

ALASKA
GASLINE
DEVELOPMENT CORP.

38th Annual Alaska Resources Conference

November 16, 2017

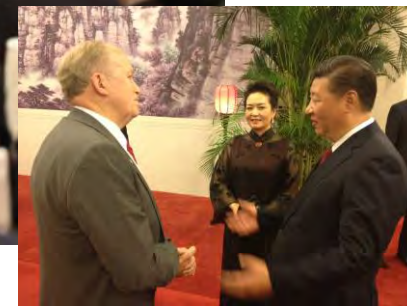
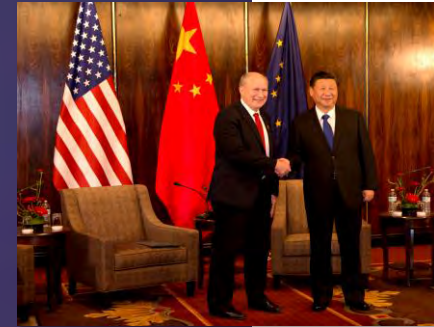
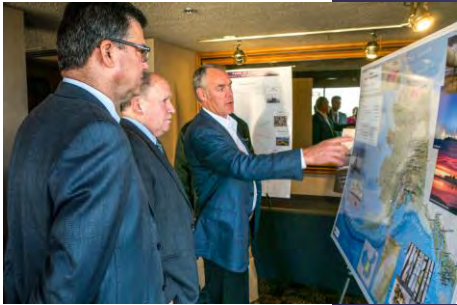
Keith Meyer

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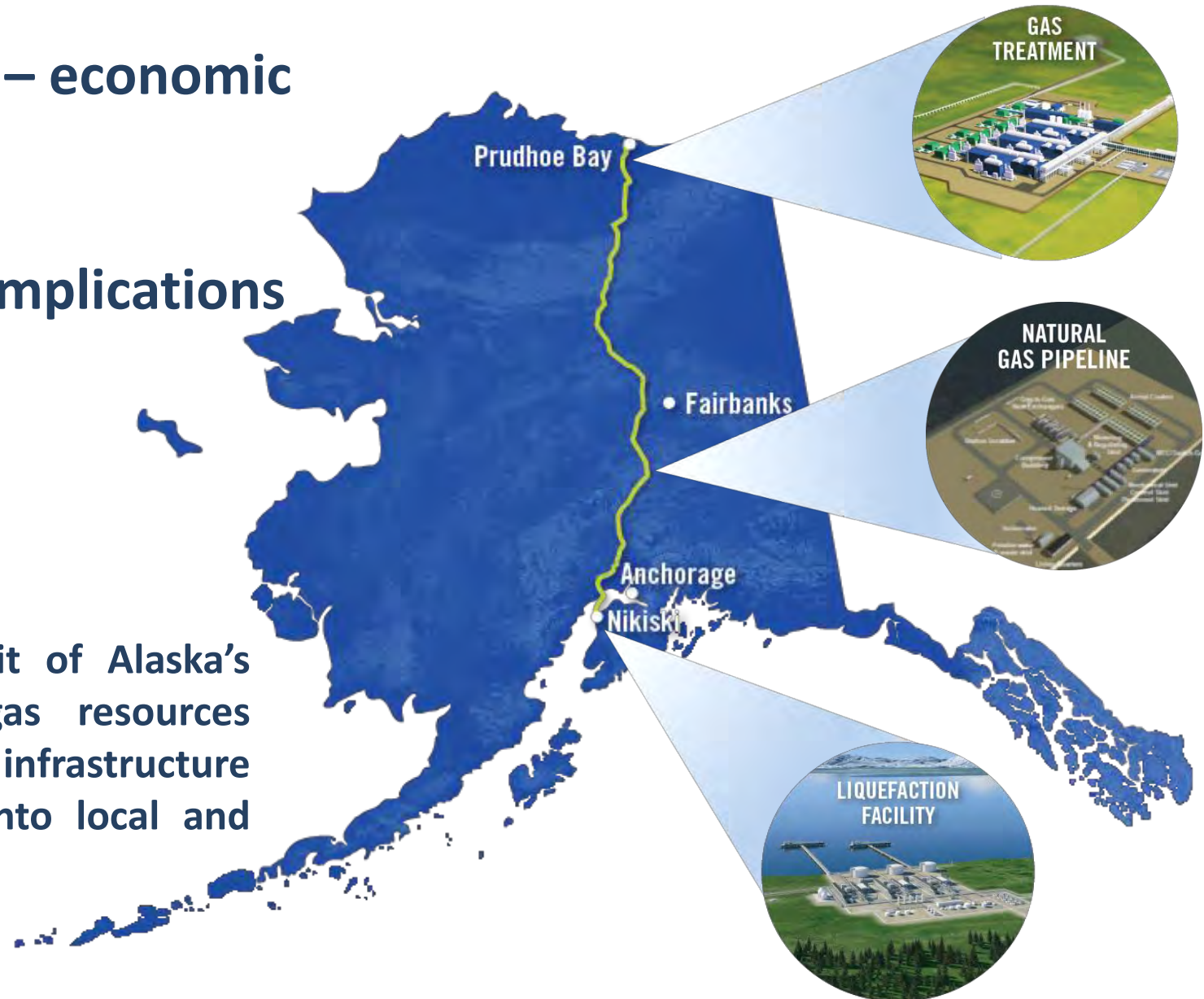
2017年11月9日
Nov 9, 2017



PRESENTATION OVERVIEW

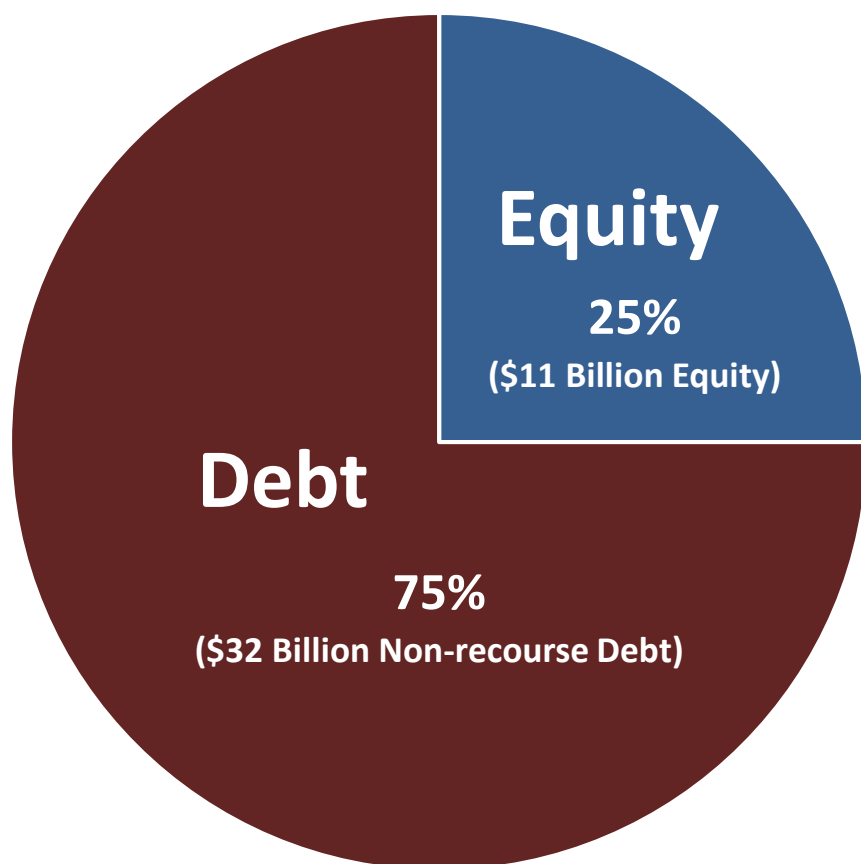
- Alaska LNG system – economic overview.
- China agreement; implications for Alaska resource development.

Mission: 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.



