### Kenai Spur Highway Re-route

February 12, 2018



Frank Richards, P.E., Senior Vice President, Program Management

## Agenda



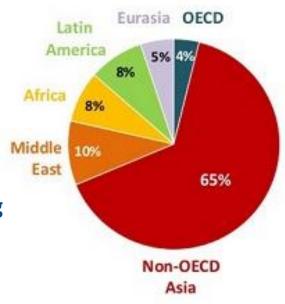
- Global LNG demand.
- Alaska LNG project status.
- Kenai Spur Highway (KSH) re-route.
- Evaluation of re-route alternatives.
- Public review process.
- Discuss next steps.

### Asia's LNG Demand



- Asia is Alaska's regional market.
- Asia is the biggest LNG market.
- "China is very serious about constructing an ongoing, mutually beneficial relationship with Alaska,"
   Chinese Deputy Consul General Ren Faqiang.
- Environmental concerns in China have caused a mandated shift to gas and other clean energy sources.
- Demand for natural gas has grown dramatically, outpacing the ability to produce domestically.
- LNG import capacity is increasing rapidly to help satisfy future demand.
- AGDC has signed Memorandum of Understandings with Tokyo Gas, KOGAS and Petro Vietnam.
- AGDC signed a Joint Development Agreement (JDA) with China.

# Share of global growth 2012-2035



# Joint Development Agreement

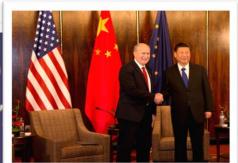






• China

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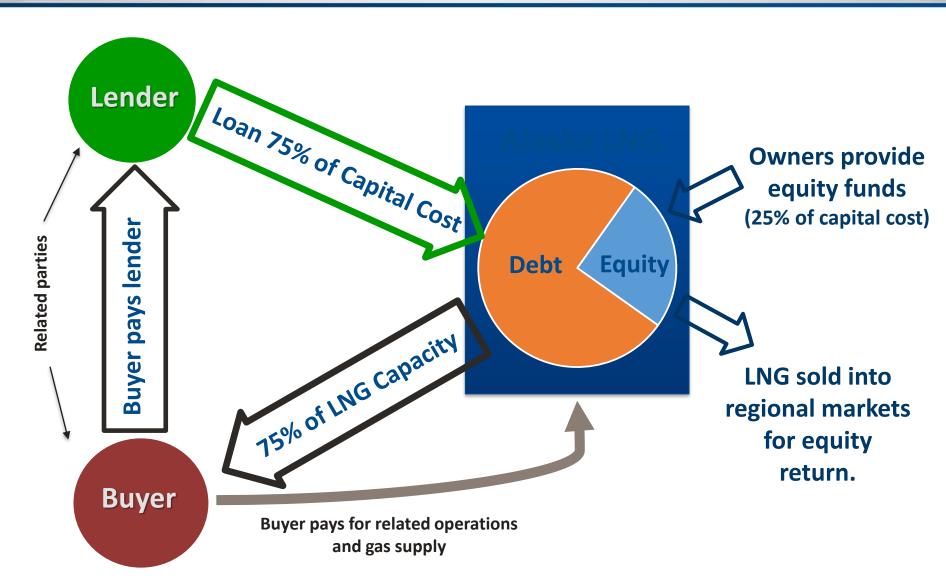
## Large Deal for a Large Project



- Thinking outside the box leveraging market position.
- Proposal to LNG consuming Asian governments:
  - In-country bank provides 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 100% ownership plus 25% LNG capacity for sale into regional markets:
  - Plus 500 MMcf/per day available to Alaskans 2.5 times the state's current daily consumption.
- Partial ownership investment by third parties is a potential, but AGDC will remain in control.

