

Alaska LNG Project

Supporting Domestic and Global Sustainability Goals The following report was prepared in partnership with Bridge House Advisors, an ESG & Sustainability consulting firm, headquartered in Chicago, Illinois. Founded in 2017, Bridge House's workforce is comprised of 50+ technical experts from varied backgrounds with extensive environmental and sustainability experience. All facts and conclusions outlined in this report were tracked to public sources at the time of this report. Bridge House did not independently verify the information provided by these public sources referenced throughout the report.

The Alaska LNG Project

The Alaska Liquified Natural Gas (LNG) Project (the Alaska LNG Project or the Project) is Alaska's priority energy infrastructure project to maximize the benefit of Alaska's North Slope natural gas resources. The Project will use clean, energy-efficient, and safe production methods to provide existing, stranded natural gas to Alaskans and convert a portion of the gas to LNG for commercialization in international markets. Alaskans will gain a long-term source of natural gas for home heating, power generation, and industrial needs at affordable prices made possible by the LNG export infrastructure. Under development by the Alaska Gasline Development Corporation (AGDC), an independent, public corporation of the State of Alaska, the Project has been widely studied by stakeholders, federal agencies, and state regulators, and is the only LNG project that has been granted all major permits on the U.S. west coast.

Because gas is produced along with oil on the North Slope, and there is no existing gas pipeline to commercial markets, approximately 7.7 billion cubic feet (Bcf) of gas is currently being compressed and reinjected back into the producing formation at Prudhoe Bay gas management facilities each day. The Alaska LNG Project will use a portion of that existing, stranded gas, estimated at nearly 40 trillion cubic feet (Tcf) of proven natural gas reserves in the Prudhoe Bay Unit and Point Thomson Unit, ¹ over the 30-year term² of the Project. Approximately 75% of the gas feedstock for the Project will be from Prudhoe Bay and 25% will be from Point Thomson.

The Alaska LNG Project's Arctic Carbon Capture (ACC) plant will be located in Prudhoe Bay near existing oil and gas infrastructure and will condition the feed gas

to meet pipeline and LNG specifications. The plant, with an average capacity of 3.5 Bcf of gas per day, will be comprised of three parallel treatment trains for the removal of carbon dioxide and hydrogen sulfide from the feed gas.³

By design, carbon dioxide from the feed gas for the Project will not be vented. Byproduct carbon dioxide separated from the feed gas stream will be captured and placed back into the subsurface geologic formations, either for enhanced oil recovery (EOR) or sequestration. Over the term of the Project, approximately 3.84 Tcf, or 202 million metric tons (MMmt), of carbon dioxide will be available to be captured and used for EOR or sequestered on the North Slope.⁴

The backbone of the Alaska LNG Project is the 42-inch diameter mainline pipeline that will traverse 807 miles from the ACC plant in Prudhoe Bay through Interior Alaska before it crosses Cook Inlet and connects with the LNG Facility and marine terminal in Nikiski on the Kenai Peninsula. The pipeline will be buried with the exception of two planned aerial water crossings, aboveground crossings of active faults, and the underwater offshore pipeline section crossing Cook Inlet.

Interconnections along the pipeline route will provide Alaskans with access to natural gas for heating and electrical generation. The LNG Facility will produce up to 20 million metric tons of LNG per year for export.⁵

^{1.} US DOE Final Supplemental EIS - January 2023 - Volume I

^{2.} FERC Order Authorization

^{3.} FERC Order Authorization

^{4.} US DOE Final Supplemental EIS - January 2023 - Volume I

^{5.} FERC Order Authorization



Regulatory Process



There are more than 50 major federal, state, and local permits and authorizations required for the Alaska LNG Project. A comprehensive regulatory process was established for the Project to ensure required permits were obtained and to maintain compliance with applicable legal requirements. The major permitting process was initiated in 2014 and was competed with all required Federal permits in 2020. The Alaska LNG Project is permitted as an integrated project and has completed a full review under the National Environmental Policy Act (NEPA) by the Federal Energy Regulatory Commission (FERC) as the Lead Agency.⁶

