

# Alaska LNG Project Update

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House Resources Committee

March 29, 2023



# ALASKA GASLINE DEVELOPMENT CORP.

## The Alaska Gasline Development Corporation (AGDC)

- Independent, public corporation owned by the State of Alaska (SOA)
- 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

## Current Owner and Developer of the Alaska LNG Project

- Transitioning project to private ownership under qualified developers

# Alaska LNG Project

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

## North Slope Gas Supply

- 40 Tcf of natural gas stranded in Prudhoe Bay and Point Thomson
- Equal to over 10 years' worth of Japan's total consumption\*

## Arctic Carbon Capture (ACC) Plant

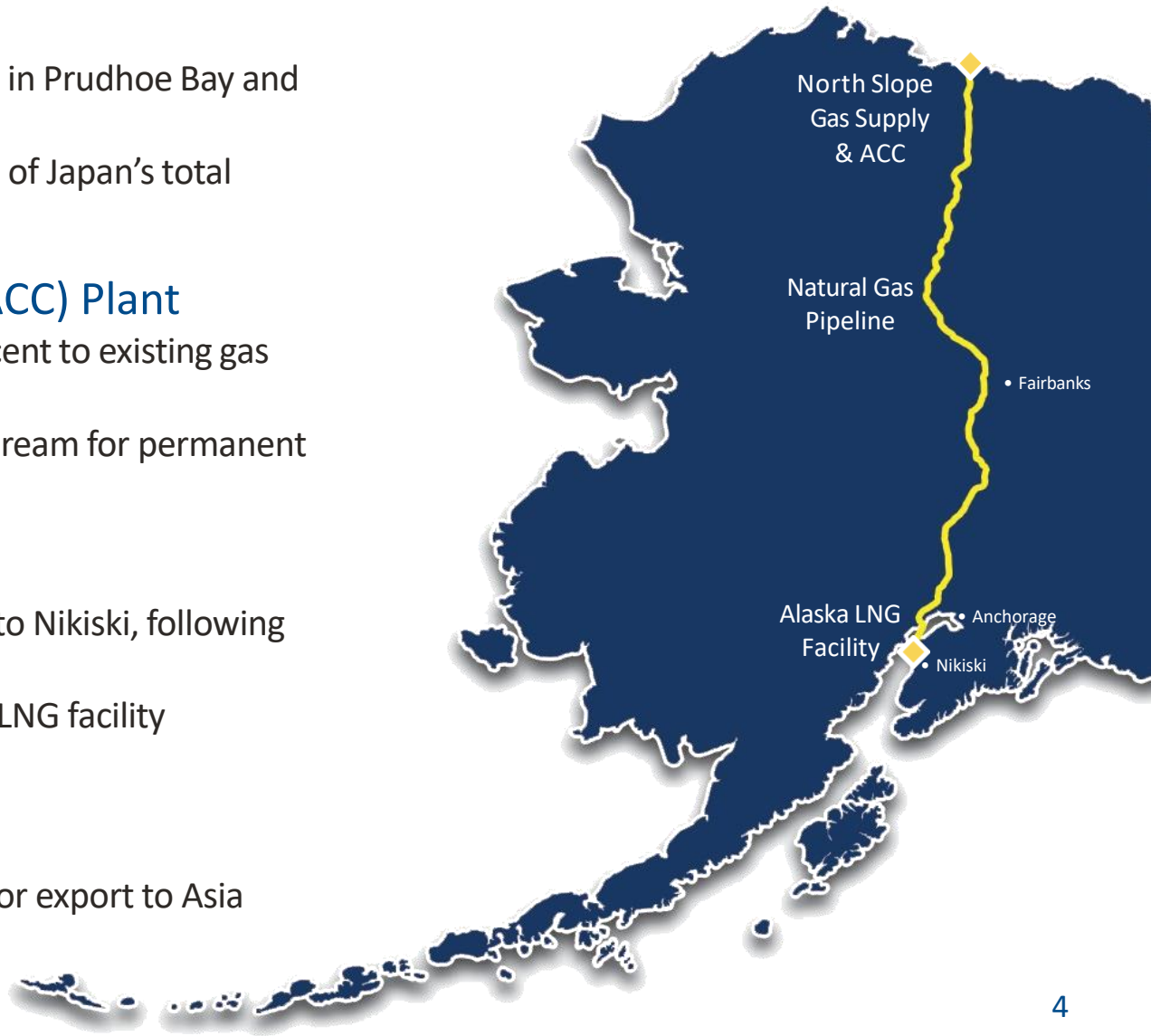
- Located in Prudhoe Bay adjacent to existing gas plants
- Removes CO<sub>2</sub> from raw gas stream for permanent sequestration