# **Transaction Simplified**



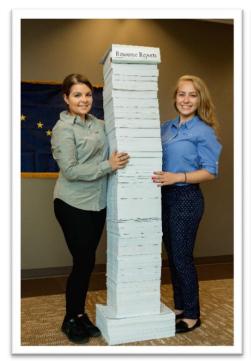


### Federal Energy Regulatory Commission



#### Natural Gas Act Section 3:

- Application April 17, 2017.
- 60,000 pages.
- Federal Energy Regulatory
   Commission (FERC) provided 801
   requests for additional
   information.
- AGDC provided 100% response:
  - January 22, 2018.
  - Total now 100,000 pages.
- FERC Dec 2018 newsletter:
  - "When we have all of the information necessary to complete our analysis and write the EIS, we will issue a Notice of Schedule for Environmental Review identifying the issuance date for the final EIS."

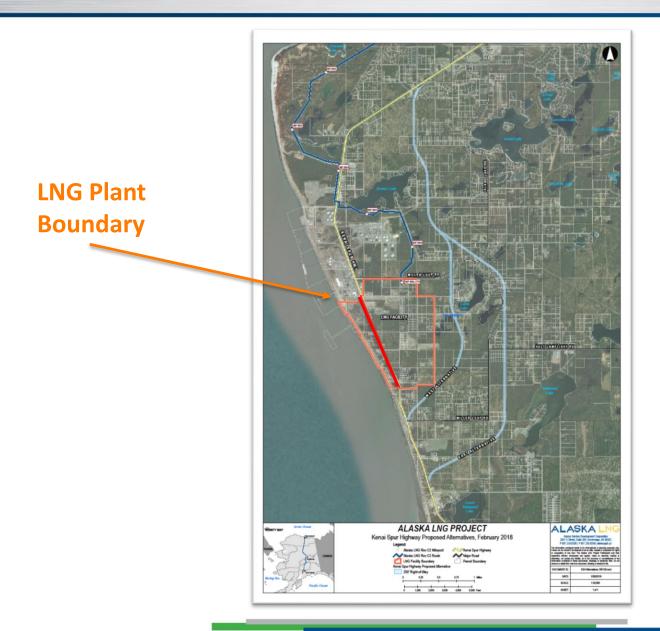




2016 2017

# Why realign the KSH?



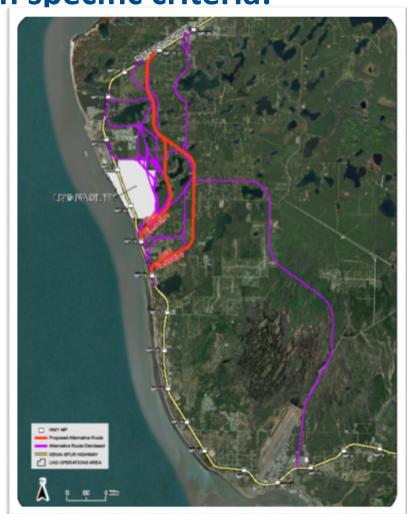


# KSH Re-route Alternatives Analysis



### Alternatives evaluated on specific criteria:

- Environmental.
- Socioeconomic.
- Right of Way.
- Utilities.
- Geotechnical.
- Design/Traffic.
- Construction.
- Cost.



### KSH Re-route Proposed Alternatives



# The East and West Alternatives were selected.

- Primary factors:
  - Avoid Construction traffic.
  - Minimize length.
  - No wetlands.
  - Good soils for solid road foundation.



### KSH Re-route Proposed Alternatives



#### **West Alternative:**

- New roadway length of 5.4 miles.
- 71 Parcels affected by 200' ROW, with a potential of 19 relocations.
- Annual maintenance cost of \$152,000.
- Construction cost
   estimate of \$23 million
   (does not include ROW
   acquisition costs).



