

**ALASKA STATE LEGISLATURE  
HOUSE RESOURCES STANDING COMMITTEE**

January 24, 2018

1:01 p.m.

**MEMBERS PRESENT**

Representative Andy Josephson, Co-Chair  
Representative Geran Tarr, Co-Chair  
Representative Harriet Drummond  
Representative Justin Parish  
Representative Chris Birch  
Representative DeLena Johnson  
Representative George Rauscher  
Representative David Talerico  
Representative Mike Chenault (alternate)  
Representative Chris Tuck (alternate)

**MEMBERS ABSENT**

All members present

**OTHER LEGISLATORS PRESENT**

Representative Gary Knopp

**COMMITTEE CALENDAR**

PRESENTATION: ALASKA LNG PROJECT UPDATE BY THE ALASKA GASLINE  
DEVELOPMENT CORPORATION

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

KEITH MEYER, President  
Alaska Gasline Development Corporation  
Department of Commerce, Community & Economic Development  
Anchorage, Alaska

**POSITION STATEMENT:** Provided a PowerPoint presentation  
entitled, "Alaska LNG" dated 1/24/18, and answered questions.

LIEZA WILCOX, Vice President Commercial and Economics  
Alaska Gasline Development Corporation  
Department of Commerce, Community & Economic Development  
Anchorage, Alaska

**POSITION STATEMENT:** Participated in a PowerPoint presentation entitled, "Alaska LNG" dated 1/24/18, and answered questions.

FRANK RICHARDS PE, Senior Vice President Project Management  
Alaska Gasline Development Corporation  
Department of Commerce, Community & Economic Development  
Anchorage, Alaska

**POSITION STATEMENT:** Participated in a PowerPoint presentation entitled, "Alaska LNG" dated 1/24/18, and answered questions.

#### **ACTION NARRATIVE**

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**CO-CHAIR ANDY JOSEPHSON** called the House Resources Standing Committee meeting to order at 1:01 p.m. Representatives Josephson, Birch, Parish, Tarr, and Drummond were present at the call to order. Representatives Tuck (alternate), Rauscher, Talerico, Chenault (alternate), and Johnson arrived as the meeting was in progress. Also present was Representative Knopp.

#### **PRESENTATION: Alaska LNG Project Update by the Alaska Gasline Development Corporation**

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CO-CHAIR JOSEPHSON announced that the only order of business would be an update on the Alaska LNG project by the Alaska Gasline Development Corporation.

CO-CHAIR TARR, as an aside, provided information to the committee on a different topic related to a presentation at the prior meeting on 1/22/18.

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KEITH MEYER, President, Alaska Gasline Development Corporation (AGDC), Department of Commerce, Community & Economic Development, provided a PowerPoint presentation entitled, "Alaska LNG" dated 1/24/18, and answered questions. He directed attention to slide 3, which was a capital budget variance analysis dated December 2017, and pointed out the Alaska LNG project is significantly underspending for 2017, after an

austerity program was implemented to extend existing funding and thereby operate within the state's allotment. Ideally, the project will attract third-party investment so that the state's additional investment would be optional, but not necessary. Slide 4 illustrated AGDC's fund balance and a forecast for January through June of fiscal year 2018 (FY 18), showing an expenditure of about \$67 million and a forecasted fund balance of about \$41 million to carry over through FY 19. Slide 5 illustrated AGDC's FY 19 operating budget, its request to receive program receipt authority, and its request to transfer [In-state Natural Gas Pipeline Fund (1229-ISP)] funds from the Alaska Stand Alone Pipeline (ASAP) project to the Alaska LNG fund.

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REPRESENTATIVE JOHNSON asked for the purpose of the requested program receipt authority.

MR. MEYER explained AGDC seeks authority to receive funds from third parties for the continuation of the project; for example, investments from third-party investors to pay for additional development, front-end engineering and design (FEED) work, and other costs through construction of the project. In response to Representative Johnson's question as to who might be involved, he opined the project would attract infrastructure investors such as pipeline companies, pension funds, insurance companies and/or foreign customers, but the project would not meet the investment hurdle rate of an oil company.

REPRESENTATIVE JOHNSON surmised China Petrochemical Corporation (Sinopec) could be a third-party investor.

MR. MEYER said yes.

REPRESENTATIVE PARISH asked for information on the aforementioned 1229-ISP fund.

