Alaska LNG Project

Alaska Energy Security Task Force
July 13, 2023

ALASKA GASLINE DEVELOPMENT CORP.

AGDC

- Independent, public corporation owned by the State of Alaska
- Created by the Alaska State Legislature

Mission

- Maximize the benefit of Alaska’s vast North Slope natural gas resources through the development of infrastructure necessary to move the gas to local and international markets

Alaska Stand Alone Pipeline (ASAP)

- Environmental Impact Statement and Record of Decision Complete
- Put on hold when focus shifted to Alaska LNG

Alaska LNG Project

- Provides best opportunity for long term, low cost, secure energy for Alaskans

2

Alaska LNG Project

ALASKA GASLINE DEVELOPMENT CORP.

The Alaska LNG Project is not the project you heard or read about over the last 20 years.

Today's Project:

- Cost competitive
- Benefits the state
- Transitions to the private sector
- Environmentally friendly
- Has all major permits and authorizations

Alaska LNG: Gas for Alaskans & Export

ALASKA GASLINE DEVELOPMENT CORP.

North Slope Gas Supply

- 40 Tcf of natural gas stranded in Prudhoe Bay and Point Thomson
- More than enough gas for 30-years

Arctic Carbon Capture (ACC) Plant

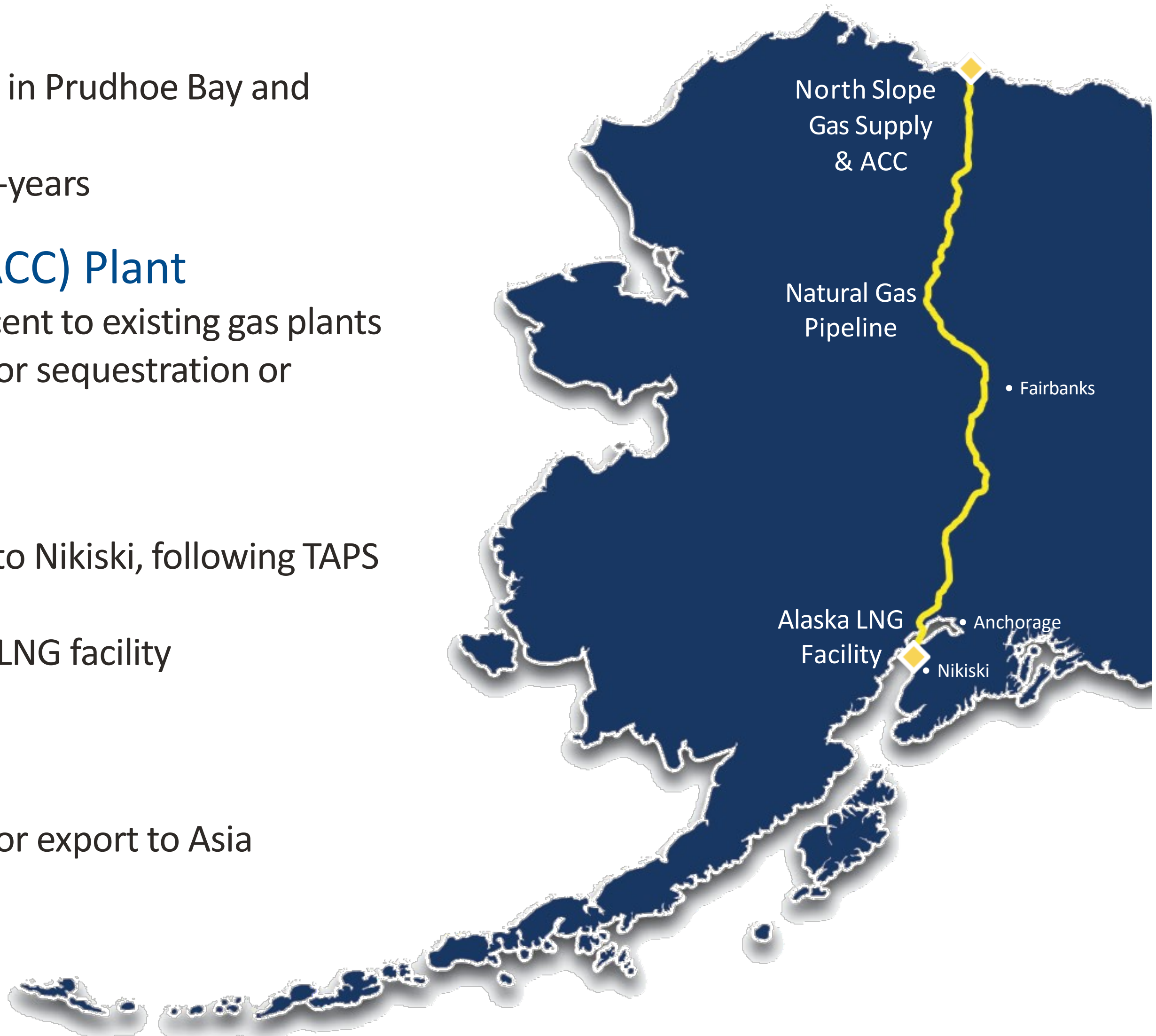
- Located in Prudhoe Bay adjacent to existing gas plants
- Removes CO_2 from feed gas for sequestration or enhanced oil recovery

Natural Gas Pipeline

- 807 miles from Prudhoe Bay to Nikiski, following TAPS and highway system
- Provides gas to Alaskans and LNG facility

Alaska LNG Facility

- 20-MTPA LNG Facility
- Converts natural gas to LNG for export to Asia



Major Permits and Authorizations

ALASKA GASLINE DEVELOPMENT CORP.

