

SENATE FINANCE COMMITTEE

March 3, 2022

9:01 a.m.

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CALL TO ORDER

Co-Chair Stedman called the Senate Finance Committee meeting to order at 9:01 a.m.

MEMBERS PRESENT

Senator Click Bishop, Co-Chair
Senator Bert Stedman, Co-Chair
Senator Donny Olson (via teleconference)
Senator Natasha von Imhof
Senator Bill Wielechowski
Senator David Wilson

MEMBERS ABSENT

Senator Lyman Hoffman

ALSO PRESENT

Mike Cline, Director, Corporate Strategy, Gaffney Cline;
Nick Fulford, Director, Gas and Energy Transition, Gaffney Cline.

SUMMARY

^PRESENTATION: COMPETITIVENESS OF ALASKA'S OIL & GAS REGIME

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Co-Chair Stedman explained that the committee would hear a presentation on the competitive nature of the state's oil and gas tax regime from one of the state's consultants. He thought Gaffney Cline had worked with the state since three administrations previously. He commented that the company had helped the state navigate through many issues dealing with oil and gas. He commented on the number of changes in the industry, including some changes in the ability to finance, the competitive position, decarbonization, and a current war.

Co-Chair Stedman mentioned that the consultants worked through the Legislative Budget and Audit Committee, which was currently chaired by Senator von Imhof. The joint committee was non-partisan and engaged a variety of consultants. He explained that Gaffney Cline would present to the committee as well as to the House and to the Senate Resources Committee. Co-Chair Stedman asked the testifiers to discuss their background and the background of their organization, including past work, to give the public an idea of the firm and its work.

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MIKE CLINE, DIRECTOR, CORPORATE STRATEGY, GAFFNEY CLINE, introduced himself and relayed that he was with the London office. He informed that Gaffney Cline and Associates was an international energy consultant with offices in Houston, London, and Singapore primarily. The firm had been providing services to the international oil and gas and energy sector since 1962. The firm's focus was not just technical, but was on strategic and commercial matters including oil and gas and energy transition. The firm had done quite a bit of work in Alaska over the years. The work had been both commercial and strategic.

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NICK FULFORD, DIRECTOR, GAS AND ENERGY TRANSITION, GAFFNEYCLINE, introduced himself. He had worked in the state during 2014 and 2015, working extensively on the Alaska's Liquid Natural Gas (AKLNG) Project. He commented on the state's niche in the liquid natural gas (LNG) industry, having been the first Pacific exporter to Japan. He commented that he had been in the industry for 45 years.

Mr. Cline discussed the presentation "State of Alaska - Alaska's Competitive Position - February 2022" (copy on file). He looked at slide 2, "Overview":

Global

- Oil Supply and Demand
- Gas Supply and Demand
- Energy Transition Implications

What does this mean for Alaska?

- Oil Industry and Outlook
- Natural Gas Opportunity

What is Alaska's competitive position going forward?

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Mr. Cline spoke to slide 3, "Volatility, Disruption & Supply in the Oil & Gas Industry":

- The oil & gas industry has been battered by deeply disruptive events in recent years leading to volatility.

- Oil price collapse of 2014-2016 and Covid-19.

- Deep cost cutting, project delays and cancellations will have long term supply implications.

- The impact of energy transition on the energy mix and related shift in the long-term prospects of the industry.

- Most recently dramatic price increases as the global economy emerges from Covid-19 against a backdrop of geopolitical concerns in Eastern Europe and the Middle East.

- Oil and gas companies have generally performed poorly and investors have demanded better capital discipline, improved financial performance and action on climate change.

Mr. Cline mentioned the striking changes in oil and gas over the previous ten to twelve years. He referenced inter-rivalries in Oil Producing and Exporting Countries (OPEC). He offered the perspective that it was important to understand which occurrences were important to the long-term impact on the industry, which he thought was always subject to volatility. He referenced the oversupply from 1985 to 2000 and the impact on prices and the industry. He referenced the financial crisis in 2008, which had caused a short lived but dramatic downturn in prices.

Mr. Cline continued his remarks and referenced a recent price recovery. He offered his opinion that although there had been a change, the underlying conditions had not changed that much and a general condition of oversupply would still exist. He pondered what had changed and suggested that oil and gas companies were looking at different ways of doing business. He mentioned greater

rigor in evaluating projects and being more selective. He mentioned energy transition.

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Mr. Cline referenced slide 4, "Energy Demand Outlook":

- World energy demand is expected to grow but many different scenarios are being discussed with key differentiators being:

- Costs of energy supply particularly fossil fuels vs renewables/low carbon.

- The nature of governmental and private initiatives to decarbonise.

- The pace of change.

- Under all scenarios significant investment is needed to meet demand and offset existing oil & gas decline

Mr. Cline asserted that long-term prospects for energy demand had not changed. The change was in how the energy demand was met, and there was increasing change in the energy mix. He commented that oil and gas and coal had been under some pressure from renewables such as low-carbon fuels. He pondered the nature of the change and how quickly it would occur. He thought there was consensus that the energy transition was moving forward, and there were a lot of governmental and private initiatives supporting the change. He predicted that there would be a lot of investment into renewables and low-carbon energy, and over time a transition (to some extent) away from oil and gas and coal.

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Co-Chair Bishop asked if Mr. Cline's demand outlook included the fact that China, India, and Russia were not participating in the same way.

Mr. Cline answered affirmatively. He qualified that there were multiple scenarios to consider. He suggested that while many countries and companies had made pledges and promises, in reality they were not doing everything they had promised. He thought it was clear that energy demand would be met somehow, and if not met by renewables, the demand would probably be met by oil and gas and coal. He

referenced several scenarios that were more or less optimistic about the use of renewables versus oil and gas.