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FRANK RICHARDS PE, Senior Vice President Project Management, Alaska Gasline Development Corporation, Department of Commerce, Community & Economic Development, informed the committee the ASAP project has advanced using the 1229 [In-state Natural Gas Pipeline Fund]. [ASAP] has moved through the draft supplemental environmental impact statement and public review, and is expected to reach a record of decision (ROD) in June [2018].

REPRESENTATIVE PARISH asked when \$12 million in funds would transfer to AGDC.

MR. RICHARDS said late in FY 18, after the ROD is obtained, AGDC seeks to transfer remaining ASAP funds to Alaska LNG.

REPRESENTATIVE PARISH returned attention to the program receipt authority and surmised AGDC expects all the investments would come from "non-Alaska state government sources."

MR. MEYER said no. In fact, the project structure requires AGDC to make offerings available to Alaskans, Alaska municipalities, and regional corporations.

REPRESENTATIVE PARISH restated his question as to whether offerings would be to state government agencies.

MR. MEYER said AGDC would not exclude any entities.

MR. RICHARDS clarified the request for receipt authority is related to receiving outside funds, and there is no request for additional appropriations from the State of Alaska in AGDC's FY 19 budget.

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REPRESENTATIVE BIRCH asked whether the program receipt authority would allow AGDC to accept funds from the Alaska Public Employees Retirement System (PERS) pension fund as a prospective investor.

MR. MEYER said AGDC has not had discussions with PERS in regard to its pension fund; however, the project is a perfect investment for pension funds and insurance companies.

REPRESENTATIVE BIRCH stated his great concern regarding potential investment by [PERS] or by the Alaska Permanent Fund Corporation.

REPRESENTATIVE JOHNSON asked whether program receipt authority allows investment into AGDC.

MR. MEYER indicated not at this time. He explained that a project company would hold the assets, and investors would participate in the project company, but would "not own a piece of AGDC"; currently envisioning that AGDC would remain 100

percent state-owned. Slide 6 illustrated future funding needs and desires. He said AGDC's spend profile includes Class 3 Work leading to lump sum turnkey (LSTK) FEED and a 2024-2025 in service date. Mr. Meyer said AGDC intends to complete FEED and future development work, but stop short of long-lead procurement.

CO-CHAIR TARR asked how AGDC was able to respond to the Federal Energy Regulatory Commission (FERC) information requests in an efficient manner.

MR. MEYER stated AGDC's response is an example of working well - with a minimal use of contractors - under its austerity program; AGDC answered eight hundred and one questions during six months of work.

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MR. RICHARDS, in further response, pointed out AGDC sought to "de-risk the project" by addressing regulatory issues. [AGDC] applied to FERC in April and received requests for specific information; a team at AGDC that has been working with FERC on ASAP provided answers to FERC and FERC has begun the National Environmental Policy Act of 1969 (NEPA) process.

MR. MEYER further explained AGDC took over an existing [FERC] filing, which is now very complete with minimal use of outside contractors.

REPRESENTATIVE DRUMMOND surmised the receipt authority is needed to accept investments in the amount of \$645 million to support the cost of the Class 3 Work.

MR. MEYER said yes, and receipt authority is also needed for construction work.

REPRESENTATIVE DRUMMOND further understood the receipt authority is not limited to the costs that are shown on [slide 6].

MR. MEYER said the receipt authority is needed to complete the project.

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MR. MEYER continued to slide 8 and explained the Alaska LNG pipeline capacity exceeds that of the proposed LNG plant by approximately 500 million cubic feet per day (MMcf/d); this is

the amount reserved for in-state use and is more than twice the current use of gas by Alaskans, which should allay fears about the project exporting all the gas. The gas price is estimated at between \$5.00-\$6.00 dollars per million British thermal units (Btus), which would be a savings in the Matanuska-Susitna (Mat-Su) and Fairbanks regions; however, less is known about the distribution of LNG to remote and coastal communities in Alaska.

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REPRESENTATIVE PARISH returned attention to slide 8 and asked whether the \$1,000 average energy savings shown on the slide relates to all Alaskan households or for those on the Railbelt.

MR. MEYER answered Railbelt [household], with an emphasis on the Mat-Su area.

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REPRESENTATIVE PARISH suggested there could be a program similar to the Power Cost Equalization (PCE) Endowment Fund to support rural communities.