## 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

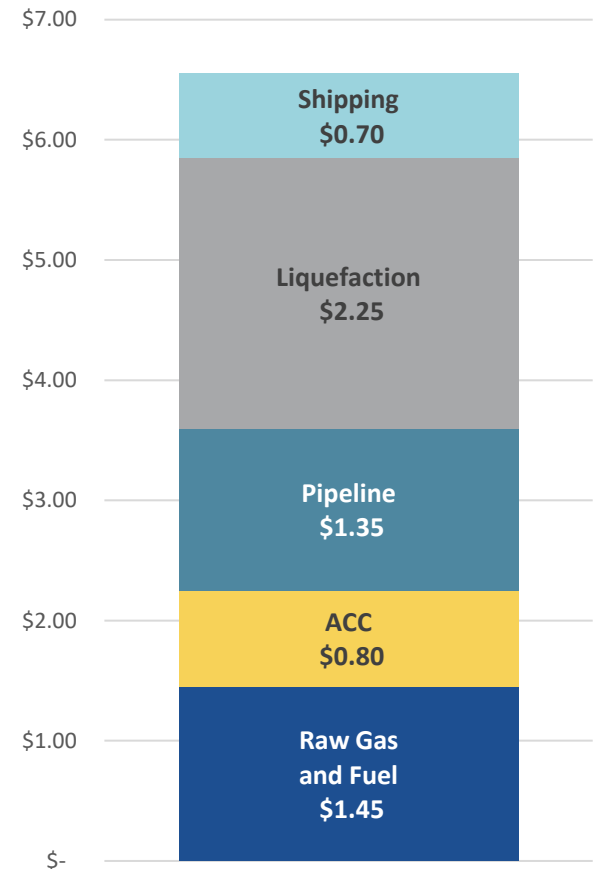
- 20 Mtpa LNG Facility
- Converts natural gas to LNG for export to Asia



## 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: \$9.00 ( $\$75 \text{ Brent} \times 12\%$ )
  - U.S. Gulf Coast: \$7.50 ( $\$2.50 \text{ Henry Hub} + \$5.00$ )
  - JKM: \$13.50 (*spot price*)
- Verified by Wood Mackenzie
- 2023 update to account for recent construction inflation, 45Q tax credits, and financial return expectation – remains largely unchanged.

### \$6.55: Delivered Cost of Supply



# Positive Climate Impact

Alaska LNG can reduce GHG emissions by more than 77 million tonnes of CO<sub>2</sub> 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



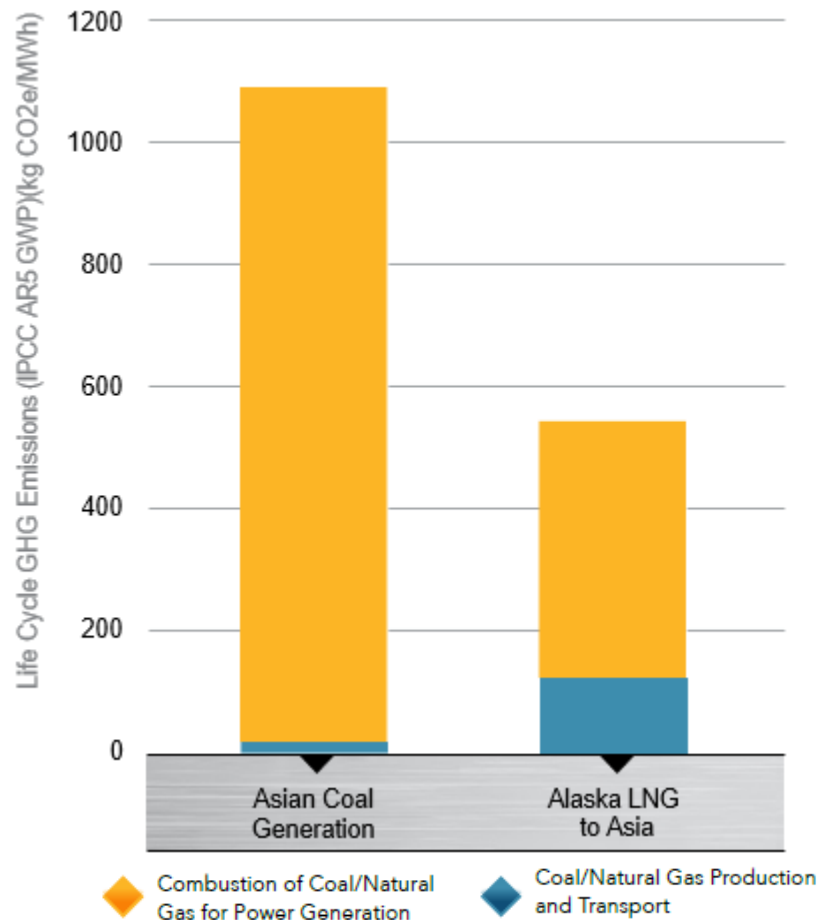
19 coal power plants

Constructing



16,000 Wind Turbines

## Lifecycle GHG Emissions for Natural Gas vs. Coal Power



Source: Greenhouse Gas Lifecycle Assessment: Alaska LNG Project



- Cook Inlet gas supply is uncertain
- Utilities are evaluating potential for LNG import
- The Alaska LNG Project 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