# **KSH Re-route Proposed Alternatives**



#### East Alternative:

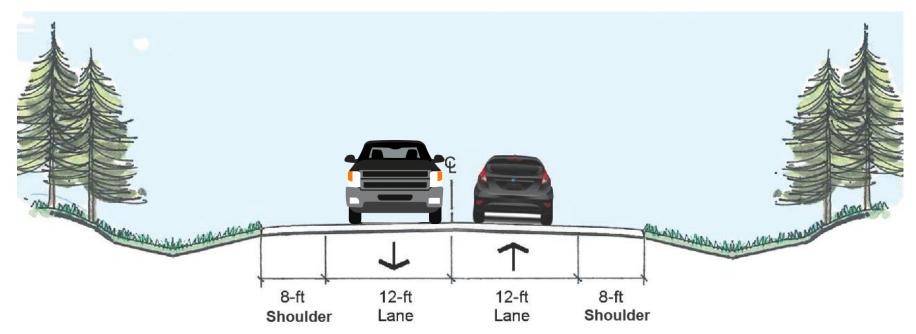
- New roadway length of 6.9 miles.
- 119 Parcels affected by 200' ROW, with a potential of 35 relocations.
- Annual maintenance cost of \$202,000.
- Construction cost
   estimate of \$33 million
   (does not include ROW
   acquisition costs).



# KSH Re-route Design Parameters

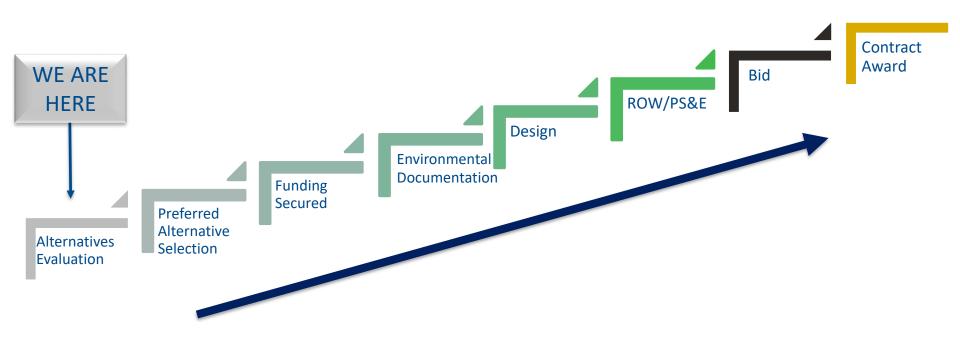


- National Highway System design standards.
- Average daily traffic volume of 6,360 vehicles in 2035.
- 55 mph speed limit.
- 200 foot Right-of-Way width.
- 8-foot shoulder to accommodate bicycle and pedestrian traffic.



## KSH Project Development





# Schedule



	2018				2019				2020			
Q1 (	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Preliminary Engineering & Environmental Documentation												
Alternatives Evaluation Final Alternative Recommended												
	P	Preliminary Engineering										
	L	imited R	ght of Ent	ries	Permits, Approvals, & Clearance							
	E	Environmental Documentation										
Right-Of-Way												
	R	ROW Dete	ermination	n ROW Funding* ROW Acquisit				ion				
Utility												
	u	Utility Coordination										
Data Collection & Design												
	G	Project Data Collection & Design: Design Review and PS&E Approval; Geotechnical Analysis, Land Survey; ROW Materials and Material Sourcing										
Bid, Award, Constr	uct											

<sup>\*</sup>Assumes funding is available Q3 – Q4 2018.

All tasks shift in accordance with funding allocation availability.

### **Next Steps**



- March 15, 2018:
  - Comments deadline on proposed alternatives.
- June 1, 2018:
  - Revised Alternatives Analysis Report completed.
- Q3 2018:
  - Community meeting to discuss preferred alternative.

### Conclusion



 The Kenai Spur Highway re-route is a priority for AGDC.

 Stakeholder comments, evaluation criteria and cost will all be considered during final evaluation.

 Based on community input and alternative analysis criteria, an optimal route will be recommended.

### Questions?



Alaska Gasline

Development Corporation

agdc.us

Alaska LNG
Project
alaska-Ing.com

Get Involved.
Get Ready.
Get Engaged.



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