Alaska LNG

House Resources Committee
January 24, 2018

ALASKA GASLINE DEVELOPMENT CORP.

Keith Meyer, President
Frank Richards, P.E., Senior Vice President Project Management
Lieza Wilcox, Vice President Commercial and Economics

Presentation Overview

ALASKA GASLINE DEVELOPMENT CORP.

- **Budget.**
- Project Cost and Economics.
- Commercial.
- Regulatory/Technical.



Capital Budget Variance Analysis

December 2017 Calendar Year

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Jan to Dec

Capital Expenditures ($000s)	YTD Actuals	YTD Budget	YTD Variance
Regulatory/Program Management	18,021	35,483	(17,462)
Commercial	5,771	18,134	(12,363)
Communications	928	1,463	(535)
Capital Total	**$ 24,720**	**$ 55,080**	**$ (30,360)**

Jan to Dec

Expenditures by Fund ($000s)		YTD Actuals	YTD Budget	YTD Variance
AKLNG (1235)		21,943	49,560	(27,616)
ISG (1229)		2,777	5,521	(2,744)
Capital Total		**$ 24,720**	**$ 55,080**	**$ (30,360)**
AKLNG (1235)	40% of Operating	3,551	4,154	(604)
ISG (1229)	60% of Operating	5,326	6,232	(905)
Total Operating		**$ 8,877**	**$ 10,386**	**$ (1,509)**
AKLNG (1235)		25,493	53,714	(28,221)
ISG (1229)		8,104	11,753	(3,649)
AGDC Total		**$ 33,597**	**$ 65,466**	**$ (31,869)**

Variance Drivers:

Significant austerity program was implemented to extend potential use of allocated funding

Regulatory:

- Timing – Related to AFE activity ramp up and vendor engagement.
- Elected Deferrals including:
  - EPC Contractor Selection.
  - Legal Counsel.
- Efficiency Gains:
  - Use of internal resources for FERC comment responses.
  - Continuity of effort with no work stoppages.

Commercial:

- Timing – Related to AFE activity ramp up and vendor engagement.
- Elected deferrals including:
  - Financial Advisor Selection.
  - Legal Counsel.
- Efficiency Gains:
  - Use of internal resources for drafting of term sheets and LOIs.
  - Continuity of effort with no work stoppages.
- Ramp up of activity is planned in 2018.

Expenditures and Projected Funds

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Summary of Expenditures and Projected Fund Balance

Expenditures by Major Activities ($000s)	Spent (Jan-Dec 2017)	JAN	FEB	MAR	APR	MAY	JUN	Total
Communications	**928**	130	60	60	60	76	106	**1,395**
Commercial (Agreements and Marketing)	**5,771**	476	526	526	526	526	526	**9,298**
Project Finance	**-**	116	105	255	255	260	260	**1,252**
Regulatory (FERC Effort)	**18,021**	1,490	1,490	1,490	1,490	1,490	1,490	**28,616**
Class 3 Work (Prepare for FID)	**-**	1,832	1,861	1,890	2,061	2,125	2,509	**12,278**
AGDC Corporate (Operating)	**8,877**	866	866	866	866	866	866	**14,802**
Total Expenditures	**33,597**	**4,910**	**4,907**	**5,086**	**5,257**	**5,342**	**5,756**	**67,641**

Projected Fund Balance ($000s)	(Dec 2016) Balance	Draw Down (Jan-Dec 2017)	JAN	FEB	MAR	APR	MAY	JUN
AKLNG Total	79,720	**(25,493)**	50,242	46,259	42,115	37,817	33,443	28,697
ASAP Total	26,410	**(8,104)**	17,382	16,457	15,515	14,556	13,588	12,578
Remaining Balance	**106,130**	**(33,597)**	**67,624**	**62,716**	**57,630**	**52,373**	**47,031**	**41,275**

Forecasted Spend Estimate and Forecasted Balance Estimate.

Note: Numbers are rounded to the nearest thousand.

FY2019 Budget Request

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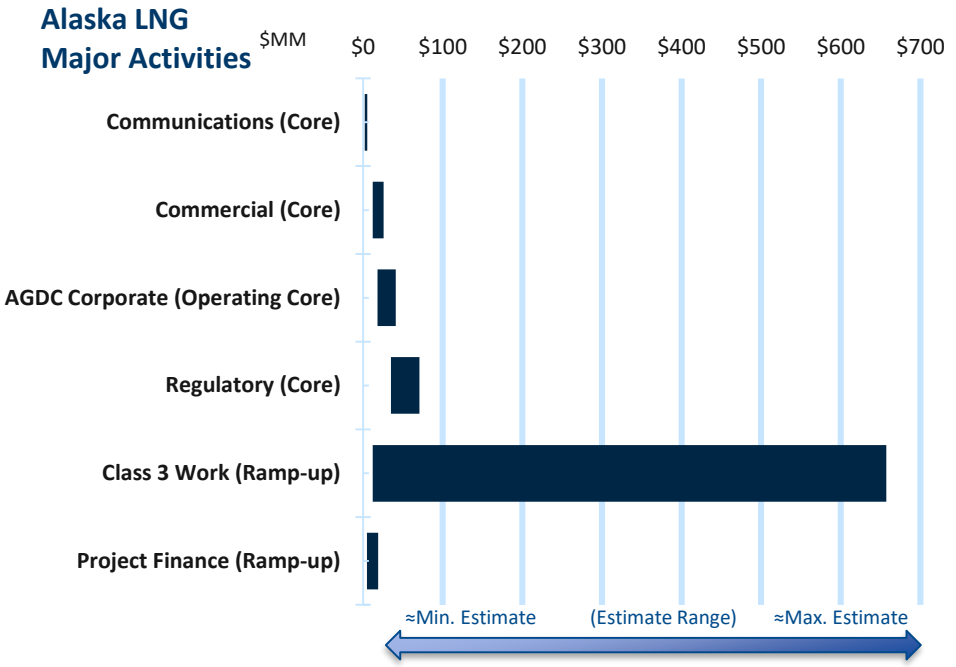
- **No General Funds requested.**
- **No additional appropriations requested.**
- **Request to receive program receipt authority.**
- **Request to transfer funds:**
  - Transfer ≈$12-Million from 1229-ISP Fund to 1235-LNG Fund.

AGDC Operating	**FY2018 Authorized**	**FY2019 Governor's Proposed**
Personal Services	6,365	6,365
Travel	466	466
Services *(Lease, Contractual, etc.)*	3,305	3,305
Commodities* *(Office & Supplies)*	250	250
Component Total:	**10,386**	**10,386**
Full Time Component Positions (PCN):	25	25

2018 and 2019 Funding Needs

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- **Funding Commentary:**
  - Future project funding in deliberative stage with AGDC Board.
  - Maximum spend keeps project on schedule.
  - Project funding from third party sources.
  - Current fund balance meets project needs through 2Q19 at current burn rate with LSTK FEED Prep and Investment Banker.



$MM

Alaska LNG 18 / 19 Spend Profiles			
Major Activity	**$≈Min**	**$≈Max**	**$≈Range**
Communications (Core)	2	3	1
Commercial (Core)	12	14	2
AGDC Corporate (Operating Core)	18	23	5
Regulatory (Core)	35	36	1
Class 3 Work (Ramp-up)	12	645	633
Project Finance (Ramp-up)	5	14	9
Total	**$ 84**	**$ 735**	**$ 651**

Presentation Overview

ALASKA GASLINE DEVELOPMENT CORP.

- Budget.
- **Project Cost and Economics.**
- Commercial.
- Regulatory/Technical.



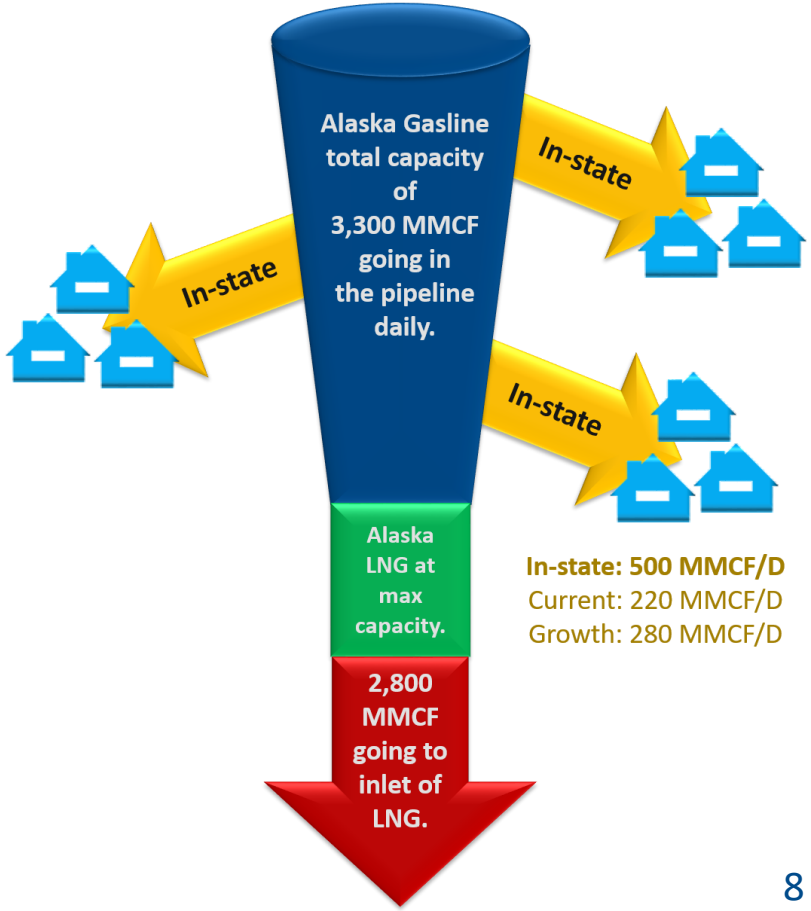
Gas for Alaskans

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Top Priority: Lower Cost Energy For Alaskans