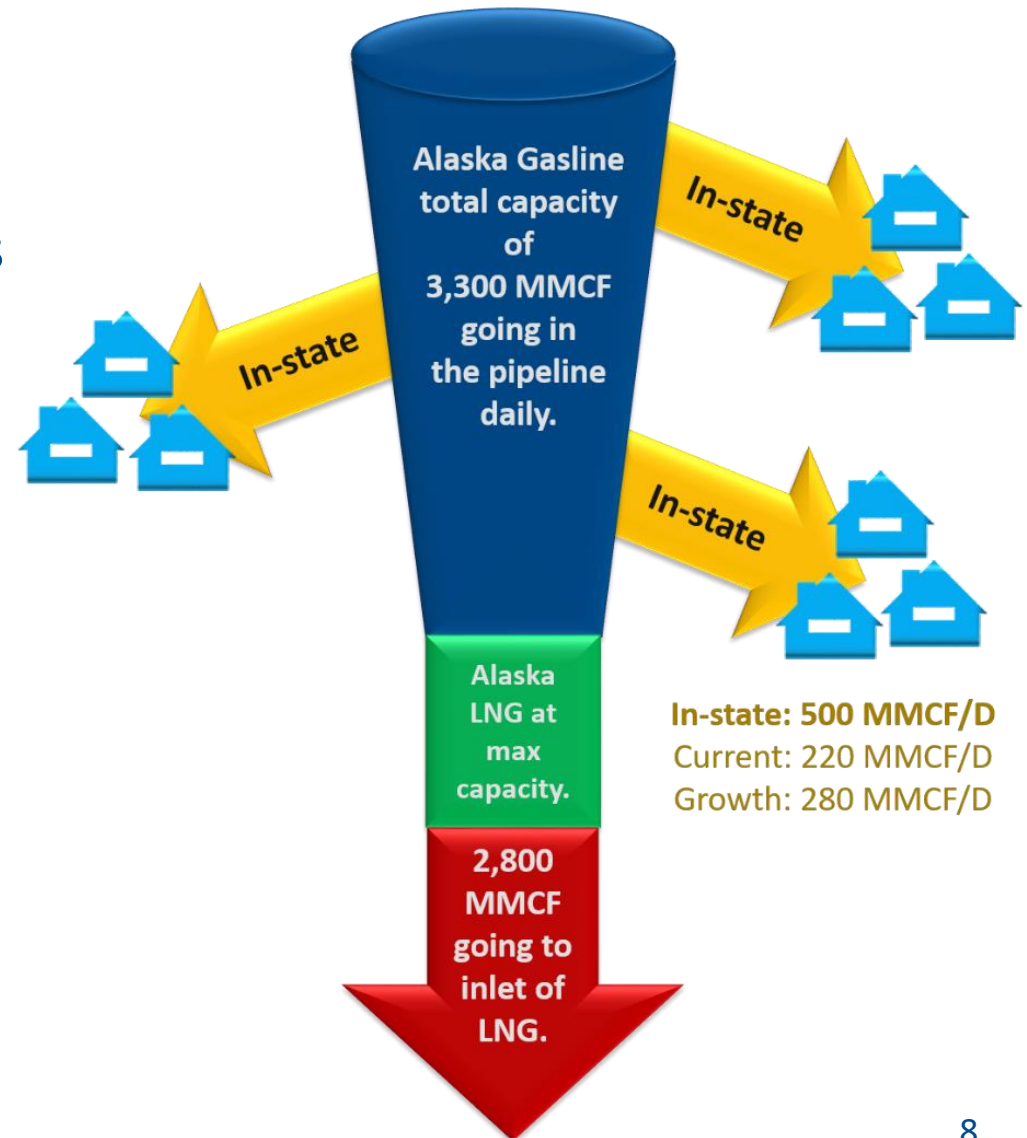


Exhaust from the Southcentral Power Project in Anchorage is lit by the setting sun on Friday, Jan. 11, 2019. (Loren Holmes / ADN)

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.

