HOUSE FINANCE COMMITTEE
March 19, 2014
1:33 p.m.

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CALL TO ORDER

Co-Chair Stoltze called the House Finance Committee meeting to order at 1:33 p.m.

MEMBERS PRESENT

Representative Alan Austerman, Co-Chair
Representative Bill Stoltze, Co-Chair
Representative Mark Neuman, Vice-Chair
Representative Mia Costello
Representative Bryce Edgmon
Representative Les Gara
Representative Lindsey Holmes
Representative Cathy Munoz
Representative Steve Thompson
Representative Tammie Wilson

MEMBERS ABSENT

Representative David Guttenberg

ALSO PRESENT

Deepa Poduval, Principal, Management Consulting Division, Black and Veatch

PRESENT VIA TELECONFERENCE

Jason De Stigter, Senior Consultant, Management Consulting Division, Black and Veatch

SUMMARY

^BLACK AND VEATCH PRESENTATION: OBSERVATIONS ON HEADS OF AGREEMENT

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Co-Chair Stoltze discussed the agenda for the day.

DEEPA PODUVAL, PRINCIPAL, MANAGEMENT CONSULTING DIVISION, BLACK AND VEATCH, discussed her background and focus on the natural gas markets. She relayed that Black and Veatch had supported the state in its gas monetization efforts beginning around 2007. A significant portion of her work revolved around helping private companies and governments look at natural gas infrastructure, market trends and forecasting, and investment strategies.

Co-Chair Stoltze asked Ms. Poduval to clarify who the consultants were working for. Ms. Poduval replied that the firm was consulting for the Alaska Department of Natural Resources (DNR).

Co-Chair Stoltze remarked that the consultants had been hired by the administration and were also working for all Alaskans.

JASON DE STIGTER, SENIOR CONSULTANT, MANAGEMENT CONSULTING DIVISION, BLACK AND VEATCH (via teleconference), discussed his background in financial modeling and engineering. He was available to answer questions.

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Ms. Poduval provided a PowerPoint presentation titled "Observations on Heads of Agreement" dated March 19, 2014 (copy on file). She noted that a presentation in members' packets titled "Alaska North Slope Royalty Study - Selected Extract" dated March 10, 2014 had been provided as backup material (copy on file).

Ms. Poduval began on slide 3 titled "Long-Term North Slope Oil and Gas Revenues are Driven by AKLNG Project Success." The slide depicted revenue forecasts from North Slope oil and gas production with and without the AK Liquid Natural Gas (LNG) project. The blue line showed declining revenue forecasts for the state using only oil production and prices. The green line included both oil and gas and showed increasing revenue forecasts; an additional $4 billion to $4.5 billion in revenue could result from the LNG project. She noted that the consultants looked at the economic value of the AK LNG project from an incremental perspective; models always included projections for an "oil only world" with an overlay of what the world would look like for Alaska with gas production as well. The models looked at the difference between the two revenue and income streams

as accruing to the AK LNG project. The modeling took into account that oil and gas production were linked in Alaska and that producing gas from Prudhoe Bay could have implications on oil production in the region.

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Co-Chair Austerman asked if the $4 billion to $4.5 billion in potential additional revenues represented a gross or net revenue stream. Ms. Poduval replied that the figures represented the annual net revenue stream once the project was operational. She detailed that the projection looked at cash flows to the state on an annual basis; the $4 billion to $4.5 billion was the incremental revenue the state would receive with the AK LNG project in operation. The presentation also included the Net Present Value (NPV), which used all cash flow streams that would accrue later in the project as well as the upfront investment the state would make in the project.

Vice-Chair Neuman asked about various assumptions used in the data including the price of gas. He mentioned the use of gas in payment for taxes and standard allowable deductions from the value to the state. Ms. Poduval replied that forecasts for 30 to 40 years in the future relied on the best information available and market view at present. The data shown on slide 3 used an assumption of 2.5 billion cubic feet (BCF) of LNG sold per day from the project; data shown did not take the state's equity investment in the project into account. The LNG market prices generally used a formula that was linked to global oil prices; therefore, the projection was based on a conservative to mid-price level for LNG. The oil price was more conservative than the one assumed in the Department of Revenue (DOR) revenue sources book; it used a $90 oil price in current dollars escalating at approximately 2.5 percent per year. The LNG price was assumed to be 13.5 percent of the oil price plus $1.00. The formula for LNG prices was fairly standardized; it was usually a percentage of the oil price plus an "adder." Recently the percentage of oil price had hovered around 14 to 15 percent. The LNG price at the beginning of the project was approximately $17 assuming a $90 price of oil.