Senator von Imhof thought the first bullet on the slide addressed the major issues. She thought all could agree that globally there would be an effort away from oil and gas. She pondered the time frame of the transition, which she thought no one knew. She thought de-investing in hydrocarbons could risk a gap in supply and demand if the alternative energy industry was not ready to fill the gap. She asked if Mr. Cline was privy to some of the conversations that indicated how the technology was going.

Mr. Cline thought that it was important to keep investing in oil and gas projects, and asserted that there was a great deal of uncertainty about how the energy mix would change over time and how quickly. He commented on the complexity of the issue. He thought it was important to, at a minimum, have oil and gas as a bridge to any future. He thought Mr. Fulford might have useful information regarding the pace of technology adoption.

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Mr. Fulford thought there were three factors to consider: the growth of renewables, the supply place to be taken by hydrocarbons, and the question of whether the hydrocarbon industry could relaunch itself in a different manner. He mentioned carbon capture and sequestration being used in conjunction with hydrogen. He posited that the matter was hinged upon economics. He mentioned projects being developed in Texas. He thought there were visionary hydrocarbon projects being looked at that could extend the time over which oil and gas could be economically produced, potentially quite significantly, into the future.

Mr. Cline considered slide 6, "Energy Transition":

- The global energy mix is decarbonizing and the pace of change is accelerating.
 - COP26 UN Climate Change Conference more than 140 nations committed to eliminate 90% of GHG emissions.
 - 2050 Net Zero GHG Targets: US net zero no later than 2050 with a 50-52% reduction from 2005 levels by 2030.

- 2030 Methane Reduction Target: Over 100 countries commit to reduce methane emissions by 30% by 2030.
- Investment dollars will flow disproportionately into clean energy.
 - The Bipartisan Infrastructure Deal includes US\$6.5 Bn for national network of EV chargers and US\$65 Bn in clean energy transmission and electric grid in support of a 100% pollution free power sector by 2035.
 - International finance: 25 countries, including the US, and 5 financial institutions pledged to end new international finance for unabated fossil fuel energy by the end of 2022.
- Hydrocarbon producers with the highest cost and the highest carbon emission intensity products will be the first to be impacted.

Mr. Cline commented that it was not difficult to gain funding for clean energy projects. He pondered the impact of an energy transition on the state and thought the impact would be significant. He thought Alaska fell into the category of those that would be the first to be impacted.

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Senator von Imhof cautioned that clearly it was more ideal to go into renewable energy and mentioned that it was better for the environment, wondered if the state could survive on alternative energy and mentioned frozen pipes and lack of energy during extreme weather. She referenced Texas. She thought a diesel or gas backup was essential.

Mr. Cline thought Senator von Imhof brought up an important issue. He mentioned the structural issues of alternative energies such as wind and solar power. He thought part of the effort was to look at the overall infrastructure. He thought the issue in Texas had been that the overall infrastructure had not been up to the task and thought there were different points of view on the reason. He thought one of the attendant items with energy transition was the major task and massive investment to make things possible. He mentioned upgrading power grids. He thought the role of oil and gas in the future would be to deliver energy when needed.

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Mr. Fulford commented that looking at energy projections on slide 4, all the items hinged on the massive electrification of the global economy. He reiterated Mr. Cline's commentary on the significant investments required and the complexity of the task of an energy transition. He posited that coping with the intermittence of renewable energies in a highly electrified global economy required things like battery storage or other means to deal with issues like the problem in Texas. He thought the role of gas (in terms of providing grid stability) was perhaps undervalued, but at the moment was the only effective tool to compensate for the intermittency seen in renewables.

Mr. Cline turned to slide 6, "Competition for Investment Dollars and Capital Markets":

- Over last decade international oil companies have moved from emphasizing growth to focusing on capital discipline and shareholder value.

- Super-Majors have initiated extensive divestment initiatives and focused more heavily on "core" regions or projects.

- Capital has become reallocated to Share-Buyback programs and carbon related opportunities.

- When large companies divest there is an opportunity for smaller companies but funding is a challenge:

- Banks and investors are reconsidering exposure to oil & gas.

- Project disruption as smaller companies struggle to finance their interests.

Source: Financial Times Article sourcing Woodmac

Mr. Cline commented that Alaska was competing for investment as a resource owner and referenced pressure on the oil and gas companies competing for investment dollars for finance. He relayed that there was a strong push from investors for oil and gas companies to perform better financially, because over time the asset class had not performed that well. He mentioned the additional pressure of becoming "greener." He mentioned the trend of large companies divesting assets. He mentioned the trend of public and smaller companies trying to pick up the divested assets. He summarized that the environment had changed for many of the larger oil companies.

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Senator Wielechowski asked if Mr. Cline was familiar with the legal obligation of an oil company to produce when it took out a lease.

Mr. Cline agreed that specifically leases, agreements, and contracts had a requirement of some kind to explore, appraise, and develop per the terms.

Senator Wielechowski understood that there was a legal duty to produce if it could make a reasonable profit.

Mr. Cline stated it was true that some contracts had a more or less rigorous work program and minimum commitments embedded. Some contracts were not so specific. He agreed that companies did not have to progress a development if it was not thought to be profitable enough.

Senator Wielechowski had heard from the Department of Revenue that the reasonable internal rate of return for a company to produce was around 20 percent, depending upon the risk.

Mr. Cline thought Senator Wielechowski's comment was reasonable and noted that it was not the same for every company nor every asset class.

Senator Wielechowski asked if Gaffney Cline had done previous analysis on the internal rate of return for Prudhoe Bay under Alaska's Clear and Equitable Share (ACES) plan.