# 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





# Utility Supply Agreement

- AGDC offered agreements to utilities that will ensure that they will receive gas supply on preferential terms from Alaska LNG.
- These agreements are with 8 Star Alaska, LLC and will bind future investors and developers 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
  - 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

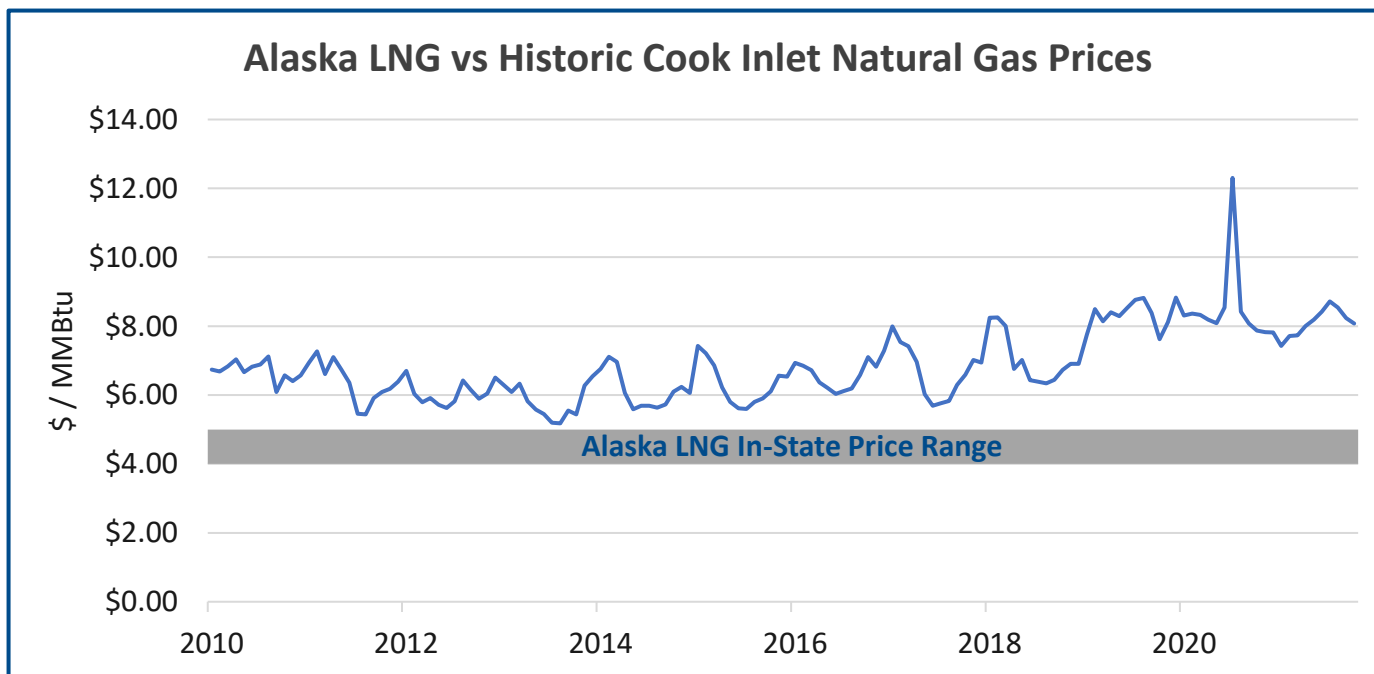
# Lower Cost Energy for Alaskans

## 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

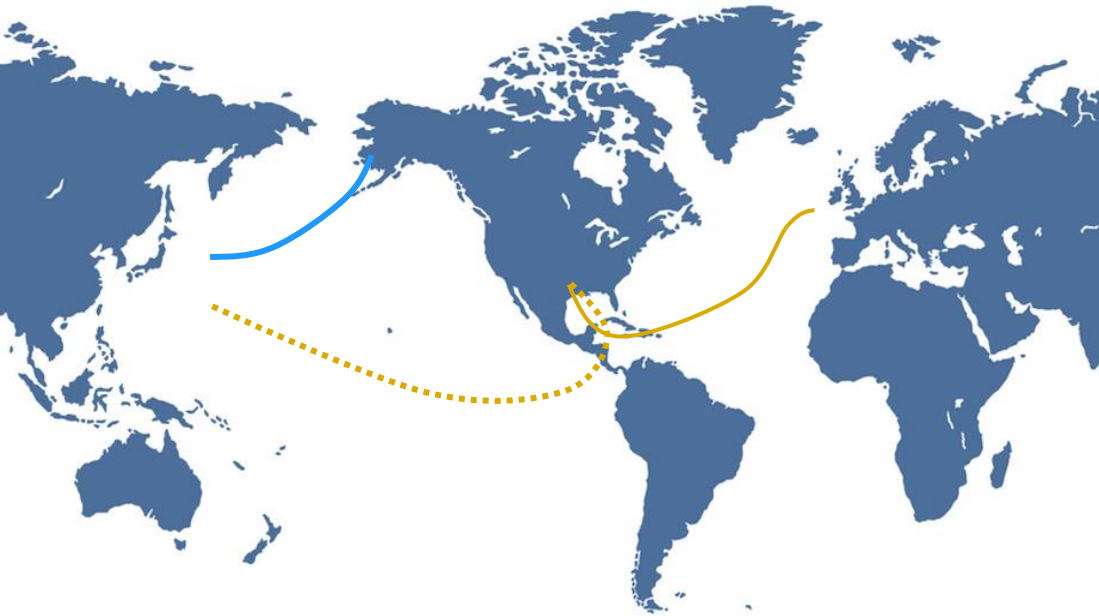
## Significant Energy Savings

- Southcentral households can expect to save up to \$1,000 in heating and electric costs
- Interior households could save much more