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Representative Gara asked for verification that the data used an [LNG] price of about $17 mmbtu [Million British Thermal Units]. Ms. Poduval replied in the affirmative related to the first year of LNG production. The price would increase with an increase in oil price.

Representative Gara referred to prior presentations and explained that the highest price estimate for LNG had been roughly $17 in the Japanese market. However, there were prices of $10 to $13 paid in other parts of Asia. He noted that under contract the state would be responsible for selling its gas (Exxon, BP, and ConocoPhillips would not sell the state's gas on its behalf). He wondered why the model assumed the state would receive the highest gas price available.

Ms. Poduval responded that the $17/$18 price was based on the current oil prices and executed LNG contracts. The LNG price in the model using current prices would be closer to $12 or $13. The $17 price was a forecast for 10 years into the future.

Co-Chair Stoltze spoke to over optimistic projections. He used an example related to pumpkin market prices. He asked Ms. Poduval if she would bet her own money on the price projection.

Ms. Poduval replied in the negative. She reiterated that the estimate was based on the best information available at present. She believed the firm had taken a somewhat conservative view on what the prices could be. However, she recalled the legislative process related to the Alaska Gasline Inducement Act; there had been rising gas prices in the Lower 48, but shale gas development had not been foreseen. She had believed that $11 gas prices would be sustained; however, she had been proven wrong just as many other natural gas experts had been. She pointed to the significant magnitude of the LNG project and its accompanying projections over the upcoming 40 years. She did not have a crystal ball.

Ms. Poduval moved to slide 4 titled "Putting the HOA within the Context of AKLNG Timeline." The slide showed how the development stages of the project were lined up. One of the first steps of the process was the pre-Front End Engineering and Design (pre-FEED), where design began for the scope of engineering and technical aspects. The pre-

FEED stage typically took 1.5 to 2 years. The AK LNG project was anticipated to take approximately 1.5 years; if it began in mid-2014 it was expected to go through the end of 2015. The next stage was the Front End Engineering and Design (FEED); it was anticipated to take approximately 3 years for the AK LNG project. She stressed the importance of the FEED stage, when all of the detailed engineering and design details were solidified. She elaborated that cost estimates would be narrowed, technical challenges would be addressed, and the majority of the commercial agreements underlying the project would be locked down. She explained that arrangements between stakeholders and markets were finalized during the FEED stage. She expounded that LNG sales and purchase agreements (SPAs) were generally negotiated and executed towards the end of the FEED stage. Additionally, financing arrangements were nailed down during the stage as well. She relayed that the project entered the Final Investment Decision (FID) stage once it had been determined that the market price would support the project cost structure and that banks were willing to finance the project. During the FID stage each company involved in a project committed to moving forward (Alaska and TransCanada in the case of the AK LNG project).

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Representative Gara referred to prior testimony that the state had proposed a production tax rate between 7 and 13 percent. He wondered what production tax rate was assumed in the graph on slide 3.

Ms. Poduval replied that slide 3 showed a straight forward SB 21 fiscal structure [SB 21 was oil tax legislation that passed the legislature in 2013]. The information did not include equity investment by the state and any changes that would call for the production tax.

Representative Gara asked for verification that the taxes shown were indicative of money the state would receive under the SB 21 tax structure. Ms. Poduval answered that the slide set the framework for the discussion ahead where the state's equity investment would be included as well.

Co-Chair Stoltze confirmed that it used the current law. Ms. Poduval agreed.