Mr. Cline relayed that he had not been involved in such an analysis, but it sounded like the kind of thing Gaffney Cline did.

Senator Wielechowski referenced research and testimony from Gaffney Cline and mentioned a document.

Co-Chair Stedman asked Senator Wielechowski to share the date of the document.

Senator Wielechowski referenced a document from October 30, 2007, that showed the analysis Gaffney Cline did at Prudhoe Bay indicated that the oil company's internal rate of return after taxes was in excess of 60 percent under ACES.

He commented that the industry had testified that ACES had been onerous, and now the state had a lesser tax rate. He recalled that Gaffney Cline had testified that it had stress tested and found that Prudhoe Bay had remained profitable after a number of increases and a high progressivity. He shared that the document concluded that the Prudhoe Bay drilling program was so profitable that even under the most extreme net tax structure, oil companies would want to continue their reinvestment program. He asked if there had been any more recent analysis that had changed the opinion offered in 2007.

Mr. Cline affirmed that if Gaffney Cline had done an analysis, the opinion would probably have changed because between 2007 and the current day, there had been a lot of change. He could not comment specifically on the numbers cited by Senator Wielechowski. He thought it was important to recognize that 2007 and 2022 were very different environments. He could not comment further without reviewing the material.

Co-Chair Stedman relayed that the committee would address some of the subject matter later in the presentation.

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Senator Wielechowski asked for an update to the analysis.

Co-Chair Stedman noted that he was present during the 2007 presentation. He asked for the title of the presentation.

Senator Wielechowski stated that the presentation was from Gaffney Cline.

Co-Chair Stedman relayed that Gaffney Cline had worked for both the legislature and the administration. He shared that he would go back into the records to identify the information.

Mr. Cline displayed slide 7, "Response to Changes in Market Conditions":

- In response to changes in market conditions, it is common for proactive governments to reassess existing fiscal terms and to consider incentives to ensure continued exploration and development in the domestic energy sector.

- How have the compared jurisdictions responded?
 - Most have allowed for tax reductions or other fiscal concessions since 2015.

In June 2020, the Norwegian parliament enacted temporary changes to the Petroleum Tax Act - "in an effort to mitigate underinvestment in the Norwegian shelf stemming from market conditions and uncertainty"

"In order to protect jobs and investment in the North Sea..." The UK implemented multiple tax reductions and simplifications in 2015 and 2016

Alberta reviewed royalties in 2016 in an effort to simplify and encourage investment. Other changes were effected as well in less hydrocarbon developed jurisdictions such as Newfoundland & Labrador.

Royalty Rates for shallow water Gulf of Mexico leases were reduced in order to encourage new developments.

- Numerous other contract based adjustments have been implemented and considered globally for asset specific contracts through renegotiations, new marginal field allowances and improved terms for newly issued contracts

Mr. Cline mentioned that there had been a number of different techniques employed since 2014, that were mainly tax oriented, designed to encourage companies to continue to and explore and invest. He mentioned the rebate of exploration losses. He highlighted that there were things a resource owner could do in a volatile environment to try and keep companies investing. He cautioned against big breaks in investment and lack of project progress for a period of time.

Co-Chair Stedman asked if Mr. Cline wanted to address the slide material.

Mr. Cline relayed that Norway had been very active in applying techniques and incentives to keep oil companies investing and exploring. In 2020, when there was a big downturn the industry, Norway had tried to make it easier by allowing companies to try and recover the tax value exploration costs. He described the activity as "de-risking." He mentioned that the United Kingdom (U.K.) had

similarly offered reductions in tax. He thought Alberta, Canada had done the same.

Mr. Cline showed slide 8, " Alaska Oil."

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Mr. Cline looked at slide 9, "Alaska Oil Outlook":

Strengths

1. Significant discovered resources
2. High-potential exploration
3. Good operators, investors and service companies

Weaknesses

1. Challenging and high cost operating environment relative to other opportunities
2. Regulatory and fiscal stability challenges
3. Difficulty of converting commercial discoveries into successful developments

Opportunities

1. Price recovery could enable material new developments of discovered resources
2. Carbon capture and usage could provide advantages in carbon conscious world

Threats

1. Continued volatility undercutting the case for large, long-term investments
2. Decelerating demand due to changes in the energy mix and energy efficiency
3. Competition with lower carbon and lower cost producers

Mr. Cline mentioned the Willow project with reference to issues around regulation and permitting. He read the "weaknesses" listed on the slide, which he characterized as structural problems. He cited that many of the state's projects were high-cost and took many years to achieve economic potential. He commented that if the oil price recovery was sustained, it might open up opportunities for development in the state.

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Co-Chair Stedman addressed the decelerating demand listed as a "threat" on the slide. He thought the state had the ability to export its oil. He mentioned the market in the Pacific and asked if Mr. Cline felt there might not be a market for Alaska's oil.

Mr. Cline did not think there was a risk of not having a market, but pointed out that the state would have to compete with Middle East oil. He knew Alaska had been successful exporting to China. He mentioned vigorous ongoing competition from low-cost producers. He did not know whether the competition would contract the premiums the state was used to getting for crude oil, but knew the competition would be an ongoing feature.

Mr. Cline addressed slide 10, "Alaska and the Lower 48 Developments":

- Alaska's biggest competitor is Lower 48 conventional and unconventional oil.

- Targeting the same US focused companies.
- Often active in both Alaska and Lower 48.
- Similar legal/fiscal environment.

- Unconventional can be high cost but the investment proposition is different.

- Understanding of unconventional wells and proximity to market reduce development risks.
- Limited pre-production development cost.
- Deep pool of participating companies (large to small) and financing options.
- Developed and capable service industry and optimized infrastructure/hydrocarbon trading.
- Ultimately, differentiator is risk difference inherent in drilling more US\$10 MM wells that could be selling crude in a matter of months vs. US\$8 Bn of investment with 20 year horizon like Willow.

