HOUSE FINANCE COMMITTEE
THIRD SPECIAL SESSION
October 30, 2015
1:30 p.m.

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CALL TO ORDER

Co-Chair Neuman called the House Finance Committee meeting to order at 1:30 p.m.

MEMBERS PRESENT

Representative Mark Neuman, Co-Chair
Representative Steve Thompson, Co-Chair
Representative Dan Saddler, Vice-Chair
Representative Bryce Edgmon
Representative Les Gara
Representative Lynn Gattis
Representative David Guttenberg
Representative Scott Kawasaki
Representative Cathy Munoz
Representative Lance Pruitt
Representative Tammie Wilson

MEMBERS ABSENT

None

ALSO PRESENT

Steve Butt, Senior Project Manager, ExxonMobil Development Company; Representative Andy Josephson; Representative Paul Seaton; Representative Lora Reinbold; Representative Liz Vazquez; Representative Cathy Tilton; Representative Shelley Hughes; Representative Geran Tarr; Representative Jim Colver; Representative Dave Talerico.

SUMMARY

HB 3001 APPROP: LNG PROJECT & FUND/AGDC/SUPP.

HB 3001 was HEARD and HELD in committee for further consideration.

PRESENTATION: ALASKA LNG FUELING ALASKA'S FUTURE PROJECT UPDATE - BY EXXONMOBIL DEVELOPMENT COMPANY

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Co-Chair Neuman reviewed the agenda for the day.

#hb3001
House Bill No. 3001

> "An Act making supplemental appropriations; making appropriations to capitalize funds; making appropriations to the general fund from the budget reserve fund (art. IX, sec. 17, Constitution of the State of Alaska) in accordance with sec. 12(c), ch. 1, SSSLA 2015; and providing for an effective date."

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^PRESENTATION: ALASKA LNG FUELING ALASKA'S FUTURE PROJECT UPDATE - BY EXXONMOBIL DEVELOPMENT COMPANY

STEVE BUTT, SENIOR PROJECT MANAGER, EXXONMOBIL DEVELOPMENT COMPANY, introduced himself and provided some of his background. He stated that as the senior project manager for the Alaska's Liquefied Natural Gas Project (AKLNG) he worked for the companies that formed the project, including the state. He relayed that AKLNG was fundamentally different because it had the state as partner. He explained that the state had converted a derivative claim on the revenues from production on the North Slope into its 25 percent share of the project to align the gas equity shares from the slope shares to the project shares. He continued that the state paid for 25 percent of the project cost. He mentioned a recent project update given in Palmer. He encouraged questions from the committee, and wanted to engage in dialogue.

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Representative Gara thanked Mr. Butt for attending the meeting and queried Mr. Butt's rank in the organization. Mr. Butt stated that in Qatar he was responsible for the startup of the largest LNG trains in the world, and Exxon was the largest builder and operator of LNG in the world. Exxon was actively pursuing about three LNG projects in different parts of the world, and AKLNG was by far the

largest. He conveyed the chain of command relative to his position in the company.

Mr. Butt introduced the PowerPoint Presentation: "Alaska LNG Fueling Alaska's Future" (copy on file). He stated that he was one of about 3,500 people involved in the project, in addition to several hundred contractors.

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Mr. Butt directed the committee's attention to slide 2: "Alaska LNG - Project Overview." He explained that there were two anchor fields on the North Slope, Prudhoe Bay and Point Thomson; which should be starting production early in 2016. Prudhoe Bay held the majority of the known gas on the North Slope, with about three-quarters of the 32 trillion to 35 trillion cubic feet of gas between the two fields. He discussed the Point Thomson gas expansion, and relayed that operators were working on drilling the 17 well, (a step-out well), with two other wells completed. He directed attention to a photo of operators bringing in the modules that would do the compression and provide about 10,000 barrels a day of condensate. He discussed the parties comprising the Point Thomson operators: ExxonMobil (62 percent), BP (30 percent), and ConocoPhillips (5 percent). The operators had invested about $4 billion to bring the Point Thomson project online, and had a great safety record.

Mr. Butt discussed the importance of Prudhoe Bay, due to its size and being the site for the CO2 which would be processed. He would try to provide information about the potential success of the project. He directed attention to a photo of the central gas facility at Prudhoe Bay, where AKLNG would tie in to get the gas for treatment. He explained that the Prudhoe Bay operator had used the gas for reinjection to keep the pressure in the oil line. Prudhoe Bay had produced between 7 billion to 9 billion cubic feet of gas per day for forty years. He shared that the Prudhoe Bay and Point Thomson operator had successfully worked with the Alaska Oil and Gas Conservation Commission (AOGCC) to secure permission for gas export for the first time. He furthered that a facet of the decision was permission to take CO2 coming out of the AKLNG project and reinject it back into the Prudhoe Bay field. He discussed the large amount of CO2 present in the Prudhoe Bay field, and compared it to other LNG project source fields, most of

which had much less quantity. The CO2 processing was an enormous undertaking which added to the expense of the gas treatment plant, and would cost the project $10 billion to $12 billion. He described the process by which the gas could be returned to the ground, after an extraction process at a treatment facility.

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Mr. Butt discussed the integration of the AKLNG project and the fields, and suggested that it was a fundamentally different construct than traditional pipeline projects. In a traditional pipeline project such as the Alaska Pipeline Project (APP) and the Alaska Gas Pipeline (Denali), Federal Energy Regulatory Commission (FERC) regulations dictated that the people who built the pipeline were unable to talk to the people who sourced the gas because it was considered an anti-competitive act. Since AKLNG was an integrated project for export, under FERC Section 3 all parties in AKLNG (who owned the resource as well as the infrastructure) were allowed to communicate, which allowed for beneficial project integration and extensive cost savings. He highlighted the importance of how AKLNG was different than its predecessors, and thought the most fundamental difference was how the project was designed for a higher level of integration and higher level of alignment.

Mr. Butt continued discussing slide 2, informing the committee that once AKLNG brought the gas in for cleaning and treatment, production would equal approximately 3.3 billion cubic feet per day, or about 15 times as much gas as the state of Alaska used. The gas would provide fuel, in-state gas needs, and at the bottom of the pipeline there would be about 2.5 billion cubic feet available for export. The pipeline would move the gas between the treatment and the liquefaction plant and was 800 miles long with a confirmed route. He discussed the size of the pipeline and related that the project had focused on the 42-inch pipeline after research indicated it was sufficient. The state had requested that the AKLNG project review a larger diameter (48-inch) pipeline. The project had received the 42-inch pipe materials for testing from a mill in the Lower 48, and the 48-inch pipe materials were ordered from a pipeline in Asia. He noted that AKLNG was continuing to work with Lower 48 suppliers to see if a company could be

found to make 48-inch pipe, which as of yet was not possible.