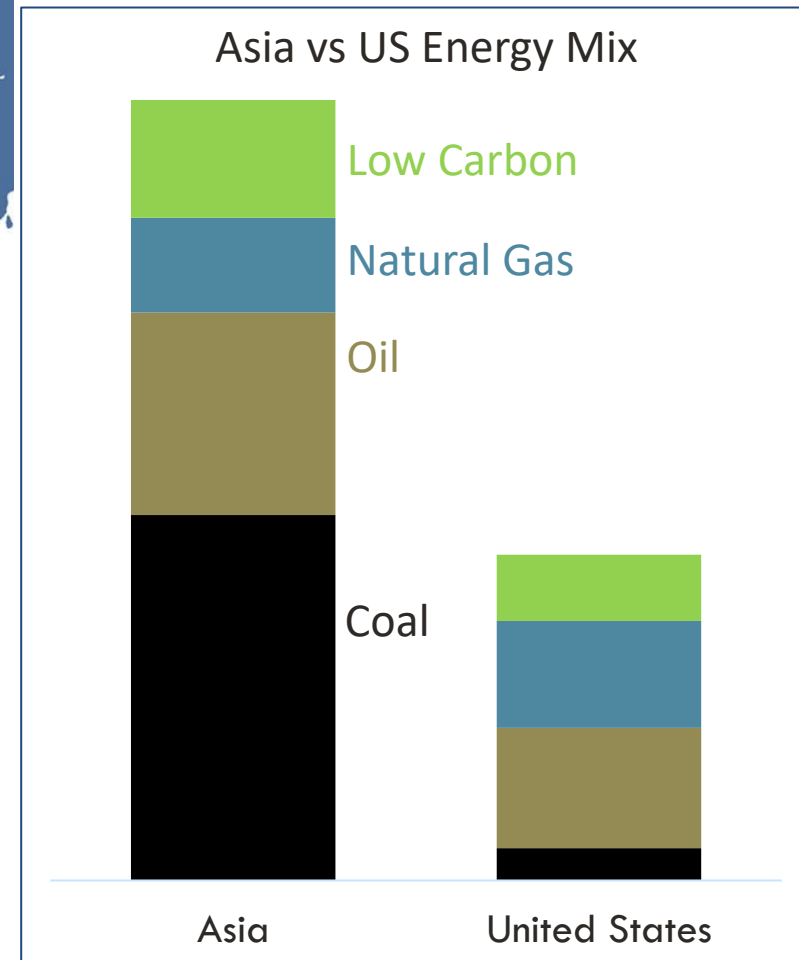
Source: EIA

- 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.



- The war in Ukraine disrupted European natural gas supply
- US LNG has been diverted to keep the heat and power on in Europe
- This dynamic increases the need for US supply from Alaska to meet the long-term energy security needs of Asia

## Coal to Gas Switching in Asia is a Massive Market



## Record High LNG prices

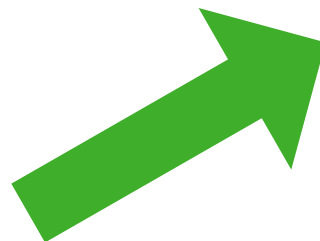
- Upward pressure on long-term contract price
- Highlights the need for new LNG capacity
- Buyers again seeking long-term contracts

## Role of LNG in National Security

- Europe is still buying Russian gas
- US LNG is being diverted to Europe
- Asian buyers are seeking LNG and expanding other energy sources (coal, nuclear)

## Natural Gas as Bridge Fuel

- Europe has recognized natural gas as transition fuel and 'green' energy
- Europe is switching back to coal due to lack of gas investment and availability



## Impact on Alaska LNG

- LNG investors and developers have increased interest
- Increased strategic importance for the US and our Asian allies
- Overall increased interest and urgency to move project forward

# Evolution to Private Developers

*2013 – 2016*

## **Producer-Led**

Producers provided initial scoping and engagement—important demonstration of producer support

*2017 – 2022*

## **State-Led**

State-led initial design, permitting, and authorization—important demonstration of state support