As part of the initial FERC application process, 14 public open houses throughout Alaska were held for the Alaska LNG Project from October 2014 through January 2015 to provide the public with information and solicit comments from interested stakeholders and regulatory agencies. The FERC also conducted extensive public involvement activities by submitting the Notice of Intent to Prepare an Environmental Impact Statement (EIS) to over 1,850 interested parties that included Alaska Native tribes, holding 12 public scoping meetings in the fall of 2015, and providing a 90-day public review and comment period for the draft EIS starting in June 2019.⁷ The FERC published its Final EIS (FEIS) in March 2020 which assessed the potential environmental effects of the Project's construction and operation activities in accordance with the requirements of NEPA.

The comprehensive, 5,000-page 2020 EIS concluded that the construction and operation of the Project would result in temporary, long-term, and permanent impacts to the environment. Most impacts would not be significant or would be reduced to less than significant through the implementation of required avoidance, minimization, and mitigation measures proposed by AGDC and FERC, but some impacts would be adverse and significant. Based on their comprehensive analysis, FERC determined the Project was not inconsistent with the public interest and issued an order on May 21, 2020 granting AGDC authorization to site, construct, and operate the proposed Alaska LNG Project.

The Department of Energy (DOE), U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Coast Guard, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, and National Marine Fisheries Service participated as cooperating agencies in FERC's review of the Project and provided expert review, analysis, and input. Following issuance of the FEIS, each agency adopted the analysis and issued associated permits and approvals for the Alaska LNG Project. Permit and approval requirements include compliance with the 165 environmental conditions adopted in the FERC Order plus the requirements in Appendix X proactively agreed to by AGDC, as well as additional requirements and conditions specific to each of the permits and authorizations. AGDC has developed a comprehensive compliance assurance process to confirm compliance obligations from permits and authorizations are fully identified and addressed during construction and throughout operations.

DOE's authorization allowing the Project to export LNG produced from the Alaska LNG Project to non-Free Trade Agreement countries was issued in August of 2020. On September 21, 2020, the Sierra Club (a nonprofit environmental organization) filed a request for rehearing of the DOE export authorization. The Sierra Club argued that DOE violated NEPA by relying on an EIS that did not examine all reasonably foreseeable impacts of the proposed Project beyond the scope of FERC's jurisdiction. The DOE issued an order granting the Sierra Club's request for rehearing for the purpose of conducting two Alaska-specific environmental studies and related public process. One of the studies was for analysis of the potential environmental impacts of upstream production (i.e., impacts before gas is placed into the Project) and a second to evaluate greenhouse gas (GHG) emissions associated with the full life cycle (i.e., conduct a life cycle analysis [LCA]) of the Project including export and use of the gas in other countries.

On July 2, 2021, the DOE published its Notice of Intent in the Federal Register to prepare a Supplemental Environmental Impact Statement (SEIS) for the Alaska LNG Project.⁸ The draft SEIS was published June 24, 2022 and was released for public comments until August 15, 2022. Of the more than 200 comments on the draft SEIS, 182 (91%) were positive comments supporting the Project, including input from native corporations and organizations (Doyon, Salamatof Native Association, Arctic Slope Regional Corporation, Alaska Eskimo Whaling Commission, Nana Worley, ASRC Energy Services, etc.), residents, utilities, industry organizations, government organizations and representatives, the Governor of Alaska, the Alaska Delegation, and others. Three agencies provided technical comments.

6. The Energy Policy Act of 2005 mandated that FERC lead the siting analysis and approval of all LNG terminals proposed in the United States.