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Co-Chair Neuman asked if there were projects in the United States that had used 48-inch pipe. Mr. Butt stated that there were two that he knew of. He thought there were additional factors to consider than just the diameter of the pipeline. He asserted that the AKLNG pipeline was different than any other pipeline in the world; and consisted of five different types of pipeline based on the presence of continuous permafrost, discontinuous permafrost, and other geologic factors in the pipeline route. He discussed the strain-based line that was needed to span the area between the Brooks Range and the Alaska Range. The project's 42-inch line was 22 to 25 percent heavier than any other 42-inch pipeline built. If AKLNG were to go to a 48-inch pipeline, it would be 60 to 65 percent heavier than any other 48-inch pipeline built because the wall thickness was so great due to high rates and pressures on the line. He relayed that every joint of the pipe had to be custom made and custom formed from 4-foot wide pieces of plate steel; after which it would be moved, coated, welded, joined, and set in the ground.

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Co-Chair Neuman remarked that there had been amendments to SB 138 to account for the cost of upgrades to highways and bridges that would handle the extreme weight of the project materials. Mr. Butt agreed, and stated that the effects and expense were open for analysis and review. He relayed that the preliminary front-end engineering and design (Pre-FEED) stage of the project would include testing of project execution capabilities (infrastructure), and the project had regular meetings and discussions with the Department of Transportation and Public Facilities to discuss the ramifications. He did not think the issues were resolved, and thought they needed further examination. He discussed the different transportation needs for the two pipe sizes, and specified that it would take approximately 150 thousand truckloads of pipe to move a 42-inch system, and would take 230 thousand truckloads to move 48-inch pipe. He continued that as the project design and size of pipe changed, so would the potential effects on transportation systems. He summarized that there was still much to be discussed and

decided pertaining to mitigating the effects on transportation.

Co-Chair Neuman asked about the potential weight of trucks transporting materials for the project. Mr. Butt thought that the trucks could handle 12,000 to 15,000 pounds each, depending upon the size of the truck and the size of the load. He added that the weight calculations would be worked into project logistics studies.

Representative Gara discussed the amount of gas needed for reinjection during oil production. He asked about CO2 in lieu of gas being used to support oil production.

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Mr. Butt responded that the gas had been used by the Prudhoe Bay operator to sustain oil production for 4 years. He clarified that the practice had presumed different ratios of the amount of oil and the amount of gas in the reservoir, and as the reservoir had matured, there was much more gas than oil. He stated that there was no benefit to putting the CO2 back in the ground, and referred to a practice in West Texas where the reinjected CO2 physically bonded to the oil and reduced its viscosity, but utilized a different type of oil. The project did not think it would use the CO2 for tertiary or oil production benefits, and the Prudhoe Bay operators subsurface teams had looked the best way to move forward. The project considered the CO2 for pressure support, and thought the ground was the best place for the CO2 because of a potential greenhouse gas effect. He highlighted the importance of the AOGCC ruling that gave the Prudhoe Bay operator the right to reinject the CO2 in Prudhoe Bay.

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Representative Wilson asked about the quality of the gas coming out of the ground after having been reinjected. Mr. Butt relayed that the operators had been doing a great job taking the gas out of the ground, and putting the gas back into the ground; and had done so almost four times. He discussed the concept of "stripping," which happened in the process of taking the gas out of the ground, whereby lighter liquids associated with the gas were removed and sold through the Trans-Alaska Pipeline System (TAPS). The gas produced for AKLNG was called "dry," indicating it had

been stripped, and there was no sellable product with in it such as butane or pentane.

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Representative Wilson asked if the stripping process included propane. Mr. Butt responded that propane could be recovered under the vapor pressure limits in TAPS. He stated that there was very little propane in the gas; after being stripped, blended with the crude oil, and sold as a blended stream. He discussed ethane, which was also present but was difficult to remove from the gas. He thought knowledge of the gas composition was another factor that enhanced communication and was favorable for success of the project; and noted that other previous projects did not have the same benefit due to being restricted by FERC 7. The APP and Denali gas treatment plants were about a third bigger than the Prudhoe Bay plant, to the cost of an additional $2 billion. The previous projects had operated under constraints that AKLNG was not subject to. He discussed the liquefaction facility, which made the gas cold and would then shrink by about 600 times and facilitate the gas for export. The plant was built primarily for the benefit of the reduction of volume of the fluid.

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Representative Edgmon mentioned a recent article about a giant field discovery in Egypt. He thought Mr. Butt had mentioned the advantage of knowledge of the gas content, which would provide greater certainty regarding future business contracts. Mr. Butt explained that the certainty was more related to the location of the gas, therefore additional well drilling was not needed. As long as Prudhoe Bay continued to operate well, there would be a good oil stream and operation providing the gas. He continued that AKLNG as an infrastructure was very expensive, however accessing the gas to fill the infrastructure was relatively cheap. The benefit was the certainty and the cost.

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Representative Guttenberg discussed the time span of TAPS and mentioned the relationship with Alyeska and the development of the North Slope, which he thought was unique. He inquired about the differences in facilitating a

final product with four project partners. Mr. Butt thought that the TAPS owners and equity participants were very different than the AKLNG ownership equities in the fields that provided the product. He referred to transfer points at the ends of the pipeline, where the product was being sold from one group of investors to a different group of investors. He asserted that every time there was a transfer point in a system there was taxable events, questions about value transfer, and often there was value leakage. If the amount of gas owned at the top of the pipeline was equivalent to the amount of project they owned in the middle, there would not be value transfer points or opportunities for value leakage. Rather, AKLNG would be physically connecting the equity shares of the fields in the North Slope to the buyers. He referred to AKLNG having learned from TAPS, and discussed past litigation about values and points of difference with regard to what should have been done differently. In consequence, the system would ensure that the parties involved in AKLNG did not need to go through points of value transfer or value leakage.

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Representative Guttenberg mentioned that AGDC had been asked quite a few questions about setting up a subsidiary corporation to do certain things. He referred to mixing project funds in different proportions and wondered how many would be needed order for AKLNG to operate.

Mr. Butt thought that it was the state's choice as to how it wanted its project shares represented. He thought that simpler project structures were better, and highlighted the importance of having all the project partners working together.

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Representative Guttenberg noted that in some cases he had seen project sponsors invest in different components of the project, at times through a financing company or subsidiary corporation. He wondered if the practice was typical for a project such as AKLNG.

Mr. Butt responded in the negative, and suggested that what Representative Guttenberg had described was a complex system in which many different parties came in, and could

lead to value leakage. He iterated that a core design element of AKLNG was to try and understand the state share of the gas, because the three producers purchased the right to produce the hydrocarbon, and preserved the right through continuing to operate consistent with the leases. The state had a derivative right to the revenues generated by the production. He furthered that the intent of AKLNG was to transfer the derivative right into a volume of gas so that the four parties could work together. He thought the scenario of different parties paying for different project components was not consistent with the overriding concept of alignment that the project was striving for, and did not promote success. He referred to the very narrow profit margins in the LNG market, and reminded the committee that the current price of LNG was half that of the previous year at the same time. He emphasized that the ability to be successful in the LNG business depended upon being efficient and keeping costs down.