*2023 – onward*

## **Developer-Led**

Transition to world-class private parties for construction and operations



- AGDC entered into Engagement Letter with Goldman Sachs to provide advisory services for Alaska LNG development capital
- AGDC is targeting \$150 million 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
- Goldman is coordinating investor outreach
  - Combination of strategic investors AGDC is already working with and large Private Equity and Infrastructure funds
- Goldman leading the update of investment materials and providing guidance on base economic model

## **AGDC is raising development capital to take Alaska LNG to Final Investment Decision (FID)**

Alaska LNG is an attractive investment:

- Best economics of any North America project
  - Fully permitted
  - Beneficial equity terms
  - Local support
- 

## **AGDC Equity Offer Highlights**

Majority ownership and control of Alaska LNG in exchange for:

- Funding development costs to FID
- Commitment to move Alaska LNG forward on fast timeline
- Preferential in-state gas supply
- Opportunity for Alaska to invest

- AGDC is pursuing multiple strategies to raise development capital
- Established LNG developers
  - Most straightforward approach but only a limited number of developers exist, each with competing opportunities
- Strategic investors
  - Have other interest in Alaska LNG, such as offtake or participation in other aspects of the project
- Financial investors
  - Desire to invest in LNG projects and stand-up project management team for execution
- All options can be complimentary and not mutually exclusive
- Pursuing possible consortium with multiple investors
- All project equity will come through 8 Star Alaska—therefore, legal/commercial structure remains unchanged

- 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 aggregate price floors that can cover system tolls and project 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 is discussions for 125% of project capacity (25 Mtpa)
- All conversations under confidentiality agreements

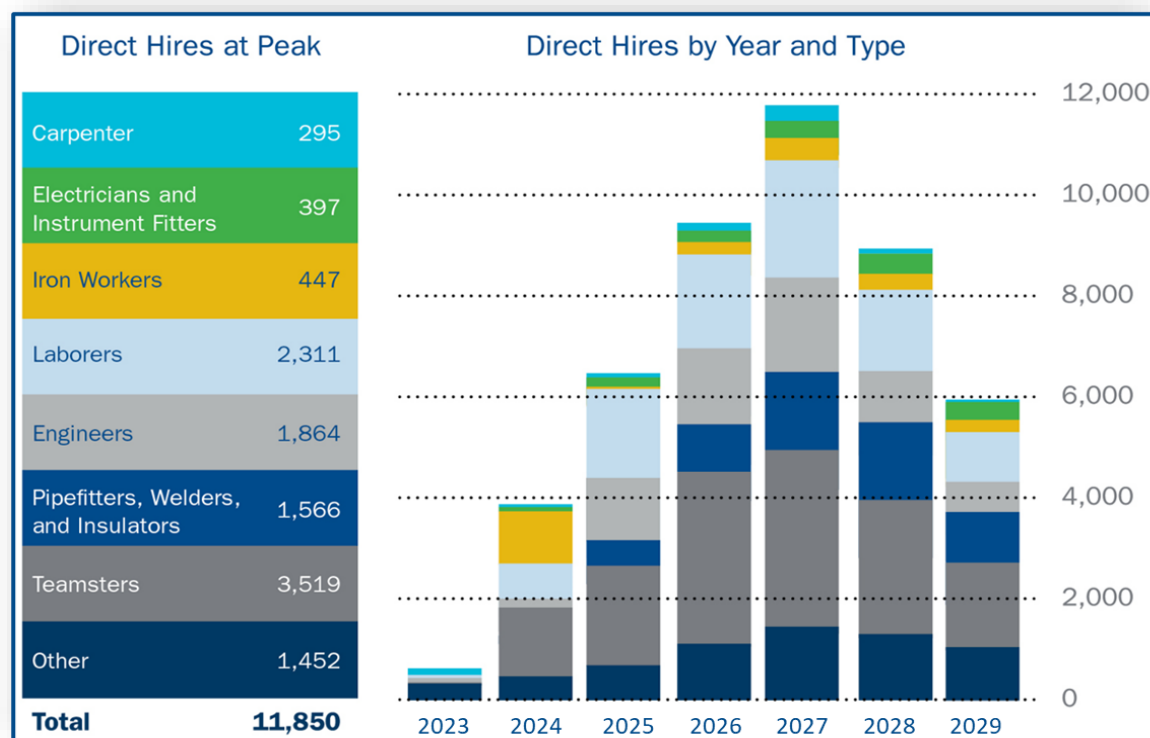
## State of Alaska revenues come from:

- Commercialization of natural gas (royalties and production tax)
- Commercialization of unlocked Point Thomson condensate (royalties and production tax)
- State Corporate Income Tax
- Property Tax
- Return on State equity investment to date (structure TBD)
- Return on additional equity investment in Alaska LNG (if elected)