7. FERC FEIS - March 2020 - Volume 1

^{8. .}US DOE Draft Supplemental EIS - July 2022 - Summary

On January 6, 2023, the DOE issued the Final SEIS, adding over 1,200 pages of analysis to the comprehensive environmental assessment of the Project, responding to comments, and concluding:

- The Prudhoe Bay Unit and Point Thomson Unit have sufficient gas to supply the Project for the entire 30-year term of the Project;
- There is sufficient capacity at Prudhoe Bay for sequestration of carbon for the entire life of the Project, as well as opportunities to enhance oil recovery at other North Slope fields to maximize use of existing infrastructure;
- Negligible, ⁹ negligible to less-than-significant, or less-thansignificant impact assessment ratings were given for both construction and operations for most upstream resource categories because the upstream resources are existing, developed oil and gas fields;

- The results of the DOE life cycle GHG analysis demonstrated:
 - When Alaska LNG GHG emissions were compared on an energy-equivalent basis, the Alaska LNG Project had 7 to16 percent lower GHG emissions than the 'Business as Usual' Scenario 1¹⁰ (this range is with and without end use carbon capture and sequestration), supporting DOE's statement that, "In conclusion, exporting LNG from the North Slope of Alaska would not increase GHG emissions when providing the same services to society (through production of natural gas and crude oil) as the no action alternative."
 - When Alaska LNG GHG emissions were compared on a nonenergy equivalent basis, Alaska LNG showed higher GHG emissions than the No Action Alternative 2,¹¹ supporting DOE's statement that, "Exporting LNG from the North Slope ... would increase GHG emissions as compared to the No Action Alternative 2, due to the difference in LNG volumes delivered to end-users."



Feb 2014 Dec 2014 Sep 2015 Jul 2016 Apr 2017 Feb 2018 Nov 2018 Sep 2019 Jun 2020 Apr 2021 Jan 2022 Nov 2022 STATUS

9. No apparent of measurable impacts are expected, and may also be described as "none," if appropriate.

10. This scenario examined the remaining oil production potential from the Prudhoe Bay Unit without major gas sales and no Alaska LNG Project.

11. This alternative presents GHG emissions associated with the estimated production of oil from the North Slope and the associated emissions from the transport, refining, and use of oil. It accounts for only the life cycle GHG emissions directly attributed to the energy production from the North Slope that would be impacted by the Alaska LNG Project.

Rights-of-Way

Alaska LNG is primarily located on State of Alaska and Federal lands. AGDC worked closely with federal and state landowners to obtain rights-of-way for 92.5% of the Project footprint in 2020 and 2021. Federal leases were granted by the Bureau of Land Management and National Park Service, and state leases were granted by the Alaska Department of Natural Resources. In each lease, AGDC has agreed to meet requirements for minimizing impacts, maintaining the rights-of-way, and providing for restoration including revegetation.



Energy Security for Alaskans and U.S. Asian Allies

The current source of gas for heat and power generation for Southcentral Alaska (where the majority of the state population resides) is the Cook Inlet basin.

It is Alaska's oldest producing oil and gas basin, dating back to the 1950s. In 1968, Chugach Electric Association constructed a power plant at Beluga and became the first consumer of gas from the field. The Beluga River Power Plant is now the largest generator of power for consumer use in Alaska. Due to plentiful gas beyond domestic needs at that point in history, exports of LNG from the legacy Kenai LNG Plant and ammonia and fertilizer from the legacy Kenai Nitrogen Plant commenced in the late 1960s. Natural gas was first provided to Anchorage through a pipeline from the Kenai Gas Field across Turnagain Arm in 1961. In 1984, a pipeline was constructed from Beluga River Gas Field to Anchorage, opening-up additional residential and commercial heating supplies for the majority of Alaska's population.

However, Cook Inlet gas production peaked in the 1970s and has been declining since that time. Fertilizer/ammonia exports ceased in 2007, and LNG exports ceased in 2011, due to limitations on Cook Inlet gas supplies. Both legacy export facilities are being maintained in mothball status with the desire to resume operations with a secure long-term gas supply.