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Co-Chair Thompson asked how the state had achieved 25 percent equity in the project. Mr. Butt explained that in 2011 and 2012, there was much discussion regarding how the project might work. The project partners had discussed past projects in which the state was not a direct participant, and in which all four parties were not participating at the same time. The past projects were examined as learning opportunities - none of the projects had been effective and it was clear to the partners that better alignment with the sovereign was needed. He noted that successful LNG projects around the world had the state as a partner, and gave examples of joint ventures. He discussed tax structures and the state's royalty claims at Prudhoe Bay and Point Thomson, and relayed that the combination of claims on the revenue stream added up to 21 or 22 percent. Through many discussions with the state and project parties, the derivative shares were translated into a gas share of the AKLNG project.

Co-Chair Thompson asked if there was 3 percent added to the states share to make the total equal 25 percent. Mr. Butt replied that 25 percent was a little more than the derivative shares had added up to, and the amount was part of the negotiation process to have all parties ready to move forward.

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Vice-Chair Saddler asked about a royalty in-kind (RIK) decision, and wondered (from Exxon's perspective) if it was essential to the progress of the project. He further queried as to whether it was still possible for the project to move forward if the state did not make the RIK decision.

Mr. Butt explained that the RIK decision was a commercial decision. He referred to slide 5, which differentiated activities as commercial work (done by the co-venturers and the state), and work in the scope of the Joint Venture Agreement (JVA) project team (done by the AKLNG project team). He related that RIK was framed as an important element of the project during discussions on SB 138 [oil and gas legislation passed in 2014], as it gave the state a share of gas rather than a derivative right to a claim on some volume of revenue.

Vice-Chair Saddler was unclear about Mr. Butt's explanation and was unsure if he was saying yes or no. Mr. Butt thought it was very important that the state made a clear decision, and it would be part of enabling some of the broader commercial discussions that needed to happen (outside true AKLNG project work).

Vice-Chair Saddler summarized that Mr. Butt was communicating that the answer was "close to a yes." Mr. Butt agreed.

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Representative Pruitt expressed interest in the FERC 3 discussion, and thought it was compelling that the AKLNG producers and line operator/owners could have discussion. He referred to data on the North Slope and wondered if there was something to prevent project parties from using the data in the future if the AKLNG project were not to go forward.

Mr. Butt clarified that the North Slope data was held by the Prudhoe Bay operator on Prudhoe Bay, and the Point Thomson data was held by the Point Thomson operator on behalf of the working interest owners in the units. He thought the true North Slope data was outside the purview of the AKLNG project. He wondered if Representative Pruitt's question specifically pertained to data around the

project and how it flowed to the JVA participants. He specified that it depended upon the location of the data, because the state had different agreements with two different representatives. Mr. Butt conveyed that he was not party to the agreements, and could not speak to them.

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Mr. Butt advanced to slide 3, "Alaska LNG - Project Overview." He recognized the project's safety success record, and reported that the project had completed the summer field season without a single safety incident. He mentioned the 250 field employees, 80 percent of which were Alaskan, and many of whom were archeologists and scientists. He discussed the building of a safety culture, setting up a long term system in which people were aware of risks and how to work safely.

Mr. Butt estimated the project spending to date to total approximately $430 million to $435 million, with about $110 million spent on concept design, about $305 million spent through the end of September, with estimated monthly spending at about $30 million. He thought that through the end of 2015, spending would be over $500 million. He relayed that the project had about 80 percent of the design work completed; before and not including the project had agreed to do additional work on the 48-inch system, which was a design scope change. The summer field work was complete. He explained that the work program and budget (WP&B) had been completed and submitted to the project partners. He clarified for the committee that on December 4, 2016, all parties remaining in the project were required to make an affirmative election on the WP&B for 2016. In the event that any partner elected to not invest in the project and move forward, the project would go in to wind-down stage or would cease.

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Mr. Butt referred to previous presentations, noting that there were key messages that had been consistent in every project review for the last three to four years. He emphasized that the integrated AKLNG project was much bigger and more complex than just a pipeline. The pipeline itself was comprised of five very complex and different pieces of the pipe, each one more complex than any pipes built in the Lower 48. The gas liquefaction and treatment

facilities were major project components, and constituted 75 percent of the total project cost. He proposed that Alaska and Rhode Island were analogous to comparing AKLNG and other pipelines in the world. He emphasized that to have a product that could access multiple markets, the gas must be liquefied and cleaned. Unlike past projects such as APP and the Denali Pipeline, AKLNG could mobilize the gas for transport instead of having fixed point pipelines that may not terminate in an area with a market for LNG. After moving the gas to favorable markets, AKLNG could hopefully get long-term agreements to secure the project, but would also have flexibility.

Mr. Butt reminded the committee that being regulated under FERC Section 3 [the federal standard applicable to export projects] allowed for full integration of the project. He continued that AKLNG had been able to get export authorizations; the project had both a free trade agreement for export and a non-free trade agreement for export. There were only about three other projects in the United States that had the same distinction, and AKLNG had been able to secure the authorization through a lot of support from the federal government. He recognized the Alaska delegation for their efforts and reported that the project had started meetings with the federal administration starting in 2012, resulting in hastened authorizations. He reiterated the benefits of integration between the resource and the project.

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Mr. Butt continued by explaining that within TAPS there were transactions, without the level of integration from being regulated differently. He stressed that AKLNG was regulated differently and permitted differently, which allowed for greater efficiency in design and regulatory work. He restated that past projects in the state did not have the same strength.

Co-Chair Neuman asked if there was a different type of project configuration other than integrated.

Mr. Butt responded that there were projects in which there were several different parties that owned different things, and each party sold in a chain. He pointed out that under some such scenarios every single transaction was a taxable event, and each party wanted some compensation for their

element of the work. He furthered that in the Lower 48, there were a lot of FERC 7 pipelines that were similar to TAPS. In the LNG business it was very uncommon to have a non-integrated project due to the project complexity and reliance on long-term contracts. He summarized that in the LNG business, non-integration configurations were very uncommon, but in other businesses it was very common.

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Vice-Chair Saddler remarked on the niceties of FERC regulation, but thought the implications were not abundantly clear. He inquired about FERC 3 regulation allowing for design integration; and understood that under that scenario there was one entity, no value leakage at each transaction point, and a simpler program to complete.

Mr. Butt agreed, and added that under FERC 3 an entity would be shielded from anti-trust laws, under different regulations, and with different types of access governed by different competition law.

Vice-Chair Saddler inquired about a distinction between the AKLNG project and past LNG projects. He wondered if Mr. Butt could make a summary statement or outline the elements that would represent differences in the AKLNG project and previous projects.