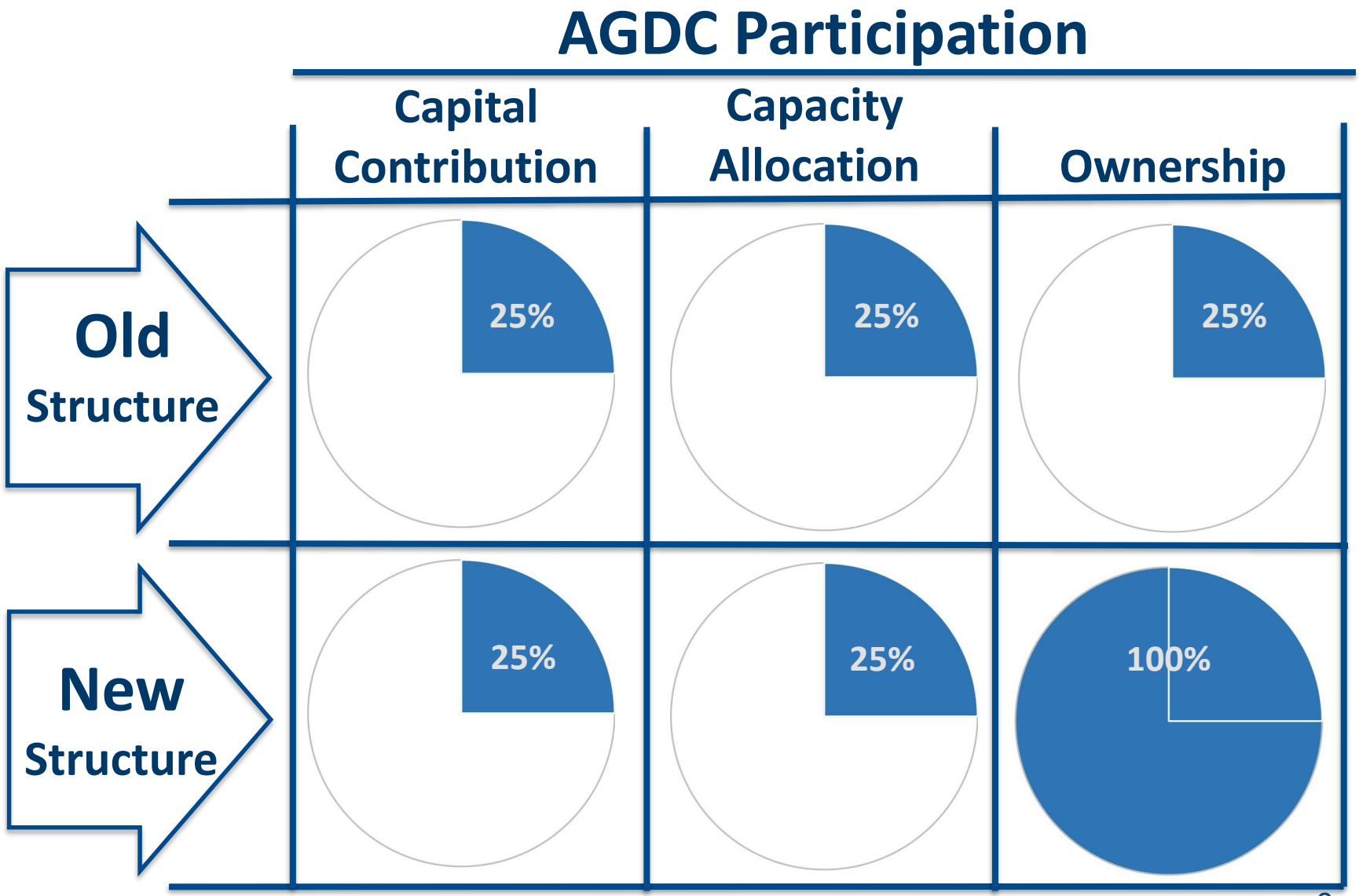
- **Energy for all of Alaska:**
  - Many off-takes to communities and projects along the Alaska Gasline.
  - Small scale LNG distribution.
- **The Alaska Gasline is bigger than the LNG Facility:**
  - No risk of Alaskans' gas going to Asia.
- **Price in the mid single digits.**
- **$1,000 energy savings on average per household.**
- **Ongoing commercial discussions to sell gas to Alaska utilities.**

Alaska LNG System Design Guarantees Gas for Alaskans:



Old vs. New Structure

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Construction (EPC*) Cost Estimate

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- In developing the construction and capital cost estimate for the Alaska LNG system, **over $600 Million in engineering, optimization, and project management was spent** over a two and a half year period.
- The resulting engineering, procurement and **construction cost estimate for the entire system is**:

$27.9 Billion

* EPC = Engineering, Procurement, Construction

Owner's Cost

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- In addition to the construction cost, there are costs that the owners must bear; the largest of these costs is a Project Management Team ("PMT") that will oversee the contractors building the project.
- The cost of the Project Management Team used in the Alaska LNG estimate is **$3.4 Billion.**
- Additional Owner's Costs include FEED ($764 Million); Insurance, operating organization and training, start-up, other ($2.1 Billion) for a **Total Owner's Cost of $6.2 Billion.**

Total Owner's Cost = $6.2 Billion

Alaska LNG Total Project Cost		
	$Billions	
Construction (EPC)	$	27.9
Owner's Costs	$	6.2
Subtotal Base Cost	$	34.1

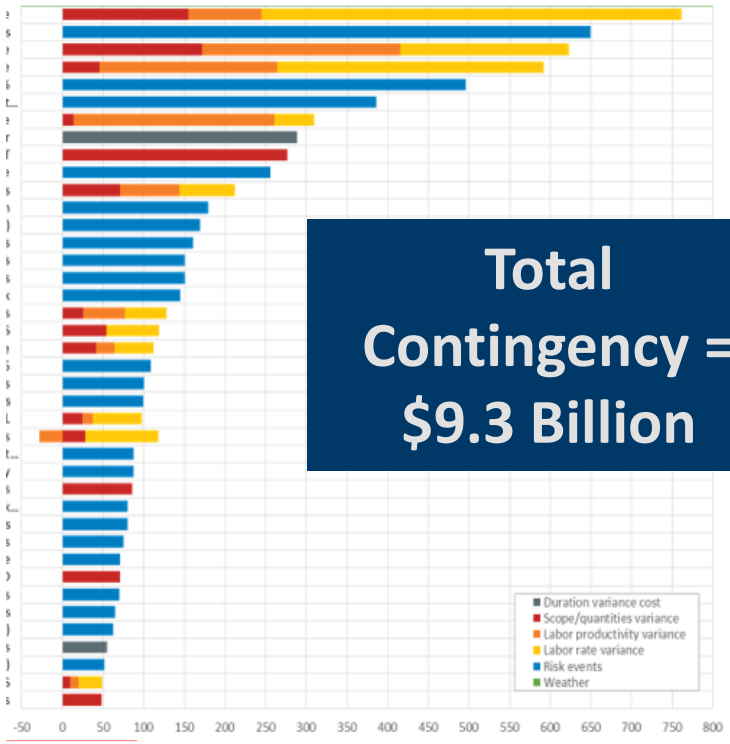
EPC = Engineering, Procurement, Construction

Total Base Cost = $34.1 Billion

Overrun Risks and Contingencies

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- During construction, many things may not go according to plan.
- To estimate the downside exposure of these risks, the major cost components were subject to a probabilistic simulation.
- The simulation produced the "tornado diagram" shown at right and identified a **potential exposure of $7.7 Billion** if everything went against the project (specific variability by item is confidential).
- Additionally, with all going bad, the project management team and other **owner's costs were increased by $1.6 Billion**.



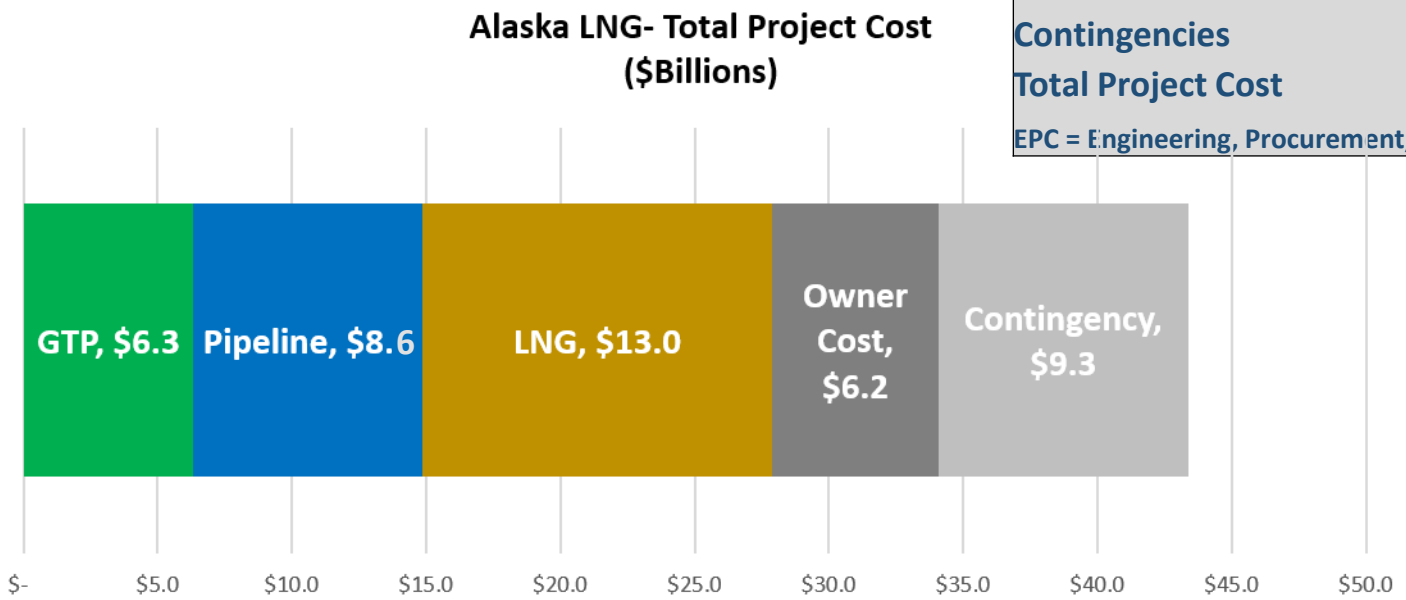
Total Contingency = $9.3 Billion

Total Project Cost

- The total project cost with contingencies then becomes $43.4 Billion*.

Alaska LNG Total Project Cost		$Billions
Construction (EPC)	$	27.9
Owner's Costs	$	6.2
Subtotal Base Cost	$	34.0
Contingencies	$	9.3
Total Project Cost	$	43.4

EPC = Engineering, Procurement, Construction



Total Project Cost = $43.4 Billion

* This number is a highly probable number, but there are other risks that could increase the cost – earthquakes, war, new regulations.

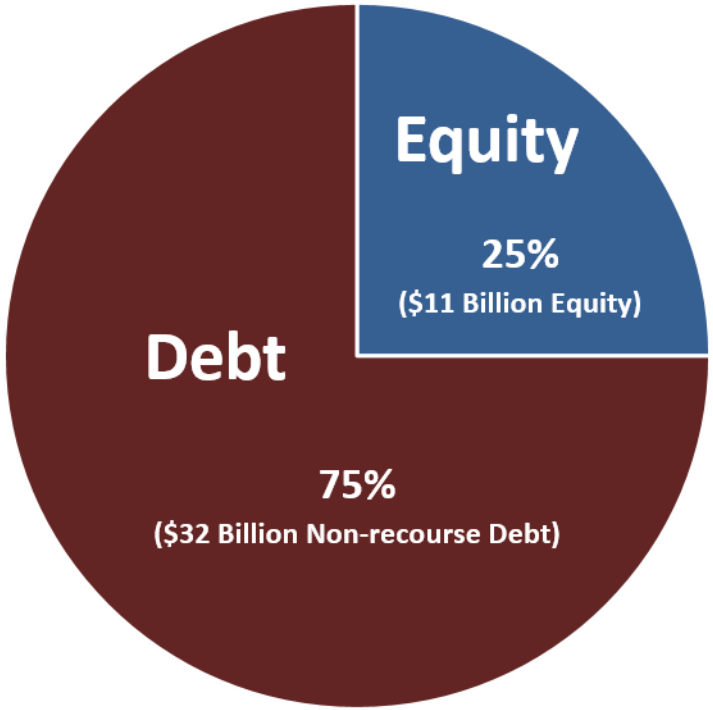
Potential Reductions

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- AGDC engaged Fluor to develop a, “zero based estimate” of the project to identify where potential savings off the base cost may exist and to adjust for inflation since the original estimate.
- Fluor identified a potential $2 Billion in savings related to optimization and strategic sourcing.
- Additionally, AGDC has received informal input from a major contractor that they would perform the project management for significantly less than the $3.4 Billion used in the base estimate.
- **None of these reductions have been incorporated into our cost estimate.**

Total Project Cost = $43.4 Billion

Alaska LNG Capital Structure



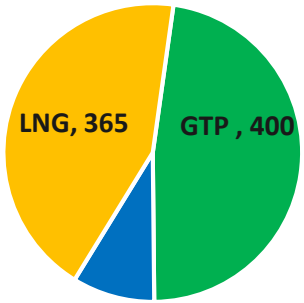
- **Base case: 42-inch, three train, 20 Mtpa design.**
- **Total Capital Cost = $43.4 Billion.**
- **Potential for phased development.**

Equity Requirement = $11 Billion
Debt Requirement = $32 Billion

Operations and Maintenance

- **Gas Treatment Plant:**
  - Operations and maintenance (O&M) estimated at $400 Million per year, which is escalated at inflation (2%).
- **LNG Facility:**
  - O&M is estimated at $365 Million per year, which excludes marine tugs and carrier related costs.
  - Feed gas, taxes, and depreciation are excluded in O&M, and are accounted for as separate items in the model.
- **Pipeline:**
  - O&M costs for pipelines are estimated at $75 Million per year.
  - Terrain and arctic climate factors result in a slightly higher O&M when compared to other pipelines.
  - These factors include strain-based design, VSM inspection and maintenance for above-ground sections, and cook Inlet subsea crossing inspection requirements.