The major Cook Inlet gas producer, Hilcorp, recently warned utilities they cannot extend contracts for gas past current contract terms, which end in two to eleven years.¹² That warning raised significant concerns about energy security for Southcentral Alaska and the Railbelt. Railbelt utilities have since formed a working group to identify other feasible energy supply options.¹³ In addition, an application has been approved by FERC for import of LNG as a potential option for providing energy despite the likely high cost of imported LNG.¹⁴ The Alaska LNG Project is the best option for replacing the Cook Inlet natural gas supply, and will provide a long term, stable, secure energy supply at approximately half the current cost to utilities.¹⁵

Alaska's Railbelt utilities fully support the Alaska LNG Project and are ready to execute agreements to obtain a long-term supply of gas. In a joint letter from Chugach Electric Association, Golden Valley Electric Association, Inc., Homer Electric Association, Inc., Matanuska Electric Association, Inc., and the City of Seward Electrical Department, the utilities indicated, "The Alaska LNG

- 12. https://www.kbbi.org/local-news/2022-05-16/natural-gas-from-cook-inlet
- 13. <u>https://www.chugachelectric.com/media/press-releases/2022/5/9/alaska-railbelt-</u> utilities-and-state-of-alaska-join-forces-to-address-in-state-energy-security
- 14. https://www.elkeng.com/u-s-ferc-approves-marathons-proposed-alaska-lng_ import-project/
- 15. <u>http://agdc.us/wp-content/uploads/2022/01/WM_Alaska-LNG-Competitiveness-Analysis_FINAL_20JAN2022.pdf</u>
- 16. Letter to Senator Sullivan in support of AGDC September 23, 2022

Project remains a focal point for Alaska to ensure a reliable, long-term, reasonably priced source of energy." ¹⁶

Further, on the global stage, Russia's invasion of Ukraine has meant Gulf Coast LNG is being diverted to Europe to replace Russian pipeline gas that is no longer delivered or desired. To replace diverted gas, Asian countries have had to pay higher prices for gas and have increased the use of coal for power generation. Alaska's unique location only seven shipping days from Asia means it will provide reasonable cost and stable energy for these countries.

" The cost of fuel oil in Alaska has risen almost twofold in the past year, and the Southcentral area of our state is running out of a dependable supply of gas. High energy costs hit hardest on communities and individuals who are at lower income levels or depend on subsistence and public support. The Alaska LNG Project will provide Alaska's residential consumers with long-term, affordable gas supply for power generation, home heating, and other needs. We critically need the Alaska LNG Project to deliver clean-burning and reasonably priced energy to maintain our capability to live and work in the state."

35-year Alaska resident, from the DOE's Draft SEIS comments



Greenhouse Gas Benefits

In 2021 (prior to the DOE SEIS), AGDC commissioned a technical study which analyzed GHG emissions across the entire life cycle of the Alaska LNG Project. This LCA analyzed GHG emissions from initial upstream extraction on the North Slope through gas treatment, main pipeline transportation, liquefaction, marine



Energy Technology Laboratory. Comparisons were then made to similar projects in the U.S. Gulf Coast and, due to the goals of commercialization in international markets, to Asian energy equivalents (e.g., Asian coal).

The conclusions of the LCA study were consistent with DOE's subsequent SEIS, noting the lower carbon intensity of Alaska LNG in comparison to coal and other LNG projects. The LCA concluded that the Alaska LNG Project emits about 50% less GHGs, shown as carbon dioxide equivalents (CO_2 -e), than the GHGs generated by a representative Asian regional coal supply chain. This translates to a reduction of more than 77 million metric tons of CO_2 -e annually due to use of Alaska LNG compared to Asian coal derived power.¹⁷ Use of EPA's GHG equivalency calculator¹⁸ provides an estimate of the impact of that level of global carbon reduction, as identified in the figure below.



