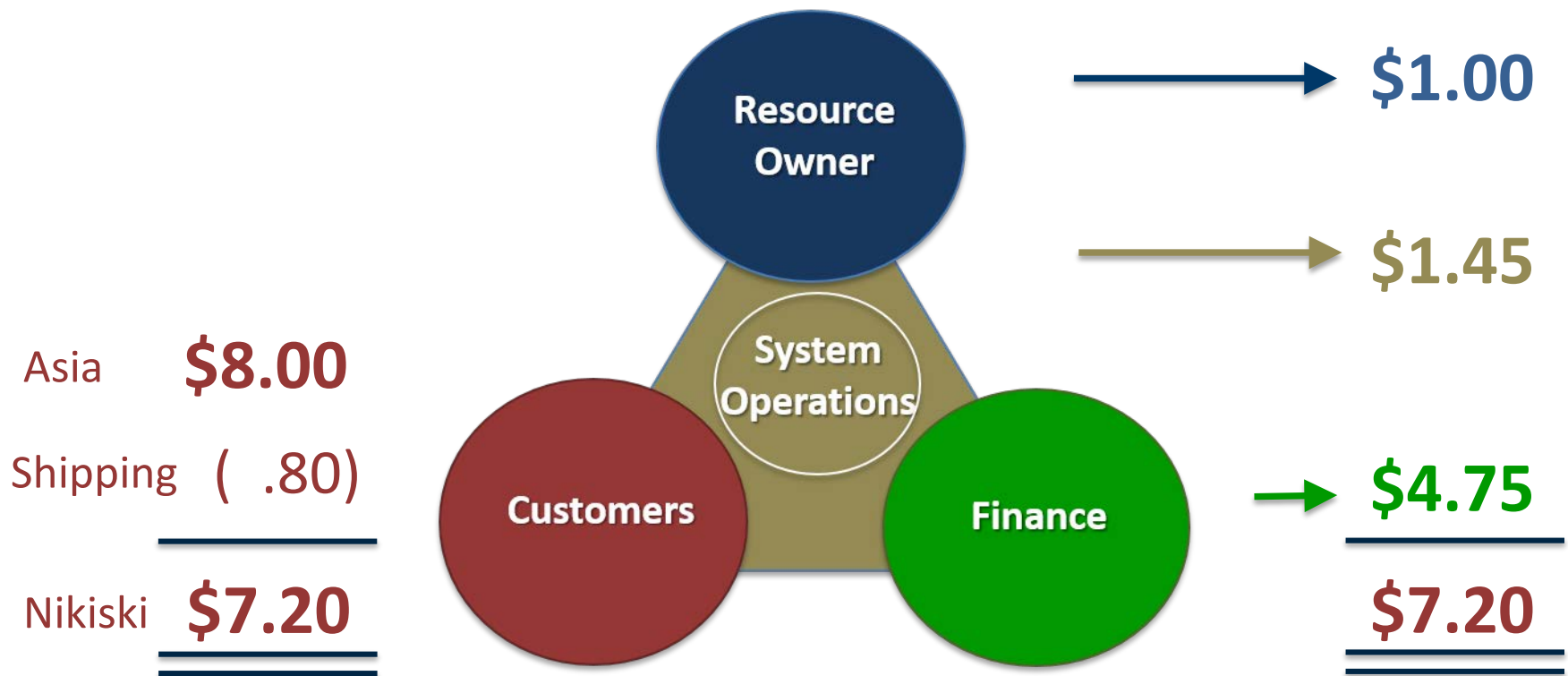
Equity investment in the project will be required; pursue a development path to provide the State with an ability to invest, but not the requirement to invest; Alaskans also to have investment option.

- Structure to receive third-party funds.
- Equity offering in-state, then beyond.