Mr. Cline mentioned a "factory drilling approach," which allowed companies to more easily pull back and restart developments, in contrast with conventional developments such as Willow.

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Senator von Imhof thought slide 10 was telling, and commented on the bar graph that showed Alaska represented in blue. She pointed out the decline from 2000 to 2020, and noted that other locations were ramping up, particularly Texas. She emphasized that there was less production, less investment, and less volume in Alaska compared to other states. She referenced Senator Wielechowski's comments and pondered that if Alaska was that lucrative, the bottom bar would be growing or holding steady. She thought it seemed that Texas and North Dakota were having more success.

Mr. Cline thought Senator von Imhof had made an interesting observation. He commented on developments in Texas that had been able to ramp up production. He reminded that Alaska was not only competing with other conventional high-cost developments but also with unconventional developments. He commented on the different risks and challenges associated with getting lucrative projects in Alaska to the point of production.

Senator Wielechowski reminded that in 2013 the legislature had passed SB 21, which had cut oil taxes. He recounted that at the time the state had been promised more production, more investment, more revenue, and more jobs, but the opposite had occurred. He queried what more the state needed to do to bring more development to the state. He wondered if cutting taxes more would bring more production to the state.

Mr. Cline commented that Alaska was facing a situation with large and mature declining fields, which was an ongoing process. He thought if the state wanted more production, new projects needed to be more attractive fiscally and in the sense of the overall market. He mentioned the Willow project and the Pikka project, which could slow the downward trend. He emphasized that new assets needed to be developed.

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Co-Chair Stedman looked at the chart on slide 10 and reflected on Texas and North Dakota and shale oil. He noted that the basins were much more open than in Alaska. He commented on Alaska's expensive and remote basin. He commented on the private ownership of other basins. He thought that Alaska had a cumbersome regulatory

environment. He asked how to draw comparisons with other states when so many factors were unequal.

Mr. Cline agreed that the market conditions in the Lower 48 were very different, including private ownership and willingness to progress projects quickly. He mentioned additional factors such as proximity to markets and closeness to infrastructure. He acknowledged that Alaska had some challenges including access and the cost of transportation to market the oil.

Co-Chair Stedman asked if the state should be looking at comparative conventional oil basins in the Arctic.

Mr. Cline thought it would be reasonable to do as Co-Chair Stedman suggested. He cited that Gaffney Cline compared Alaska to other high-cost developments. He reiterated that transportation was an issue, and could also be an interesting point of comparison with similarly situated developments in the Arctic.

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Senator Wielechowski thought Co-Chair Stedman had made a good point. He commented that Norway was also a high-cost environment, and it had a tax rate of 70 percent and high oil production. He asked what Norway was doing that Alaska should be doing. He thought it was obvious that the tax rate was not driving the industry away in Norway or other countries that had tax rates of 70 percent or more. He asked what Alaska could be doing to attract more investment.

Mr. Cline thought Senator Wielechowski had made a good observation. He agreed that the marginal tax rate in Norway was 78 percent. He thought there were fundamental differences between Norway and Alaska. He agreed that the government take was high in Norway and suggested that some government take was more attractive to companies than in others. He noted that Alaska was an income-based system, where companies were taxed on profit without royalty. He explained that the tax burden was pushed to the post-payout period, which governments liked.

Mr. Cline continued. He thought another important feature was that in addition to the nature of the fiscal approach, Norway had good resources and potential, good access to the

market, were well-regulated, and had a very stable fiscal environment. He commented on the stability of the tax rate over time. He mentioned recovering on exploration losses and other tax policy-oriented techniques of taking risk away from oil companies. He thought there were many factors that made Norway an attractive environment.

Co-Chair Stedman commented that Norway had a national oil company and were able to pick partners according to profitability. He thought there were structural differences. He thought the U.K. had changed its oil and gas tax structure more than Alaska.

Mr. Cline thought Co-Chair Stedman had made a good point. He explained that one of the problems had been change in taxes in the U.K. He mentioned that the U.K. had proposed a windfall profits tax because of the recent runup in prices. He thought Norway seemed much more stable.

Co-Chair Stedman wanted to comment on slide 9 and slide 10. He mentioned litigation and wondered how many projects in Norway faced litigation for 5 or 10 years.

Mr. Cline answered "some." He thought that Norway was less litigious.

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Mr. Cline advanced to slide 11, "Oil Development, Production and Mr. State Revenues":

- Prolific but rapidly maturing basin.
 - Dramatically impacting state revenues.
- Despite exploration success, new developments are not replacing production declines.
 - Relatively high cost environment.
 - Permitting and regulatory challenges have delayed major activities and heightened perceptions of associated risk.
 - Tax stability may be considered a risk.
 - Fierce competition for O&G investment dollars.

Mr. Cline commented that slide 11 was a wrap-up slide for the topic of Alaska oil.

Co-Chair Stedman discussed the decline in production. He commented on presentations to the committee in 2008 and

2009 that had shown a parabolic curve predicting a decline of 2 percent to 4 percent, depending on how active the industry was in curtailing the decline. He thought there had been a normal response from the industry and the sovereign, and the production trajectory had been predicted a decade previously.

Mr. Cline affirmed that Co-Chair Stedman was correct in that for a conventional development, there was usually a ramp up, plateau, and gradual decline. He continued that the developments that occurred had also been seen in the North Sea, where the big companies such as BP gave way to smaller companies that were focused on extending the economic life of projects. He thought because the state had a few very large assets, the challenge was how to fill the production gap.