Completed

- Federal Energy Regulatory Commission (FERC) Environmental Impact Statement (EIS) and Order
- Department of Energy (DOE) Supplemental EIS and Export Orders
- Land rights-of-way (ROW): about 93% of Project area
- Approved Cultural Resources Management Plan
- Major Facility Air Permits

ALASKA LNG	Federal Permits and Authorizations	
Permit/Authorization	Date Obtained	Complete
Presidential Finding Concerning Alaska Natural Gas - President Reagan	1/12/1988	✓
BLM Right-of-Way - Grant Offer	1/1/2021	✓
BLM Right-of-Way Record of Decision	7/23/2020	✓
Cultural Resources Management Plan	6/24/2021	✓
DOD Letter of Non-Objection	3/10/2020	✓
DOE Natural Gas Export Order (Free Trade) Order No. 3554	11/21/2014	✓
DOE Natural Gas Export Order (Non-Free Trade) Conditional Order. 3643	5/28/2015	✓
DOE Natural Gas Export Order (Non-Free Trade) Order No. 3643-A	8/20/2020	✓
DOE Order on Rehearing (Non-Free Trade) Order No. 3643-B	4/15/2021	✓
DOE Natural Gas Export Order (Non-Free Trade) Order No. 3643-C	4/13/2023	✓
EPA Section 401 Water Quality Certification	6/22/2020	✓
FAA Determinations GTP	5/6/2021	✓
FAA Determinations LNG	1/5/2021	✓
FERC Final Environmental Impact Statement	3/6/2020	✓
FERC Order Granting Authorization under Section 3 of the Natural Gas Act[1]	5/21/2020	✓
FERC Programmatic Agreement - Cultural Resources	6/24/2020	✓
NMFS Biological Opinion AKR0-2018-01319	6/3/2020	✓
NMFS Cook Inlet Marine Mammals (whales/seals) Incidental Take Rule	8/17/2020	✓
NMFS Cook Inlet Marine Mammals (whales/seals) Letter of Authorization	9/15/2020	✓
NMFS Prudhoe Bay Incidental Harassment Authorization Marine Mammals (whales/seals)	2/16/2021	✓
NPS Right-of-Way Permit	1/5/2021	✓
NPS Right-of-Way Record of Decision, DNPP	7/23/2020	✓
PHMSA Siting Letter of Determination and Analysis - Liquefaction Facility	2/4/2020	✓
PHMSA Special Permit - Crack Arrestor Spacing	9/9/2019	✓
PHMSA Special Permit - Mainline Block Valve Spacing	9/9/2019	✓
PHMSA Special Permit - Pipe-in-Pipe	4/27/2020	✓
PHMSA Special Permit - Strain-Based Design	9/9/2019	✓
PHMSA Special Permit - Three-Layer Polyethylene Coating	9/9/2019	✓
USACE Record of Decision Section 404 Wetlands Permit	6/24/2020	✓
USCG Bridge Permit - Deshka River	9/11/2020	✓
USCG Bridge Permit - East Fork Chulitna	9/11/2020	✓
USCG Bridge Permit - Middle Fork Chulitna	9/11/2020	✓
USCG Bridge Permit - Sag	9/11/2020	✓
USCG Bridge Permit - Tolovana	9/11/2020	✓
USCG Letter of Recommendation Regarding the Waterway Suitability Assessment	8/17/2016	✓
USCG Waterway Suitability Assessment	3/18/2016	✓
USFWS Biological Opinion	6/17/2020	✓
USFWS Cook Inlet Incidental Take Rule Marine Mammals (sea otters)	8/1/2019	✓
USFWS Eagle Take Permit	6/23/2020	✓
USFWS Incidental Take Rule Marine Mammals (polar bear)	8/5/2021	✓

Regulatory Work Took Over a Decade

Major Permitting for Alaska LNG Occurred 2012 - 2023

- Scoping and pre-filing work
- Two major impact statements totaling over 6,000 pages of analysis
- Agency response documentation totally more than 150,000 pages
- Over a billion dollars

Permits and Approvals are Legally Tied to the Project - Not Easily Transferred to New Project/Scope

- Purpose and need
- Impacts
- Footprint

Can Build in Phases

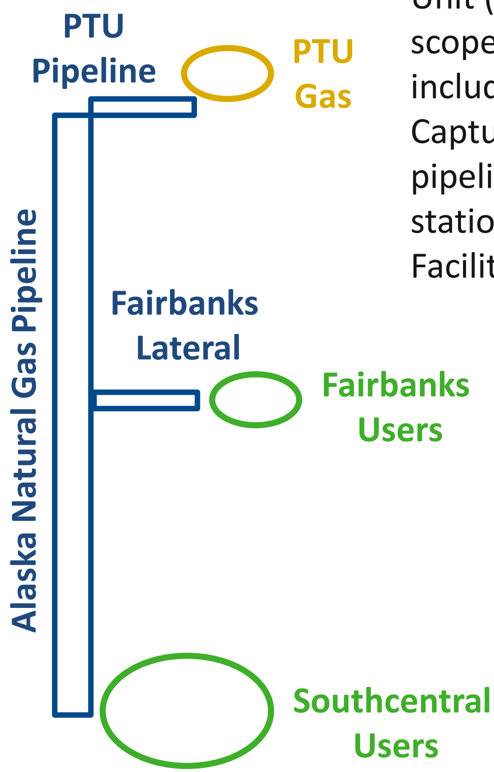
- Examples: Pre-build pipeline, start with one train at the liquefaction facility

Alaska LNG Phase 1 Pipeline

ALASKA GASLINE DEVELOPMENT CORP.