MR. RICHARDS recalled AGDC was created by the legislature to work on an in-state pipeline project to benefit Fairbanks and Southcentral Alaska. Therefore, Senate Bill 138 [passed in the Twenty-Eighth Alaska State Legislature] created a rural energy fund that will be supported by 20 percent of the [state] revenue from the Alaska LNG project to secure funds directed to rural communities for energy.

REPRESENTATIVE PARISH asked that future presentations make clear whether references are to [all] Alaska households or to Mat-Su and Fairbanks households.

MR. RICHARDS and Mr. Meyer nodded yes.

CO-CHAIR TARR asked whether Mr. Meyer's reference to small-scale [rural] LNG distribution would be of a refined product.

MR. MEYER said yes, the product would be LNG. He clarified small scale LNG distribution may be in a tank, such as an ISO container that could be shipped by barge, moved by truck, or transported as cargo by the Alaska Railroad.

REPRESENTATIVE TUCK asked how the expected price of natural gas from Alaska LNG would compare to the price of natural gas from Cook Inlet.

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LIEZA WILCOX, Vice President Commercial and Economics, Alaska Gasline Development Corporation, Department of Commerce, Community & Economic Development, explained the estimate on slide 8 is a broad calculation for current gas-consuming households; mid-single digit pricing was compared to current gas contracts for Cook Inlet and the total was divided by the total number of households. Savings for households that are not currently served by natural gas would be affected by the cost of delivery and conversions, but may still be higher.

MR. MEYER continued to slide 9 which compared the structure of the project under the previous producer-led consortium [of BP, ConocoPhillips and ExxonMobil] with the new AGDC structure, pointing out the new 75 percent debt/25 percent equity structure defines that AGDC participation is 100 percent of ownership; however, some of the ownership would be sold to raise the equity of \$11 billion. Slide 10 illustrated engineering, procurement, and construction costs for Alaska LNG of \$27.9 billion, and Mr. Meyer said over \$600 million was spent in engineering, optimization, and project management to develop the construction and capital cost estimates. Slide 11 illustrated owner's costs not included in the construction cost estimate such as the cost of the Project Management Team, which is \$3.4 billion. Additional owner's costs include FEED, insurance, operations, and training for a total in owner's costs of \$6.2 billion. Estimates of overrun risks and contingencies were estimated through probabilistic simulations of "what could go wrong" and total \$9.3 billion (slide 12). Slide 13 illustrated the total project cost of \$43.4 billion; Mr. Meyer pointed out contingencies are included in the total, and said he is "reasonably comfortable" with the total cost.

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CO-CHAIR JOSEPHSON recalled the previous project estimate in 2014 was \$45-\$60 billion and surmised contingencies were included in the original framework.

MR. MEYER said yes. He characterized the framework as a reasonable approach that incorporates contingencies and project management. In further response to Co-Chair Josephson, he

affirmed the original framework would have also included the components of contingencies and project management.

REPRESENTATIVE RAUSCHER asked for examples of contingencies.

MR. MEYER stated the project could be delayed due to materials shortages or a labor strike.

REPRESENTATIVE TUCK asked whether the percentage of total owner's cost to construction cost is typical and standard.

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MR. RICHARDS advised the Department of Transportation & Public Facilities (DOTPF) allows a range from 16 percent to 22 percent for construction-related oversight, which is similar to the Alaska LNG [owner's cost] estimate of nearly 25 percent of the base cost; however, the Alaska LNG estimate includes the additional factors of training, insurance, and FEED that are not included [in owner's cost estimates] by DOTPF.

MR. MEYER directed attention to slide 14 and advised AGDC engaged Fluor [Corporation] that identified a potential net \$2 billion in savings related to optimization and strategic sourcing; further, AGDC received an informal response from a major contractor that it would perform project management for significantly less than the estimate of \$3.4 billion. These potential savings are not reflected in the \$43.4 billion construction cost estimate. Slide 15 illustrated the project's 75 percent debt/25 percent equity structure of \$32 billion and \$11 billion respectively. Operations and maintenance (O&M) costs were shown on slide 16.

REPRESENTATIVE JOHNSON returned attention to slide 14 and asked for the amount of the "significantly less" estimate for project management.

MR. MEYER said AGDC did not have a formal number. In further response to Representative Johnson, he said he included this information because he feels the cost of project management could be less than \$3.4 billion.

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CO-CHAIR TARR reminded the committee the spending on O&M shown on slide 16 would largely be dollars that would stay in Alaska and provide jobs for Alaskans.