Alaska LNG
Operations and Maintenance
Annual Cost, $ Millions



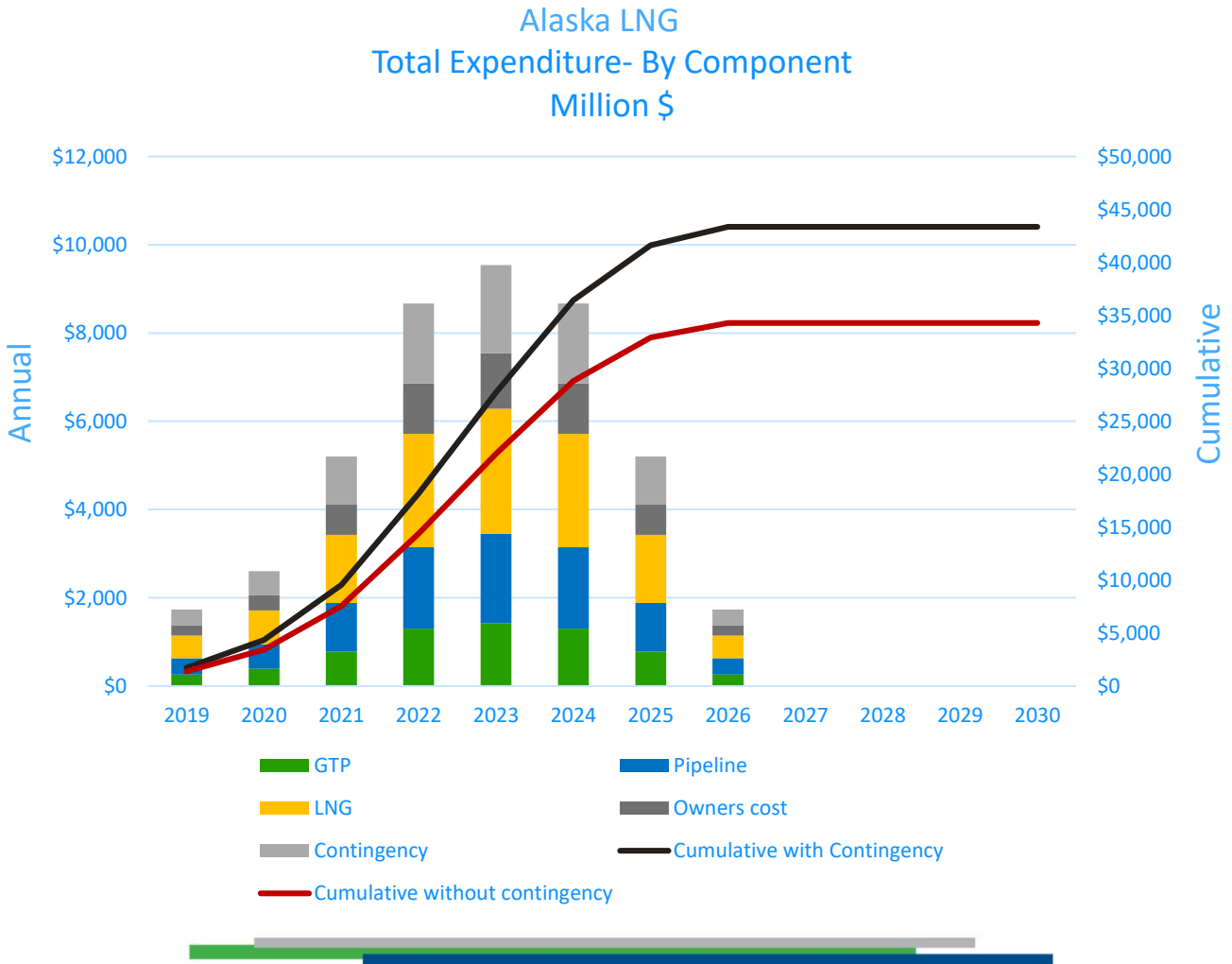
Estimated OPEX Sensitivities

Annual OPEX Variance	25% Decrease	25% Increase
From to - $Millions	840 to 630	840 to 1050
Delta Social Economics		
DCFR, %	+0.21%	-0.21%
NPV10, $Millions	+1,001	-1,001
Cost of Supply, $/MMBTU	-0.18	+0.18

Construction Draw Schedule

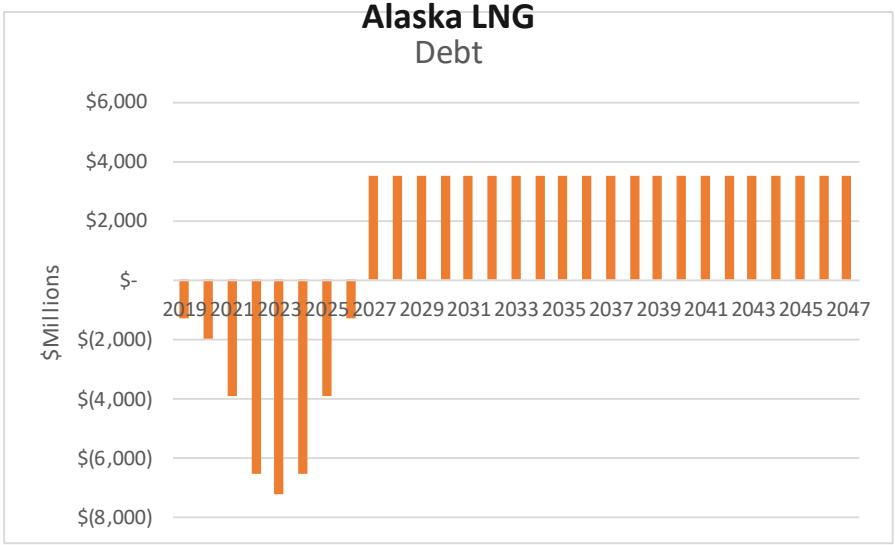
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- Capital expenditure by component during construction phase.
- Construction commencing in 2019.
- Train 1 in-service Q3 2024; Train 2 in Q3 2025; Train 3 in Q3 2026.



Debt Funding

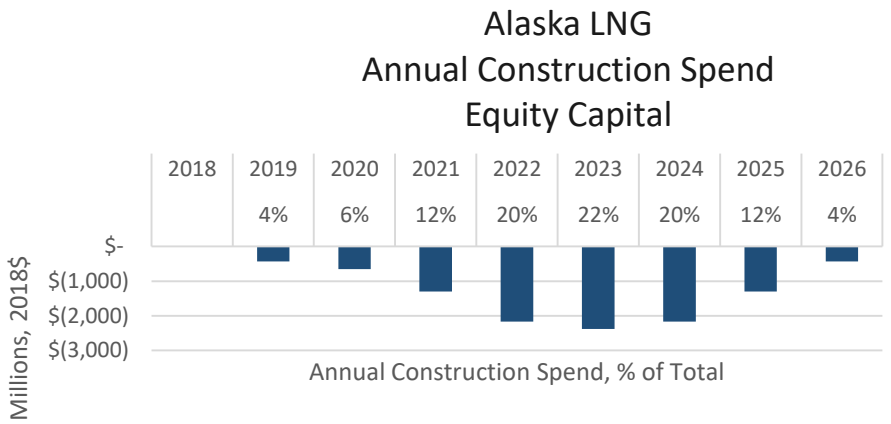
- The cost of service in the system is highly influenced by the cost and term of debt.
- The current assumptions assume we can secure debt on a 20 year term at 5% interest.
- Under a 20 year term, 5% interest rate, the **annual debt service will be $3.5 Billion**.
- In the “debt for capacity” proposal, the customer helps secure the debt; the cost and term is passed through to the customer.



Equity Investment

- **The equity owners of the Alaska LNG system will invest up to $11 Billion** (assuming the full $43 Billion project).
- The owners will receive a return on the investment through the sale of system capacity after paying debt service and O&M expenses.
- **The return on investment will be dependent primarily on the price of LNG sold and the cost of debt.**

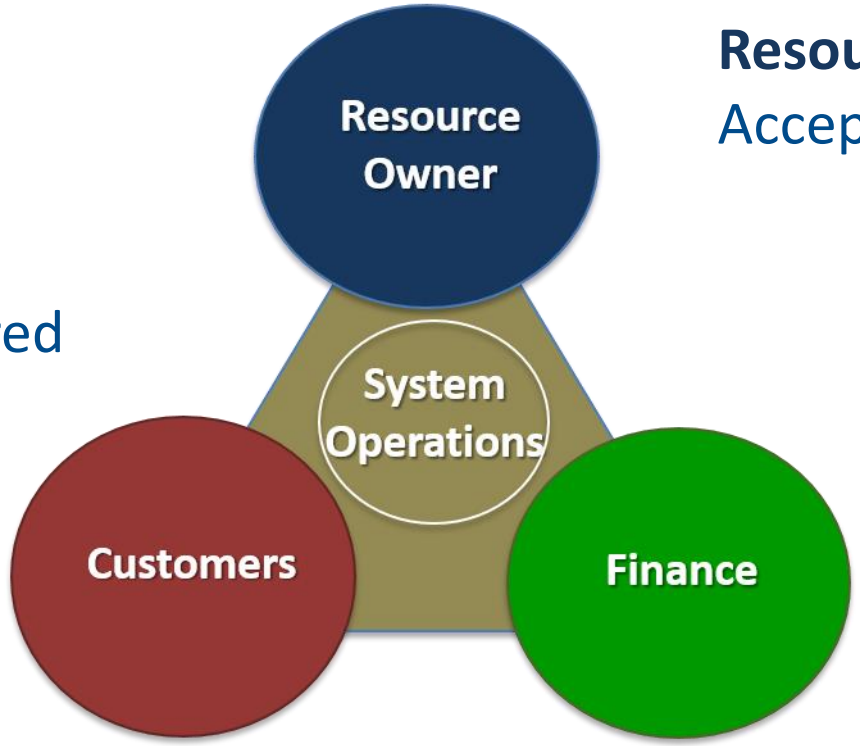
- The $11 Billion equity requirement will be 25 percent of total equity requirements.
- Under current assumptions, return on equity is 8% initial term, 10% project life, 15% from State perspective (with royalty and other).