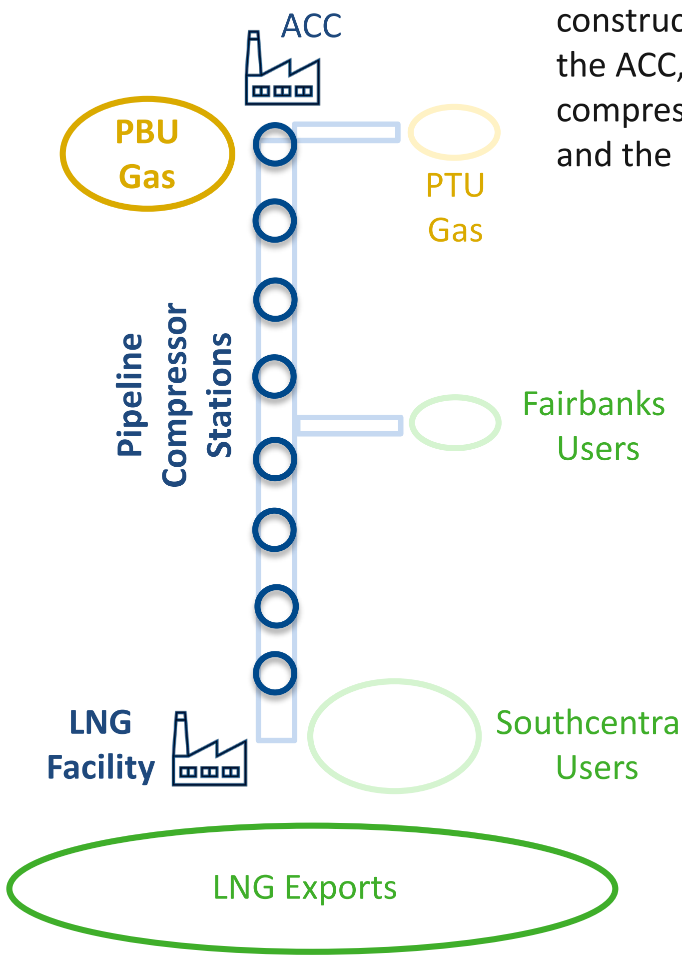
Phase 1: Gas to Alaskans

Gas is sourced from the Point Thomson Unit (PTU): Pre-build scope does not include Arctic Carbon Capture (ACC), pipeline compressor stations, or the LNG Facility.



Phase 2: LNG Exports

Full Alaska LNG Project scope is constructed, including the ACC, pipeline compressor stations, and the LNG Facility.



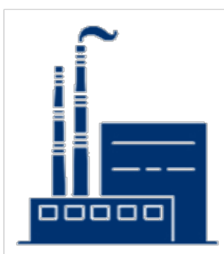
Positive Climate Impact

Alaska LNG can reduce GHG emissions by more than 77 million tonnes of CO_2 per year.

Alaska LNG can have one of the greatest GHG benefits of any project in the world.

Alaska LNG will have the same GHG impact as:

Eliminating

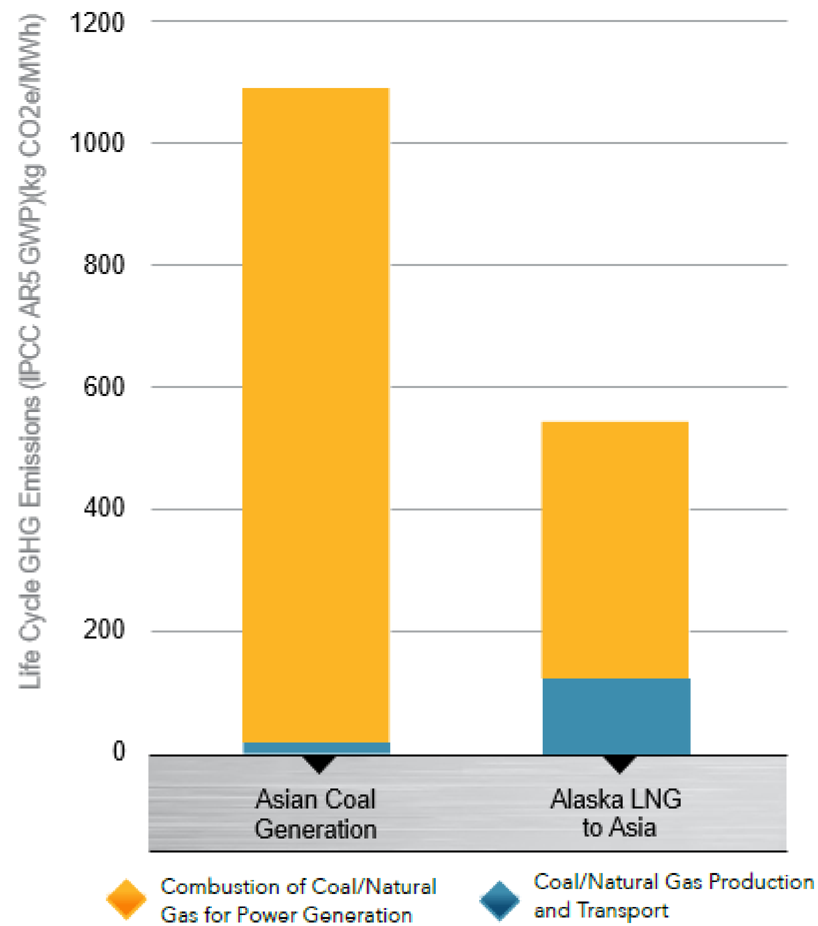


19 coal power plants

Constructing

16,0000 Wind Turbines

Lifecycle GHG Emissions for Natural Gas vs. Coal Power



Source: Greenhouse Gas Lifecycle Assessment: Alaska LNG Project

LNG Demand Forecast

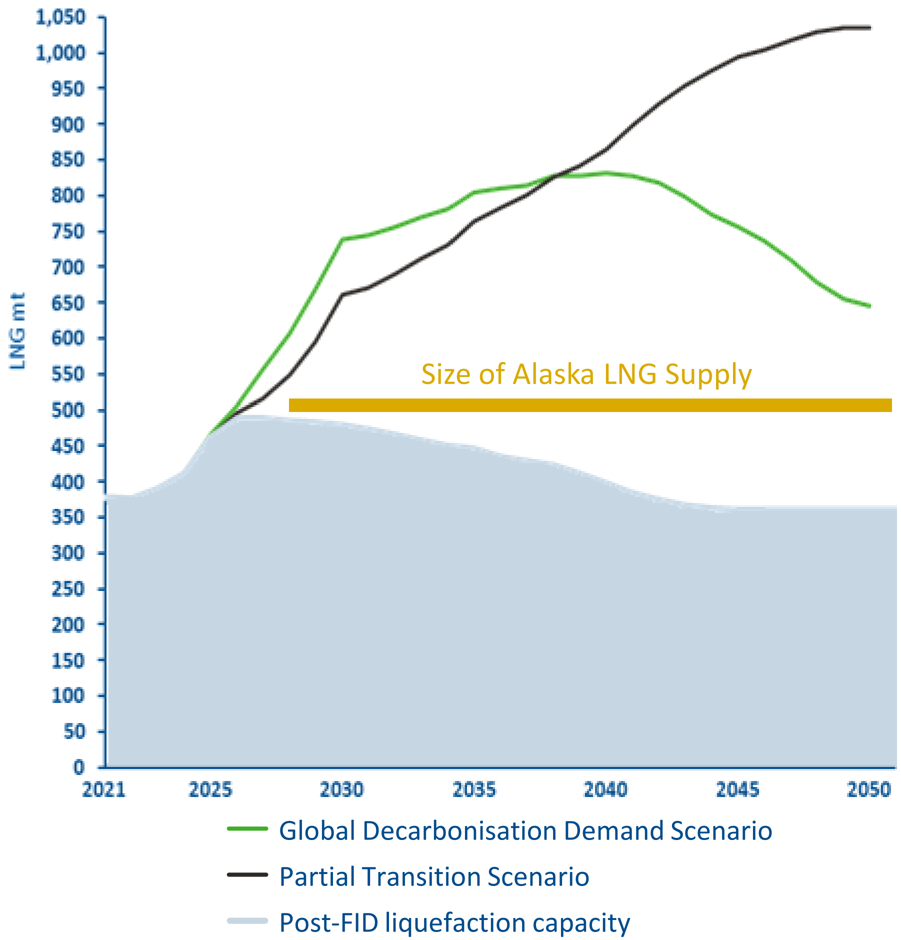
LNG Market is Still Growing

- Demand growth will outpace current and planned LNG capacity
- LNG growth expected as part of energy transition, as natural gas emits half the greenhouse gases as coal

Investors and Buyers want LNG

- New LNG projects expected to be sanctioned. Most new projects have some degree of energy transition planning
- Under both energy transition scenarios, LNG demand exceeds supply for the expected life of the Alaska LNG Project

Global LNG Supply/Demand Balance Forecast, 2021-2050



Source: Gas Strategies

Strong Economics

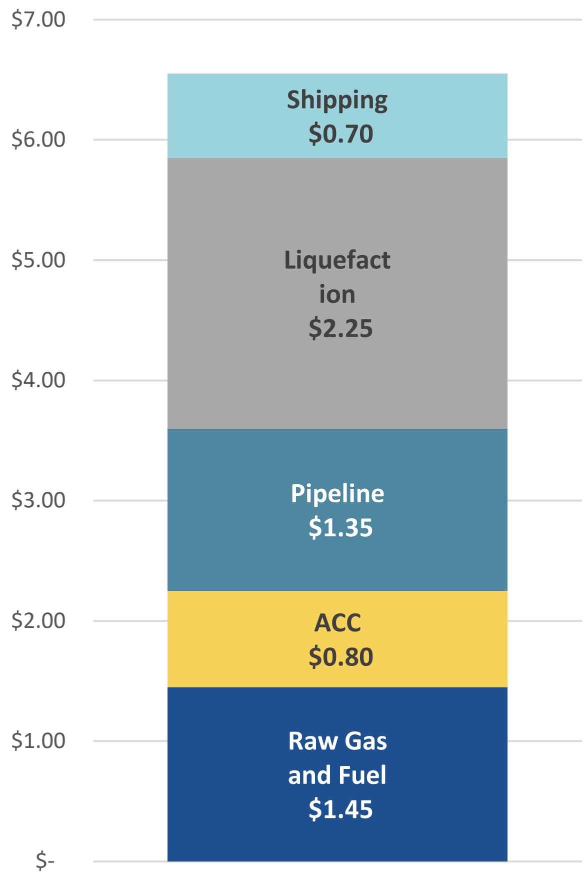
ALASKA GASLINE DEVELOPMENT CORP.

Alaska LNG's Cost of Supply is Well Below Market Prices

- $6.55 cost of supply delivered to Asia is lower than competing market prices*
  - Brent Linked: $9.24 *($77 Brent x 12%)*
  - U.S. Gulf Coast: $7.30 *($2.30 Henry Hub + $5.00)*
  - JKM: $19.50 *(spot price)*
- LNG will be sold at market prices, providing for significant financial upside to Alaska LNG investors and the State of Alaska
- 2023 update to account for recent construction inflation, 45Q tax credits, and financial return expectation