MR. MEYER agreed.

REPRESENTATIVE PARISH inquired as to the contractual and legal commitments to [local hire].

MR. MEYER explained slide 16 describes O&M over the life of the project, not during construction. Work done over the life of the project is suited to those who live locally; in fact, generations would be employed on the project, and it would provide an attractive career choice.

REPRESENTATIVE PARISH restated his question as to how this project would be fundamentally different than other resource extraction businesses that typically have approximately 30 percent of their workforce staffed by outside labor.

MR. MEYER advised a pipeline and LNG facility provide more normal-day work, except at the gas treatment plant [on the North Slope]. For example, at the LNG plant in Nikiski and at control centers along the pipeline, workers would drive to work and home, unlike the usual North Slope work schedules of two weeks on and two weeks off.

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REPRESENTATIVE TUCK advised one way to ensure Alaskans have first access to jobs is through a project labor agreement; in addition, apprenticeship programs often require one-year residency to ensure Alaskans receive training first, and which could be part of a project labor agreement (PLA).

MR. MEYER urged for the state to start training pipeline workers as soon as possible; training for all the prospective work is available now in Alaska.

CO-CHAIR TARR recalled during the State of the State Address the governor mentioned a PLA as a component of Alaska LNG.

MR. MEYER affirmed the project would have a PLA. Slide 17 was a projection of the construction costs in phases beginning in 2019, with and without contingency: Train 1 would be in service by the third quarter (Q3) of 2024, Train 2 would be in service by Q3 of 2025, and Train 3 would be in service by Q3 2026. Looking at debt funding, the debt term would be about 20 years at 5 percent thus the annual debt service would be \$3.5 billion. A graph illustrated \$3.5 billion payments for debt service

during the life of the loan (slide 18). He pointed out in this debt for capacity proposal, customers help secure the debt and the cost and term of the debt would pass through to customers. Slide 19 described the state's equity investment of \$11 billion on the full project; owners receive a return on investment through the sale of system capacity after debt service and O&M expenses; Alaska benefits from its 25 percent excess capacity; the return on investment would depend primarily on the sale price of the LNG and the cost of the debt; under current assumptions, the return on equity would be 8 percent during the initial term, 10 percent during the life of the project, and 15 percent for the state if it is the investor.

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REPRESENTATIVE PARISH asked what level of state investment is envisioned.

MR. MEYER restated the state's equity would be \$11 billion.

REPRESENTATIVE TUCK asked for the effect on consumer costs after paying off the debt service, such as a possible reduction in consumer costs.

MR. MEYER explained after the debt is repaid, the contract expires, and all the capacity returns to the owners. The state can sell the capacity after the system is paid for, which results in a significant uplift in revenue. In further response, he clarified that under the debt for capacity arrangement, the debtor pays the debt by buying system capacity; that is, the customer pays for the right to move the LNG through the system as does a pipeline company.

REPRESENTATIVE PARISH posited a scenario in which cheap, abundant renewable energy dominates globally and the price of oil crashes; in this case, what would be the state's position in regard to its debt.

MR. MEYER remarked:

The probability of hydrocarbon usage ... going away completely in our lifetime, and [our] children's, is probably low. The probability that the world embraces a cleaner hydrocarbon molecule, which is the methane molecule ... that's very high. So, we're going to start to see heavier molecules - coal, heavy oil, that type of thing - be in less demand in favor of that

lighter molecule, methane. And we see that in a big way in China, which currently buys half the world's coal, they're shifting to, to natural gas.

MR. MEYER continued to explain his expectation is demand for gas will go up over time relative to other hydrocarbons. He acknowledged in certain areas wind, solar, and battery technology energy are effective; however, in other areas natural gas will be in demand for a long time. Alaska is well-positioned to supply Asia, the largest LNG market in the world, and there will be increases in methane use in Asia to replace coal. Further, oil consuming industries such as the marine industry are shifting to natural gas resulting in demand for gas for fuel for high-horsepower engines, for home heating, and for electric generation. To the question of what would happen to the state, he opined during the debt period of the project, if a customer does not take the gas, the system and 75 percent of O&M are already paid; after the system is paid for, the pipeline could link methane to world markets.

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REPRESENTATIVE PARISH recalled the state twice did not anticipate a downturn in oil prices. If, for any reason, the price of LNG drops, he asked, "How exposed are we as a state?"