Balancing Three Drivers

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



Resource Owner - Acceptable netback.

Customers – Product delivered at a market clearing price.

Financing - Adequate pricing for debt and equity markets.

LNG Market Price

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Asia Pacific LNG Market

U.S. Competition

Henry Hub + $5.00

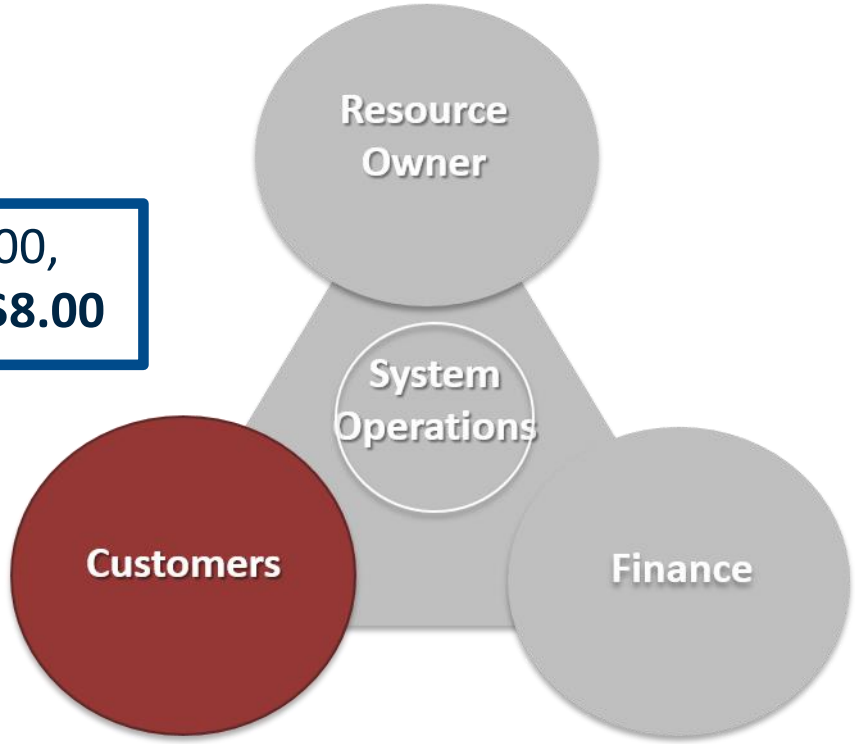
HH currently $3.00,
$3.00 + $5.00 = **$8.00**

International

12-14% x Oil per Barrel

Other emerging pricing

Brent currently $63,
$63 x 12% = **$7.56**



US Gulf Coast LNG Delivered to Asia			
	$/MMBtu		
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

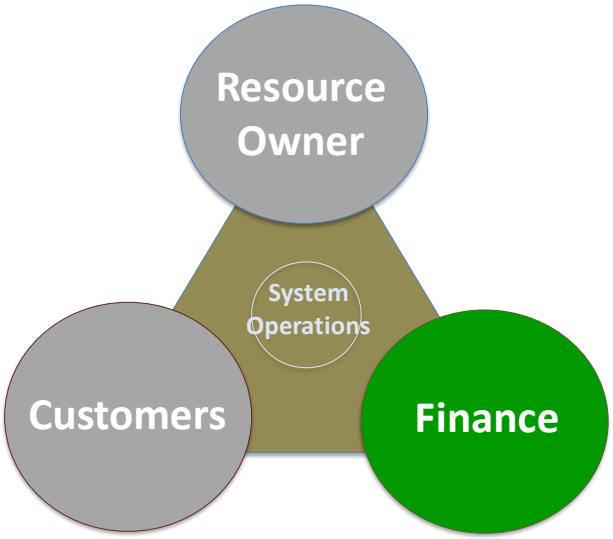
LNG Price: FOB Nikiski

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Cost of Infrastructure

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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
Equity	50%	$ 21.5	20%	$ 4.3
Debt	50%	$ 21.5	5%	$ 2.3
Total Annual				$ 6.6

$2.00 /MMBtu Savings

Alaska LNG Infrastructure

$/MMBtu

System Operations & PILT

- $1.4 Billion Annually

→ O&M $1.45

Financing

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

→ Debt $3.60

- Equity - $1.1 Billion/yr

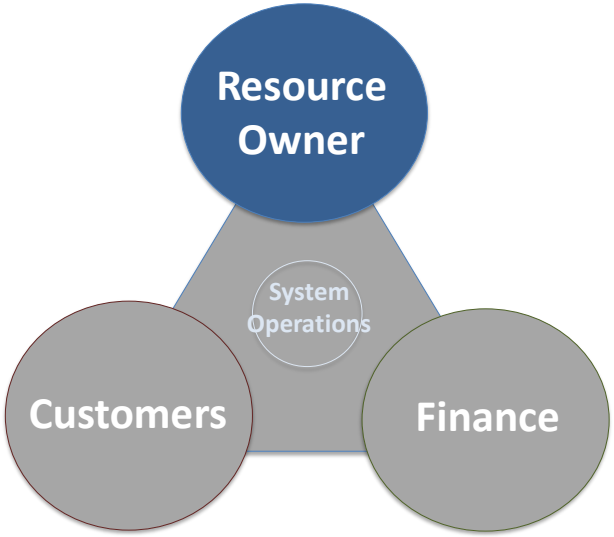
→ Equity $1.15

Alaska LNG System

→ Total $6.20

Netback to North Slope

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$1 Billion annually for gas supply; plus

$1.4 Billion for Alaskan workers and communities.

$/MMBtu

Asia Market $8.00	Less: Shipping $.80	Nikiski $7.20

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.

Alaska LNG System: $6.20/MMBtu

- O&M $1.45
- Debt $3.60
- Equity $1.15

Netback $1.00

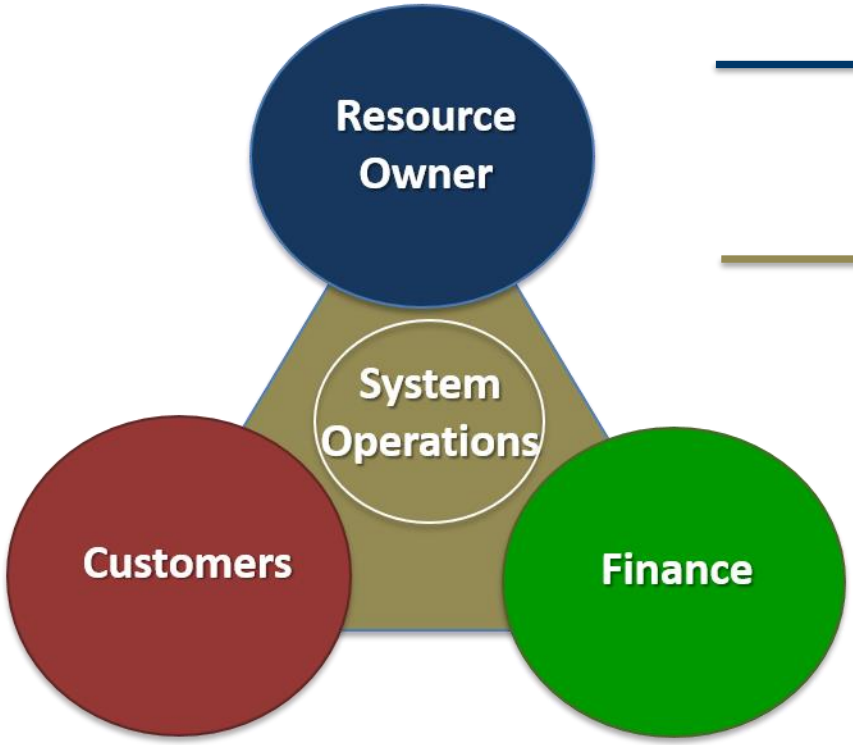
US Gulf Coast LNG Delivered to Asia		$/MMBtu	
Gas supply	$	3.00	<== Henry Hub market price
Liquefaction	$	3.20	<== US Gulf Coast Liquefaction
Shipping	$	1.80	<== Gulf to Asia + Panama
Total Delivered	$	8.00	

Alaska LNG Unit Cost at 19.7 Mtpa	$Billions	$/MMBtu
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

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



$1.00

$1.45

Asia **$8.00**

Shipping (.80)

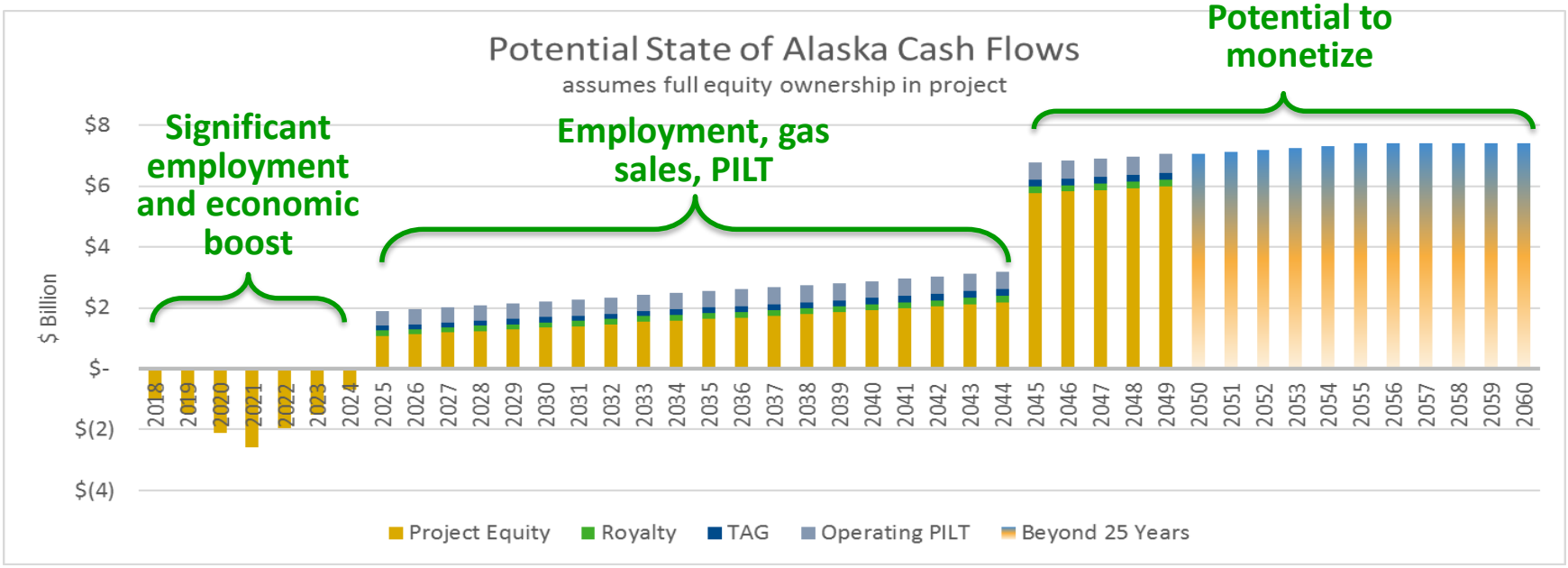
Nikiski **$7.20**

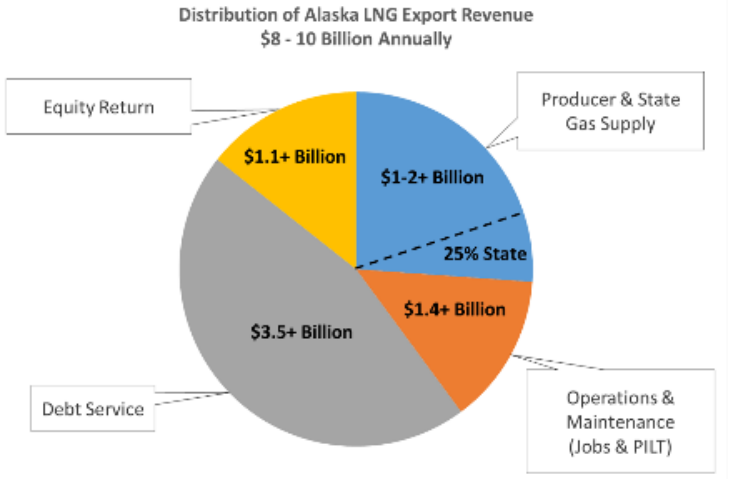
$4.75

$7.20

Investment Profile – State of Alaska

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Equity-only ROE:

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

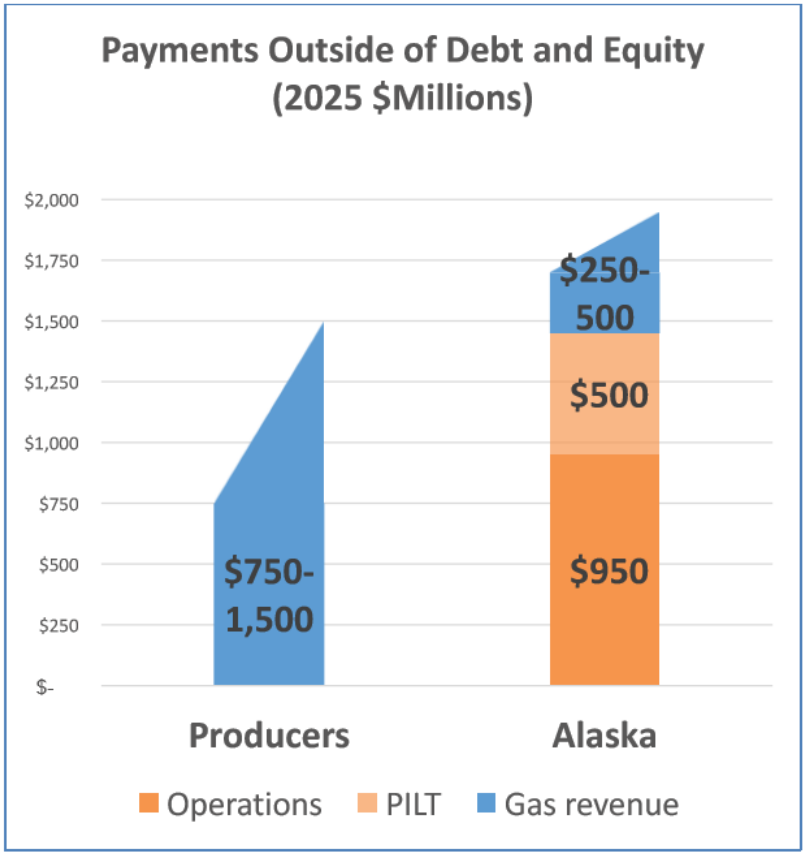
Equity ROE plus RIK/TAG and PILT:

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

Non-Equity Benefits to Alaska

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The gasline and LNG infrastructure provides enormous value to Alaska; there is a significant lost 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.

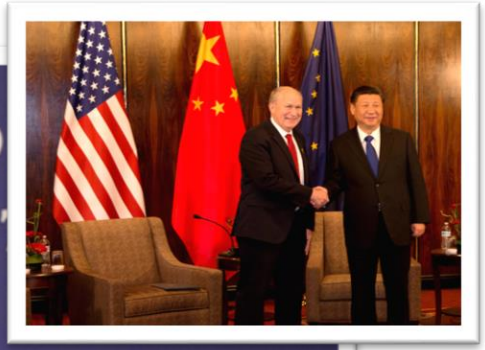
Joint Development Agreement

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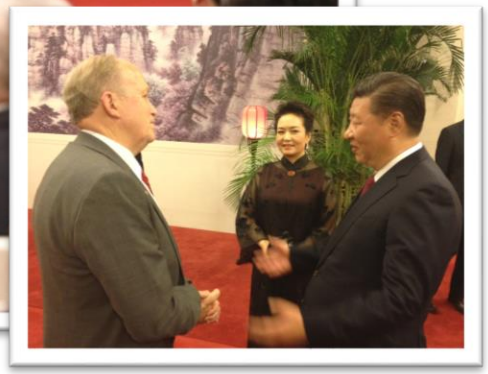












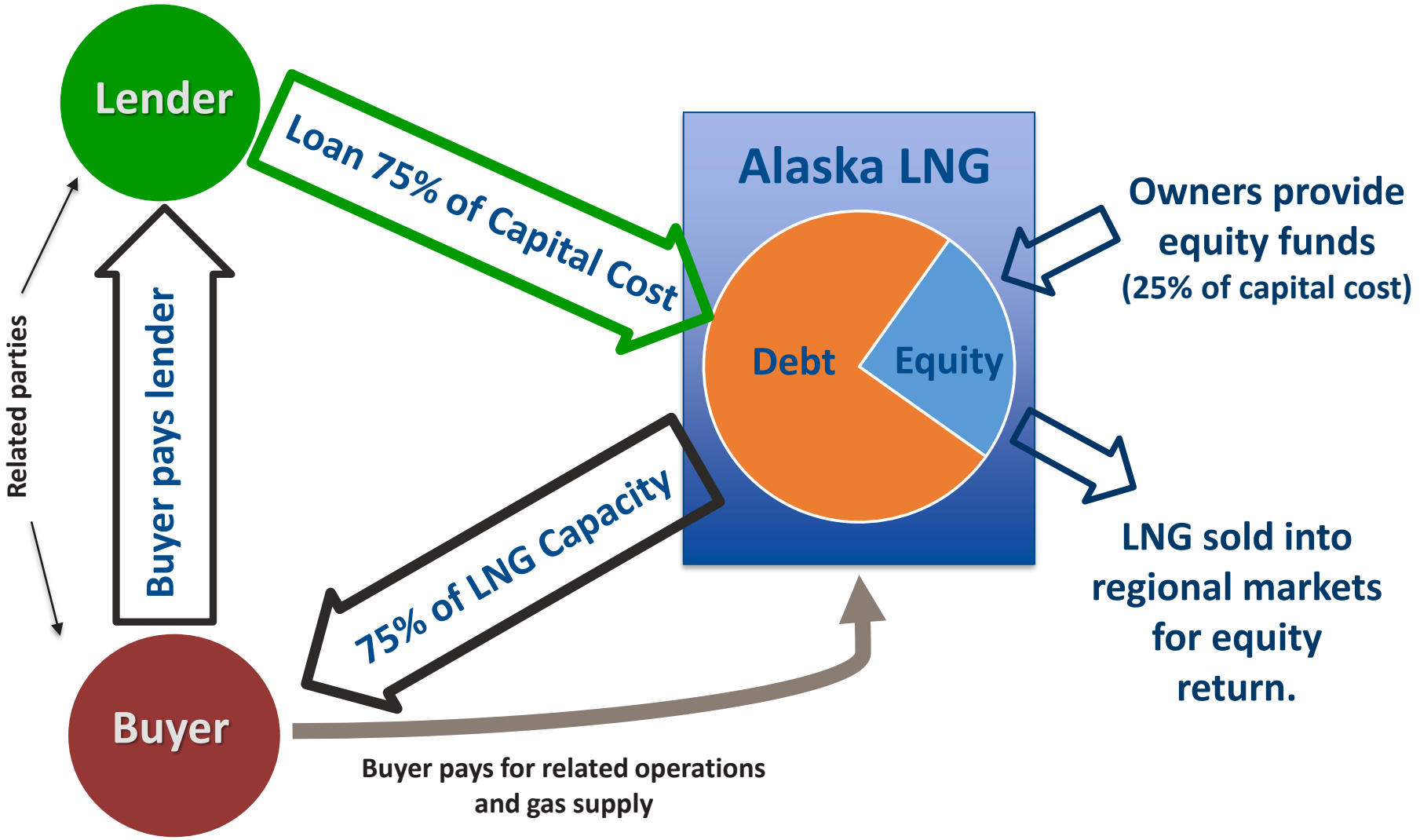
Large Deal for a Large Project

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- **Thinking outside the box – leveraging market position.**
- **Proposal to top 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

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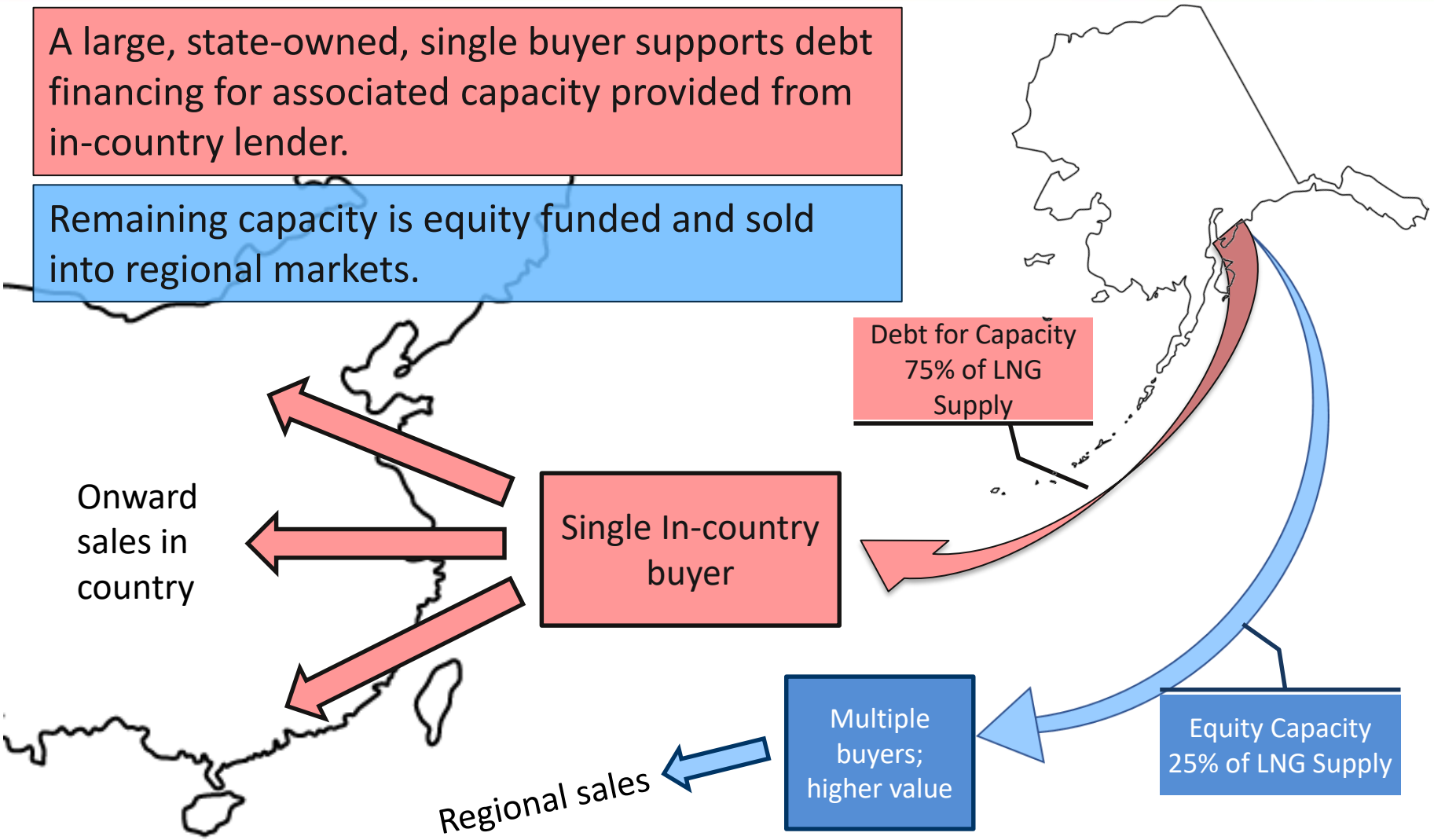