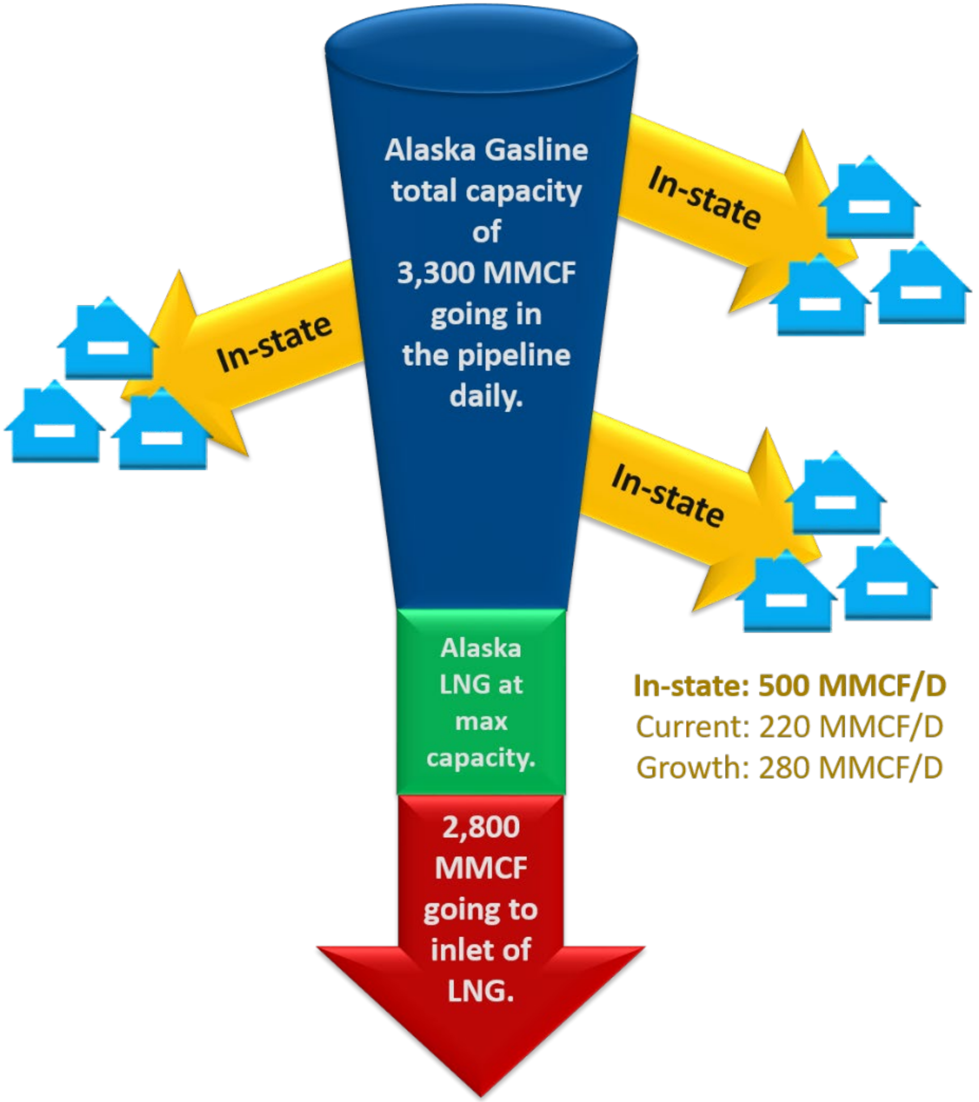
**As of June 8, 2023*

$6.55: Delivered Cost of Supply



Priority Supply for Alaskans

- Alaska LNG is designed to provide system capacity to ship natural gas to Alaskans
- The pipeline has 500 MMcfd of capacity in excess of the LNG Plant's needs
  - All 500 MMcfd is prioritized for Alaskans
  - Current Alaska natural gas demand is about 220 MMcfd
  - Allows for long-term Alaska natural gas demand growth



Lower Cost Energy for Alaskans

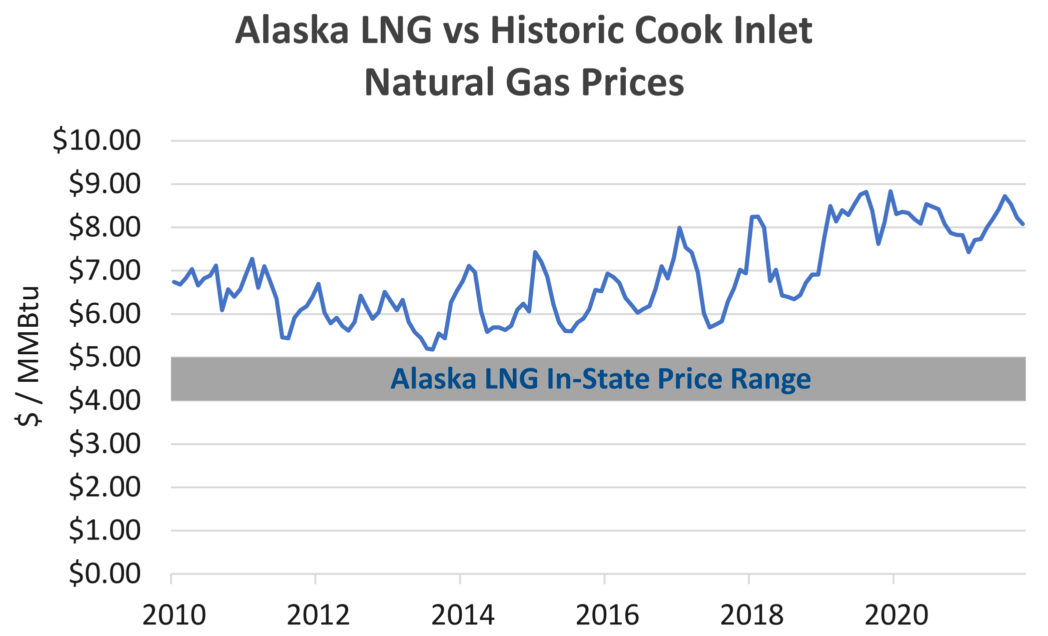
ALASKA GASLINE DEVELOPMENT CORP.

Low-Cost Gas for Alaskans

- The Alaska LNG in-state price is estimated to be between $4 - $5 per MMBtu
- Significant reduction from current prices, saving Alaskans hundreds of dollars per year*

Significant Energy Savings

- Southcentral households/businesses can save up to $1,000 in energy costs (more in the Interior)
- Communities without access to natural gas will benefit from Rural Energy Fund



Not all Alaskans use natural gas. This table converts the price of natural gas to other energy sources used in Alaska.