Mr. Butt discussed the Yukon Pacific project, which had advanced farther than other projects in the 1980's, and had received an environmental impact statement (EIS). He furthered that the project had relied on CO2 venting, did not have a lot of investment for CO2 removal, and could not put any of the CO2 back into the ground. The project also had no mechanism to integrate with the upstream. There had been many unresolved technical challenges, and Yukon Pacific was never able to move the project forward. He mentioned other projects which had looked at having different parties own things separately, and reiterated the costliness of making value transfers at different junctures in a project. He suggested that such a model would only work when there was a tremendous amount of value to be shared between the many additional parties. He restated the efficacy of having four parties at the table who had either purchased the right to the gas or had a right to the gas through the constitution; and as such, the parties governed how the project worked. The more parties and more forms of

compensation paid to broader groups, the more likely it was that a project would not be successful.

Mr. Butt pointed out a bullet on slide 3, and highlighted "cost of supply", which he described as the ultimate metric for the competiveness of any LNG project. He emphasized that AKLNG competed in a very complex global market; buyers were considering how to do the best for their economy and future generations. Buyers were excited by new sources of demand, and did not want to pay any more for the commodity than they had to.

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Vice-Chair Saddler discussed other projects and mentioned the Denali Pipeline Project, the Alaska Gasline Port Authority Project, and the SGDA Pipeline Project. He wondered if Mr. Butt wanted to discuss distinctions between AKLNG and the three projects. Mr. Butt related that the Denali Pipeline Project was an agreement between two of the producers to try and work together to make a pipeline between the North Slope and the Lower 48. He thought the Denali project had worked hard, spending approximately $100 million; and pointed out that many of the same people were involved in the AKLNG project. He emphasized that AKLNG had learned from the Denali project; but it was difficult for Denali to be successful since they did not have all four parties involved, and did not have the ability to work in an integrated manner. He added that APP had shared the same challenges and had spent $330 million. Neither Denali nor APP had advanced in the federal regulatory process as far as AKLNG had with completed resource reports, a pending EIS, a docket with FERC, and secured export authorizations.

Mr. Butt discussed other projects, and suggested they were independent projects in which the projects were completely separate from the resource owners. The independent projects physically had purchases and sales at the top and bottom, which led to value transfer and an opportunity for taxation and value leakage. He reiterated the importance of trying to be as integrated as possible, matching the equity in the project and the equity in the fields. He thought the simplicity of projects with integration would mitigate the high level of skepticism and mistrust created by seeing projects that had started and stopped without achieving success. He thought the projects that Vice-Chair Saddler

mentioned were structured in a way that was less likely to be successful than AKLNG.

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Co-Chair Neuman referred to the value leakage that Mr. Butt had mentioned. He wondered if one of the producers were to withdraw from the AKLNG project, would it bring the profit margin down enough to make the project non-economic.

Mr. Butt thought that if one of the producers withdrew, it would not change the economics of the project. Rather, the situation would present a challenge as to how to preserve alignment without having all the parties that own the source of gas as part of the project. Additional concerns pertained to getting the gas into the system and keeping the project going. He summarized that Co-Chair Neuman's question had many possible answers. He reiterated that cost of supply was the most important metric.

Co-Chair Neuman asked that if one of the producers were to withdraw, would AKLNG need to be reauthorized for FERC 3 or be authorized under FERC 7. Mr. Butt replied in the negative.

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Representative Wilson asked about the 2016 WP&B, and wondered what the state share of the budget would be on December 4, 2015.

Mr. Butt responded that the project budget included approximately $211 million for very specific tasks, $30 million for conditional items with pending variables (e.g. 48-inch pipe materials) for a total budget of $240 million; and the state's 25 percent share was about $60 million.

Vice-Chair Saddler thought many Alaskans were interested to know if they would be able to get in-state gas. He asked about current provisions for off-take and wondered if any pending decisions about off-take would be made before the Pre-FEED stage was concluded.

Mr. Butt thought that most people wanted to know how the project would impact their energy bills. He specified that SB 138 contemplated five off-take points, and that AGDC had been looking at many different designs for the number of

off-take points. He thought the number of off-take points was less important to the project than flexibility in the initial design, since once the project was built it would not be easy to change. He furthered that LNG was a flexible product, and the state had most of its population near the coast. He continued that once LNG was transported on the water; it was for the state, Alaska Industrial Development and Export Authority (AIDEA), and other groups to decide which of the many ways to transport the gas. He stated that his role on behalf of the project was to determine how to take the resource from the North Slope and build the infrastructure at the lowest cost to supply. He added that the off-takes were outside his purview and he may not have been the best person to answer.

Vice-Chair Saddler commented that his understanding of the design process was that the producers wanted a low-cost delivery of their supplies; whereas the people of the state wanted to ensure they had the opportunity to have gas delivered at multiple locations, which was costly. He wondered if Mr. Butt could characterize the status of the decision regarding off-take points.

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Mr. Butt thought the question would be best answered by AGDC, since it had examined many options for off-take points. He furthered that AKLNG had picked the route of the pipeline where there was the lowest environmental impact, which gave the highest probability of being successful. He thought there was a lot of flexibility around off-takes that could be discussed.

Representative Munoz asked about the request of the administration to have gas pledges from the producers by early December 2015, and wondered about the impact of the requirement if it was not met. Mr. Butt commented that the pledges were a commercial or marketing issue, which was outside the project purview. He restated the recurring themes of alignment, risk, and cost; stating that he had talked about the three subjects in every presentation. He considered questions such as the gas pledges to be concerned with alignment, and alignment was needed to get the costs low enough for project success. He thought that such questions should be bilateral discussions between the state and the other party, and restated that they were outside of his purview.

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Representative Munoz indicated she would follow up on her question at a later date.

Representative Kawasaki wanted to clarify the meaning of the December 4 election. He thought he had gleaned from testimony from TransCanada that if the legislature were to take no action and no bills were to pass at present, TransCanada might be in a position to vote "no." He wondered if at that point all progress on the project would cease. Mr. Butt answered in the affirmative.

Representative Kawasaki stated he did not want the project to cease in that manner, but wondered how the project would unwind if it were to happen.

Mr. Butt clarified that the project had only done a little thinking on the eventuality of project cessation, and thought it was important to focus on the success case scenario. He reported that there was always secondary planning in place. He shared that TransCanada and AKLNG had been building some detailed plans as to how TransCanada might transition out its AKLNG employees over time.

Representative Kawasaki asked about the hypothetical fate of the information and data that had been compiled for the AKLNG project (from the Alaska Gasline Inducement Act (AGIA) and other sources), in the case that the project ceased.

Mr. Butt specified that the data that came in to the project was owned in different places by different parties. He furthered that any old data would either held by the parties or the derivative parties; and the final outcome would depend upon the type and origin of the data in question.

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Co-Chair Thompson wondered if the state was spending too much time working on project cessation scenarios and withdrawal agreements, and asked if it might be slowing down the process. Mr. Butt did not think it was his purview to tell the different parties how to invest resources; however, successful LNG projects focused on getting costs

down and working together to solve problems. He posited that any time project partners were not working together to resolve problems and get costs down was time not spent towards a success goal.