Coal is currently the largest source of energy for many Asian countries. Many of these countries have set net-zero GHG emissions goals and are trying to move away from coal fuel to meet those goals. For example, Japan, South Korea, and Singapore have set 2050 net-zero GHG emissions targets; China has set a 2060 net-zero GHG emission goal; Thailand aims to reach netzero by 2065; and India plans to reach net-zero by 2070.¹⁹

The comparison of GHG emissions from coal versus LNG power production is important, as switching from coal to gas is a critical step in reducing global GHG emissions. The International Energy Agency found that in general, coal-to-gas switching reduces GHG emissions by about 50% when providing electricity and by 33% when providing heat.²⁰ Yet, despite lofty carbon zero goals, last year (2022) was one of the largest coal-use years ever, with record coal output from China, India, and Indonesia.²¹ European nations increased coal consumption for the second year in a row, and the U.S. used coal for about 22% of electric power generation. Carbon dioxide



coal fueled power generation will help Asian countries meet their energy needs while decreasing global GHG emissions.

Further, when compared to other LNG export supply chains, the Alaska LNG Project had a lower overall GHG intensity primarily due to lower upstream emissions, pipeline transmission, and ocean tanker transportation components.²³

- Lower Upstream Emissions: Natural gas produced on the North Slope shares extraction and gathering and boosting emissions with that of the associated oil production.
- Pipeline Transmission: Carbon sequestration is proposed to occur at the point of production (North Slope), thereby lowering the opportunity for fugitive losses during pipeline transmission. Additionally, the Alaska LNG Project's mainline pipeline is one 807-mile single pipeline with only eight compressor stations, resulting in lower fugitive and compression combustion emissions compared to other projects with multiple pipelines and more combined compressor stations.
- **Ocean Tanker Transportation:** Shipping routes from Alaska to Asian markets are significantly shorter than those from the U.S. Gulf Coast.
- 17. Alaska LNG GHG LCA October 2021
- 18. EPA's GHG Equivalencies Calculator
- 19. https://climateactiontracker.org/countries/
- 20. https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions
- 21. https://www.iea.org/reports/coal-2022/executive-summary
- https://www.progressivepolicy.org/publication/the-climate-case-for-expandingus-natural-gas-exports/
- 23. <u>Alaska LNG GHG LCA October 2021</u>

Use of Existing Infrastructure and Corridors



The Alaska LNG Project is designed to maximize use of existing infrastructure on the North Slope, and to maximize use of existing transportation infrastructure corridors. As noted previously, the Prudhoe Bay and Point Thomson Units that will supply the gas for the full life of the Project are existing and already developed oil and gas fields. Further, these units on the North Slope have an existing network of gravel pads, access roads, and infrastructure (airports, facilities, camps, etc.) that will be used for the Alaska LNG Project.

The Alaska LNG Project mainline pipeline will parallel the Trans-Alaska Pipeline System for almost half of its length (to about milepost 400) at just south of Livengood, then will route south to parallel the Parks Highway and go underwater to cross Cook Inlet.

The use of existing infrastructure and transportation corridors was a key component of Project approvals by FERC as well as the Corps of Engineers and other regulatory agencies.

Stakeholder Engagement



As a public corporation created by the Alaska State Legislature to maximize the benefit of Alaska's vast natural gas resources for Alaskans, there has been extensive public involvement and transparency as the Project has been developed. Over 130 public or open house meetings/events have been held, and AGDC Board meetings (over 80 to date) are public and provide an opportunity for comments.

In addition, the regulatory process has included public comment periods on draft permits and authorizations, and AGDC continues to meet with villages, tribes, native corporations, state/federal legislators, and others on an ongoing basis. Alaskans have overwhelmingly supported the Alaska LNG Project for its environmental and economic benefits, as well as due to the high level of transparency and stakeholder engagement in the development and approval process. For example, the most recent draft agency document (the DOE draft SEIS) garnered over 200 comments, 182 of which were positive and included broad support from Alaska residents, Alaska native corporations and organizations, Alaska utilities (Railbelt Utilities, Interior Gas Utility), Alaska industry and government organizations (Alaska Works Partnership, Alaska District Council of Laborers, Resource Development Corporation, Alaska Oil and Gas Association, etc.), and others.