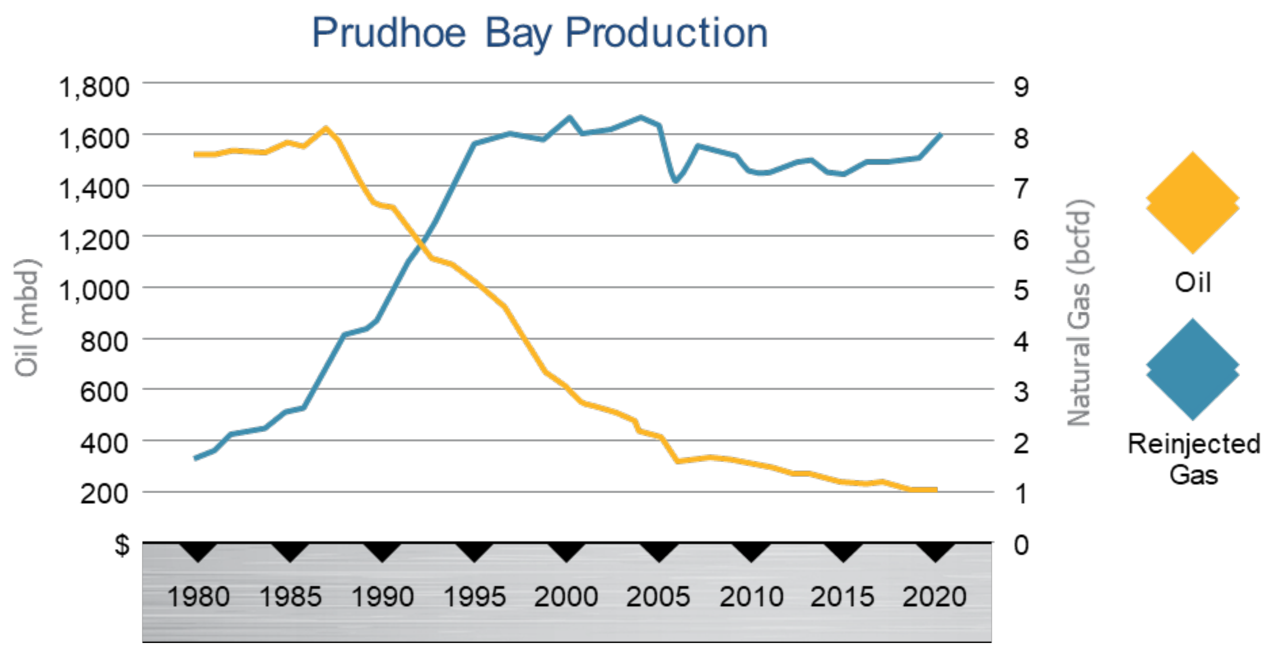
Natural Gas	Heating Oil	Electricity
$/MMBtu	*$/gal*	*$/kWh*
5.00	0.69	0.02
10.00	1.38	0.03
15.00	2.07	0.05
20.00	2.76	0.07
25.00	3.45	0.09
30.00	4.14	0.10

* Source: Energy Information Administration

Alaska Resource Use

ALASKA GASLINE DEVELOPMENT CORP.

Revenue from gas sales will offset declining oil revenues



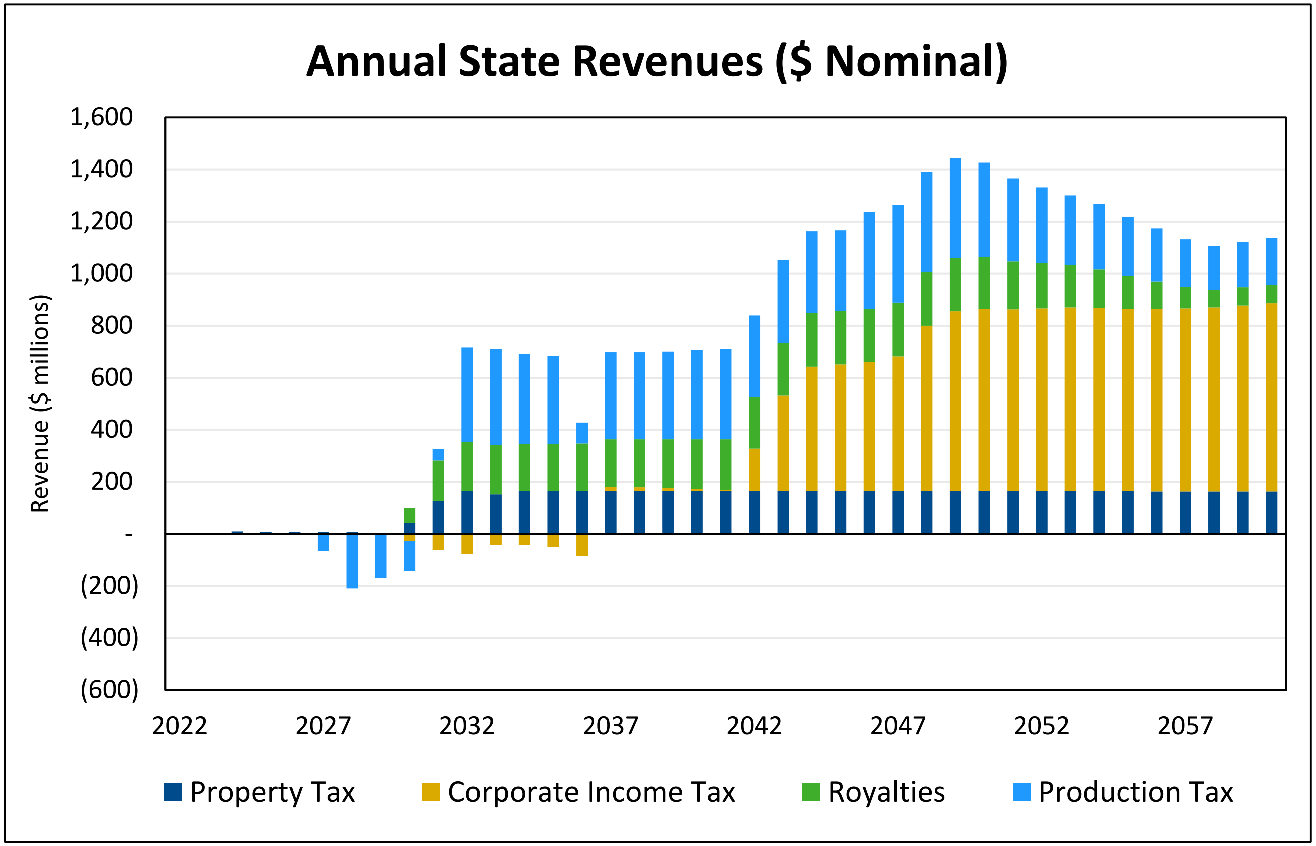
Project maximizes use of existing oil and gas infrastructure