MR. MEYER said, "very little." The revenue and return on the Trans-Alaska Pipeline System (TAPS) has been steady even though the state does not own TAPS; in this project AGDC is building the pipeline and the LNG facility thus is insulated from commodity price fluctuation. The project is attractive to risk-adverse investors. With certain prices the gas price may fluctuate; however, most of the project's customers are large gas or electric utilities which seek a stable price that is not linked to oil price. Alaska can offer a natural gas supply not linked to the Henry Hub price index.

CO-CHAIR TARR returned attention to slide 18 and asked for the amount of the total debt.

MR. MEYER said \$32 billion.

CO-CHAIR TARR returned attention to slide 19 and asked for clarification on the graph depicting the Annual Construction Spend - Equity Capital.

MR. MEYER clarified the \$11 billion [debt] lines up with the debt payment per year and the total construction spend for each year. In further response to Co-Chair Tarr, he confirmed the initial contracts for service are for 20 years and the debt term is 20 years, although AGDC could extend up to 30 years. Slide 20 showed the project must balance three factors: market price for customers, the financial market, and an acceptable netback price to the resource owner - the state. To explain how AGDC determined the expected market price of [\$8.00/MMBtu], he first noted one of the sources for the project's competition is Texas/Louisiana with gas selling at Henry Hub index of approximately \$3.00, plus \$5.00 for liquefaction, fuel for liquefaction, shipping, and [the expense of] the Panama Canal. He advised a product that can beat a competitor's price of Henry Hub plus \$5.00, can be marketed in Asia (slide 21). The shipping cost [for Alaska LNG gas to Asia] would be \$0.80 thus the gas must reach the plant at Nikiski at a cost of \$7.20, which can be accomplished by the Alaska LNG system (slide 22). He broke down the costs of the Alaska LNG system as follows: O&M and payment in lieu of taxes (PILT), \$1.4 billion annually or \$1.45/MMBtu; \$3.5 billion/year debt service, \$3.60/MMBtu; equity \$1.15/MMBtu. The total cost for the infrastructure system to deliver gas from the North Slope, liquify, and export from Nikiski would be \$6.20/MMBtu (slide 23). Slide 24 illustrated the market price and all the aforementioned costs, resulting in \$1.00 netback for the gas supply; he concluded the required quantity of gas would be approximately 1 trillion cubic feet per year which would garner \$1 billion per year to suppliers. Slide 25 illustrated the equal costs of the system and the cost of gas delivered to Nikiski: \$7.20 MMBtu.

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MR. MEYER continued to slide 26, which was the investment profile for the state's investment of \$11 billion during the three main phases of the project: construction; operation while repaying debt; operation after debt. He noted after the debt is paid, income increases to approximately \$6 billion. Further information on benefits to the state without investment - \$11 billion is invested by outside sources - were provided on slide 27. Mr. Meyer stressed even without investment, the state's economy would receive \$250 million to \$500 million for its gas supply, \$450 million to \$500 million from PILT, and \$950 million from O&M.

REPRESENTATIVE TUCK questioned whether said income is total economic gain or state revenue.

MR. MEYER said, "... not so much revenue, but into the state's economy...." He then described the November 9, 2017 Joint Development Agreement signed in China (slide 28). During the [trade mission] AGDC proposed to the top LNG consuming nations in Asia, and to the Asian governments, that money for [construction] debt would be repaid in capacity in the project. Further, 25 percent of the cost of the project would be funded by the owners for 25 percent of capacity and AGDC retains 100 percent of ownership, with the potential for partial ownership investment (slide 29).

CO-CHAIR TARR asked whether "in-country bank provides the debt for 75 percent of the capital cost" would be a lump sum payment or annual payments.

MR. MEYER said the funding would align with the construction schedule draw during the construction period. Slides 30 and 31 were illustrations of the proposed transaction. He further explained the loan for 75 percent of the capital cost would be repaid by "giving capacity to a buyer, and the buyer is going to make the debt service payments to the lender and, therefore, the term and the pricing of that is somewhat insulated from us, and even the currency. And so, our obligation is to provide the capacity, the buyer pays the lender, and that happens for the term of the loan. [The] buyer also has to pay 75 percent of the O&M, for the life [of the loan], and has to buy the gas supply." He turned attention to equity funding and said AGDC is currently focused on acquiring funding for 25 percent equity in the amount of \$11 billion (slide 32). The return on this investment would be from the sale of system capacity not dedicated to debt service or to debt for capacity customers, and is dependent on the market price of the gas (slide 33).