Unified Buyer/Lender Proposal

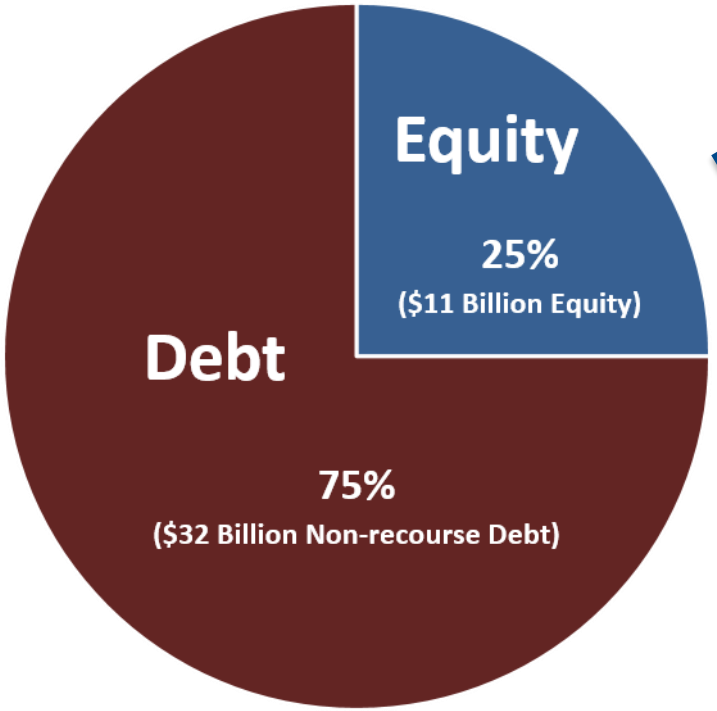
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A large, state-owned, single buyer supports debt financing for associated capacity provided from in-country lender.

Remaining capacity is equity funded and sold into regional markets.



Funding Focus



$11 Billion Equity requirement to be raised by AGDC.

Focus turns to equity funding.

$32 Billion debt provided by customer group; secured with system capacity.

Equity Investment

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- **The equity owners of the Alaska LNG system will invest up to $11 Billion** (assuming the full $43 Billion project).
- The equity investors will earn a return on the investment through the sale of 5 MTPA of system capacity not dedicated to debt service or debt-for-capacity customers.
- The 5 MTPA of capacity will also be allocated 25 percent of the operating cost of the system.
- **The return on investment will be dependent in part on the price of LNG sold.**

Return on Equity

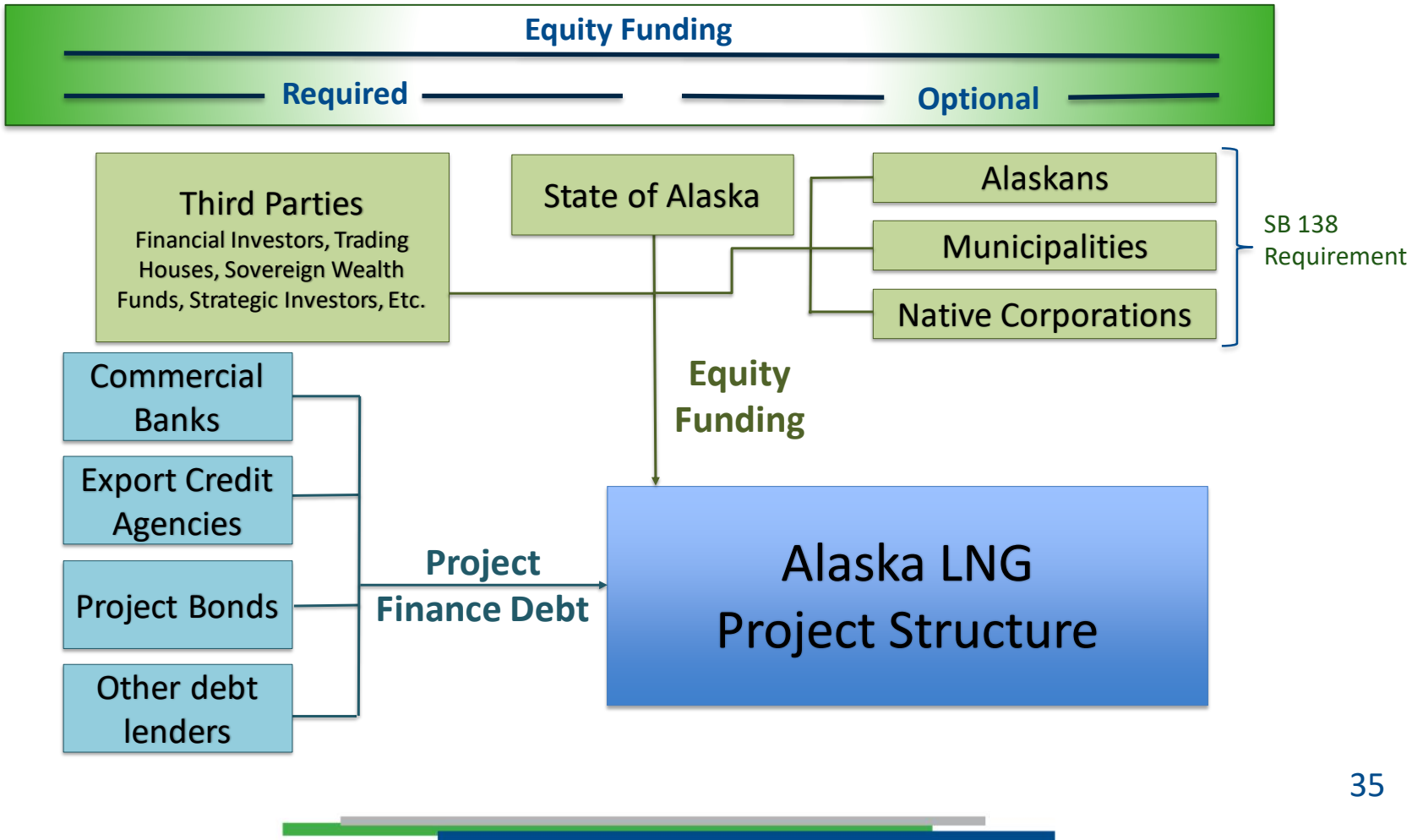
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- 5 MTPA of capacity equals 250 Bcf* per year of gas.
- Using the base case pricing ($8.00/MMBtu in Asia less $.80/MMBtu shipping = $7.20/MMBtu at Nikiski, less gas cost of $1.00/MMBtu = $6.20/MMBtu for the system), the 5 MTPA of equity capacity can generate $1.55 Billion annually.
- After paying its 25 percent share of operating costs, the return to equity can be $1.2 Billion annually.
- On a 100% equity basis, the equity return is about 8%.
- Using our bond funding capability or selling additional LNG capacity on a long-term basis that underpins financing, we can reduce the equity requirement and increase the equity return.
- Equity capacity also has the potential to generate higher returns by selling into shorter term markets at higher prices when market conditions exist.

*Bcf = Billion Cubic Feet or about one Trillion Btu

Financing

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



Presentation Overview

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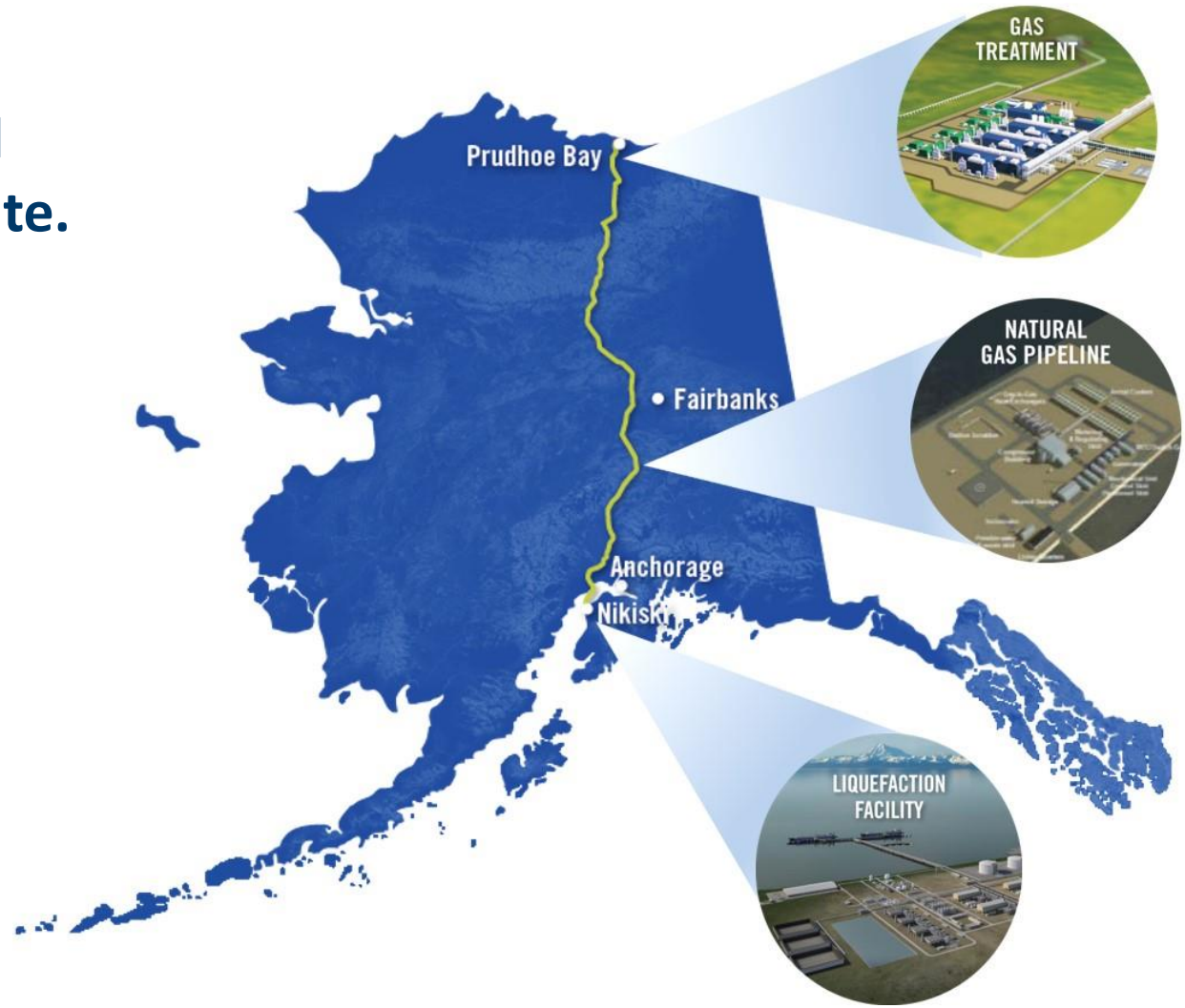
- Budget.
- Project Cost and Economics.
- **Commercial.**
- Regulatory/Technical.