AGDC is collaborating with Department of Revenue to Quantify  
State Revenue from Alaska LNG

## The Alaska LNG Project Creates Jobs

- Almost 12,000 direct jobs at peak of construction
- 1,000 long-term operations jobs
- Significant indirect jobs during construction and operations

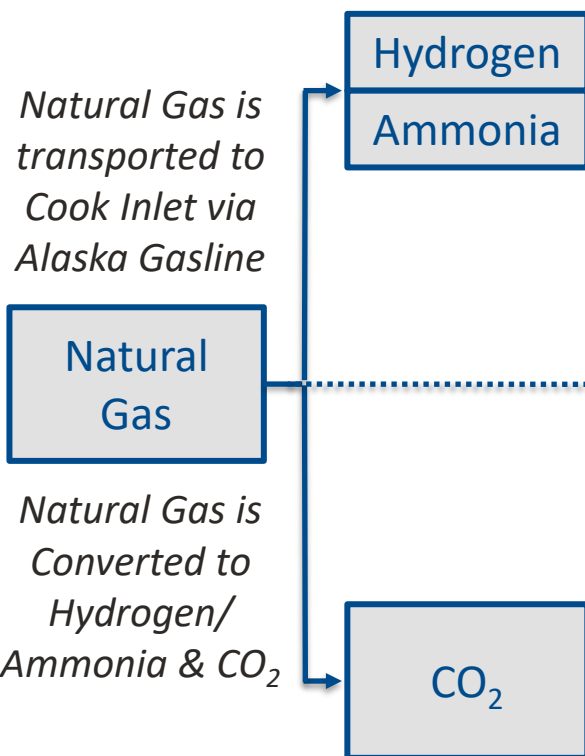




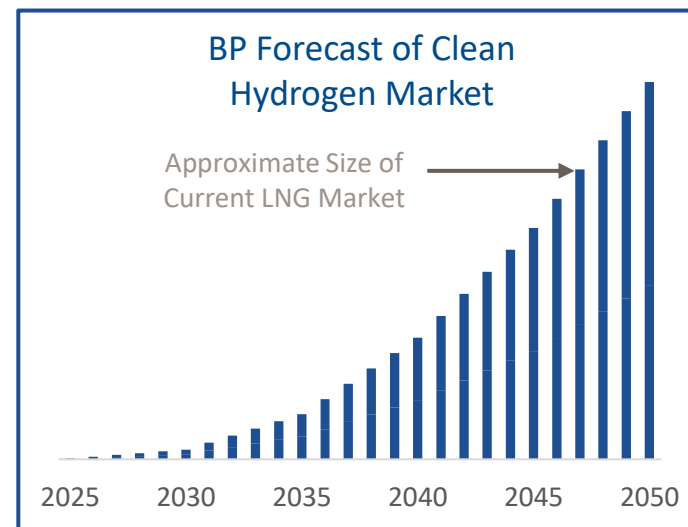
## Recent federal actions have supported the Alaska LNG Project:

- Federal Loan guarantees - \$29 billion
- Ambassador Emanuel Tokyo Summit
- U.S. Export Import Bank – letter of intent
- Department of Energy Supplemental Environmental Impact Statement
- FFY 23 Appropriation - \$4 million
- 45Q Tax Credits - \$600 million/year; \$6+ billion total

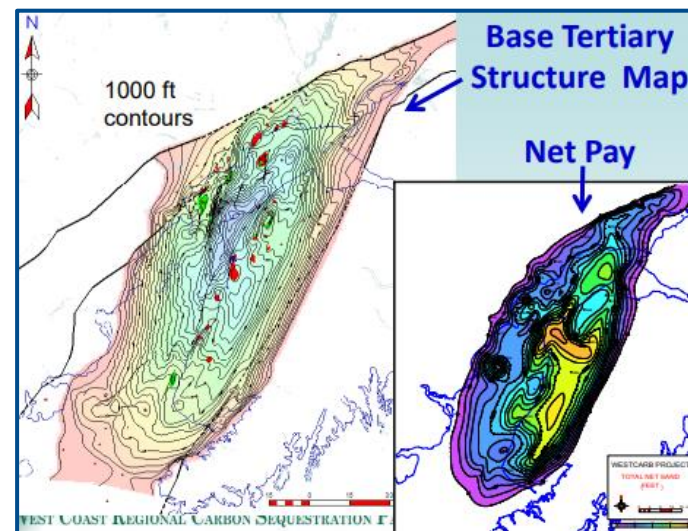
# Alaska Hydrogen Opportunity



- Hydrogen/ammonia are clean energy sources
- Key Asian markets forecast rapid demand growth
- Infrastructure funding available for investment in Alaska



- Cook Inlet has the best carbon sequestration potential on the Pacific Coast of North America
- Allows for “future-proofing” Alaska LNG with transition to net-zero hydrogen/ammonia production