Improved Air Quality in Interior Alaska

The Alaska LNG Project would improve air quality and decrease air quality-related health hazards in the state, especially in Interior Alaska. Fairbanks, in the central Interior region of Alaska, does not meet EPA air quality standards and the EPA has determined it is a serious non-attainment area for particulate matter (PM 2.5) with pollution levels high enough to be a human health concern. The area currently lacks a directsource gas transmission pipeline and depends instead on coal for generation of electricity, along with wood and oil for heat and some limited availability of gas transported by tanker/road from the Southcentral area. Recently, EPA rejected portions of Alaska's State Implementation Plan that was put forward to help reduce PM2.5 emissions in Fairbanks, creating significant concern in the community about how to meet air quality goals given the lack of gas as an alternative to existing coal and wood/ oil use.26

A number of comments from Alaskan residents on the DOE Draft SEIS reinforced the Interior Alaska air quality benefits of the Project. Several examples are listed to the right:

- " The Alaska LNG Project would dramatically improve air quality in the state, especially in the Fairbanks, Alaska area. Currently, that area has serious air quality problems and does not meet national air quality standards. Increased availability of clean-burning, affordable natural gas would limit emissions from the main sources of energy in the area: coal, wood, and oil. By improving air quality, Alaska LNG Project would improve the lives of Interior Alaska residents."
- " The EPA has determined that Fairbanks, Alaska has some of the worst air quality in the nation. The Alaska LNG Project would improve air quality in the state, especially in Fairbanks, Alaska, and decrease air quality health hazards. Without the Project, we will not have affordable, reliable energy, and the air quality in Alaska's Interior region will continue to be impacted from the current, higher emission sources of energy: coal, wood, and oil."

By creating a long-term, reliable, and low-cost supply of cleanburning natural gas for Fairbanks via a future interconnection from the main Project pipeline, human health and air quality would be significantly improved in the region.

Alaska Clean Ammonia Opportunity

AGDC currently has a Memorandum of Understanding (MOU) with a Japanese-led team for evaluating the opportunity to use gas from the Alaska LNG Project for production of carbon-free ammonia for export. The carbon dioxide generated from this ammonia manufacturing process will be captured and sequestered in secure underground geologic formations, and Alaska's Cook Inlet basin has been identified by scientists as having world-class carbon sequestration potential. This assessment will further define Cook Inlet's sequestration potential and the economics for producing clean ammonia alongside LNG in Alaska.

Ammonia is central to the zero-carbon strategies of nations across the Pacific rim. In October 2020, Japan declared that it aims to achieve carbon neutrality by 2050 and developed the "Green Growth Strategy" that outlines 14 growth sectors including ammonia-fired power generation. Japan plans to grow ammonia use in energy production to 3 million tons per year by 2030 and 20 million tons in 2050, up from zero today.²⁵ Alaska is only seven shipping days from Japan (6,000 miles shorter than from the U.S. Gulf Coast) with no canals or congested shipping lanes, thereby reducing costs and shipping emissions.²⁶ Alaska is uniquely able to offer long-term LNG supply security while also providing the option to transition to low-carbon fuels utilizing the same infrastructure. This provides Alaska LNG Project customers the flexibility to transition from LNG in response to the market and technology.

- 24. https://www.epa.gov/ak/fairbanks-air-quality-plan
- 25. METI Hydrogen/Ammonia Fuel
- 26. https://agdc.us/wp-content/uploads/2022/10/2022-10-04-Ammonia-Assessment-Release.pdf

Economic Benefits

The Alaska LNG Project has been termed 'transformative' for Alaska because of its job creation, long term state revenue generation, and stable low-cost energy supply.²⁷ Each of these issues is discussed below.