Ms. Poduval returned to the project development timeline on slide 4. Major expenditures began once FID had been completed. She pointed to the state's required investment during each of the stages. Depending on the level of equity taken on by the state and the involvement of TransCanada, the state's investment would range from $43 million to $100 million in the pre-FEED stage. State commitment during the FEED stage would be between $180 million and $450 million. Once the FID stage had concluded and sales agreements and financing had been locked in, 95 to 97 percent of the state's total investment would occur (at the end of 2018 and prior to the completion of construction). The state would be required to make decisions about its total investment as would the producers. The development plan phases were very typical of large LNG projects worldwide; decisions about project viability were made based on information received in previous stages. She pointed out that the Heads of Agreement (HOA) laid out principles that advanced the project to the pre-FEED stage when the state could begin entering into commercial agreements with producers and other parties.

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Representative Wilson asked about the reason for the $43 million and the $108 million investment range in the pre-FEED stage. Ms. Poduval replied that the range was determined by the share the state and partners would take.

Ms. Poduval continued to discuss slide 4. She noted that the legislature would have many sessions ahead that involved determining more detail related to a project. She moved to slide 5 titled "Royalty Study Highlights and Recommendations." She expressed intent to discuss different aspects examined by the royalty study and some of the key findings. The key finding was the recommendation that the state consider equity participation in the project. The study team included Black and Veatch, Daniel Johnston and Co., DNR, DOR, and producers. The study had examined four primary items. The first was to help the state understand the global LNG market (i.e. opportunity, opportunity size, competition). The second item looked at supply chain elements including potential project expense, common commercial structures for LNG projects, and the likely structure of the AK LNG project. The third aspect looked at the project from a fiscal perspective and used other large and successful worldwide projects as a benchmark. The

fourth aspect examined project risk and ways for the state to manage the risks and incentivize the project. The findings (shown in blue) and recommendations (shown in green) had led to the ultimate recommendation of state equity participation. The global LNG market was growing and was projected to double in size by 2030; it was driven by market fundamentals where the developing world was becoming increasingly energy hungry. Developing nations were looking at natural gas as a source of clean and less expensive energy. The global market recognized the attractive opportunity; therefore, there were various LNG projects competing for the growing demand. She stated that Alaska competed fairly aggressively against the other projects looking to capitalize on the opportunity. Some of the state's advantages included a well-established resource base (competing projects had uncertainty about access to adequate LNG that would support a 30-year project life) and shipping proximity to Asian markets (Asia was a growing center for LNG demand). One of Alaska's main disadvantages to the project was the expensive cost structure. Other projects that were as or more expensive had achieved FID. The Gorgon project in Australia was headed by Chevron and had equivalent capacity to the project contemplated in Alaska; however, at last count the cost estimate was approximately $53 billion. The project was under construction and was expected to start production in a couple of years.

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Ms. Poduval communicated that fiscal benchmarking put Alaska's government take as fairly high; the take included the state and federal government. Alaska's government take got close to 70 percent; for LNG projects worldwide the government take ranged from 40 to 85 percent. The study recommended that the state work on improving its commercial attractiveness given the expectation that market demand for LNG would grow dramatically and recognizing that several other projects were competing keenly with Alaska. The second recommendation was to retain value to the state as much as possible in any incentive the state provided to the project. The supply chain element assessment recognized that the AK LNG was anticipated to be a large, complex, and high cost project. She pointed out that elements comprising the project would be considered complex individually (i.e. gas treatment plant (GTP), 700-mile pipeline, and LNG plant). The good news was that the producers involved in

the project were the best in the world and had the ability to tackle the magnitude and complexity of the project. The project structure was likely to be integrated and producer owned. She explained that with a vertically integrated structure the same parties would own the upstream, the GTP, pipeline, and the LNG plant. The structure was typical for large, complex LNG projects. She relayed that an integrated structure allowed for maximum project control; therefore, there was not typically a situation where one component was ready but another was not. The integrated structure helped to control costs, locate efficiencies across the components, and to control the project schedule. She stated that the structure was rational from the project's perspective. However, one of the risks the structure created for the state was the potential for misalignment between interests of the state and the producers. She used the Trans-Alaska Pipeline System project as an example. The state was not likely to have access to significant information and producers inherently worked to maximize value to their companies. She detailed that the objective was not necessarily achieved by allowing other companies to utilize the infrastructure or to encourage production from the other companies.