Source: West Coast Regional Carbon Sequestration Partnership

# Major Permits and Approvals

## Completed

- Federal Energy Regulatory Commission (FERC) Environmental Impact Statement (EIS) and Order
- Major federal permits and authorizations
- Land rights-of-way (ROW): about 93% of Project area
- Approved Cultural Resources Management Plan
- ACC Plant Air Permit
- Liquefaction Facility Air Permit

ALASKA LNG		Permits and Authorizations	
Permit/Authorization	Date Obtained	Complete	
Presidential Finding Concerning Alaska Natural Gas – President Reagan	1/12/1988	✓	
Alaska Department of Environmental Conservation – Gas Treatment Plant Air Permit	8/13/2020	✓	
Alaska Department of Environmental Conservation – Liquefaction Facility Air Permit	7/7/2022	✓	
Alaska Department of Environmental Conservation – Section 401 Water Quality Certification	6/19/2020	✓	
Alaska Department of Natural Resources Leases	4/13/2021	✓	
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)	11/21/2014	✓	
DOE Natural Gas Export Order (Non-Free Trade) <sup>1</sup>	8/20/2020	✓	
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 <sup>2</sup>	5/21/2020	✓	
FERC Programmatic Agreement - Cultural Resources	6/24/2020	✓	
NMFS Biological Opinion AKRO-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	✓	

# How to Contact AGDC

Alaska Gasline Development Corporation <https://agdc.us/contact-agdc/>

Alaska LNG Project <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](https://www.linkedin.com/in/alaska-gasline-development-corporation-607418245)

Board of Directors meetings are public meetings and are also available on Zoom. The next meeting is anticipated to be in June 2023. Previous meeting information is available at <https://agdc.us/about-us/board-meeting-schedule-materials/>

Phone: 907-330-6300

Toll-Free: 855-277-4491

Contact Mary Siroky, [mpsiroky@agdc.us](mailto:mpsiroky@agdc.us) or 907-321-0550 for scheduling meetings/presentations or any questions you may have.

AGDC.us

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ALASKA  
GASLINE  
DEVELOPMENT CORP.

The logo for Alaska Gasline Development Corp. features the company name in a sans-serif font. To the right of the name is a stylized outline of the state of Alaska, composed of several blue stars of varying sizes arranged to form the state's shape.

# Acronyms

ACC	Arctic Carbon Capture	Gt	Gigatonne
AFN	Alaska Federation of Natives	GTP	Gas Treatment Plant
AGDC	Alaska Gasline Development Corporation	HH	Henry Hub
ANCSA	Alaska Native Claims Settlement Act	HOA	Heads of Agreement
ANVCA	Alaska Native Village Corporation Association	IOC	International Oil Company
AOGCC	Alaska Oil and Gas Conservation Commission	IPT	Integrated Project Team
AP-X	Air Products Liquefaction Technology	IRR	Internal Rate of Return
Bbl	Barrel	JKM	Japan Korea Marker
Bblsd	Barrels per Day	Kbblsd	Thousand Barrels per Day
Bcf	Billion Cubic Feet	LNG	Liquefied Natural Gas
Bcfd	Billion Cubic Feet Per Day	LOI	Letter of Intent
BLM	Bureau of Land Management	M3	Cubic Meters
Capex	Capital Expenditure	MMBtu	Metric Million British Thermal Unit
CB&I	Chicago Bridge & Iron Company	MOU	Memorandum of Understanding
CCS	Carbon Capture and Sequestration	MT	Metric Tons
CIT	Corporate Income Tax	MTPA	Million Tonnes Per Annum
CO <sub>2</sub>	Carbon Dioxide	NETL	National Energy Technology Laboratory
CO <sub>2</sub> E	CO <sub>2</sub> Equivalent	NPRA	National Petroleum Reserve Alaska
DES	Delivered Ex-Ship	O&M	Operations & Maintenance
DOE	Department of Energy	OCS	Outer Continental Shelf
DOT&PF	(Alaska) Department of Transportation and Public Facilities	Opex	Operating Expenses
EA	Environmental Assessment	QRA	Quantitative Risk Analysis
EIS	Environmental Impact Statement	ROW	Right-Of-Way
EPC	Engineering, Procurement & Construction	SPA	Sale and Purchase Agreement
FEED	Front End Engineering Design	TAPS	Trans-Alaska Pipeline System
FERC	Federal Energy Regulatory Commission	Tbtu/yr	Trillion British Thermal Units per Year
FID	Final Investment Decision	Tcf	Trillion Cubic Feet
FOB	Free on Board	TPA	Tonne per Year
FTA	Free Trade Agreement	USGS	United States Geological Society
GHG	Greenhouse Gas	VDR	Virtual Data Room