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Representative Edgmon wondered how, in a period of long-term depressed commodity prices, the project would go forward. He discussed risk and referenced third quarter earnings that were vastly different than earnings the previous year. He thought the project may have to succumb to budget cuts if the trend continued. He acknowledged the project partner alignment, but thought perhaps the project could become a casualty of reductions in terms of global operations.

Mr. Butt concurred with Representative Edgmon's suppositions. He noted that the ability to move the project forward was represented in upcoming slides. He reiterated that as the project moved forward the costs would go up, and it was necessary to have confidence that the project would be a profitable venture. He pointed out that LNG was selling for half the price it was a year previously. He referred to public data that had been provided by enalytica pertaining to the cost for AKLNG to generate a volume of a million BTUs of LNG. He discussed the cost of LNG production and quipped that if a project was losing money on a unit cost basis, it shouldn't try and make up for it in volume.

Representative Edgmon asked about direct competitors to the AKLNG project; and asked Mr. Butt to characterize what was happening in British Columbia and whether it was considered a direct competitor. Mr. Butt mentioned new projects in Western Canada, the Gulf Coast, East Africa, the Pacific Rim and Australia; and remarked that they were all vying for growth in the LNG markets. He specified that currently the LNG market was about 270 million to 280 million metric tons annually. He hoped the AKLNG project would start in 2024 or 2025; and estimated that as energy demand grew (with population growth) the volume of LNG demanded would be in excess of 400 million tons. He concluded that there was growth in the LNG market, and stated that it was the fastest growing sector of the energy market due to its flexibility. He continued that LNG had the lowest carbon emissions of fossil fuels, and had some structural

advantages. He thought the state was as invested in the project outcome as he was; and emphasized working on cost reduction, alignment, and risk reduction. He discussed geographic advantages of the AKLNG project; such as colder temperatures resulting in greater yield, and the close distance to the Asian market with lower shipping costs. He thought the challenge was overcoming the treatment costs, managing the CO2, and managing the 800 miles of pipe. He reiterated that there was active competition to the AKLNG project, but emphasized that project participants had a high level of commitment.

2:44:05 PM

Representative Gara asked if there was any realistic hope that China's announcement to reduce CO2 emissions might have a positive effect on LNG prices. Mr. Butt thought all such factors mattered, and added that population growth was also an important factor in driving the demand of LNG. He discussed the forecast population growth and environmental challenges in China, and suggested that the factors boded well for the future of LNG. He emphatically restated that the only way to ensure project success was to establish alignment between the four resource parties, preserve alignment in the project, and work together to drive down costs.

2:45:52 PM

Vice-Chair Saddler asked what Alaskans should infer from Exxon's recent application to AOGCC to go to gas expansion operation at Point Thomson (as opposed to cycling and condensate production). Mr. Butt commented that the intent was to find a way to use the resource at Point Thomson to support a gas export scenario such as AKLNG. He continued that there were different ways to do it, and thought cycling was self-defeating since a great deal of fuel was used to move molecules around, and at some point the product being moved would not pay for all the fuel that was being used. He emphasized the importance of when and how energy was moved out of resources such as Point Thomson. He recognized the Prudhoe Bay operator for maximizing oil production through their good work in maintaining reservoir pressure and gas reinjection at Prudhoe Bay. He commented that there was less and less oil remaining, which is why AOGCC had supported Prudhoe Bay offtake as well as Point

Thomson offtake. He thought the exciting part of the AOGCC ruling was that they also allowed for CO2 reinjection.

2:47:27 PM

Representative Guttenberg discussed the upcoming decision as to whether AKLNG would hire a gas marketer who had expertise in the field to aid in decision making. He inquired about the timeline for the decision, and wondered how it would affect the project if the state did not have the expertise to make the decision. Mr. Butt reminded the committee that he was not a marketer, and did not feel qualified to tell the state when and how to bring in a marketer. He pointed out that the project partners all had marketing professionals that could communicate with the legislature (although not to each other). He referred to the sensitivity of marketing activities under antitrust law, which carried personal as well as civil penalties. He suggested that the legislature open dialogue through the marketing organizations available to it through the project.

2:49:30 PM

Co-Chair Neuman asked what point in the project would be appropriate to start the process of marketing gas. He thought it might be very early in the project process to start marketing.

Mr. Butt turned to slide 6, which illustrated the phased/gated process of AKLNG project management. He discussed early-phase project activities and asserted that before moving from the Pre-FEED to the FEED stage of the project, more information on commercial agreements and commercial viability was needed. Even more such information was needed when moving into the final investment decision (FID)/Construction phase of the project. He thought the amount of marketing information needed would be relegated to the comfort level of the project partners as they moved through the project phases. He reiterated that there were marketing professionals available to talk with the legislators one on one (larger sessions pertaining to marketing advice could be considered collusion). He pointed out that if the state elected to have its role be as a direct marketer, the relevant discussion could also be considered collusion. He asked what Co-Chair Neuman thought

was needed (in terms of marketing information) to move from one project phase to another.

2:51:38 PM

Mr. Butt reviewed the project team, which he described as incredibly experienced (slide 4). He described that there were about 135 people working in four different offices: an office in Anchorage managing regulatory issues and community affairs, an office in Calgary where the pipeline was being designed, an office in Houston where the LNG plant was being designed, and an office in Denver where the gas treatment plant was designed. He explained that the teams were in place in the chosen cities due to design and contracting expertise in place in each location. He pointed out that it was much more cost efficient to move a small number of project team people to where the contract expertise was.

Mr. Butt discussed the integration of the AKLNG team, and the process of how AKLNG jobs were staffed. He referred to the principle of "the best player plays", and elaborated that there were organizational charts with specific job descriptions with clear deliverables and resourcing requirements. He outlined the staffing process by which project roles were filled, where managers from each project partner constructed lists of qualified employees to potentially fill roles in the project. He discussed integration of employees from all the partners using balance and succession plans. The project sought balance in the team (for diversity of ideas and diversity of experience) and succession planning. He added that the TransCanada transition would function through the same process.

2:56:05 PM

Co-Chair Thompson asked if the members of the project management team were required to sign a confidentiality agreement.

Mr. Butt stated that the employees signed secondee agreements because every member of the team had full access to all lead party systems, processes, and tools. The employees did not share such information with their parent companies or other companies. He emphasized that the agreements were very important to AKLNG, considering non-

disclosure agreements in particular. He used the example of the company that provided the chemical to separate the CO2 from the gas, which had one of the most strict confidentiality agreements that could be found. He explained that the motivation for such a strict policy was the protection of their chemical formula.

Mr. Butt discussed blanket confidentiality agreements - he qualified that individuals signed agreements back to the corporations. He related that he had signed only one confidentiality agreement; indicating that as an employee of ExxonMobil, he would honor all confidentiality agreements of ExxonMobil. He explained that the confidentiality agreements of a company were binding to every individual in the company.