Bcf = Billion cubic feet

ALASKA LNG CAPITAL STRUCTURE

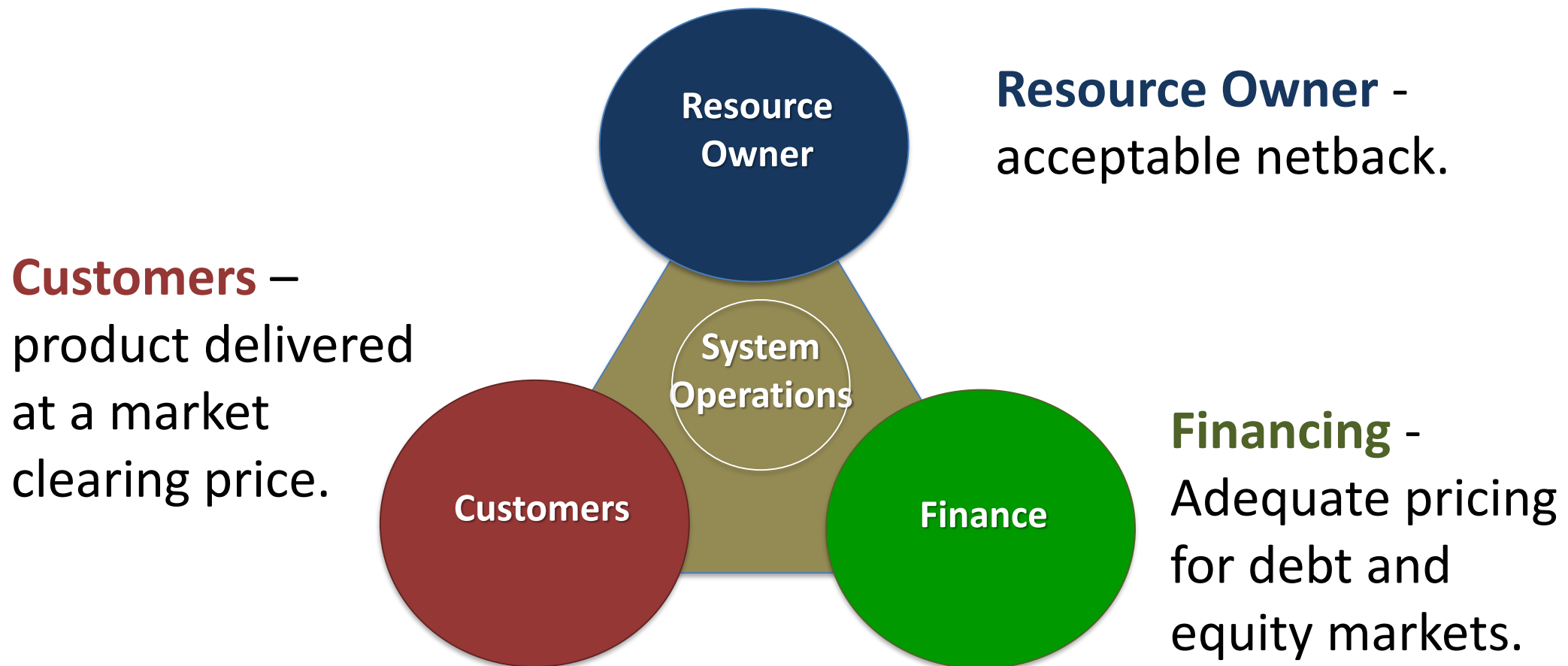


- Base case: 42-inch, three train, 20 Mtpa design.
- Total Capital Cost = \$43 Billion.
- Potential for phased development.



BALANCING THREE DRIVERS

- All infrastructure and resource development projects have similarities.
- Three key drivers have to be balanced to make the project economic.



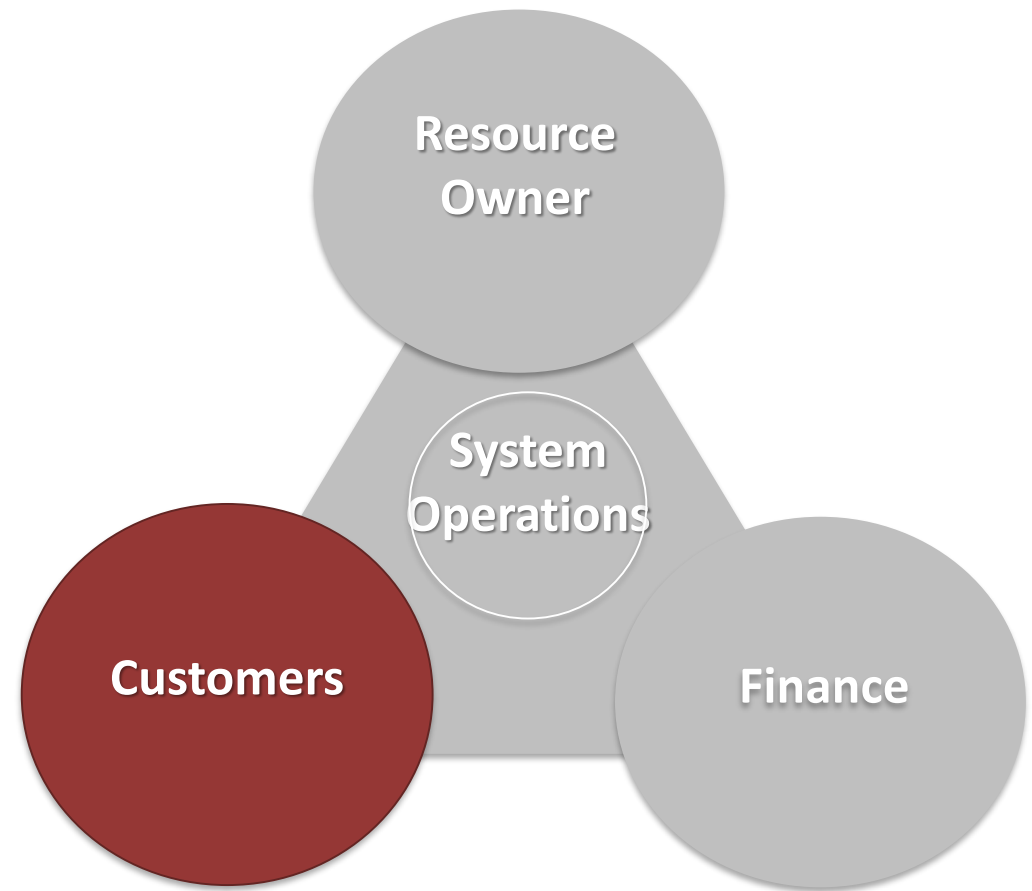
Asia Pacific LNG Market

U.S. Competition

- Henry Hub plus \$5.00/MMBtu**
 HH at \$3.10 + \$5.00 = \$8.10

International

- 12-14% Oil per Barrel**
 12% Brent at \$63/Bbl= \$7.56
- Other emerging pricing**



US Gulf Coast LNG Delivered to Asia	
	<u>\$/MMBtu</u>
Gas supply	\$ 3.00 <== Henry Hub market price
Liquefaction	\$ 3.20 <== US Gulf Coast Liquefaction
Shipping	\$ 1.80 <== Gulf to Asia + Panama
Total Delivered	\$ 8.00

Market Price
\$8.00/MMBtu

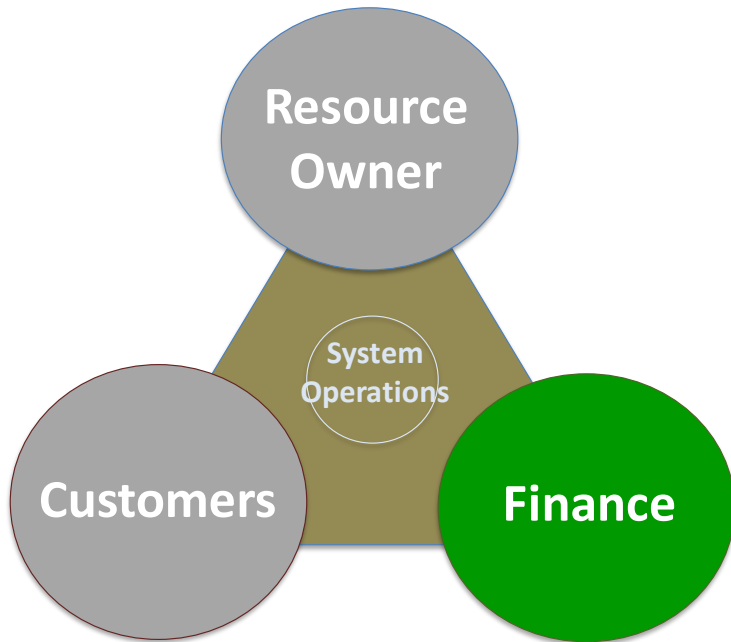
LNG PRICE: FOB NIKISKI

Market Price
\$8.00/MMBtu

FOB Nikiski
\$7.20/MMBtu

Shipping
\$.80/MMBtu

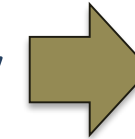




Alaska LNG Infrastructure

System Operations & PILT

- \$1.4 Billion Annually

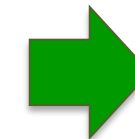


\$/MMBtu

O&M
\$1.45

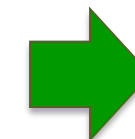
Financing

- Debt service - \$3.5 Billion/yr
20 yr; 5%



Debt
\$3.60

- Equity - \$1.1 Billion/yr



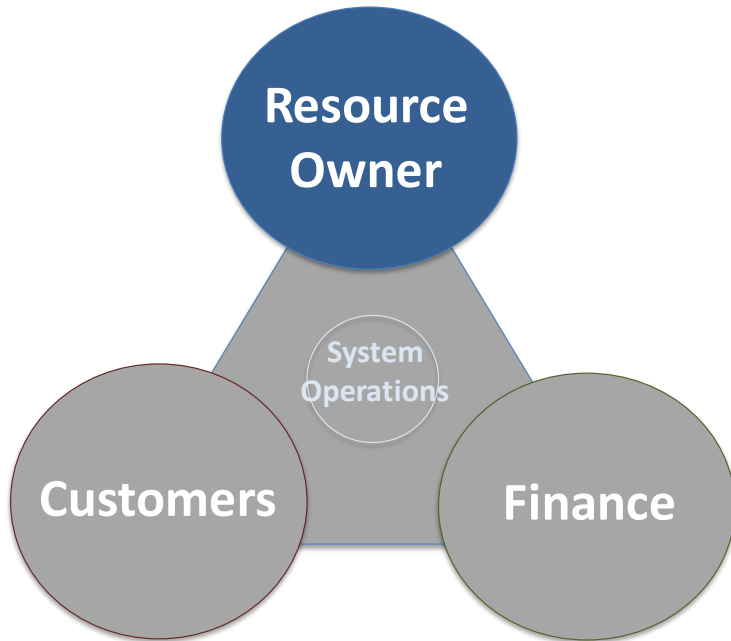
Equity
\$1.15

Annual Financing Costs				
	Ratio	Capital	Price	\$Billions
Equity	25%	\$ 10.8	10%	\$ 1.1
Debt	75%	\$ 32.3	5%	\$ 3.5
Total Annual				\$ 4.6
<hr/>				
Equity	50%	\$ 22	20%	\$ 4.3
Debt	50%	\$ 22	5%	\$ 2.3
Total Annual				\$ 6.6

\$2.00 /MMBtu Savings
(Compared to previous AKLNG Structure)

Alaska LNG System: \$6.20/MMBtu

NETBACK TO NORTH SLOPE



\$1 Billion annually for gas supply; plus
\$1.4 Billion for Alaskan workers and communities.