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CO-CHAIR TARR asked whether the gas would be sold on the spot market.

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MR. MEYER said the market price could be affected by the spot markets or shorter terms; the spot market has a high degree of volatility due to fluctuations in demand. He said the bottom line is that the project expects a rate of return based on 100 percent equity, with the ability to leverage the cost by issuing bonds or obtaining bank financing (slide 34). Slide 35

illustrated the project's financing structure, which he characterized as "pretty traditional, pretty standard, and that's where we need that receipt authority, that program receipt [authority]" (slide 35).

CO-CHAIR TARR recalled AGDC has the authority to form subsidiaries and asked whether AGDC subsidiaries would perform specific pieces of the project.

MR. MEYER agreed state involvement in the project could be through AGDC or subsidiaries such as a non-profit subsidiary that would be established for in-state sales as required by Senate Bill 138; however, the Alaska LNG project company would be a for-profit entity.

REPRESENTATIVE DRUMMOND surmised from Mr. Meyer's earlier statement China is already in need of gas.

MR. MEYER said yes. China has surpassed Korea as the number two buyer in the world for LNG, behind Japan.

REPRESENTATIVE TUCK returned attention to slide 30 and asked whether AGDC is concerned about the lender/buyer relationship.

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MR. MEYER acknowledged AGDC must ensure the project is fair and balanced and that it can clear financial markets from what would probably be a consortium of banks. The purchase agreement must satisfy lending agreements, AGDC, the equity owners, and the gas suppliers without too much risk for parties. Currently, China has a lot of U.S. dollars, and the governments of the U.S. and China have agreed providing LNG to China would be beneficial. He implied protections are provided by the review and approval of the project by the Committee on Foreign Investment in the United States (CFIUS); subsequently, AGDC "will have about \$32 billion from China, we'll bury it in the ground in Alaska - in the form of pipes and LNG facilities - and we'll be a long-term supplier for them ...."

REPRESENTATIVE PARISH asked what the state should be wary of [regarding negotiations].

MR. MEYER stated an unbalanced deal with too much risk on the state would be unacceptable, for example, an agreement with significant majority ownership. He assured the committee the

negotiations will be high profile and transparent with many opportunities for scrutiny.

MS. WILCOX provided a commercial update of the project. She began her presentation, recalling the committee requested further information on the various sources of data for the LNG supply-demand forecast that was previously provided. Slide 38 was an updated chart of the long-term contracts for Japan, Korea, mainland China, and Taiwan, all of which have expiring long-term contracts. Ms. Wilcox advised Japan is reducing the number of its long-term contracts; however, China is increasing long-term contracts, and now has 19 LNG terminals and more are planned. China LNG imports have increased by 46 percent this year because its domestic natural gas production is not keeping up with demand. She stressed China has a track record of growth, and more growth is forecast by the industry. In China, natural gas provides 7-8 percent of its energy and coal provides 65 percent. She noted the president of China has expressed China's growing interest in environmental matters and seeks to turn China's focus from coal to natural gas.

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MS. WILCOX explained slide 38 also shows a diverging range of demand for the abovementioned Asia markets, and how supply from the Alaska LNG project fits in the supply-demand forecast that was provided by three consultants. She continued to Alaska LNG project competitiveness as follows (slide 39):

- LNG market is growing more liquid but long-term contracts are beneficial to sellers for financing, and to buyers for stability
- buyers seek a mix of contract portfolios
- buyers seek a variety of pricing structures and to ensure a variety of supply to meet their specific long-term needs

MS. WILCOX said in 2017 AGDC's commercial team focused on market awareness and relationships with potential buyers from nearby markets and growing markets, such as China and Vietnam. [AGDC] also has taken a government-to-government approach through a memorandum of understanding (MOU) with state-owned Vietnam Oil and Gas Group (PetroVietnam). In other cases, AGDC negotiated directly with buyers, through executed unannounced letter of intent agreements, and other announced agreements with Korea Gas Corporation (KOGAS), Tokyo Gas, PetroVietnam, and Sinopec (slide 40). In 2018, the commercial team will work in legal, commercial, and financing aspects to convert the aforementioned

first agreements into definitive agreements. Ms. Wilcox noted the project has expanded its industry expert support staff located in Houston and in Anchorage. Further, AGDC plans to conclude agreements envisioned in the Joint Development Agreement with Sinopec, Bank of China, and CIC Capital Corporation, and to advance other agreements to ensure sufficient sale and purchase agreements are acquired to enable project sanction and project financing in 2019 (slide 41).