Co-Chair Stedman commented on previous testimony on the magnitude of Prudhoe Bay as the "elephant field," and the importance of continuing Prudhoe Bay into the future.

Mr. Cline agreed.

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Co-Chair Stedman thought it was not universally recognized by the legislature that there was a fairly normal decline curve. He pondered that the state needed to deal with the geology of the basin regardless of policy.

Mr. Cline did not think the trend was reversible, but he did think it was possible to slow it down and optimize it, which would be incredibly valuable for the state.

Co-Chair Stedman qualified that he was not diminishing the industry's push to stabilize and lengthen the life of the field, which had taken much work and resources. He emphasized that the trend was predictable.

Senator von Imhof hoped there was consensus to extend the production tail end of the curve. She considered the factors that could be controlled, as well as all the circumstances outside the state's control. She pondered the effects of past decisions and a holistic way of looking at events. She thought making isolated statements regarding single elements was too constricting and did not account for numerous factors. She wanted to be cautious about

laying blame on the effects of one action the state had taken.

Co-Chair Stedman did not think anyone was trying to lay blame and asserted that there were competitive forces from both directions.

[10:06:47 AM](#)

Mr. Fulford showed slide 12, "Alaska Gas."

Mr. Fulford looked at slide 13, "Natural Gas Price Volatility 2020-2022," which showed a graph entitled 'Global Gas Price History Since 2020.' He informed that the next section of the presentation would address development of the gas resource, which he thought most people would perceive as a longer-term goal for the state. He commented that after several weeks of price volatility in Europe and Asia, there was a significant geopolitical event in Europe and an extraordinary runup in the price of gas based on concerns over Russian supplies. He cited that the price of gas in Europe was about \$60. He commented that the majority of United States' (U.S.) LNG exports were being sent to Europe. He considered pricing basis for the two vessels per day that went to Europe and compared it to feedstock. He referenced about positive cash flow of about \$200 million.

Mr. Fulford compared \$5 gas in the U.S. to \$60 gas in Europe. He thought the arbitrage could only be captured through LNG. He thought one of the broader considerations of the events of the previous few days was that all major gas suppliers would be looking at alternative supplies of LNG, and would rate things like political stability and ease of technical production very highly. He thought it was quite likely that a number of major gas buyers would be considering Alaska and wondering if they should pursue projects.

Mr. Fulford continued to address slide 13 and considered that not all LNG was priced at wholesale indices. He discussed the price of LNG. He commented on the current price volatility that the industry had experienced since 2018 due to structural oversupply of LNG in the market, and other factors. He mentioned the impact of the Covid-19 pandemic on the market. He mentioned vessels being delivered at a cash loss of \$8 million to \$10 million per vessel, which led to supplies being turned down and

cancelations. He had been in the LNG industry for over 40 years and never seen a period of time like the previous two years and its extraordinary pricing environment.

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Mr. Fulford continued his remarks. He qualified that unfortunately from an LNG perspective, the price volatility was an unwelcome feature. He mentioned new projects coming on and used the example of China and its quick recovery. He suggested that there would be a new opening for new LNG projects to start up over the following few years. He mentioned an expansion in Qatar. He summarized that it had been a difficult time for the LNG industry, but there was an underlying trend of increasing demand, notwithstanding the energy transition features. He emphasized that events in Ukraine had put the focus on secure, politically stable suppliers such as Alaska.

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Co-Chair Stedman thought one of the state's advantages was a stable government. He asked Mr. Fulford to address pricing. He mentioned the term "Japanese cocktail," in reference to pricing. He asked about a correlation between Asia and Europe. He asked Mr. Fulford to address trends and contracts. He thought the market had been dynamic over the previous several years.

Mr. Fulford addressed pricing and explained that the global gas industry had been seeking a way to establish price transparency for several years. He noted that the conventional pricing method had continued for many years. He mentioned the emergence of the U.S. as a major energy exporter, and that natural gas was a commodity that was independent of oil and responded to its own supply and demand features. He commented that buyers and sellers were trying to establish a reliable mechanism to reflect the underlying true value of natural gas in global markets. He described the use of a mix of indices in the pricing formulas, which was currently being used quite extensively.

Mr. Fulford continued to address Co-Chair Stedman's questions. He noted that any LNG contract written in the previous ten years typically had a kind of price re-opener or price redetermination. He furthered that the industry was in a very dynamic situation, and with LNG becoming so

fungible, and the major factor representing change was freight. He emphasized that freight was a very active feature of the market, and for any new LNG project freight was a major factor in deciding on a marketing and pricing approach.

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Co-Chair Stedman asked Mr. Fulford to elaborate on the length of contracts, which he thought had been substantially shorter and more dynamic.

Mr. Fulford thought Co-Chair Stedman had brought a very interesting current topic. He explained that that in the context of the commoditization that was happening in LNG, more cargos were being bought and sold on spot basis. The longer-term contracts that were being signed were now typically shorter in length. He observed that there had been an awareness amongst buyers that it was no longer reliable on the commoditized spot market to buy LNG. He estimated that he had seen three Chinese contracts signed with U.S. exporters in the Gulf in the previous two months, in the region of 10.2 to 10.5 percent Brent, for 15 to 20 years. He thought the period of time from 2018 to 2021, when one could send a text and trade an LNG cargo to arrive in the next few days, had passed. The practice had been replaced by a very balanced procurement strategy that included long-term reliable supply, some medium to trading, and a short-term almost-daily trading pattern.