US Gulf Coast LNG Delivered to Asia		
	<u>\$/MMBtu</u>	
Gas supply	\$ 3.00	<== Henry Hub market price
Liquefaction	\$ 3.20	<== US Gulf Coast Liquefaction
Shipping	\$ 1.80	<== Gulf to Asia + Panama
Total Delivered	\$ 8.00	

\$/MMBtu



Selling into an \$8.00/MMBtu Asian market means LNG at Nikiski needs to be \$7.20; less O&M, Debt Service, and Equity Return, leaves \$1.00 Netback to the North Slope.

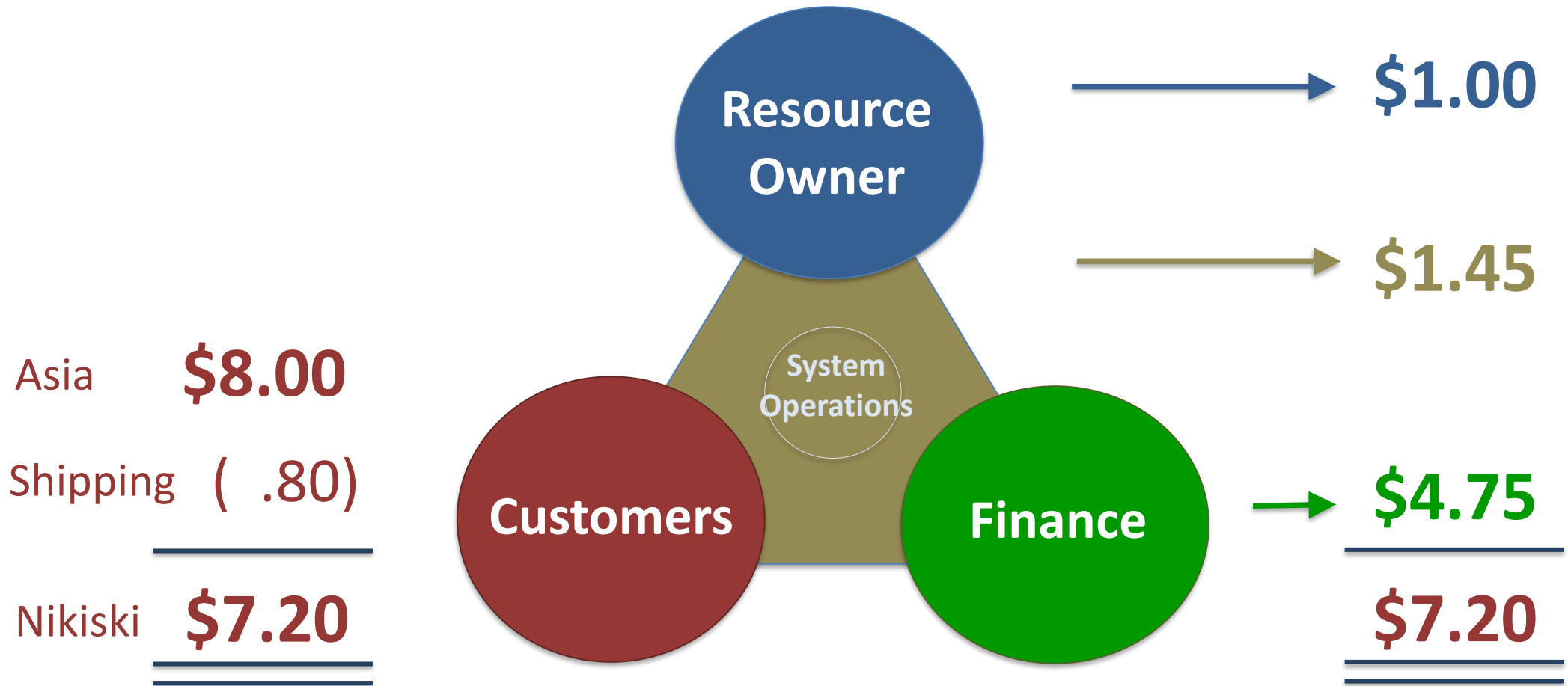


Netback
\$1.00

Alaska LNG Unit Cost at 19.7 Mtpa			
	<u>\$Billions</u>		<u>\$/MMBtu</u>
Raw Gas Supply	\$ 1.0	\$	1.00
Shipping	0.8		0.80
Equity Return	1.1		1.15
Debt Service	3.5		3.60
O&M + PILT	1.4		1.45
Total Delivered	\$ 7.8	\$	8.00