- Upstream infrastructure and large-scale production facilities are already in place on the North Slope

Alaska LNG: New State Revenue

ALASKA GASLINE DEVELOPMENT CORP.

Significant revenue generated by Alaska LNG, even with no State of Alaska investment in construction.



State of Alaska Department of Revenue Analysis (April 2023)

**Does not include AGDC revenue from return on investment-to-date or future State investments.*

Alaska LNG Investment

ALASKA GASLINE DEVELOPMENT CORP.

- AGDC is seeking private investors to take Alaska LNG through Front-End Engineering and Design (FEED) and to a Final Investment Decision (FID)
- Goldman Sachs is under agreement to raise investment capital for Alaska LNG
- AGDC is targeting approximately $150M development capital to get to FID
  - 3rd Party FEED costs, project management, legal/commercial, 8 Star Alaska overhead
  - Investors will receive majority interest in 8 Star Alaska and Alaska LNG
- Capital Raise Process:
  - Goldman Sachs has set out a structured capital raise process and leading financial investment engagement
  - Goldman Sachs is only engaging with investors with the financial strength and expertise to advance the project

Alaska LNG CIM (Confidential Information Memorandum)

- Developed by Goldman Sachs
- Distributed to potential investors under confidentiality agreements
- Contains 60+ pages of detailed financial projections, commercial status, and investment terms

Alaska LNG Execution Strategy

AGDC's Role: Transition to Private Investors

- AGDC is seeking qualified partners and investors to advance Alaska LNG to FID
- AGDC created the project company 8 Star Alaska, LLC (8 Star) to function as the parent company of the project
- AGDC is transitioning Alaska LNG assets under 8 Star and is selling 75% equity ownership of the company to investors in exchange for taking the project to FID
- AGDC will retain a 25% carried interest in 8 Star

8 Star's Role: Manage Alaska LNG through FID

- 8 Star will be managed by private investors with AGDC being a minority owner
- 8 Star will be the project manager and retain oversight of all 3 aspects of the project through to FID
- 8 Star ownership is likely to consist of one "lead party" with other strategic partners owning minority stakes
- At FID, 8 Star will raise the construction capital for each of the three project subcomponents

Now → **After Investment**

Investment Highlights

ALASKA GASLINE DEVELOPMENT CORP.

1. **Significant Recent Tailwinds Driving Project Towards FID**
   Combination of US government support, macroeconomic factors driving demand for LNG and long-term North Slope E&P operators underpins attractive outlook for Alaska LNG development

2. **Abundant Stranded Gas Reserves with no Commodity Linkage**
   Significant volume of low-cost gas with no link to volatile commodity prices or need for fracking

3. **Proximity to Asia Reduces Cost of Supply and Transportation Bottlenecks**
   Short shipping route, direct to Asian markets minimizing shipping (only 7-9 days)

4. **Most Economic North American LNG Project**
   Delivered cost of supply is competitive with other pre-FID projects globally, targeting $6.50 per MMBtu delivered to Asia

5. **Offtake Agreement Flexibility Will Spur Contracting Momentum**
   Low cost of supply and lack of commodity linkage enables pricing structure flexibility for offtakers

6. **In Discussions with World-Class Partners**
   Group of IOCs, pipeline specialists, upstream operators, and LNG offtakers

7. **Significant Existing Value from Regulatory Approvals, Permitting and Due Diligence**
   Major government approvals obtained including FERC Order, DOE export license, Corps of Engineers wetland permit, air permits for both major facilities, and lease / Right of Way agreements covering ~93% of the Project footprint

8. **Attractive Pre-FID Returns**
   Significant project tailwinds towards FID with potential to unlock significant value for pre-FID equity

9. **Leading Low-Carbon LNG Profile**
   Amongst the leading projects globally for low-carbon emissions, access to world-class potential Carbon Capture and Sequestration (CCS) and a ready opportunity to expand into hydrogen

10. **Local Support Incentivizing Project Development**
    Alaska LNG has strong local support, Alaska Native land claims resolution, and commercial relationships with Alaska Native Corporations

Utility Supply Agreement

- AGDC offered agreements to Alaskan utilities that will ensure they receive gas supply on preferential terms from Alaska LNG.
- These agreements are with 8 Star Alaska, LLC and will bind future investors in Alaska LNG
- Key Terms
  - Alaska utilities will be provided natural gas from Alaska LNG on priority terms to supply residential, commercial, and small industrial customers
  - The price will be no higher than that paid by the LNG facility for natural gas supply (lowest cost possible)
  - In the event of an interruption, Alaska utilities will be prioritized over LNG exports
  - Ensure utility demand growth up to 500 MMcfd, over 2x growth
  - Ability to adjust take-or-pay commitments in response to changes in demand or new renewable sources of energy