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Mr. Fulford referenced slide 14, "Global Market Context - LNG Developer Perspective":

- A new window of opportunity is potentially present for Alaska but significant challenges must be faced.
 - Given the energy transition, this could be the last chance to monetise the substantial gas resources in a traditional manner.
 - AK LNG will require very large capital investments and the State will need to weigh the risks carefully.
- Industry and sources of finance have been materially impacted by the volatility of the last 2 years:
 - European concerns over Russia supply exacerbating volatility

Mr. Fulford commented that not surprisingly, the price volatility and challenges seen over the previous few years had significantly impacted the flow of LNG projects reaching the market. He mentioned security issues in Mozambique and cost issues for many projects. He described the lack of long-term buyers for U.S. projects, which had prevented the typical finance sources from funding projects. He referenced a rapid supply tightening, and as a result LNG projects were seeking more favorable backing from financiers.

Mr. Fulford continued his remarks. He mentioned the emerging feature of carbon intensity. He described that most of the U.S. Gulf Coast projects had been pursuing an emissions strategy of net-zero projects. He referenced net-zero cargos delivered in the past few years, which had used nature-based offsets that worked out to about \$2.5 million per cargo. He described that the origins of the practice had been the French government's refusal to approve a contract between a French buyer and U.S. seller on the basis of the carbon intensity of the gas. He thought the event had sent the message through all the projects that carbon intensity was something customers would be looking at. He thought the feature had to be examined carefully in the context of AKLNG.

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Senator von Imhof looked at the second item under the first bullet on slide 14, which posited that AK LNG would require very large capital investments and the state would need to weigh the risks carefully. She asked if it was correct to say that oil had a higher return on investment than gas.

Mr. Fulford thought Senator von Imhof's statement was a good generalization. He explained that partly for LNG, a lot of the investment was infrastructure, and the elements typically had a much lower risk compared to the exploration risk or reserve risk in the oil industry.

Senator von Imhof asked if the state did the same amount of investment in other areas such as mining or fishing or tourism, there would not be the same revenue return as gas or especially oil.

Mr. Cline explained that oil and gas were currently very profitable but went up and down. He generalized that companies were able to be quite profitable in the crude oil business, and historically more so than with gas. He thought that extractive industries like oil and gas involved a lot of investment but could be profitable, probably more so than other industries.

Co-Chair Stedman thought it could be simply stated that other industries could not replicate the value of oil. He was concerned with the first paragraph on slide 14 that iterated that given the energy transition, it could be the last chance to monetize the substantial gas resources in a traditional manner in Alaska. He thought there had been similar comments on the subject over the previous twenty years. He thought there were other impediments that were blocking the state from monetizing the gas. He mentioned the impediment of the gas being stranded in the Arctic. He asked the testifiers to comment on whether it was the last chance to monetize the gas.

[10:26:07 AM](#)

Mr. Fulford thought that a degree of explanation was needed. He referenced energy transition and thought it was clear that within a generation, the shape of the global energy sector would change significantly. He referenced a previous comment that hydrocarbons could play a very significant role even in a net zero world, but the technologies to exploit them were likely to be different. He considered Alaska's natural gas resource and thought it may be that exploiting it through an LNG project was less likely as the world moved to a net zero position. He thought there could potentially be additional opportunities, and listed carbon sequestration, hydrogen, and ammonia. He thought reexamining the resource and how best to exploit it could change over the next few years as the energy transition built momentum.

Mr. Fulford turned to slide 15, "High level guideline project economics compared to other global sources of LNG - breakeven analysis to China (central case)":

- Alaska is competitive from a feed gas and freight cost perspective.
- However, main challenges to the project arise from high processing, pipeline and liquefaction costs.

-Driving down costs in these 3 elements of the value chain will drastically improve competitiveness.

-Unless they are addressed, Alaska will continue to rank as a high cost producer unlikely to be profitable at expected long run pricing levels.

Mr. Fulford discussed the AK LNG Project, noting that the management of the project had changed, and the Alaska Gasline Development Corporation (AGDC) in particular had done work to build on what was done by Exxon and others. He thought it had been recognized from the outset that cost represented a major hurdle for any Alaskan LNG project to overcome. He mentioned cost advantages from feedstock and freight. He considered the gas treatment plant, the pipeline, and the liquefaction plant, which represented exceptionally high levels of investment. He commented that the track record of the LNG industry had not addressed some of the cost constraints very successfully.

Mr. Fulford discussed financing and noted that a lot of the success of the LNG project rested around infrastructure, and with the infrastructure came a high financing cost. He mentioned looking at project structure and de-risking the project as ways to bring down the financing cost. He knew that AGDC had worked to reduce the cost of financing.

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Co-Chair Bishop referenced slide 14 and asked about the slide's reference to the state's "last chance" to monetize its gas. He asked if the viewpoint had factored in a pipeline-only option for exporting the gas, and that someday the gas could leave Point Thomson with no pipeline.

Mr. Fulford commented that considering different concepts would be a positive route for the Alaska project. He remarked on the substantial cost of the pipeline (compared to the Gulf Coast competition), as well as that of the gas treatment plant. He explained that the characterization on the slide was based on a conventional LNG development plan involving the gas treatment plant, the pipeline, and the liquefaction.

Senator von Imhof referenced the cost of financing, and statutory mill rates. She asked if the communities had

agreed to the arrangement, and if AGDC had addressed property taxes.

Mr. Fulford shared that he had worked on the topic back in 2014 and 2015 along with the Department of Revenue. At the time, the standard approach to property tax (20 mills based on assessed value) had represented a significant cost burden for the project in the early years to the order of \$2.5 billion per annum. He recounted that the extensive discussion with borrowers at the time were aimed at a levelized payment in lieu of tax, which would have resulted in a lower burden on the project in the early years but would have held it on a constant level. He thought there had been draft legislation prepared at the time, but it had never progressed. He thought the level of property tax burden at the start of the project would be considered difficult to accommodate and would need to be looked at in the context of other government take.