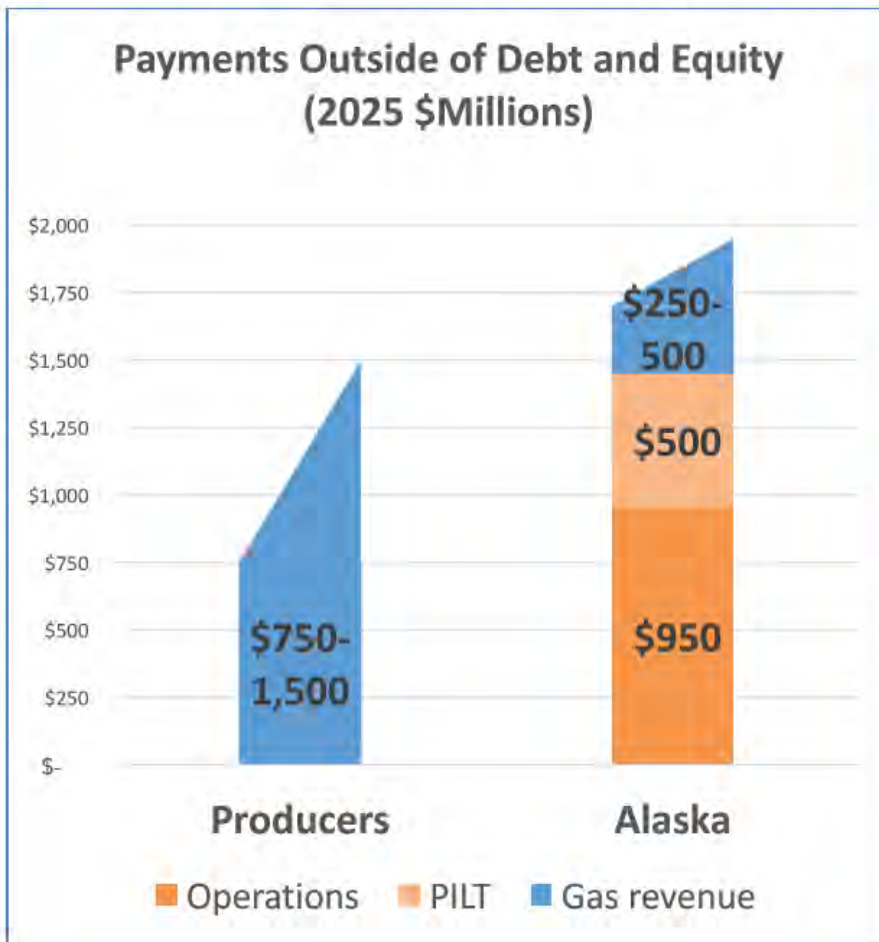
BALANCING THREE DRIVERS

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



NON-EQUITY BENEFITS TO ALASKA

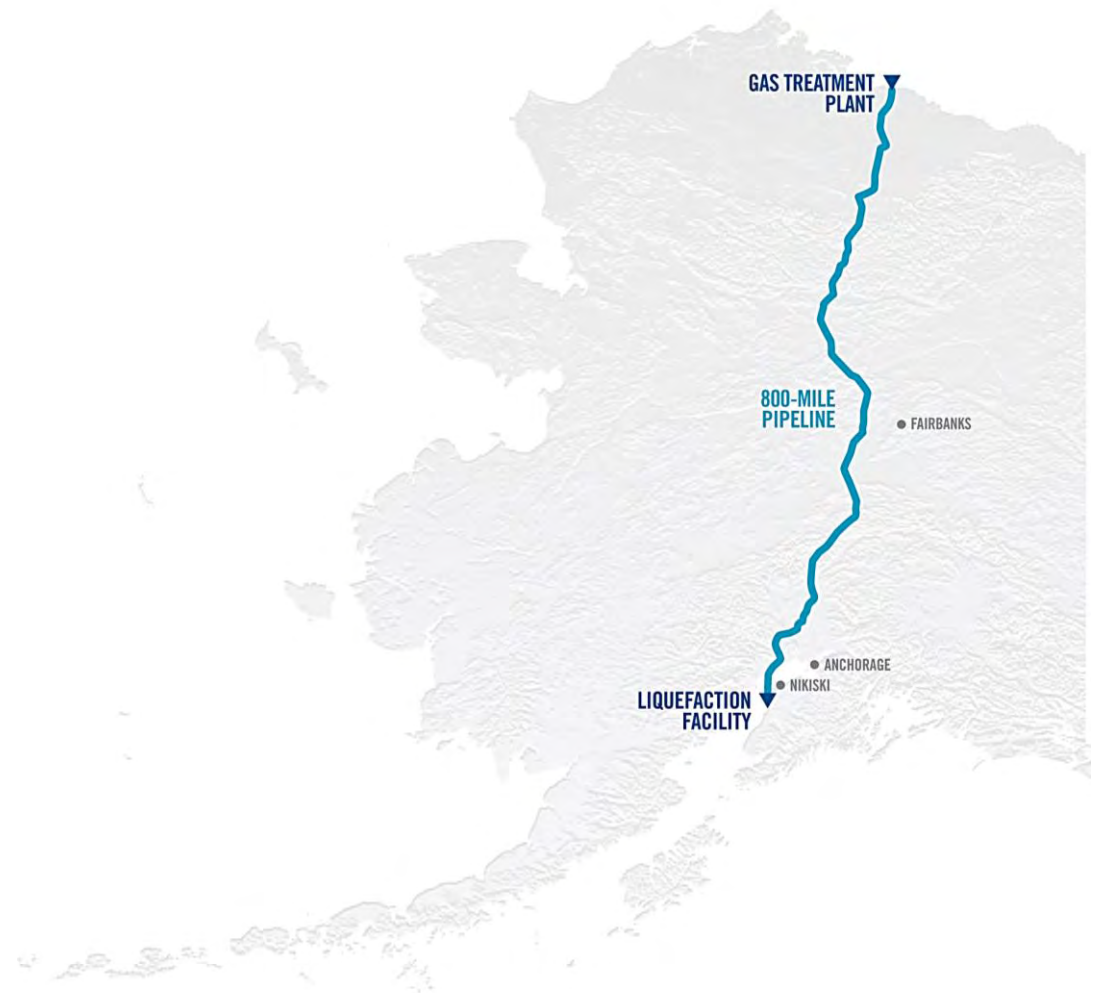
The gasline and LNG infrastructure provides enormous value to Alaska; there is a significant opportunity cost of not developing the project.



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.

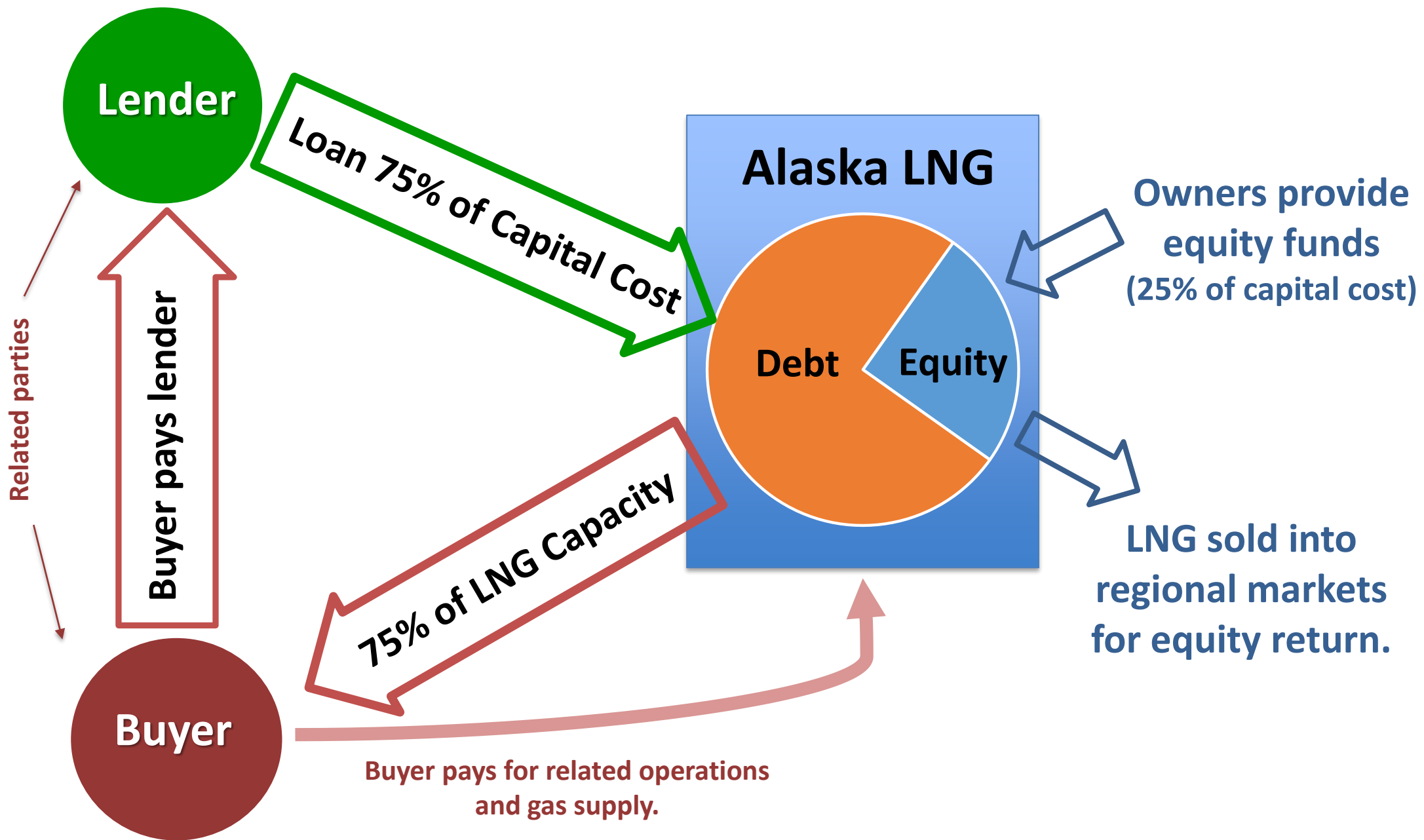
Commercializing a large energy infrastructure project in Alaska



“MEGA DEAL” FOR A “MEGA PROJECT”

- **Thinking outside the box - as big as Alaska.**
- **Proposal to top LNG consuming Asian governments.**
 - In-country bank provide the debt for 75% of capital cost;
 - Alaska LNG provides proportionate amount of capacity (75%) to in-country buyer as repayment of the debt.
 - In-country buyer makes debt service payments directly to in-country bank, eliminating credit risk and foreign exchange risk.
- **Equity portion (25%) is funded by owners;**
- **Project company retains the 25% capacity for sale into regional markets.**
- **Partial ownership investment by foreign entity is a potential, but AGDC will remain in control.**

TRANSACTION SIMPLIFIED



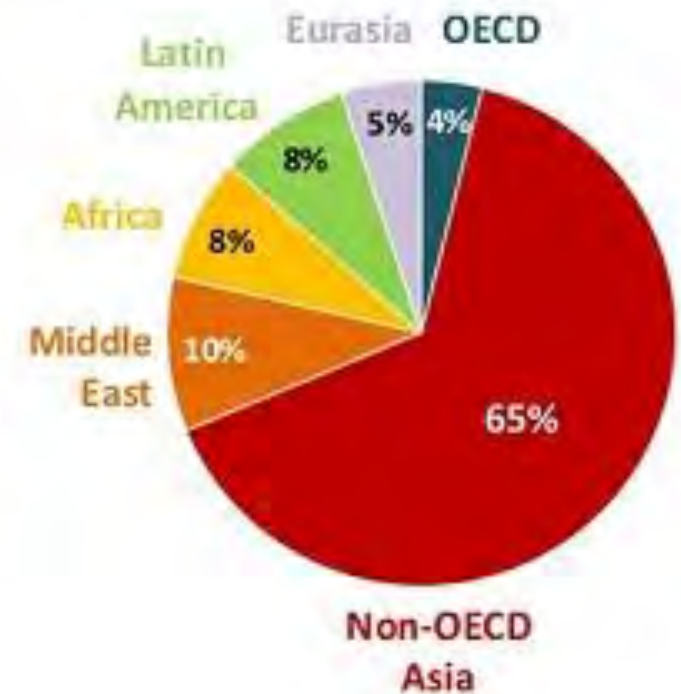
PRIMARY ENERGY DEMAND GROWTH

- China is the biggest growth market for primary energy

Primary energy demand, 2035 (Mtoe)