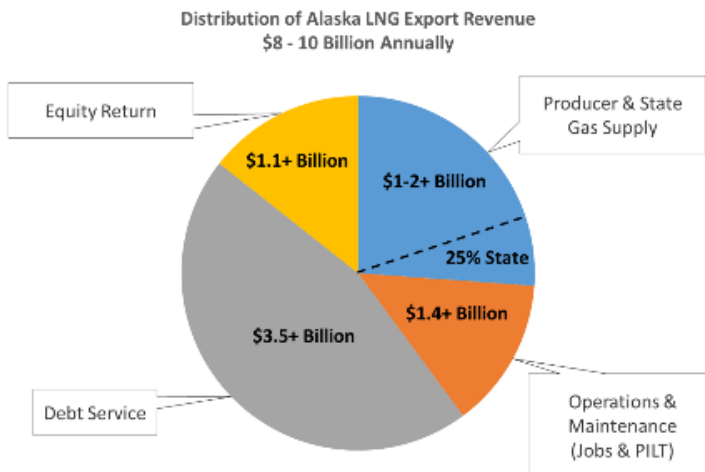
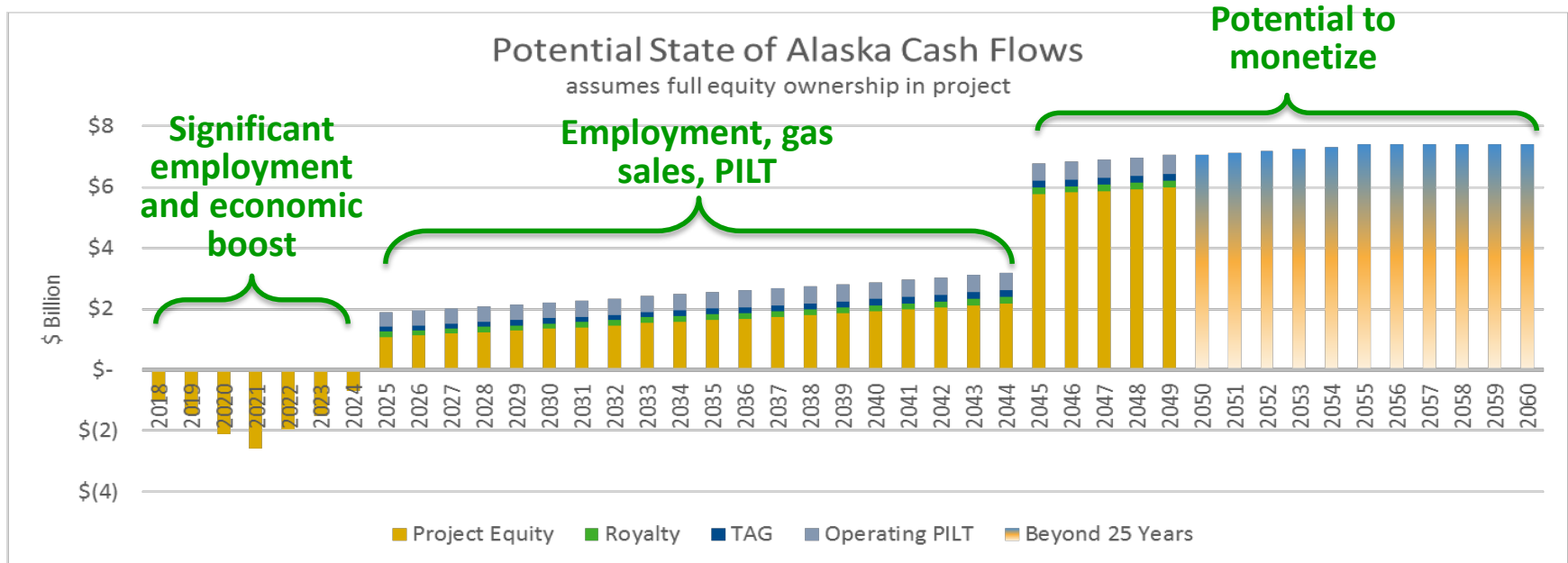


Balancing Three Drivers

The project is economic to all stakeholders under the current structure.



Investment Profile – State of Alaska



Equity-only ROE:

- 8% through initial period.
- 10% life of project.

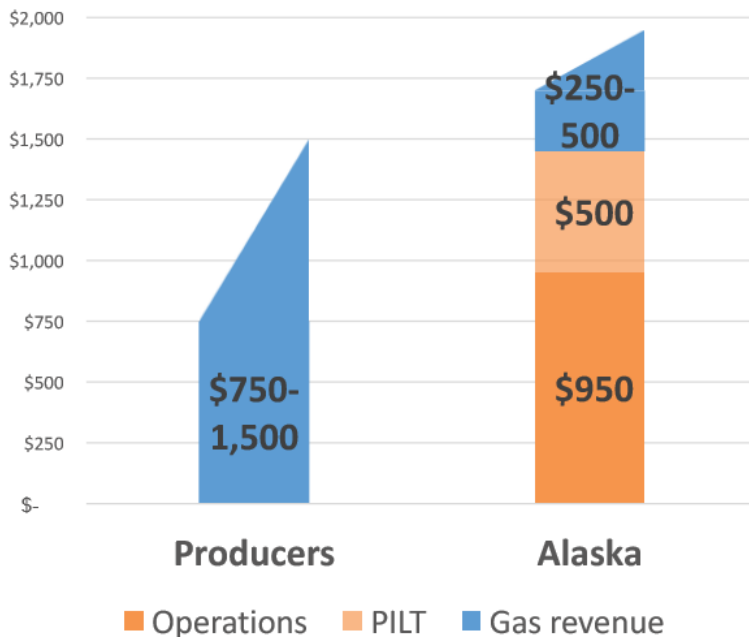
Equity ROE plus RIK/TAG and PILT:

- 13% during initial period.
- 15% life of project.