CO-CHAIR JOSEPHSON referred to an announcement made by Ms. Wilcox [document not provided] and asked for a better sense of the status of the project.

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MS. WILCOX remarked:

The direct quote ... came from the Bank of China representative and the comment that he made was related to the fact that it is a large project, and the Bank of China will be looking to, to bring in other banks in order to support the investment ... for the debt for capacity portion of it, they would, they would be the lead in China because they've taken on that role and they will be bringing in others.

MS. WILCOX continued to explain the aforementioned type of debt arrangement is common to the industry in all major projects and she gave examples. In further response to Co-Chair Josephson's question about progress made from 11/9/17 to present, she said she was surprised by the current level of support for the project from the [consulate of the People's Republic of China] in San Francisco and the Bank of China [at the World Trade Center Anchorage - China Business Conference, 1/23/18].

REPRESENTATIVE PARISH returned attention to slide 38 and pointed out the forecast represents the contracts, but is not a forecast of future LNG capacity that may be provided by new supplies. He questioned how many new entrants into the industry are expected in the next 10 years, their production capacity, and the effect of new entrants on contract renegotiations. Representative Parish acknowledged the presentation addressed some of his concerns; however, he restated his interest in knowing the overall picture of the supply of gas.

MS. WILCOX will provide the requested data and said the number of new suppliers into the market "is always somewhat fungible."

She suggested if all existing contracts were renewed and all factors were considered, a gap between supply and demand would still exist.

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REPRESENTATIVE PARISH asked for the cost to dismantle the project at the end of its productive life.

MR. MEYER was unsure but pointed out LNG plants are a clean operation thus a plant could be scrapped, and gas pipelines are typically left underground; furthermore, he suggested that reserves on the North Slope would supply gas to the pipeline for many decades.

REPRESENTATIVE JOHNSON asked for a timeline on binding agreements.

MR. MEYER said AGDC expects to focus on definitive agreements in 2018, particularly for contracts with China, and all commercial agreements should be in place within the first six months of 2019 to facilitate a final investment decision - also within the first six months of 2019 -in order to begin construction in the last six months of 2019. Binding commercial agreements, binding loan documents, equity investors, and regulatory paperwork are required for a final investment decision. He characterized the timeline as an aggressive schedule.

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MR. RICHARDS turned attention to the Alaska LNG Regulatory Timeline shown on slide 44: in April 2017, FERC application filing and request for additional responses; in August 2017, the project received approval for [Fixing America's Surface Transportation Act Title 41] (FAST Act); in August 2017, Presidential Executive Order for expedited review of major projects was issued; in November 2017, the Joint Development Agreement was signed. Future expected datelines are: January 2018, FERC EIS schedule published; December 2018, Final EIS published; March 2019, Record of Decision. Mr. Richards continued to note AGDC is also interacting with Joe Balash, Assistant Secretary for Land and Minerals Management, Department of the Interior (DOI), who oversees the Bureau of Land Management. One issue the state has with DOI is Public Land Order (PLO) No. 5150, a longstanding issue related to transferring federal land to the state; a portion of this land is needed for the Alaska LNG pipeline corridor. Another issue

related to DOI regulation is the question of aboveground or belowground pipeline construction for a section of the pipeline south of Prudhoe Bay; AGDC seeks DOI support to bury the chilled, high-pressure natural gas pipeline underground for safety and security (slide 45). Further federal interactions occurred with the Environmental Protection Agency (EPA); the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, for incidental take authorizations in the Beaufort Sea and Cook Inlet; the U.S. Army Corps of Engineers (USACE) related to additions to the [Clean Water Act] Section 404 permit; the Pipeline Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation, related to environmental special permits (slide 46).

MR. RICHARDS added state authorizations are required from the Alaska Department of Fish & Game (ADFG), the Department of Environmental Conservation (DEC), and the Department of Natural Resources (DNR), with the goal of permitting completed by the first quarter of 2019 (1Q 2019) in order to reach a final investment decision (slide 47).

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REPRESENTATIVE TALERICO asked for the status of obtaining permission for the project to cross private property.