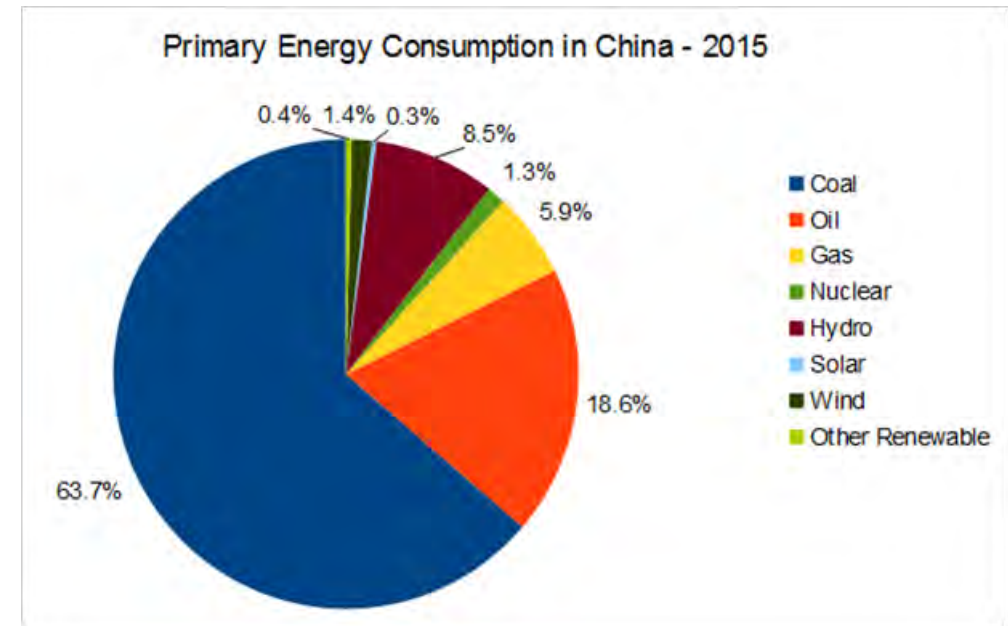
Share of global growth 2012-2035



CHINA MOVING TO CLEANER FUELS

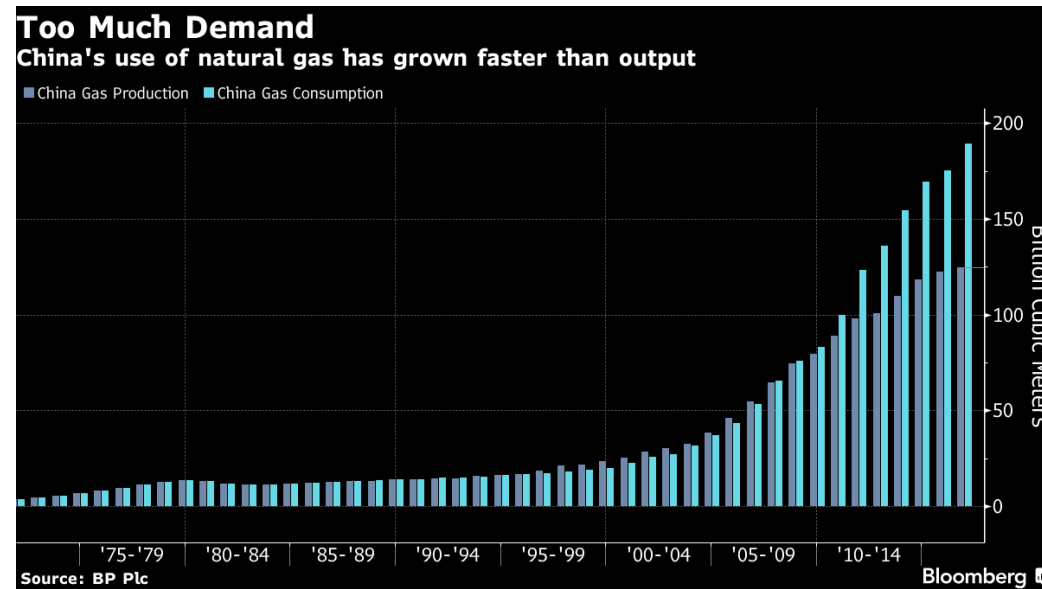
- China energy mix is predominantly coal and oil.
- Environmental concerns have caused a mandated shift to gas and other clean energy sources.

President Xi's address to the 19th Party Congress mentioned "environment" 89 times.



CHINA LNG DEMAND TO GROW RAPIDLY

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



China's LNG Terminals
Easier access to private terminals may help imports

● State company operated ● Independent



Global liquefied natural gas imports
billion cubic feet per day



JOINT DEVELOPMENT AGREEMENT



ALASKA
GASLINE
DEVELOPMENT CORP.



中国投资有限责任公司
CHINA INVESTMENT CORPORATION



中國銀行
BANK OF CHINA

- 75% of project debt financing from China in exchange for 75% of capacity for life of loan; O&M plus gas is additional.
- Remaining 25% of capacity held for sale by Alaska LNG to other Asian markets.
- Potential for Chinese companies to invest in minority interest.
- Potential for engineering and fabrication.
- A transparent and feasible investment model.
- Specific roles and terms defined by end of May, definitive documents by December 31, 2018.
- Parties not obligated to sign definitive agreements or expend funds.

- **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.



Fortune Global 500 Rankings, 2017

Company	Revenues (US\$M)
1 Walmart	\$485,873
2 State Grid	\$315,199
3 Sinopec Group	\$267,518
4 China National Petroleum	\$262,573
5 Toyota Motor	\$254,694
6 Volkswagen	\$240,264
7 Royal Dutch Shell	\$240,033
8 Berkshire Hathaway	\$223,604
9 Apple	\$215,639
10 ExxonMobil	\$205,004

Sinopec's track record of LNG developments and investments:

- Sinopec has 3 LNG receiving terminals on China's coast (9 MTPA).
- Partner with ConocoPhillips in Australia Pacific LNG (APLNG) with an offtake commitment for 7.6 MTPA for 20 years.
- 20 year, 2 MTPA contract with ExxonMobil from Papua New Guinea (PNG LNG).

- **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.



Current Rank ▲	Company (ticker-exchange)	Total assets (US\$B)
1	Industrial & Commercial Bank of China Ltd. (1398-HKG)	3,473.24
2	China Construction Bank Corp. (0939-HKG)	3,016.58
3	Agricultural Bank of China Ltd. (1288-HKG)	2,816.04
4	Bank of China Ltd. (3988-HKG)¹	2,604.30
5	Mitsubishi UFJ Financial Group Inc. (8306-TKS)	2,589.56
6	JPMorgan Chase & Co. (JPM-NYSE)	2,490.97
7	HSBC Holdings Plc (HSBA-LON) ²	2,374.03
8	BNP Paribas SA (BNP-PAR)	2,190.42
9	Bank of America Corp. (BAC-NYSE)	2,187.70
10	Wells Fargo & Co. (WFC-NYSE)	1,930.12

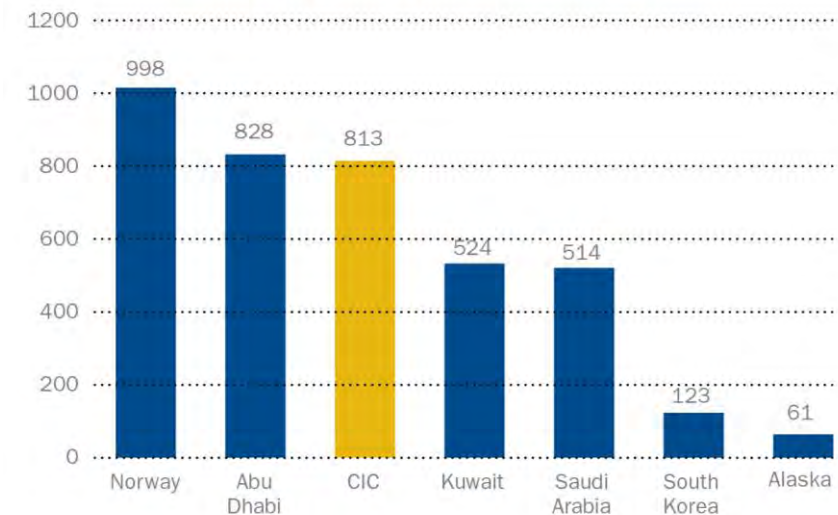
Track Record of Successful LNG Financing:

- Coral South floating LNG project in Mozambique.
- Tangguh LNG in Indonesia.
- Cheniere's Corpus Christi trains 1 and 2.
- Australia Pacific LNG.

- **China Investment Corporation (CIC):**
 - 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).