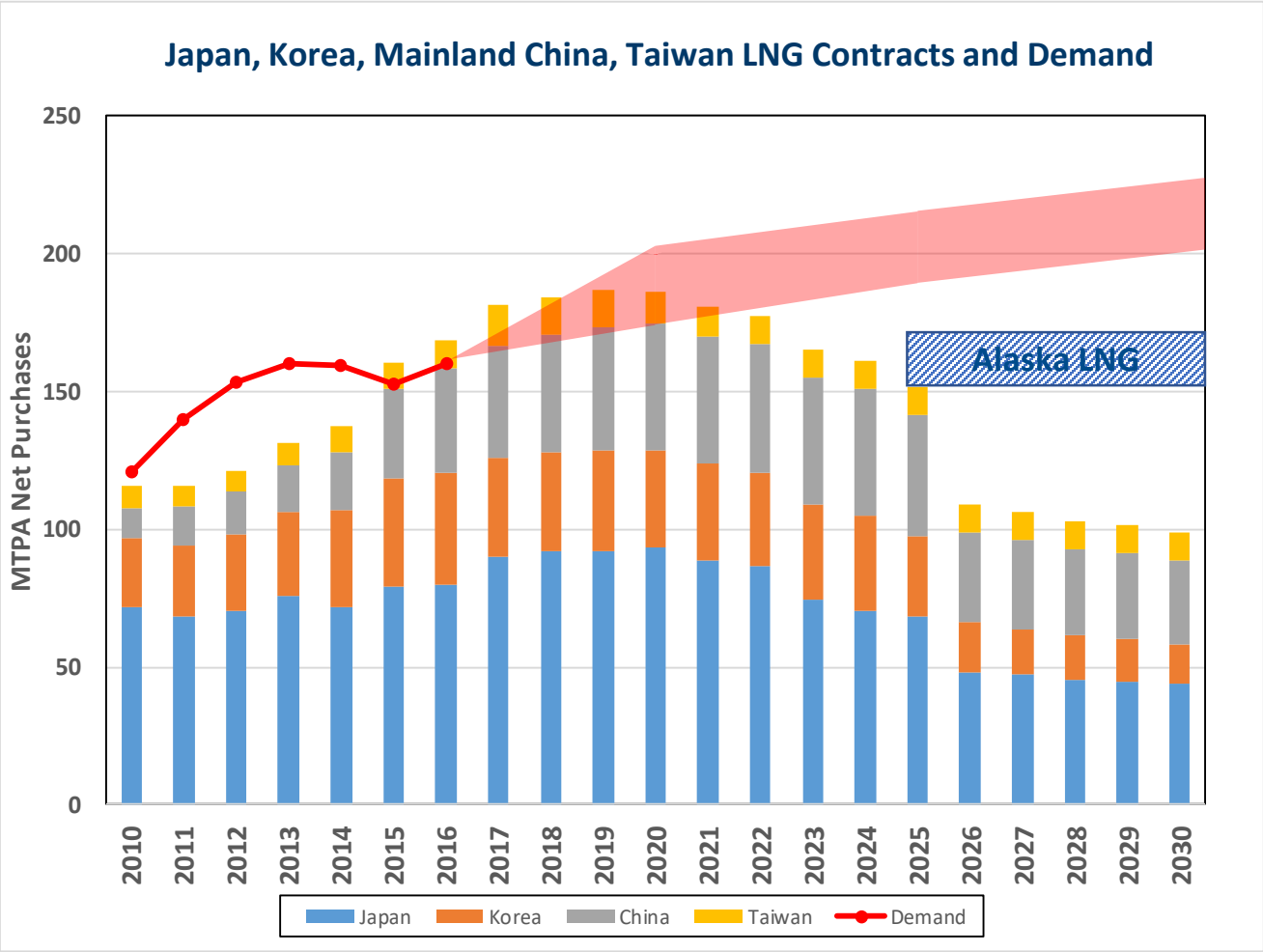
Commercial Update

ALASKA GASLINE DEVELOPMENT CORP.

- **LNG Demand and Contracting Update.**
- **2017 Results.**
- **Deliverables for 2019 FID.**



LNG Supply-Demand Forecast



- 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.

Sources: Global Natural Gas Advisors, Jan. 2018; KPMG Global Energy Institute; IHS Markit.

Alaska LNG Competitiveness

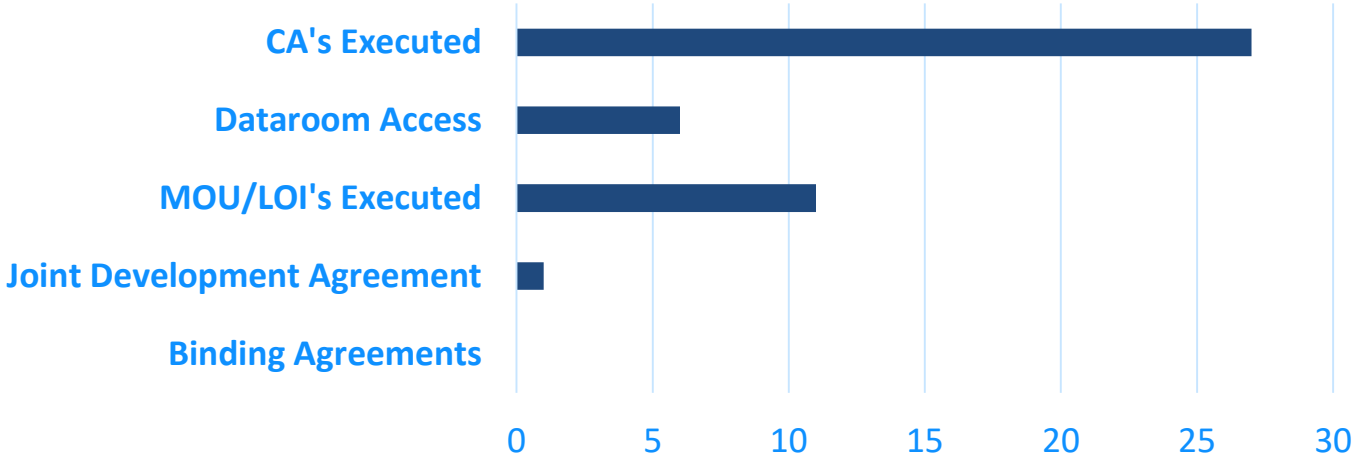
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- **Long-term contracts are still being, and will continue to be, beneficial to both buyers and sellers.**
- **Many buyers have contract portfolios to meet a variety of their needs. These portfolios blend their risks.**
- **Buyers look to round out their portfolio and can look at different mechanisms to:**
  - Reduce pricing risks.
  - Ensure security of supply.
  - Meet their long-term energy needs.
- **Alaska LNG can compete on a variety of fronts as demonstrated by the agreements signed thus far.**

Results of 2017 Marketing Activities

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- Last year, AGDC was focused on building market awareness.
- The Commercial team is now focused on negotiations with the entities that have signed MOUs, LOIs, or other agreements to move them to binding agreements.
- In addition to the Joint Development Agreement, there are 11 other companies that are interested in Alaska LNG including KOGAS, Tokyo Gas, and PetroVietnam Gas.



2018 Focus: Definitive Agreements

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- **Market areas with multiple interested buyers and/or investors:**
  - **China:**
    - Conclude agreements envisioned in the JDA.
    - Detailed LNG Sales and Purchase Agreements with multiple buyers.
  - **Japan, Korea, Vietnam, etc:**
    - LNG Sale and Purchase Agreements.
    - Pursue financing opportunities for equity project share.
- **Alaska: Complete Gas Supply and Tolling Agreements.**
- **Continuing buyer and finance due diligence will drive more visitors to the project in Alaska.**

Contracting Activity Ramp-Up

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- AGDC/DOL and contract resources have been identified.
- Counter parties are engaged.
- Contracts that will enable 2019 FID are clear, and now need to be delivered.





Presentation Overview

ALASKA GASLINE DEVELOPMENT CORP.

- Budget.
- Project Cost and Economics.
- Commercial.
- **Regulatory/Technical.**



Alaska LNG Regulatory Timeline

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ALASKA LNG TIMELINE		
2014 – 2016 Producer Led Effort	$600 million of engineering, environmental, and science completed to advance permitting of Alaska LNG under Producer led effort. State of Alaska takes lead – December 2016	
2017 and Beyond AGDC Led Effort (*Requested)	April 2017	AGDC Files FERC Application
	August 2017	Fast -41 Approval
	August 2017	Presidential Executive Order
	November 2017	Joint Development Agreement
	January 2018	EIS Schedule Published*
	December 2018	Final EIS Published*
	March 2019	Record of Decision*

Alaska LNG Technical and Regulatory Update

ALASKA GASLINE DEVELOPMENT CORP.

Federal Agency Interactions:

- **FERC**:
  - Application filed April 2017.
  - 801 data requests June 2017.
  - AGDC provides all answers by January 2018.
  - FERC EIS schedule published.
- **DOI**:
  - New Assistant Secretary and BLM Director.
  - PLO 5150.
  - ROW Grant.
  - Below Ground vs. Above Ground Pipeline.

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Federal Agency Interactions:

- **EPA Region 10:**
  - New Administrator.
  - Yukon River designation of Aquatic Resource of National Importance did not occur.
- **NOAA Fisheries:**
  - Incidental Take Authorization requested.
- **US Army Corps of Engineers:**
  - Section 404 permit.
- **PHMSA special permits:**
  - Separate environmental analyses.

State and Federal Permitting

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- **Federal authorizations:**
  - 5 Special Permits (PHMSA).
  - Section 404 Wetlands Fill Permit (USACOE).
  - Incidental Take Authorizations (NOAA).
  - Federal ROW Grant & Material Sale Contracts (BLM).
- **State authorizations:**
  - Title 16 Habitat Permits (ADFG).
  - Air Permits (ADEC).
  - State ROW Grant (ADNR).
  - 401 Certification of Section 404 Permit (ADEC).
  - Material Sale Contracts & Water Authorizations (ADNR).
- **Schedule:**
  - Federal and State Permits In-Hand 1Q 2019.