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Ms. Poduval highlighted the study's recommendation for the state to align with producers.

Representative Gara observed that the term "misalignment" had been used frequently related to gas legislation in the current session. He asked for detail on the meaning of the word in the context of the current topic [AK LNG project].

Ms. Poduval discussed various areas of potential misalignment. For example, producers had no incentive to expand a project, to create open access, or to enable more exploration and production activity on the North Slope; whereas, the state would have a high level of incentive to enable the items. Additionally, if the LNG plant was producer-owned, under the current fiscal structure a high midstream cost would reduce the state's royalty take and production tax, but from the producer's perspective the scenario was lucrative. She explained that a producer's midstream entity would make a significant amount of money, but its upstream would appear to not make a substantial amount.

Vice-Chair Neuman was concerned about risk management. He wondered if Black and Veatch had ever compiled a project were the project expense structure and the government's share looked similar to the proposed AK LNG project. He mentioned that the proposed structure included royalty, gas, and taxes paid to the state.

Ms. Poduval did not believe she had worked on a project as outlined by Vice-Chair Neuman. However, there were a number of projects worldwide where the state would take its share of the project as a portion of the production. She detailed that it was fairly common within a production sharing contract for an IOC and production entity to share the production coming out of a project. The production was split into two tiers: the first tier would be called either "cost oil" or "cost gas" and went to the producer to help cover its costs associated with the project; the second tier would be "profit oil" or "profit gas" and was typically split between the state and producers in some ratio. Negotiations occurred related to the ratio structure (i.e. fixed versus varying over time). She provided Yemen LNG as an example where the state and producers had a share in the project. Cutter was the world's leading producer of LNG and had a number of projects that all worked under the production sharing contract arrangement. She reiterated that it was not uncommon to see structures similar to the LNG project contemplated by the state.

Ms. Poduval pointed to the dark blue box on slide 5, which indicated that the project did not come without risk. There were a number of significant risks the state needed to manage and to be cognizant of. The project was currently in the very early development stage; as more information on the project emerged and financial decisions needed to be negotiated, the state had to actively think about risks it wanted to take on and which risks it wanted to offset with another party. It was important to recognize that there would be costs associated with offsetting risk to another party. She returned to the royalty study recommendation of state equity participation on slide 5.

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Ms. Poduval spoke to fiscal aspects of the project and ways to reduce risk. One simple way to improve the attractiveness of the project was to reduce the state's fiscal take from production tax or royalty. The study had

determined that moving the fiscal needle did not move project economics enough to make them attractive. She explained that taking royalty or production tax away completely would only improve the producers' Internal Rate of Return (IRR) by 1.5 percent due to the significant upfront capital outlay required. She stressed that midstream costs (associated with the GTP and LNG plant) were such a significant portion of the project's total cost that without a way to influence or modify them the needle would not move significantly. The other downside to a straight fiscal-take reduction was that the state was essentially transferring value to the producers and not necessarily getting anything in return. She discussed the importance of creating value for the state and producers, which had led to the equity participation recommendation. The state could be part of the project and helped reduce the project's cost because some of the upfront cost was borne by the state. Additionally, the state would receive value in return for the dollars; it would not be a $2 billion to $4 billion reduction in the state's fiscal take. The alignment between the state and producers was another reason that equity participation made sense; participation by the state would award the state a seat at the table and would include access to information from producers throughout the process.

Representative Gara discussed a scenario in which the state was a 20 percent owner of the project; he wondered why it would be helpful to have access to the information from producers if the state could not act on it. Ms. Poduval answered that it would depend on how the commercial agreements were structured. It would be valuable to have a seat at the table related to the expansion principles that were laid out in the HOA; the principles allowed each of the parties (even minority interest holders) to initiate an expansion of the project.

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Representative Gara believed expansion was a significant benefit; however, if the state was a one-fifth owner the state could vote to expand, but it would be required to pay the full expansion cost. He questioned when the scenario would be economically viable for the state. He stated that under a prior version of the project all parties would have been required to share in the cost of expansion.