Alaska Affordable Energy for Rural Alaska

- Required by Alaska Statute 37.05.610
- The purpose is to provide a source of funds for appropriation to develop infrastructure to deliver **energy** to areas of the state that do not have direct access to the Alaska LNG pipeline
- The Alaska Affordable Energy Fund is to receive an annual deposit of 20% of state royalty revenue after paying into the Permanent Fund

Gas Sales Agreement – Producers

- Investors have identified that gas supply terms are needed prior to investing development capital
- Securing these agreements is a top priority for AGDC
- Need for gas supply terms has been communicated to the Producers
  - DOR Commissioner Crum and DNR Commissioner Boyle joined meetings to stress the importance of the project to Alaska
  - Goldman Sachs joined meetings to communicate investors' views on the importance of gas supply
- AGDC has transmitted gas supply precedent agreements to Producers
  - 8 Star Alaska, LLC is the buyer in the agreements so it will be binding on future investors
  - Establishes, price, term, volume, and commitment to buy and sell gas
  - Fully-termed gas supply agreements will be negotiated by the private project developer prior to FID
  - Mixed level of engagement from the Producers

LNG Sales Agreements

ALASKA GASLINE DEVELOPMENT CORP.

- Active negotiations with multiple LNG offtakers/buyers are underway
  - Negotiations are fairly advanced with ongoing price discussions
  - Buyers include traditional Asian utility buyers, LNG traders, and oil and gas companies
  - All buyers are credit worthy and large-scale market participants
- Alaska LNG is uniquely able to offer a combination of prices
  - Brent-linked, Henry Hub, JKM, and fixed-price offering
  - 20-year term with an aggregate price floor that can cover system tolls and debt service
- Some buyers are considering “equity offtake” where they would invest in the project at FID in exchange for LNG supplied at cost
- In total, AGDC is currently in discussions for 125% of project capacity (25 MTPA)
- All conversations under confidentiality agreements

In Summary – Alaska LNG…

ALASKA GASLINE DEVELOPMENT CORP.

Increases Production:

- Provides infrastructure to get stranded gas to market
- Provides another 30+ years of North Slope production and increases condensate production
- Provides lower cost, clean-burning gas for Alaskans (no imports needed)
- Contributes to state revenue
- Provides bridge to ammonia and hydrogen production

Minimizes Impacts:

- Extensively scrutinized with multiple requirements to minimize impacts
- Maximizes use of existing infrastructure and resources
- Lowers global greenhouse gas emissions
- Uses existing corridors – TAPS, utility corridor, highway
- Regulated under strict U.S. and Alaska legal requirements

Energy Security – Alaska

ALASKA GASLINE DEVELOPMENT CORP.

- Cook Inlet gas supply is uncertain
- Utilities are evaluating potential alternative natural gas supplies
- Alaska LNG is the best option to replace Cook Inlet gas
    - Secure, low-cost supply for Alaskans
    - Alaska LNG will ensure priority natural gas supply for Alaskans

ANCHORAGE DAILY NEWS

Energy

Hilcorp warns Alaska utilities about uncertain Cook Inlet natural gas supplies

By Alex DeMarban
Updated: May 17, 2022
Published: May 17, 2022

Exhaust from the Southcentral Power Project in Anchorage is lit by the setting sun on Friday, Jan. 11, 2019. (Loren Holmes / ADN)

Officials with several Alaska utilities say they've been informed by Hilcorp that the company does not currently have enough natural gas reserves in Cook Inlet to provide for new gas contracts. Those contracts face renewal in the next two to 11 years.

Getting in Touch with AGDC

Contact Information

AGDC
http://www.agdc.us/
https://agdc.us/contact-agdc/

Alaska LNG
https://alaska-lng.com/
https://alaska-lng.com/contact-us/

Social Media
Twitter https://twitter.com/alaskalng
Facebook https://www.facebook.com/AKGaslineDevelopmentCorp
LinkedIn www.linkedin.com/in/alaska-gasline-development-corporation-607418245

Telephone
Phone: 907-330-6300
Toll Free: 1-855-277-4491

Post
3201 C Street, Suite 505
Anchorage, Alaska 99503

AGDC Common Acronyms

ACC	Arctic Carbon Capture
AFN	Alaska Federation of Natives
AGDC	Alaska Gasline Development Corporation
ANCSA	Alaska Native Claims Settlement Act
ANVCA	Alaska Native Village Corporation Association
AOGCC	Alaska Oil and Gas Conservation Commission
Bbl	Barrel
Bblsd	Barrels per Day
Bcf	Billion Cubic Feet
Bcfd	Billion Cubic Feet Per Day
BLM	Bureau of Land Management
CCS	Carbon Capture and Sequestration
CO2	Carbon Dioxide
CO2E	CO2 Equivalent
DOE	Department of Energy
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPC	Engineering, Procurement & Construction
FEED	Front End Engineering Design
FERC	Federal Energy Regulatory Commission
GTP	Gas Treatment Plant
HH	Henry Hub
Kbblsd	Thousand Barrels per Day
LNG	Liquefied Natural Gas
LOI	Letter of Intent
M3	Cubic Meters
MMBtu	Metric Million British Thermal Unit
MT	Metric Tons
MTPA	Million Tonnes Per Annum
NETL	National Energy Technology Laboratory
NPRA	National Petroluem Reserve Alaska
ROW	Right-Of-Way
TAPS	Trans-Alaska Pipeline System
Tbtu/yr	Trillion British Thermal Units per Year
Tcf	Trillion Cubic Feet
TPA	Tonne per Year

AGDC.us

ALASKA GASLINE DEVELOPMENT CORP.