A Thoroughly Studied Route

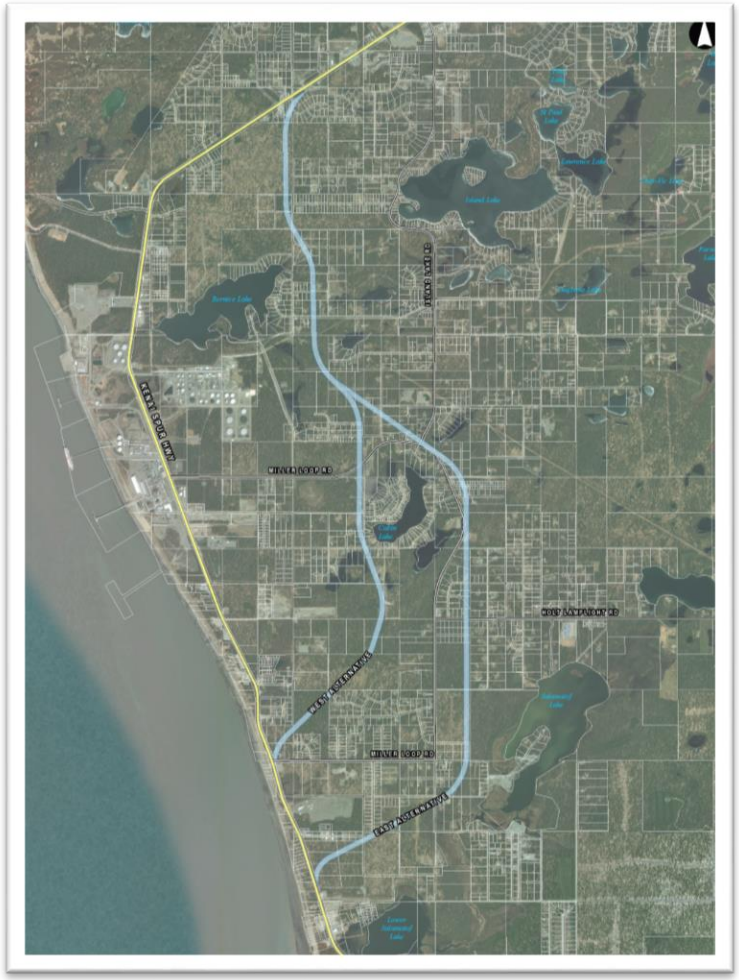


- **Pipeline route is an existing and well-defined transportation/utility corridor:**
  - Alaska Natural Gas Transportation System (ANGTS) FEIS 1976.
  - Trans-Alaska Gas System (TAGS) FEIS 1988.
  - Alaska Stand Alone Pipeline (ASAP) FEIS 2012.
- **Pipeline crosses 611 waterways:**
  - 194 contain anadromous fish.
  - 12 major.
  - 92 intermediate.
  - 507 minor.

Alaska LNG Technical and Regulatory Update

ALASKA GASLINE DEVELOPMENT CORP.

- **Kenai Spur Highway (KSH) Re-route:**
  - Must be moved for safety and security of plant operations.
  - Alaska LNG presented 12 alternatives to Nikiski before stopping work.
  - AGDC took over analyses to get to two primary alternatives.
  - AGDC to host public meeting to review alternatives analyses and obtain public comment.
  - Select preferred alternative in 2018.
  - Hold further work until funding obtained.



Alaska LNG Key Stakeholder Issues

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- **LNG Site Selection:**
  - Site selection study completed in 2012 included 21 sites in Cook Inlet and Prince William Sound.
  - **Screening criteria:**
    - Compatibility to construct a 20 Mtpa facility.
    - Marine navigation.
    - Environmental considerations.
    - Land usage.
- **Point Mackenzie not Port Mackenzie was alternative.**
- Port Mackenzie not considered due to incompatible land use – 20 Mtpa LNG facility would consume entire existing waterfront, other commercial activities would not be allowed.
- Port Mackenzie use was planned for project logistics in alignment with Port Master Plan.
- Nikiski site ultimately selected as preferred alternative with significant engineering and environmental analyses done to meet FERC requirements.
- Matanuska Susitna Borough has asked for FERC to now consider Port Mackenzie as preferred site.
- FERC will determine Borough request to become intervener.
- AGDC did not violate NEPA or the Clean Water Act.

ASAP 2018 Activities

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Environmental, Regulatory and Land (ERL):

January 31:

- Complete Cultural Resource Management Plan.

March 31:

- U.S. Army Corps of Engineers (USACE) publishes Final Supplemental Environmental Impact Statement.

Complete wetlands mitigation plan:

- Provide additional data and white papers to USACE.
  - Wetlands dataset.
  - Reclamation methodologies for belowground pipeline.

July 1:

- USACE and other federal agencies issue Records of Decision (ROD).
- Section 404 permit.
- Right of Way grant across federal lands.

Federal Support

- **White House Meetings:**
  - National Economic Council – FERC and Infrastructure Bill.
  - Council on Environmental Quality – NEPA and permitting streamlining.
- **Trump Administration:**
  - Strong support from Cabinet members – Secretary's Ross and Zinke:
    - Clear policy directives.
    - Secretarial Orders.
    - Rationalized permitting process.
- **Congressional Delegation:**
  - Denali Park provision in the Senate Energy Bill.
  - FERC NEPA Schedule.



Program Management

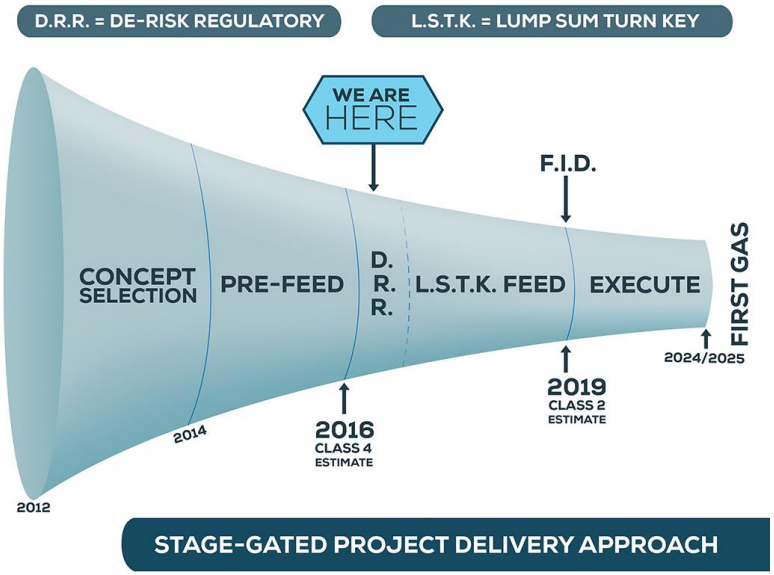
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- **Strategic Country Sourcing:**
  - Optimization of Alaska LNG materials and equipment needs.
  - 4 primary countries – U.S., China, Japan and Korea.
  - Looked at raw materials production to manufacturing to fabrication.
  - Results illustrate saving potential ~$1.4B ($2017).
- **Zero Based Execution Review:**
  - Independent review for opportunities to reduce risk and costs.
  - Top to Bottom review of 3 subprojects execution plans.
  - Individual opportunities resulting in cost savings (>$100M).
  - Outcomes will be included in FEED/LSTK activities.

Alaska LNG Project Development

ALASKA GASLINE DEVELOPMENT CORP.

- **New elements in the "Decision to Enter FEED":**
  - Have we structured the project for tax and other financial efficiencies?
  - Have we secured customers sufficient for financing?
  - Have we identified and secured parties interested in equity investment in the infrastructure project?
  - Have we identified and secured lenders for non-recourse project debt finance?
  - Have we secured large EPC companies competent to manage the construction of the project and shoulder a significant part of the construction related risks?



Alaska LNG Project Development

ALASKA GASLINE DEVELOPMENT CORP.

- **Contracting strategy to achieve Final Investment Decision (FID):**
  - **FEED Rollover to Lump Sum Turn Key (LSTK):**
    - LNG and marine terminal.
    - Gas Treatment Plant.
    - Pipeline and compressor stations.
    - 2018/2019 estimated costs $400-$700 million.
  - **Joint ventures:**
    - U.S. and Chinese EPC companies.
    - Alaska and non-Alaska companies.
    - EPC consortia.
  - **Program Management:**
    - Engineering, procurement, contracting and construction expertise.
    - Provide management systems and resources to augment AGDC PMT.



Alaska LNG Project Development

ALASKA GASLINE DEVELOPMENT CORP.

- **Joint Development Agreement (JDA) Participation:**
  - Working with Sinopec and other Chinese engineering and construction companies to find appropriate fit for project development participation.
  - JDA Technical committee reviewing project execution and design details.
  - **Technical exchange:**
    - Pipe manufacturing capabilities.
    - Module fabrication capabilities.
    - Design expertise.



Conclusion

ALASKA GASLINE DEVELOPMENT CORP.

The stars are aligned, seize the opportunity.



Big project. Achievable. Alaskans have done it before.

Get Involved.

Get Ready.

Get Engaged.

ALASKA GASLINE DEVELOPMENT CORP.

agdc.us

Facebook.com/AKGaslineDevelopmentCorp

Alaska Gasline Development Corporation

Appendix

Operating Budget Variance Analysis

December Fiscal Year (FY) 2018

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Variance Drivers:

- Personal Services- AGDC current In-House Full Time PCN headcount is 19 verses budgeted headcount of 25.
- Services –General Counsel position vacancy.
- Vacant positions need to be filled; as project activity intensifies the need will become more acute.

Operating Expenditures ($000s)	Full FY18 Budget	FY18 YTD Actuals	FY18 YTD Budget	FYTD Variance (Under)/Over	Percent Spent
		Fiscal Year			
Account					
Personal Services	6,365	2,446	3,183	(737)	38%
Travel	600	251	300	(49)	42%
Services	2,771	1,215	1,386	(170)	44%
Commodities	650	240	325	(85)	37%
Depreciation		22	-	22	-
Operating Total	**$ 10,386**	**$ 4,173**	**$ 5,193**	**$ (1,020)**	**40%**

Operating Expenditures ($000s)	Full FY18 Budget	FY18 YTD Actuals	FY18 YTD Budget	FYTD Variance (Under)/Over	Percent Spent
		Fiscal Year			
Department					
Executive Team	3,111	1,215	1,556	(340)	39%
Commercial Team	872	384	436	(52)	44%
External Affairs Team	1,129	475	565	(90)	42%
Legal Team	200	75	100	(25)	37%
Finance Team	1,390	499	695	(196)	36%
Admin Services Team	2,201	870	1,101	(231)	40%
IT Data Mgmt Team	1,483	656	742	(86)	44%
Operating Total	**$ 10,386**	**$ 4,173**	**$ 5,193**	**$ (1,020)**	**40%**

Capital Expenditure

December 2017 Calendar Year

ALASKA GASLINE DEVELOPMENT CORP.

Authorization for Expenditure (AFE) ($0,000)	AFE Activity Group	AFE Activity Element	Actuals CY17 1Q	Actuals CY17 2Q	Actuals CY17 3Q	Actuals CY17 4Q	Total
Regulatory	Regulatory Core Activities	FERC	1,338	3,195	2,427	3,770	**10,729**
		AK LNG Cash Calls	1,179	55	0	119	**1,353**
		AKLNG Physical Asset Mgmt.	34	49	11	14	**108**
		Core Embedded Technical Team	966	1,160	956	932	**4,014**
		In State Gas Delivery	120	3	0	40	**164**
		Supplemental Environmental Impact	345	741	302	264	**1,652**
Regulatory Total			**3,981**	**5,203**	**3,696**	**5,140**	**18,020**
Commercial	Business Development	Agreements	698	151	1,113	849	**2,811**
		In-State-Gas	29	16	32	36	**113**
		Project Marketing	857	535	520	638	**2,551**
	Business Development Total		**1,584**	**702**	**1,665**	**1,523**	**5,474**
	Project Finance	Project Financing / Analysis	71	161	75	(11)	**297**
	Project Finance Total		**71**	**161**	**75**	**(11)**	**297**
Commercial Total			**1,655**	**864**	**1,740**	**1,512**	**5,771**
Communications	Collateral	Marketing Material	0	28	65	71	**164**
	Outreach	Engagement	158	(7)	107	(63)	**194**
	Tradeshows	AGDC LNG Promotions & Outreach	102	134	217	116	**570**
Communications Total			**260**	**154**	**390**	**124**	**928**
Grand Total			**5,897**	**6,221**	**5,826**	**6,776**	**24,720**