2:57:40 PM

Co-Chair Thompson understood that AGDC had not signed a confidentiality agreement, and wondered if the corporation was limited in access to some confidential information.

Mr. Butt stated that there were open discussions pertaining to the agreements, and two weeks previously there was a regulation posted for public comment by AGDC. Each of the project partners sent a representative to raise concerns, and the project team also sent its technical manager to raise concerns. He continued that AGDC had already signed several non-disclosure agreements, and it was future agreements that were open to question.

Mr. Butt emphasized that it was very difficult for AKLNG to see how to proceed if AGDC did not sign future non-disclosure agreements. He discussed the necessary documentation during the Pre-FEED stage, including a deliverables document to include definition of project specifics. He thought there would need to be one document available to those who had signed agreements, and another document redacted for others who had not. He provided a hypothetical scenario in which AGDC was in the room during a discussion, and the discussion could not proceed if it contained confidential information. He stated he had never seen it done, and thought it would increase costs.

Mr. Butt thought that the word "confidentiality" often had negative connotations, and sounded like there were things to be hidden. He asserted that the agreements were about

preserving the competitiveness of the project. He emphasized that if the state wanted the project to be successful and globally competitive, it had to have access to the best goods, services, and people; and that was a standard on all LNG projects anywhere the world. He reiterated that parties would not work with the project if they feared their company's livelihood and future would be at risk. He summarized that the project really wanted to have an open environment where everyone would be able to work together and see all the information. He restated that the confidentiality concept was all about making an environment where AKLNG could be a competitive project.

3:00:42 PM

Co-Chair Thompson did not think that there would be a workable solution if AGDC did not sign a confidentiality agreement.

Co-Chair Neuman asked if AGDC's failure to sign an agreement had already slowed the pace of the project.

Mr. Butt thought that Co-Chair Neuman posed a great question, and stated that the situation absolutely impacted the pace of the project. He was unsure if it had slowed the project down, but thought that time spent on confidentiality agreements was time that could have been spent on more relevant and productive discussions on the project. He acknowledged that the Pre-FEED stage was about working together and finding alignment; but the more difficult the process was, the harder it was to move forward.

3:01:32 PM

Co-Chair Neuman had heard that the confidentiality agreement was confidential.

Mr. Butt stated that he believed that the language in the confidentiality agreement in question was subject to the signature on it, and was part of the information that any signatory did not release. He expressed respect and understanding about the need for information, but avowed that the project needed to very thoughtful about any information it put in the public domain. He thought there needed to be a process to sort through the problem.

3:02:43 PM

Co-Chair Neuman asked if the WP&B was confidential, and wondered what individuals or groups with the state could review it.

Mr. Butt specified that the WP&B was a JVA document that had been released to the state gas team, who were all signatories to the confidentiality agreement. He qualified the document as "a road map" on how to build an LNG project, and was something to be protected. He thought the project needed to find a way to have enough transparency in the process that people could have confidence, yet not compromise competitiveness.

3:03:49 PM

Representative Edgmon asked who made up the Alaska gas team.

Mr. Butt stated that there was a broad range of people who represented the state on other issues. He advanced to slide 5: "AKLNG Project Scope" to answer Representative Edgmon's question. He pointed out the yellow "swim lane" box which represented the AKLNG project team, and included a list of all the issues the team managed under the project. He stated that he was accountable for the issues listed; including advancing the regulatory process, advancing the design process, and driving costs down. He elaborated on some of the acronyms listed on the slide and summarized that the items had to do with procuring entities to do the next phase of work. The work was shared by project partners, and the phase [Pre-FEED project scope, under JVA] was where the partners could agree on how to move the project forward while driving down cost.

Mr. Butt continued that the state gas team was represented by the blue swim lane box depicted on the slide, including commercial activities outside of the JVA and project team. He explained that the configuration [activities executed by co-ventures and the state] was because different parties had different ideas and different methods. He qualified the activities as commercial work, and reported that there was probably an additional 100 or more people doing the work. He specified that the state gas team was primarily representatives to the blue swim lane, representing the state on commercial issues, and issues that the state

viewed as important to frame the project for success. He detailed a number of the technical employees that AKLNG worked with on both sets of activities.

3:06:07 PM

Representative Edgmon referred to slide 4, and asked about positions on the organizational chart that were staffed by employees of TransCanada. He wondered how the positions would be addressed if TransCanada left the project. Mr. Butt stated that the roles would be filled using the same principle as the rest of the team positions, and as the project moved from the 15 TransCanada employees supporting the project to zero, every position would be open to the nomination process.

3:07:06 PM

Representative Edgmon asked if there was a chance that the vacant position could be filled with non-Alaska designated employees.

Mr. Butt answered that the right people would be selected after balancing and shaping of the team, and emphasized that the best candidates were preferred. He clarified that everyone the participants put up for the jobs would be considered.

Representative Edgmon stated that he better understood the value of TransCanada. He mused that the pipeline project manager was from TransCanada, but it was not a foregone that the replacement candidate would be an Alaska-designated position. Mr. Butt replied that it was possible, and it would not be known until the candidates were examined.

3:08:11 PM

Vice-Chair Saddler asked about the aforementioned non-disclosure agreements signed by AGDC, which he thought sounded like a confidentiality agreement. He thought it was understood that AGDC was not signing confidentiality agreements.

Mr. Butt clarified that AGDC had signed some confidentiality agreements in 2014 that were still in place.

3:08:55 PM

Vice-Chair Saddler asked if Mr. Butt (as the project manager) was concerned about the kind of structure the state used to hold its share of the project.

Mr. Butt had not considered the matter, and stated that he was agnostic. He expressed care that the project stayed aligned, and expressed sensitivity to Representative Edgmon's earlier question. He emphasized that AKLNG wanted people from each partner involved in the project, and it was in the best interest of the project. He thought the staffing process was very simple, and was unconcerned about how the state carried out its process.

Vice-Chair Saddler asked if Mr. Butt had any objection to AGDC stepping in to assume TransCanada's role.

Mr. Butt stated that there were some great folks at AGDC, and felt confident that there were individuals that could fit into some of the roles. He described familiarity with AGDC staff.

Vice-Chair Saddler discussed the pace of progress and whether the project was moving forward according to established milestones. Mr. Butt thought that the following slide might address Vice-Chair Saddler's question.

3:11:09 PM

Mr. Butt turned to slide 6, "Project Development Phases," which illustrated the phased/gated process used to manage large projects. He revealed that he would discuss what happened in each project phase, and then would talk about the significance of the project gates. He signified for Vice-Chair Saddler that once he addressed the two topics, he could more adequately discuss how milestones fit within the overall process.