MR. RICHARDS advised the project affects approximately 40 miles of private land, including Alaska Native Claims Settlement Act (ANCSA) corporation land mostly owned by Ahtna, Incorporated (Ahtna) and a leasing process with Ahtna is underway.

REPRESENTATIVE BIRCH inquired as to the potential devastating impacts of the Alaska Salmon Habitat Protection Standards and Permits (Stand for Salmon) Initiative, and its "parallel" proposed legislation in the context of permitting for the Alaska LNG project.

MR. RICHARDS directed attention to slide 48 that identified the number of waterways crossed by the project. Stream surveys indicated 194 waterways contain anadromous fish and require [Alaska Statute] Title 16 permits. AGDC is in the permitting process with ADFG to ensure statutory requirements for water crossings are met. Mr. Richards cautioned any additional burdens on permitting requirements could add risk and delay to the project.

REPRESENTATIVE BIRCH expressed his grave concern regarding the aforementioned [initiative and proposed legislation] and asked about any reaction on the part of AGDC.

MR. MEYER agreed this is an important issue and said, "Part of the importance is the language in the, in the legislation that was proposed, now that's not the HB 199, ... I'm not that familiar with that language." He related certain language could be stifling to development, for example, that which suggests certain habitat could support a species even though the species isn't there. The Alaska LNG project crosses over 600 streams, and Mr. Meyer said the proposal is detrimental to any development project in the state.

CO-CHAIR JOSEPHSON said, "I think [HB]199 speaks to substantial effects: If there's a potentiality for substantial effects, a major permit would be required." He asked for AGDC's plan [under current regulation] when the pipeline approaches an anadromous stream.

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MR. RICHARDS explained the process with ADFG is to determine which streams have anadromous fish and then to identify the best time to cross and what mitigation efforts AGDC must put in place to meet ADFG's requirements under its Title 16 permit, based on factors specific to the waterbody and environmental conditions. He turned attention to the Kenai Spur Highway which must be rerouted because it transects the site of the proposed LNG plant in Nikiski. Although AGDC would build the reroute, after construction, operation of the road would be transferred to DOTPF, therefore, approval of the reroute must be obtained from DOTPF and the [U.S. Department of Transportation]; two alternatives will be offered for public comment at a hearing in Nikiski [2/12/18](slide 49). Continuing to stakeholder issues, Mr. Richards provided detailed background information related to the Mat-Su Borough's complaint to FERC that AGDC and the former project consortium incorrectly considered siting of the LNG plant in 2012, without including Port Mackenzie, prior to choosing Nikiski. [AGDC] is not opposed to the Mat-Su Borough becoming an intervener in the FERC process; however, he pointed out the borough has previously supported the Nikiski site and returning to the comparable site analyses would delay the project. He restated Nikiski is AGDC's preferred site (slide 50).

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MR. RICHARDS returned attention to ASAP 2018 activities as follows: January 31, complete Cultural Resource Management Plans; March 31, USACE Final Supplemental Environmental Impact Statement; wetlands mitigation plans; July 1, Records of Decision from USACE and other federal agencies (slide 51). He related sources of federal support are: the National Economic Council and the Council on Environmental Quality; Trump Administration cabinet members Secretary of Commerce Wilbur Ross and Secretary of the Interior Ryan Zinke; the Alaska Congressional delegation (slide 52). Mr. Richards advised AGDC is working on strategic country sourcing which is the best way to acquire materials for the project. The four countries considered are China, Japan, Korea and the U.S. The former project team focused on China for the fabrication of the modules for the gas treatment plant; in fact, there could be savings of approximately \$1.4 billion by utilizing materials from countries that are buyers of the product and investors in the project. In addition, the zero-based execution review covered the three main subprojects seeking opportunities for savings in the execution of the project (slide 53). Mr. Richards noted at a previous hearing AGDC was asked to provide project information in terms of a stage-gate project process, and he reviewed the project timeline to date. New elements in the decision to enter FEED include securing customers, gas, lenders, and capable engineering, procurement, and construction contractors (slide 54). Finally, during 2018-2019, the project will progress from FEED to LSTK with the major subprojects of the LNG gas treatment plant, and pipeline and compressor stations with major spending between \$400 million and \$700 million (slide 55).

[3:03:28 PM](#)

#### **ADJOURNMENT**

There being no further business before the committee, the House Resources Standing Committee meeting was adjourned at 3:03 p.m.