Sovereign Wealth Funds (US \$ Bill), 2017



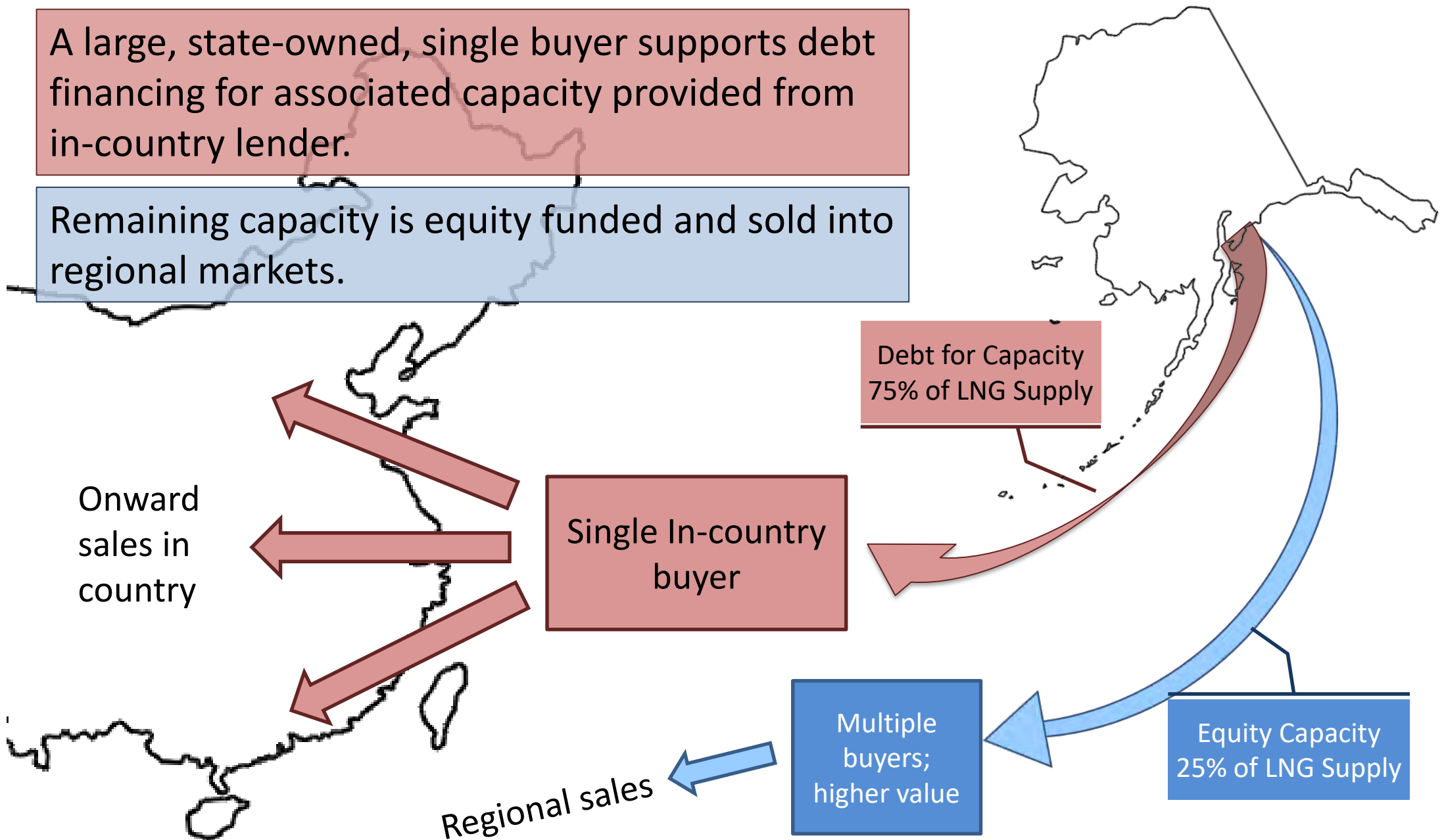
Track Record of Successful LNG Investment:

- CIC Invested \$3.15 billion in GDF Suez Exploration & Production International SA and \$850 million in Atlantic LNG Company of Trinidad and Tobago in 2011.

UNIFIED BUYER/LENDER PROPOSAL

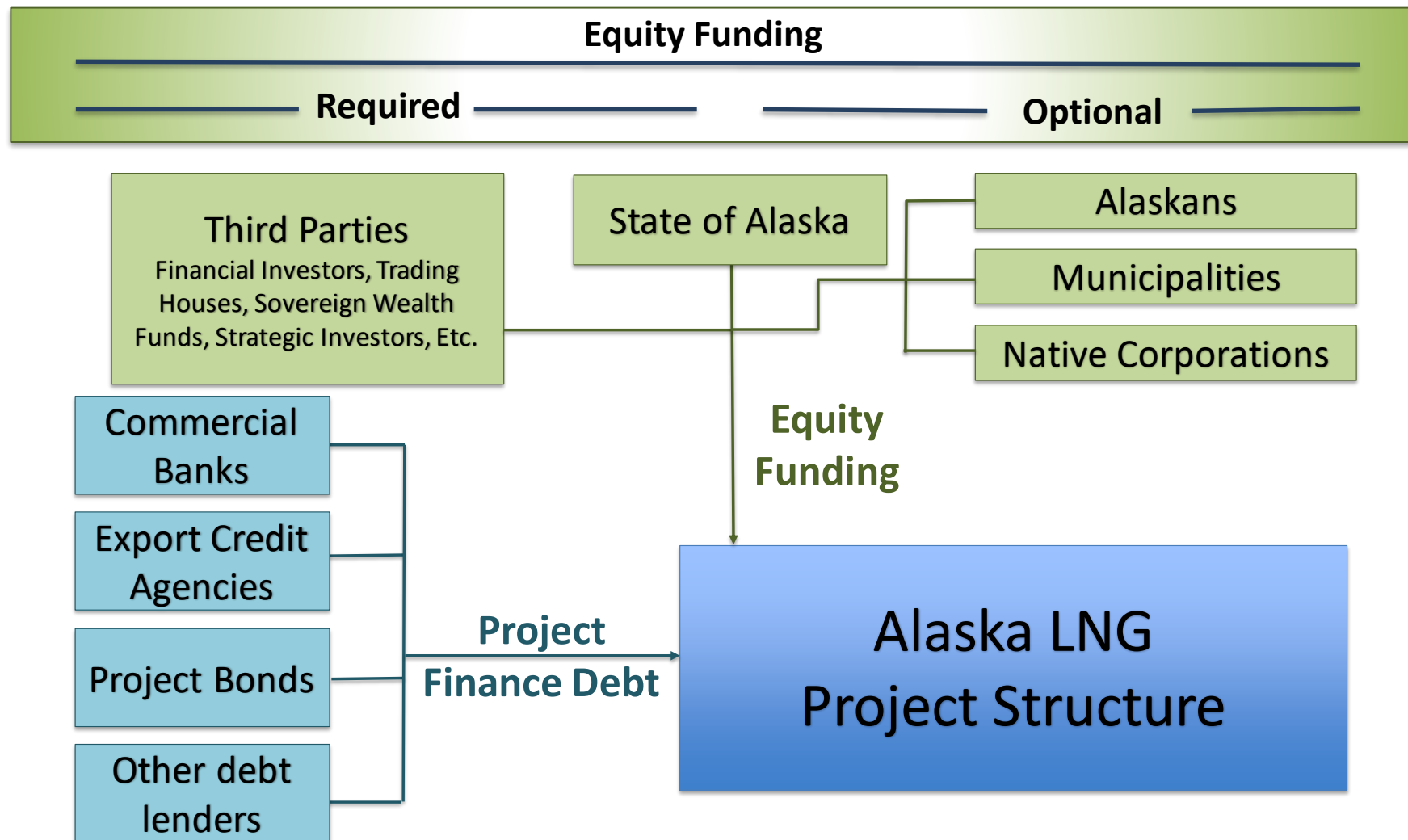
A large, state-owned, single buyer supports debt financing for associated capacity provided from in-country lender.

Remaining capacity is equity funded and sold into regional markets.



EQUITY FINANCING OPTIONS

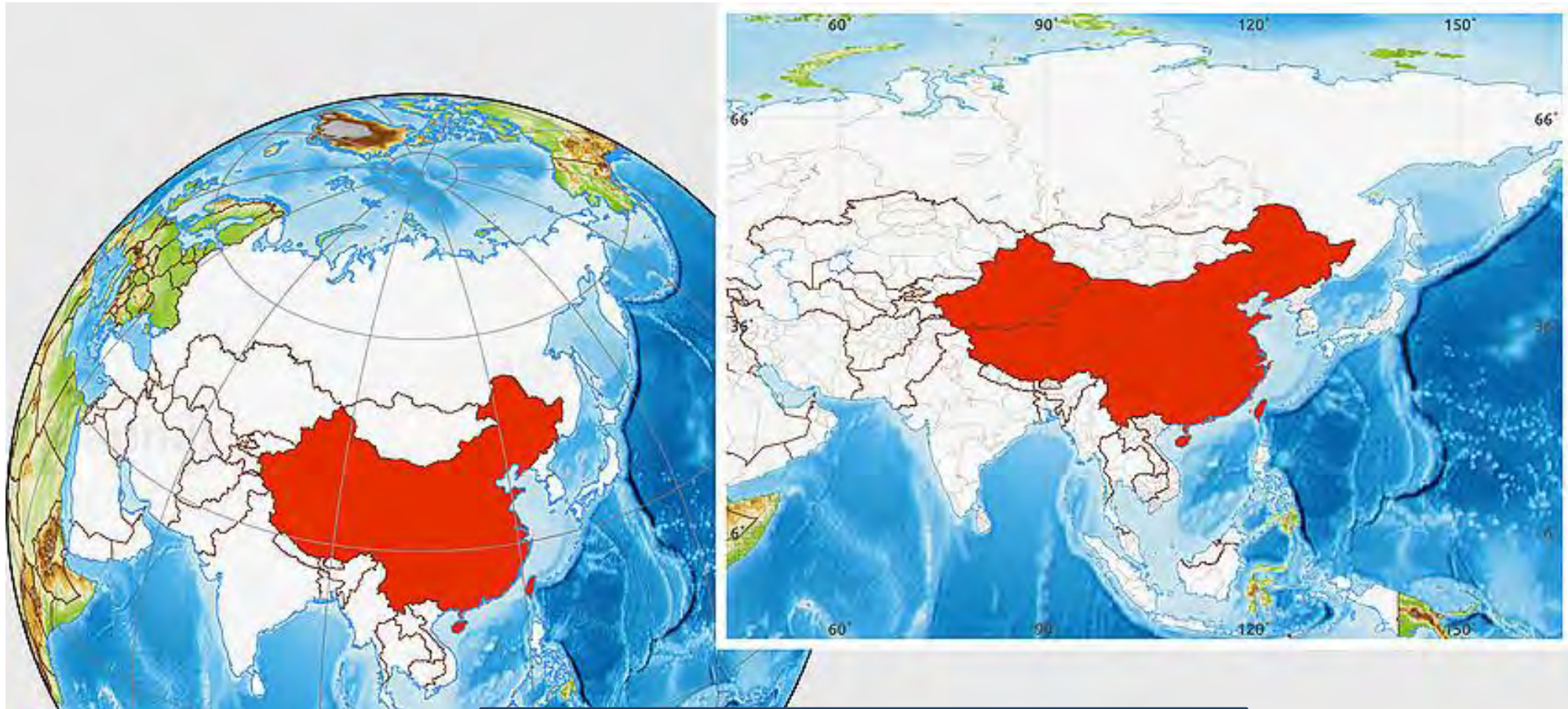
Equity investment in the project will be required; pursue a development path to provide the State with an ability to invest, but not the requirement to invest; Alaskans also to have investment option.