Mr. Butt elaborated that that each of the project phases were intended to make the project more understandable, more certain, and reduce risk. The concept select phase was where the "how" of the project was defined; key questions as to line size, location of gas and LNG plants, and plant size were addressed. The current project phase was pre-FEED; wherein the project endeavored to drive down costs,

advance regulatory work, and ensure the system design would work and be executed. He highlighted that the system was incredibly integrated, and used an example of the system's sensitivity to small changes to illustrate the importance of designing the components together. The FEED stage involved taking the simple and rudimentary designs and making them more complex and with specifications for building that included a high level of detail. The final phase was execution, in which the project reached the FID stage and the project was actually built. He summarized that each of the phases had a gate for the purposes of completing work before moving on to later stages.

Mr. Butt drew attention to the "Project Influence Curve" graph on slide 2, which he thought illustrated the importance of the gates. The graph moved through the same color range as the project phases to illustrate the passage of time. The blue line represented actual spending. In 2012 and 2013, the project [in the green Pre-FEED phase] had spent about $30 million per year doing high-level design. In the current Pre-FEED phase, $30 million per month was spent to do the more detailed design. He estimated that in the FEED phase, the project would spend $30 million per week as detailed specifications were tested, and many more contractors were doing more design. The FEED phase would provide confidence for the final phase of FID, where it would spend $30 million per day to procure and construct for the project.

Mr. Butt drew attention to the red curved line on the graph, which defined the ability to influence the project. He pointed out that as the project moved through the phases, the ability to make changes and influence details diminished. In the beginning phases the project was working off paper, which was not very expensive and provided the ability to influence the design. He recounted the FERC resource reports and permit applications that had been filed and stated that once the permits were filed it became very difficult to change things. After defining and permitting items, which were reviewed and approved by the regulator, degrees of freedom were diminishing. He pointed out that the red influence curve dropped quickly through the FEED phase, and once in the FEED phase the ability to move things dropped a great deal since the design of the project was largely set. Instead of continuing with design, the FEED phase was concerned with how to construct the project. The detailed analysis included logistics studies

and labor studies; and as the project lost the ability to change things and spending went up, the project had made good decisions. The gates were used to enable the good decision-making.

3:17:39 PM

Mr. Butt reiterated the significance of the blue spend curve, and thought it was important that the project did not move through the gates until it was ready. He thought using the specific term "milestones" [in reference to Vice-Chair Saddler's question] could be potentially problematic, and revealed that studies of mega-projects had indicated that schedule-driven projects were prone to failure. He furthered that the failures were due to not moving through gates and making decisions in a timely manner.

Vice-Chair Saddler asked if the project was generally on track.

Mr. Butt stated that the project was absolutely on schedule to complete the Pre-FEED stage by mid-year 2016, and the FEED decision by mid-year 2017; which was what was committed to in the Heads of Agreement. He restated that date-certains and milestones were not what was done in mega project designs; the project was driven to the completion of the work in the gated process rather than driven to the dates.

Mr. Butt continued that AKLNG was very confident that it was on schedule to do the work, and thought that with the addition of the 48-inch pipe work (which would add 6 to 8 months of work to the pipeline team) all other work would be completed around April 2016. The information from the completed work would be used in the resource reports, which were critical to keep the regulatory work moving forward and eventually feed into the application. He summarized that the project was working toward dates, but concerned itself with progress.

3:19:48 PM

Representative Pruitt asked if the gates were set in stone. He referred to conversation regarding items that would potentially be moved from the FEED to pre-FEED stage, and wondered if it was common practice. He inquired if there

was a point at which project items were not able to be shifted in such a way.

Mr. Butt stated underlined the significance of what activities were listed in each phase, because over time the ability to make changes decreased. In the event that any of the four parties wanted to consider an element for completion earlier than its phase indicated, it was incumbent on the other participants to try and find a way to reduce the risk. He reiterated that everything in the project pivoted back to alignment, risk, and cost.

Mr. Butt thought the shifting of items between stages was not without consequence. He theorized that if money was spent in the pre-FEED stage rather than the FEED stage (where there was more certainty) it could create the risk of having to pay for the work twice if there was a change in design. The project tried to use the gated process to reduce uncertainty, but the gates were not set in stone. He referred to hundreds of years of combined experience in leadership teams that established a process through which tasks were ordered for maximum benefit. He did not want to spend money on commercial issues before moving through the gates, so as to not spend money answering commercial questions that might no longer be relevant.

Mr. Butt referred back to the gated model on slide 6, and suggested that anything moving from the dark blue gate (later in the process) into the light blue gate (earlier in the process) increased costs. He emphasized that partners could not move tasks across the gates without having enough information to be comfortable.

3:22:47 PM

Co-Chair Neuman referred to slide 5. He wondered if AGDC represented the state on the AKLNG project team pre-FEED project scope, and if it had seen the WP&B.

Mr. Butt stated that AGDC had received the WP&B at the same time as everyone else; and additionally, there were AGDC representatives who were involved in creating the WP&B. He expressed that he had a great deal of respect for the corporation's technical committee representative Fritz Krusen, who had helped to build the budget.

Co-Chair Neuman asked if AGDC had to sign agreements prior to the creation of the WP&B.

Mr. Butt stated that AGDC was covered under the JVA as a project participant.

Co-Chair Neuman asked if AGDC would have to sign confidentiality agreements before December 4, 2015.

Mr. Butt understood that most of the agreements in question were already done, and referred to new regulations and how they would impact AGDC's ability to sign agreements going forward. He understood it was open to public comment. The questions were read into the public record, and AKLNG was waiting for a response. He qualified that AGDC was working hard on the issue.

3:24:30 PM

Representative Gara referred to slide 6, and discussed project phases. He surmised that 90 percent of spending occurred when the project was ready to be executed. He wondered if Mr. Butt had observed other projects in which decisions about project viability were made after the pre-FEED stage rather than the FEED stage.

Mr. Butt had seen projects that completed the pre-FEED phase but did not clear the gate to the FEED phase after finding that it was not economic to proceed due to project costs or regulatory environment. He stated that there were a lot of projects that completed the pre-FEED stage more than once in order to cut costs, and had seen it done with a savings of 30 percent after engaging with the learning process in pre-FEED activities. He emphasized the importance of the gated process and the reduction of project uncertainty before increased resource commitment.

3:26:47 PM

Representative Kawasaki referred to the supplemental request in SB 3001, which asked for additional positions (including a marketer) in order for the AKLNG state team to work. He thought that part of the justification was to push some of the FEED decisions into the pre-FEED stage, and asked Mr. Butt if he considered it to be a wise decision from a project perspective.

Mr. Butt stated that Representative Kawasaki asked a great question, but did not feel it was a question he could answer. He reiterated that if the request was what it took for a project partner to get enough alignment to be willing to move through the process, then he thought it was important to make it work. He thought the only way for a big project to be successful was to preserve the alignment and address such issues. If any one of the partners needed information earlier (that was traditionally worked in FEED); he respected the decision and thought it was not his position to question it.

3:28:05 PM

Co-Chair Neuman commented that all the project parties worked to solve a problem that any partner might have. He thought the coordinated effort towards problem solving was a good policy.