[10:34:22 AM](#)

Co-Chair Stedman thought it was clear that the chart on slide 15 showed that the pipeline cost was significantly higher than Alaska's competitors. He observed that the liquefaction terminal cost was also significant in comparison. He asked Mr. Fulford to expand on the issue.

Mr. Fulford explained that he had not yet mentioned the significance of the price of steel and cited that the price had increased by about 250 percent over the previous two to three years. The increase was a significant element of any gas or oil processing facility. He thought the price of raw material costs for a project were significantly higher than a year or two previously. He mentioned the distance of Alaska's projects as a factor, as well as the potential need for an \$8 million to \$10 million gas treatment plan on the North Slope.

Co-Chair Bishop commented that some members had suggested purchasing pipe ten years previously and thought the state could have achieved a great return on investment even if the pipe was not used on a project.

Co-Chair Stedman asked Mr. Fulford to address cost overruns and asked how sensitive the potential AK LNG project was.

Mr. Fulford considered that whenever his company looked at an LNG project, the largest concern was capital cost. He commented on the price of gas being a concern. He mentioned the trend of negotiating a fixed price contract. He thought LNG developers were adopting a more aggressive stance with contractors to put some of the overrun risk onto those building the project. He thought the practice had proved partly successful. He referenced the Gulf Coast and stabilization of costs.

Co-Chair Stedman thought the matter would be addressed in greater detail if and when the state moved forward with the project.

[10:39:01 AM](#)

Mr. Fulford considered slide 16, " Alaska LNG":

Strengths

1. Substantial low cost resources
2. Low upstream technical risk
3. Proximity to Asian demand markets
4. Climate assists with lower liquefaction cost

Weaknesses

1. Substantial infrastructure build required in challenging environment
2. IOCs have withdrawn support, funding and expertise from the projects
3. Competitiveness relative to other sources

Opportunities

1. Capex control and reductions improve economics
2. Carbon intensity reductions
3. Alternative structuring and funding options

Threats

1. Directly competing adjacent project (Can)
2. Competition from USGC, Qatar, Russia etc.
3. Emergence of new shale based exporters
4. Energy transition

Mr. Fulford quickly summarized the factors on slide 16, which he thought had been previously addressed in part. He thought the state was well-placed for Pacific LNG buyers. He thought the cost framework of the AK LNG project was a significant challenge and mentioned the lack of one of the

significant LNG players. He thought the Gulf Coast was the state's main competitor, and considered that achieving an equivalent supply would be a main goal for the state.

Mr. Cline displayed slide 17, "Alaska's Competitive Factors."

Mr. Cline highlighted slide 18, "OPEX/CAPEX Comparison":

- Alaska is a relatively high cost environment:
 - Most development statements and data suggests US\$8-15/Bbl of development costs, which is comparable to other high cost developments (ongoing unconventional developments & deepwater).
 - Operating costs are dependent on existing facilities, remoteness, weather and accessibility but broadly observed to be between US\$7-12/Bbl.
 - Significant transport costs of US\$8-\$10/Bbl, which is higher than most other upstream opportunities.
 - Unit costs further challenged due to gas and NGL monetization limitations.

Mr. Cline summarized that Alaska's competitive position was a combination of issues including resource potential, market conditions, fiscal approach, and applicable costs. He drew attention to the graph on the right entitled 'Indicative New Development Costs,' and highlighted that the state's transportation costs were higher than other competitors and was a key issue that had a big impact on competitiveness.

[10:43:12 AM](#)

Co-Chair Stedman referenced Senator Wielechowski's question from the previous day regarding ownership of the transportation corridor.

Senator Wielechowski referenced transportation costs, and asked if the fact that the pipeline companies owned the transportation infrastructure (and received a tax deductible regulated rate of return of at least 9 percent) impacted the figure shown on the chart.

Mr. Cline referenced the tariffs and the regulated rate of return, which were important and did contribute towards the cost. He mused that the cost could be lower but reminded that regulated rates of return were designed to allow the

pipeline owner to get the investment back on a rate of return.

Senator Wielechowski asked if Mr. Cline factored in the regulated rate of return when calculating the cost of transportation.

Mr. Cline stated that the firm had focused on the actual data and costs and did not look further to determine if the regulated tariffs were reasonable or not.

Co-Chair Stedman commented on earlier production increases and noted that regardless of where the oil came from, it all had to come down the pipeline. He referenced earlier concerns on the rising tariff but noted that an increase in marginal production was a benefit to all parties.

Mr. Cline thought Co-Chair Stedman had made a good observation. He mentioned the issue that with declining production, at some point the tax became less viable. He believed the current operator had done a good job in bringing down the threshold.

[10:46:44 AM](#)

Mr. Cline looked at slide 19, "Fiscal Comparison":

- Government take analysis assumes costs for new development in Alaska.
 - Assumes US\$70/Bbl crude oil sales value and net of US\$30/Bbl of Costs (Capex, Opex & Transport).
 - Each jurisdiction will have unique characteristics (development timeframe, cost environment, infrastructure/market proximity etc.)
- Alaska has relatively high government take compared to select jurisdictions, including GOM, Lower 48 and Canada (Alberta).

Mr. Cline addressed the graph on the slide entitled 'Life Cycle Indicative Value per Barrel Breakdown at \$70/bbl.' He noted that the slide had considered a number of different jurisdictions, including Norway, the Lower 48, the Gulf of Mexico, and the U.K.

Senator Wielechowski thought it looked as though corporate income taxes were counting for 10 percent of the government

breakdown. He asked about the assumed rate charged by the state.

Mr. Cline stated that the rate was different for each state.

Senator Wielechowski asked about the rate for Alaska.