Non-Equity Benefits to Alaska

The gasline and LNG infrastructure provides enormous value to Alaska; there is a significant opportunity cost of not developing the project.

**Payments Outside of Debt and Equity
(2025 \$Millions)**



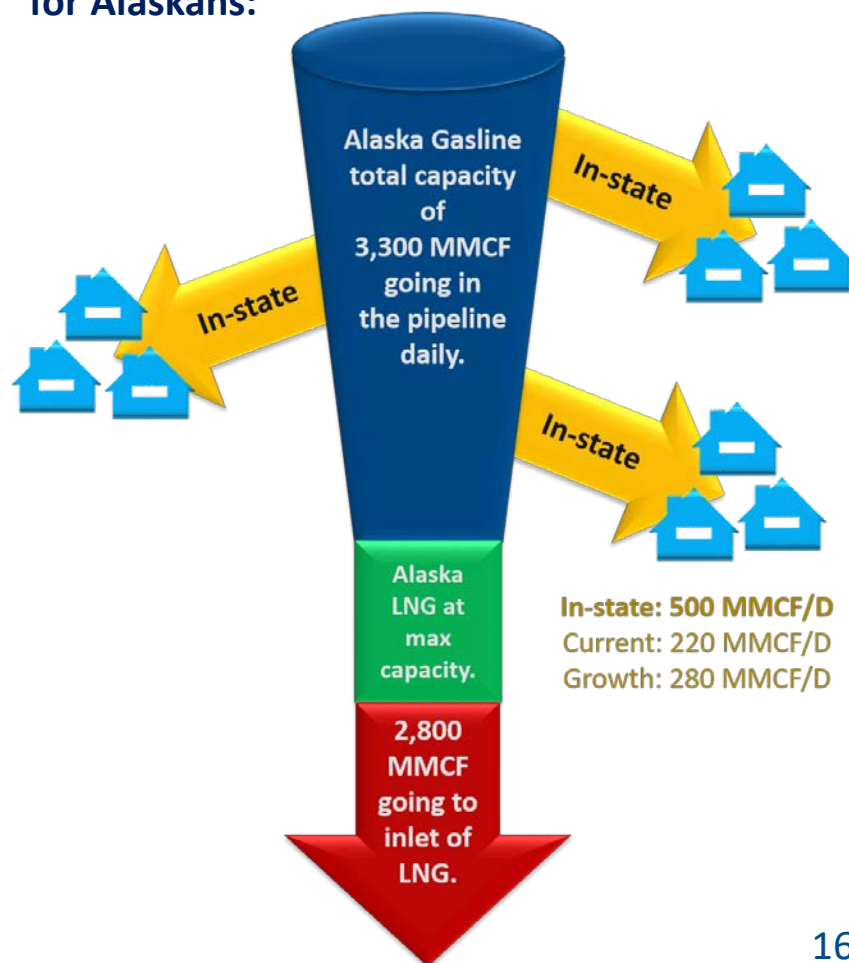
Item	Annual Value	State's Share/yr	
Gas Resource	1 TCF/yr @ \$1-2/Mcf =\$1-2 Billion	25%	\$250-500+ MM
PILT	\$450-500 MM	100%	\$450-500 MM
Operations	\$950 MM	100%	\$950 MM
Equity Return	\$1.1 Billion	0 to 100%	
Net Revenue After Debt Retirement	\$6 Billion	0 to 100%	

- Opportunity for the State to generate \$1.6-\$2.0B per year upon project completion.
- Alaska can elect to be an equity investor.
- Significant upside opportunity given long-term LNG price forecasts.

Top Priority: Lower Cost Energy For Alaskans

- **Energy for all of Alaska:**
 - Many off-takes to communities and projects along the Alaska Gasline.
 - Small scale LNG distribution.
- **The Alaska Gasline is bigger than the LNG Facility:**
 - No risk of Alaskans' gas going to Asia.
- **Price in the mid single digits.**
- **Ongoing commercial discussions to sell gas to Alaska utilities.**

Alaska LNG System Design Guarantees Gas for Alaskans:



Clean Energy for Alaskans

- **Lower cost energy for Alaskans.**
- Clean air for Fairbanks.
- Blue skies for Beijing.
- Alaska LNG can 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 in Fairbanks.



CO₂ and particulate emissions have degraded China's air quality.



China aims to boost its natural gas energy supply from 6 to 10 percent by 2020.

- **Alaska LNG will create a construction employment boom with a long-term employment future.**
 - **\$400 Million** in direct wages and salaries.
 - **12,000** jobs during construction.
 - **1,000** long-term operations jobs.