Ms. Poduval replied that it would not necessarily be bad for the state to pay for the expansion. She elaborated that the state should expect the cost to be paid by the producer seeking to use the expansion. She provided a hypothetical scenario where Anadarko found gas and wanted to enter the LNG project; if the state facilitated the expansion Anadarko would pay a tariff through the GTP pipeline and LNG plant for the state. The state would have its original investment offset by the tariff payments and should expect to earn a return on equity as well. She expounded that the scenario would be similar to the tariff the state would pay TransCanada if the company had a share in the project. She summarized that having to make the investment may not be a bad thing and may be an additional source of revenue for the state.

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Ms. Poduval turned to a pie chart on slide 6 titled "Criteria Applied for Evaluation of HOA Tie in to Royalty Study Recommendations." She used the royalty study recommendations as the valuation criteria as she discussed the HOA. She highlighted four primary recommendations including create alignment through equity, improve commercial attractiveness of the project recognizing its challenges, preserve value to the state, and manage the associated risks. She moved to slide 7 that addressed the first concept of creating alignment through equity participation. She detailed that the HOA outlined equity participation for the state. Key tenets of the HOA were shown on slide 7. The first basic concept was that royalty as gas and gross tax as gas together would combine and create the state gas share. The state gas share would be equivalent to the state's equity share through the project itself (the GTP pipeline and LNG plant). In turn, the state's equity share would impact how much the state invests in a project and how much it would earn. The state was anticipated to hold equity along the entire supply chain (through the GTP pipeline and the LNG plant). The state's financial commitments were anticipated to be made in a stage-gated manner (current decisions would focus on funding for the pre-FEED stage only). The structure helped to create alignment. When Black and Veatch had looked at state equity participation there had been a number of different structures it had examined. One equally attractive alternative from a financial perspective was for 100 percent state ownership of the pipeline; however, one

of the shortcomings was that producers could prevent access through the GTP or in the LNG plant. The structure on slide 7 created a path through the project for the state's gas and to facilitate other explorers and developers to move their gas to market.

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Representative Gara pointed to slide 7. He noted that the state used to receive royalty and production tax payments in the bank. He mentioned a shift to the state receiving a 20 to 25 percent portion of the gas, which it would sell. He asked for confirmation that the state gas share and the state equity share did not need to be the same. He wondered why the two numbers were identical.

Ms. Poduval replied that each party would have an equal share of the gas and the project; each party would have the same share of the project as they had in gas on the slope. The scenario reflected the general structure for a vertically integrated project where the upstream and midstream shares were equalized. Every party would have the same ownership as it went through the different pieces of the project. The objective was for the producers and state to have their share of the gas; each party would pay for their own infrastructure to move the gas to market. A difference between shares introduced the possibility that the state would ship its gas on the producers' capacity and the question of how terms would be negotiated or vice versa. It was clearer to have the items be equal.

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Representative Costello remarked that the state got involved in royalty gas arbitration and that the royalty share was not always the same. She wondered if the project royalty share would always be 12.5 percent.

Ms. Poduval deferred the question to DNR.

Representative Costello wondered if the state would have the option to sell its equity share in the future. Ms. Poduval replied in the affirmative.

Representative Costello addressed the consideration of the state's complete fiscal situation. She wondered if it would be possible for the state to sell its equity share in the

project at some point in the future. Ms. Poduval replied in the affirmative.

Representative Costello asked whether an equity owner had sold a portion or all of its equity in any other similar projects. Ms. Poduval replied in the affirmative. She detailed that it was fairly common during the FEED stage of LNG projects for the original sponsors to offer a portion of equity to buyers to create purchasing incentive. She noted that typically both parties benefitted from the scenario.

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Co-Chair Austerman believed it was necessary to return to the Memorandum of Understanding (MOU) to define who the state's partners would be in a state equity share scenario. He believed that for the state to have an equity share it would be required to fund itself; therefore, a partner would be taken on. He wondered if his understanding was accurate.

Ms. Poduval replied that there were almost two different decisions facing the state. The first decision was whether the state wanted to take an equity share in the project. The second decision was about the best way to optimize the state's participation. She believed the TransCanada fell under the second decision; after choosing to explore an equity participation in the project the state would then think about offsetting upfront capital cost risk by using a partner.