Representative Kawasaki was curious if the other project partners to AKLNG were looking at marketing or asking similar questions as the governor.

3:28:51 PM

Representative Pruitt asked if there was concern about the new regulations related to the confidentiality agreements that would change or invalidate previously signed agreements with AGDC members or other project team members.

Mr. Butt stated that his understanding was that the agreements that had been signed would be honored. The project had discussed the matter with AGDC, and the corporation was going to honor the existing agreements. He recounted that AKLNG had read questions into the public record pertaining questions about how to execute project work when there was not a free flow of information. He wanted a free flow of information, and thought Representative Edgmon had raised an important question - whether state legislators would see everything. He thought it was important for legislators when speaking to those working on the state's behalf; so as to provide comfort that the work was proceeding as planned. He discussed the importance of having an integrated team, and enabling the spending decision-makers to be able to communicate about the project particulars. The alternative to alignment and integration was increased costs.

3:30:49 PM

Representative Guttenberg referred to a course some members had taken that studied the successes and failures of megaprojects. He had learned that project managers were a key component of the success of projects, and described them as "generalists" who had worked in a variety of project areas. He suggested that Mr. Butt was currently in such a position; and would have understanding of why project decisions were made, changed, and how they came about. He thought Mr. Butt was well respected and wondered if he saw himself as the AKLNG project manager for the long-term.

Mr. Butt was happy to work on the project as long as the project parties thought they were getting good results. He reminded the committee that no employee lasted forever, and that was why there was a succession clause. He felt that one of the greatest testimonies to the quality of the AKLNG team was that they did not need him. He likened his job to driving a Zamboni (making the ice as smooth as possible for maximum speed); and doing air traffic control (making sure everyone takes off and lands on time and nobody bumps in to each other mid-air). He stated that he enjoyed his job.

Representative Edgmon thought the overall project costs were between $45 billion and $65 billion. He referred to the Trans-Alaska Pipeline, and recalled that the project cost eight times more than what was originally projected. He asked about Mr. Butt's level of confidence in the budget for the AKLNG project staying within the projected range. He referred to a presentation by enalytica the previous day that suggested the project had a greater likelihood of success if it was closer to the $45 billion level than the $65 billion level.

Mr. Butt praised the project team, and had every confidence that the team was comprised of the right people with the necessary experience. He relayed that the lead party in the AKLNG project had just completed another project (with a large gas plant, large LNG plant, and a 600-mile pipeline) ahead of schedule and under budget. The project had been in remote and difficult terrain, and the pipeline had crossed two mountain ranges. He expressed that he had a healthy respect for the unknown, and it was the unknown that caused

projects trouble. He referred back to the gated process as a means of driving down cost and ensuring project success.

3:35:47 PM

Representative Edgmon referred to Mr. Butt's mention of contingency plans and suggested that the supply of LNG was overtaking the demand. He wondered if there was a scenario under which AKLNG had to build the project for much less than $45 billion.

Mr. Butt responded that the project was currently working on how to take large sections of the cost structure out without losing any reliability or compromising safety. He discussed significant recent changes in systems and materials, through which the team had found a way to save $1.5 billion from the project cost estimate. Additionally, the team had found approximately $500 million in savings through fiber optics, and was looking for more. He relayed that the pipeline team had found different ways to size and build the roads, and thought they could cut $1 billion from the initial estimate for gravel. He explained that the savings were offsetting pressures from elsewhere; such as labor (a huge pressure), camp management, personnel transportation, and pipe acquisition. The team was continuing to work the process to drive down the costs.

Representative Edgmon referred to an earlier comment by Mr. Butt that approximated that the pipeline was 20 to 25 percent of the entire AKLNG project cost. He wondered if the pipeline was the largest cost variable subject to the most fluctuation.

Mr. Butt responded that every piece of the project had cost pressures, and the pipeline had large execution risks (because of the large size and need for so many people). He thought designs and drivers were commonly areas of big cost overruns in big plants. He specified that three quarters of the cost of AKLNG was outside the pipeline. The probability was that there would likely be cost overruns in the plants rather than the pipeline. He thought it was important to get the design correct so there was no cost overruns, and mentioned the importance of the execution plans. He thought there had been many similar projects with no cost overruns. He recounted that all the LNG trains his company had built in Qatar were built under budget, and all the LNG trains in

Papua New Guinea were built under budget. He reported that Point Thomson was being built under budget.

3:38:56 PM

Vice-Chair Saddler asked Mr. Butt to discuss the potential risks and rewards for the state's project partners in AKLNG.

Mr. Butt stated that if there was true alignment, and the state put up 25 percent of the project cost, and received 25 percent of the revenues; the parties who put forward 75 percent of the cost would get 75 percent of the revenue. He mentioned that there would be tax differentials that would skew the numbers, but he considered a ratio of 3 to 1 to be a fair estimate of the breakdown between the state and the other partners. He emphasized having a project system in which everyone was working together and when prices went up, there was more profit to share.

Vice-Chair Saddler asked if there were any other benefits for the parties in delaying the project.

Mr. Butt did not feel qualified to answer Vice-Chair Saddler's question, but did not see how it would benefit anyone to delay the project for any capricious reason. He emphasized that the project parties had put up $430 million to get the results they had received, everyone had worked in good faith, and there was investment in Point Thomson. He reiterated the importance of keeping the costs down, and moving through the gates; and thought that all the parties wanted to have enough confidence to get through the gates. He thought that there were different issues raised by each of the parties, but the process and the way to resolve the issues was the same.

3:41:49 PM

Mr. Butt scrolled to slide 7: "Alaska LNG by-the-numbers," which illustrated results of some of the project teams. He wanted to discuss the community outreach events that the project had engaged in; he thought that there had been over 100 events. Project staff had talked with thousands of Alaskans and hundreds of Alaskan business on how the project worked. There had been a lot of positive meetings with Native corporations, Native villages, and tribal entities; and he had been pleased by the level of support.

He highlighted the photographs on slide 7; which showed work on the project, including a recent community meeting.

3:42:57 PM

Representative Gara asked about the purchase of 570 acres in Nikiski. He recalled debate from the two previous years about whether or not Nikiski or Valdez would be the terminus for the project. He wondered if the final decision had been made on the terminus in Nikiski.

Mr. Butt thought that all parties were aligned on the terminus location in Nikiski. The site had some very good geotechnical characteristics. He referred to a book that would be provided to the committee; which included a summary of all the sites that were considered, as well as how the decision was made. He felt that all the partners were comfortable with the terminus location.

Co-Chair Neuman reviewed the agenda for the following day.

3:44:46 PM

Representative Wilson asked if the committee would hear from the attorney general.

Co-Chair Neuman specified that the committee had put in a request to hear from the attorney general on the following Monday.

HB 3001 was HEARD and HELD in committee for further consideration.

#
ADJOURNMENT
3:45:22 PM

The meeting was adjourned at 3:45 p.m.