FOCUS: CHINA

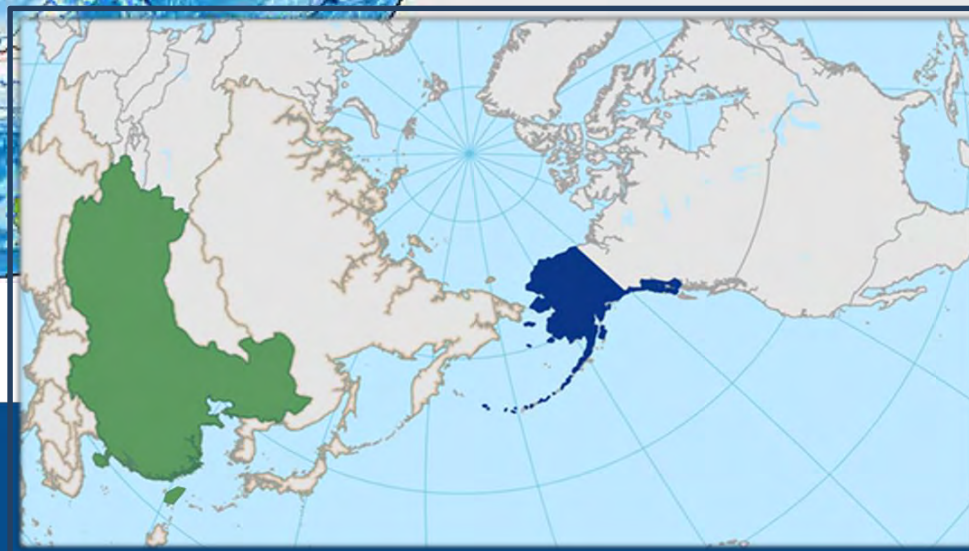
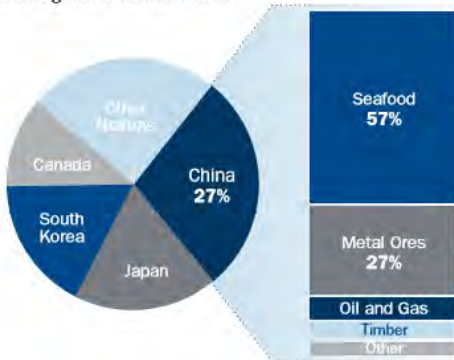


CHINA: ALASKA'S EXPORT PARTNER



China is Alaska's Biggest Trade Partner

Trade with China directly benefits thousands of Alaskans, including fishermen and miners.

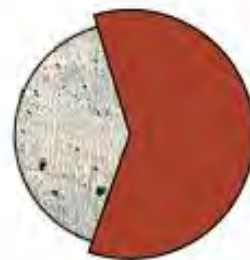
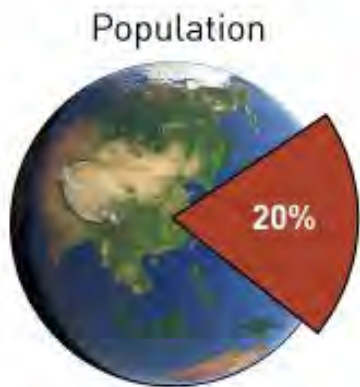


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CHINA AS RESOURCE BUYER

China is a major consumer of raw materials that can be produced in Alaska.

China share of world raw material consumption



Concrete
60%



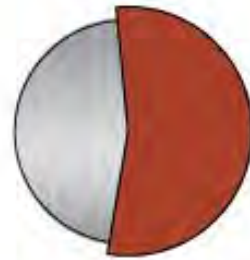
Copper
48%



Coal
49%



Rice
30%



Aluminum
54%



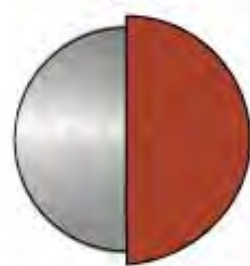
Steel
46%



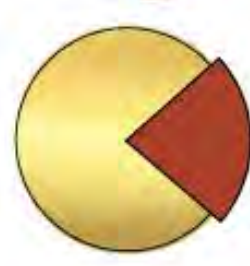
Uranium
13%



Corn
22%



Nickel
50%



Gold
23%



Oil
12%



Whea
17%

MAJOR TRADE ENHANCEMENT

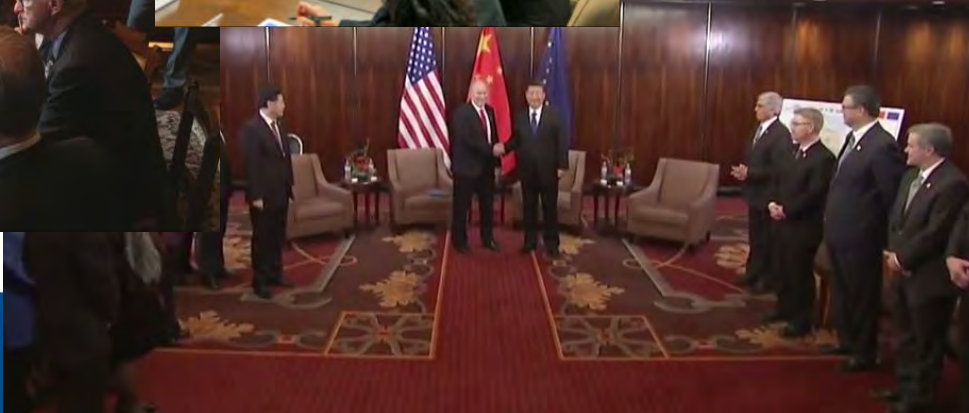
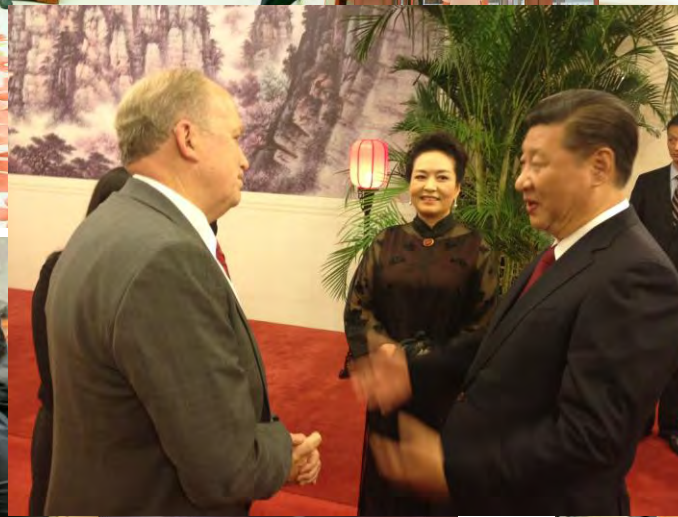
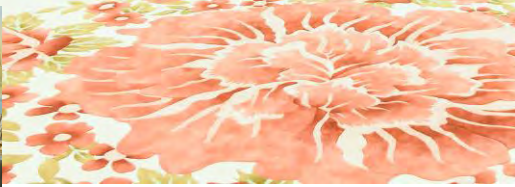
- Alaska currently exports seafood and other products to Asia.
- Alaska LNG will significantly increase exports to Asia.
- Future mining projects, enabled by Alaska LNG, will further enhance trade.