Co-Chair Stedman explained that historically there had been three major producers on the North Slope, and the state had set up the tax structure so the three corporations were "C" corporations, not anticipating that one of the members would leave the state. Another company had come into the state with a different structure (Sub-Chapter S) that changed the government share relationship. He summarized that the three recipients were the federal government, the state, and the industry. He asked how Gaffney Cline had incorporated the state income tax into the analysis.

Mr. Cline relayed that the firm had not incorporated the Sub-Chapter S tax basis into its calculations. He acknowledged that the tax status made a difference for the state.

Co-Chair Stedman reminded that Chapter S signified a tax at the individual rate on an annual basis, and a C corporation was taxed for corporations. He continued that there was a shift within the structure that was unanticipated, and the committee had been struggling with it.

[10:50:20 AM](#)

Senator Wielechowski remarked that one of the largest producers on the North Slope paid no corporate income taxes. He emphasized that the number shown on the graph for government take in Alaska was extraordinarily flawed. He cited that in FY 22, the corporate income tax had been \$145 million on \$11 billion of oil going down the pipeline, while in 2023 it was projected to be \$240 million on nearly \$13 billion in oil. He considered the production value, and \$5.8 billion in profit, and estimated that amount was nowhere near a 9.4 percent. He thought the slide showed a 20 percent royalty was shown for the state of Alaska.

Mr. Cline stated that the graph was based on the actual royalty rates in Alaska. He commented that the assessment was a fiscal comparison from the companies wanting to come

in and was a competitive assessment. He postulated that a company wishing to come into the state would look at the actual tax rates for a company like itself (which was likely a C corporation) and make its assessment on that basis. He continued that it was true that an S corporation might have a different situation. He reiterated that Gaffney Cline had tried to do a competitive assessment with the perspective of what a company would see of the Alaska fiscal system when deciding whether to make an investment.

Co-Chair Stedman wanted to clarify that the chart addressed the life cycle of a selected investment. He thought Senator Wielechowski was using numbers in a 12-month window at \$70/bbl under current production cost and taxes. He thought there were two different topics being discussed. He asked if the slide considered the life cycle analysis of a particular investment, a one-year slice in time over a fiscal year.

Mr. Cline affirmed that the graph showed a life cycle assessment.

Co-Chair Stedman thought the life cycle assessment moved the numbers somewhat, since there were both new and old entrants, aging valuable profitable fields, and fields that made nothing. He wanted more clarity about what was being discussed.

[10:54:35 AM](#)

Senator Wielechowski suggested that the graph appeared to show that the royalties took up the 20 percent government take. He noted that royalties were 12.5 percent, so the graph appeared wrong. He commented that production tax, at \$70/bbl oil, was \$4.63, while the slide showed a much higher number. He thought the slide showed lower production taxes for the Lower 48 compared to Alaska. He cited a roughly 10 percent gross tax in Texas and North Dakota. He thought the corporate income tax numbers were incorrect. He thought the royalty numbers in other states were much higher than Alaska. He asked about the "State Special Oil Income Tax."

Mr. Cline explained that the category was a supplementary tax designed to capture the excess rent, usually in oil and gas extractive industries. The tax was an income tax that was applied on top.

Co-Chair Stedman thought the committee could ask Gaffney Cline to return and look at the life cycle costs, and also address the actual numbers from the previous two years and the following year. He was concerned about mixing life cycle costs with annual production and actual cash flow, which he thought was messy. He suggested that Gaffney Cline could put a finer point on the information. He thought the information was confusing and cautioned that care was needed when considering Texas and North Dakota, which could distort the data. He wanted an "apples to apples" comparison.

Mr. Cline stated that he was happy to share the information on how the numbers on the slide were created.

Co-Chair Stedman asked about further information regarding royalty trends. He thought there had been changes to the royalty structure in North Dakota and Texas due to macroeconomic issues.

[10:58:53 AM](#)

Senator Wielechowski thought the information on the slide was damaging to the state. He referenced statements from producers commenting that Alaska was too expensive. He was concerned that companies would look at the information and think the state's government take was high, and asserted that the numbers were wrong. He wanted to examine the government take at different price levels. He compared Alaska with the Lower 48, which had a gross royalty of 25 percent on average, and a gross production tax of 10 percent. He thought the price was paid at different prices of oil. He thought the companies could not write off costs in North Dakota and Texas, while in Alaska companies could write off 100 percent of costs. He mentioned deductible tax credits. He thought Alaska would be much more competitive at lower prices where it was not taking nearly as much as gross tax regimes.

Co-Chair Stedman thought Senator Wielechowski had made a reasonable request. He thought Alaska clearly had a tax structure set up to handle the different prices. He suggested that Gaffney Cline run the model at \$10 increments down to \$30/bbl.

Senator von Imhof agreed with Senator Wielechowski that it was important to get slide 19 correct. She appreciated Gaffney Cline going back to check the numbers, and thought it was important to differentiate between life cycle costs and annual costs. She observed that Norway allowed a delayed payment to the state. She thought it was material that Alaska had a minimum tax and received the money early on. She did not want to lose sight of the bigger picture that the state was in the twilight years of oil production. She asserted that when companies invested, there was money to the state treasury and local governments, as well as high paying jobs and economic stimulation statewide. She cautioned against getting too mired down regarding amounts of taxes and government take. She did not think anything went to the state for the Natural Petroleum Reserve-Alaska (NPRA) or the Alaska National Wildlife Refuge (ANWR).

11:03:34 AM
AT EASE

11:06:21 AM
RECONVENED

Co-Chair Stedman relayed he would adjourn the meeting and continue the presentation at the afternoon meeting after the planned agenda.

ADJOURNMENT
11:07:07 AM

The meeting was adjourned at 11:07 a.m.