Learn more about opportunities and what role you can fill by visiting the Alaska Department of Labor at labor.state.ak.us.

Alaska LNG Employment Examples



Welder – Fabricate and assemble metal structures and pipelines.



Electrician – Install and maintain wiring, control and lighting system.

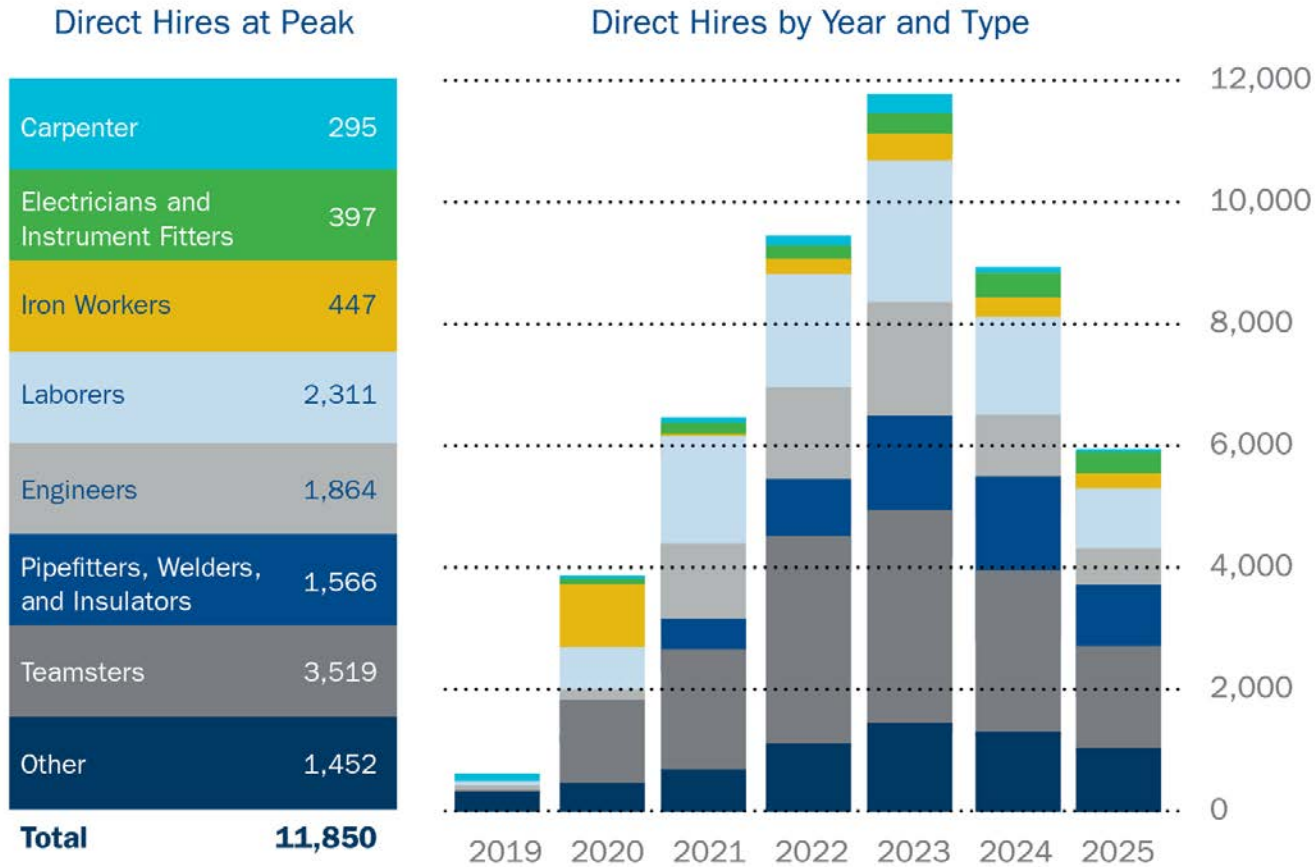


Construction Manager – Determines material and labor costs, hires workers.



Mechanical Engineer – Design power-producing machines.

Jobs for Alaskans



Every trade will be needed to construct the Alaska LNG.

Investment in Alaska's Future



- Alaska LNG will be the biggest **economic driver in Alaska** since the construction of the Trans Alaska Pipeline System (TAPS).
- Alaska LNG project will spur **new resource development projects**, including mining projects and other industrial and commercial developments.
- Low cost, clean burning natural gas will spur **economic development for the next generation**.

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.
- Environmental approval is in process.
- In-service 2024.





The stars are aligned, seize the opportunity.



Big project. Achievable. Alaskans have done it before.

Get Involved.

Get Ready.

Get Engaged.



agdc.us

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