Strategic relationship

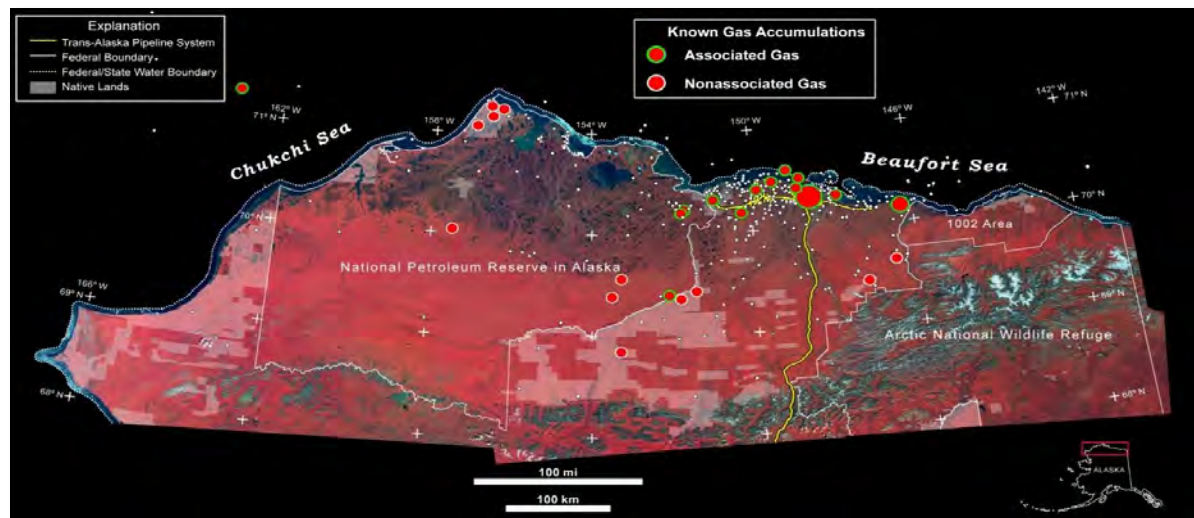
RELATIONSHIPS AT ALL LEVELS

Relationships have been established at all levels of government and industry on both sides.



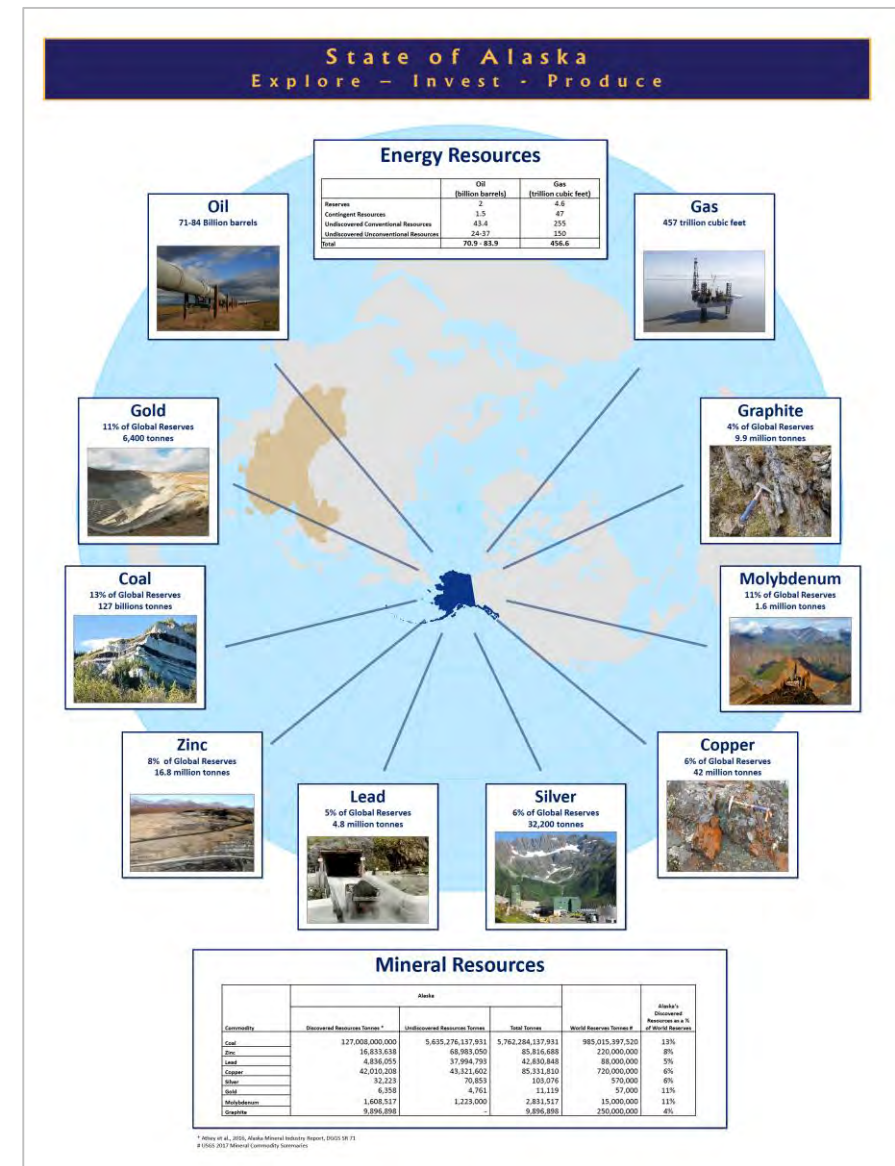
HIGHLIGHTING LOCAL OIL AND GAS

- Alaska's North Slope is a hydrocarbon-rich, largely unexplored area.
- Area measures 245,000 km², and has fewer than 500 exploration wells.
- 35 TCF of developed gas resource.
- 200+ TCF of prospective conventional gas resource.

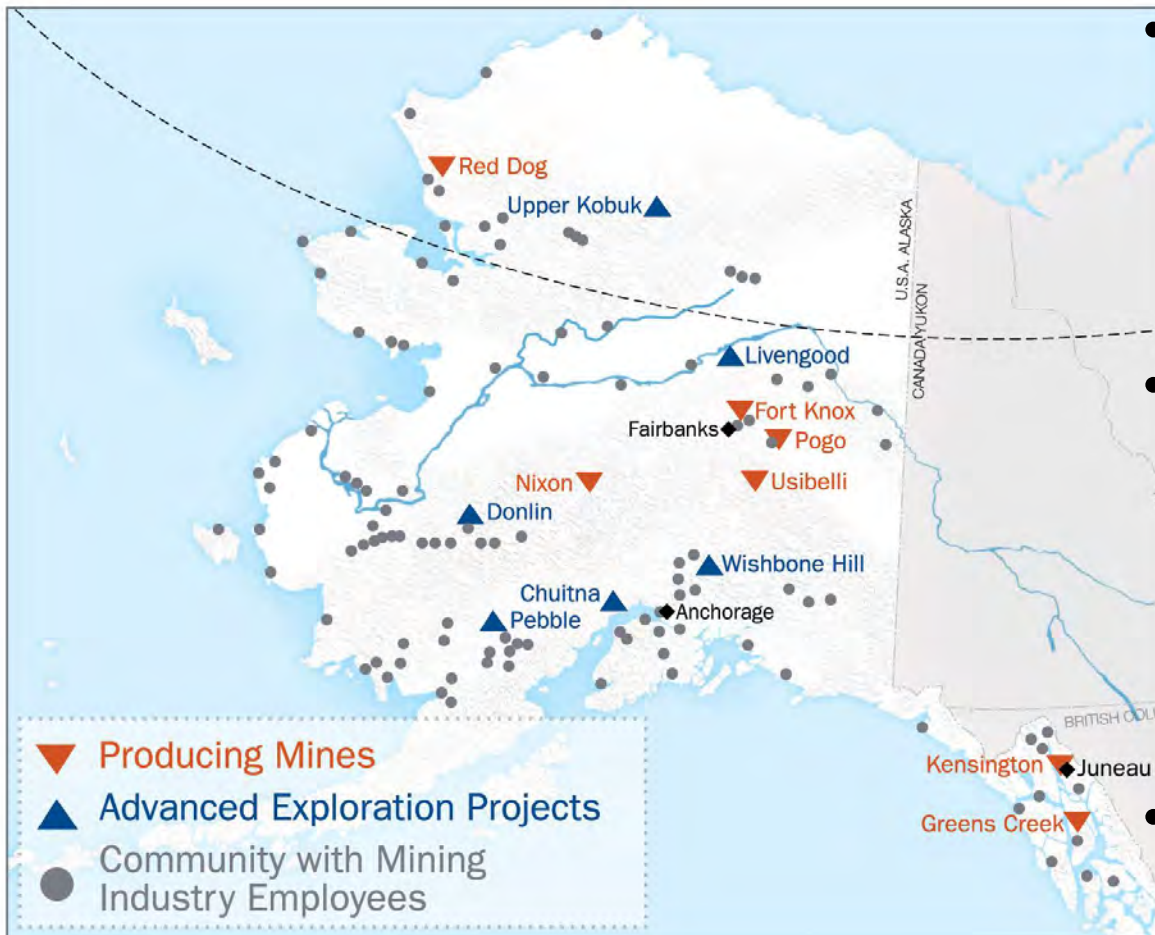


PITCHING ALASKA AS A RESOURCE NEIGHBOR

- Alaska is a resource development state.
- 4 trillion tons of high quality coal: one of world's known coal resource.
- World-scale lead/zinc deposits: including the world's largest zinc mine.
- World-scale gold and copper mines: numerous existing and potential.
- Graphite: America's highest grade largest, large flake graphite deposit.
- Significant rare-earth deposits.



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 generations.**

THANKS TO ALL WHO SUPPORTED THE EFFORT!



Get Involved.

Get Ready.

Get Engaged.



THANK YOU!

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