JOBS

As outlined in the socioeconomic portion of the Alaska LNG Project 2020 EIS, the eight-year construction phase of the Project is expected to create up to 35,000 direct jobs with an average of 54% filled by Alaska residents. Additionally, there are approximately 1,000 direct operational jobs expected that would create a permanent increase in the economic activity around the North Slope Borough (ACC plant location) and the Kenai Peninsula (LNG facility location).²⁸

STATE REVENUE

In addition to workforce opportunities, the Project will bring about both social and economic benefits for Alaskans beyond those directly connected to the pipeline through the generation of its several revenue streams, including royalties. Royalties gained from the Project will be distributed into government programs including the Permanent Fund (approximate 12.5% allocation) to support the funding of annual dividend payments for Alaska residents and Alaska Affordable Energy Fund (approximate 20% allocation) to support access to energy programs in communities without direct access to gas from the Alaska LNG Project.²⁹

" Alaska receives a majority of its revenue from oil taxes and royalties. In addition, direct oil and gas jobs, and the indirect support jobs, drives employment income in Alaska's private sector. Currently, most of Alaska's revenue is from oil (not gas) and Alaska oil production is declining. In 1998, more than 4 times the amount of oil went through the Trans Alaska Pipeline System (TAPs) than in 2020. At some point, throughput may be low enough that TAPS cannot operate. It is critical to move forward with the Alaska LNG Project now to use existing oil Infrastructure while it is still in place and functional, and to replace the decline in oil production and revenue that forms the basis of the state economy."

Quote from the DOE Draft SEIS public comments

DECREASED HOUSEHOLD ENERGY COSTS

In addition to providing jobs and state revenue from export, the Project will also provide reliable, reasonably priced fuel for in-state users and projects. Along the main gas pipeline, interconnection points for existing gas distribution systems have been proposed to allow for future in-state deliveries of natural gas, providing Alaskan residential consumers with a long-term affordable gas supply for power generation, heating, and other needs. Additional interconnections can be made throughout the length of the pipeline where it is economic. AGDC is working with the Alaska State Legislature, local governments, utilities, and the public to identify the most appropriate locations for these in-state gas interconnections. Approximately 500 Mcf per day of gas will be available for in-state use, nearly double the current in-state use rate.

Communities connected to the pipeline, which are likely to include but not be limited to Fairbanks, Anchorage/Matanuska-Susitna (Mat-Su) Borough, and Kenai/Nikiski, will have access to energy at a lower cost than alternative fuel sources. This is important because Alaska's per capita energy consumption is the fourth highest in the nation due to long and harsh winters, highly distributed populations, and low total population size. ³⁰ Natural gas from the mainline pipeline will cost approximately \$4-5 per MMBtu for utilities, a rate much lower than alternative sources such as a diesel/fuel oil equivalent at approximately \$30 per MMBtu, ³¹ or gas from Cook Inlet that has averaged approximately \$8.40 per MMBtu. ^{32, 33} Offering an alternative and lower cost energy source to Alaskans will result in significant savings for Alaskan households. To quantify that savings:

- The current total utility demand for natural gas in Southcentral Alaska is about 60 Bcf per year.³⁴
- If the Project saved \$4 per MMBtu/Mcf, that would equate to annual savings of \$240 million in total natural gas costs.
- With a combined population of Anchorage, the Mat-Su, and Kenai totaling approximately 460,000 residents, energy savings per capita could amount to about \$500 per person per year.

- 28. FERC FEIS March 2020 Volume 2
- 29. Alaska Statute 37.05.610
- 30. <u>https://www.eia.gov/state/?sid=AK</u>
- Approximate value when diesel/fuel oil cost an estimated \$4/gallon.
 According to Enstar Natural Gas Company and the Energy Information
- Administration.
- 33. The stated energy costs reflect the anticipated amount to be charged directly to the utility company and are not necessarily reflective of customer rates.
- 34. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SAK_a.htm

^{27.} Public Board meeting comments, Aaron Schutt, President and CEO of Doyon, Limited, a Alaska Native Regional Corporation, Fairbanks, Alaska, June 16, 2022



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