Co-Chair Austerman asked for verification that there was nothing forbidding other partners from having partners to come up with their share of the funding. Ms. Poduval agreed.

Ms. Poduval moved to slide 8 titled "Improve Commercial Attractiveness of AKLNG Project." The slide showed the producer's return on the project. The state's equity participation in the project improved the returns for the producers by 3 to 4 percent over the life of the project. The increase was largely achieved by reducing the upfront investment required by producers to facilitate the project. The state's participation meant that it would have "skin in the game" to make the project operational. Another commercially attractive aspect of the structure was that it

could potentially reduce valuation disputes if the state elected to use royalty-in-kind (RIK). She detailed that using the RIK method came with risks for the state; the HOA designated that the state would elect to take RIK if satisfactory arrangements could be made for the state's disposition of gas and the producers offered to individually negotiate with the state to market its portion of the gas. She would elaborate on the issue later in the presentation.

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Representative Gara recognized that sovereigns had the ability to tax and to receive the tax revenue. He understood that Black and Veatch was recommending options to make the project more economic. He remarked on his interest in making the project economic as well. He pointed to Ms. Poduval's testimony that instead of receiving taxes the state would have a bundle of gas to sell. He observed that the major oil companies had a long history selling their oil and gas to customers worldwide; however, Alaska had zero experience in the area. He wondered if it would be feasible to require the companies to sell Alaska's share of the gas in addition to their own share. He wanted to avoid a situation where oil and gas companies negotiated a $17 contract for themselves, while Alaska only received a $14 contract. He added that the oil and gas companies would not be incentivized to ensure that Alaska received the better contract.

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Ms. Poduval replied that RIK represented valid risk to the state. She noted that the royalty study in members' packets ["Alaska North Slope Royalty Study - Selected Extract" by Black and Veatch (copy on file)] included a number of slides designated to the risks associated with RIK. She spoke to the importance of the specific risk highlighted by Representative Gara. She detailed that the state did not want to be in the position of competing with some of the best marketers in the world for a share of the LNG demand within the same timeframe. One of the advantages with RIV [royalty-in-value] was that the state benefitted from [companies'] marketing expertise, which the state would not have if it was marketing LNG on its own. The marketing difficulty would not only come from a lack of experience, but from a lack of relationships with buyers in the Asian

markets. She noted that the companies had lengthy relationships with some of the Asian buyers; it was a market that worked based on relationships, which was unlike the more transparent natural gas market in the Lower 48 and the crude oil market.

Ms. Poduval relayed that the Heads of Agreement (HOA) included the intent of the producers to market the equivalent of their portion of the state's royalty and production tax on the state's behalf. The associated terms were yet to be negotiated. She stressed that the specific risk was one of the key areas the state should focus on. She added that it was difficult to see how RIK would make sense if the producers or their equivalent were not marketing the state's gas.

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Representative Wilson asked how much of the state's gas would be used in-state. Ms. Poduval replied that the study assumed that instate demand would be approximately 250 mmcf per day. The state could choose to divert its gas towards serving in-state demands, but without knowing the future demand it was difficult to determine the answer. For example, if Cook Inlet production was sustained at current levels there may not be as much demand in the Anchorage market. She detailed that the study took in-state needs into account; it assumed gas was equivalently portioned between the state and producers. She asked her colleague to confirm her statements.

Mr. De Stigter agreed. The share of the 250 mcf per day for in-state gas between the state and producers was based on their overall share of the gas.

Ms. Poduval elaborated that the study assumed that the producers and state could serve the in-state market; market price was not necessarily discounted relative to what the state or producers would achieve from selling to a global LNG market. She added that it was cheaper in-state because the gas would not incur shipping or LNG plant costs; only the GTP and pipeline would be required to get the gas to market.

Representative Wilson did not believe the scenario increased affordability and surmised that producers would make more profit off of the state if they did not need to

ship gas out-of-state. She anticipated that if the state directed a portion of its gas share to in-state use it would be more economical for rural residents versus a price charged to go to Asia. Ms. Poduval did not believe Representative Wilson was making a misstatement. She expounded that the study did not assume that the gas was sold at a discount in the local market. The assumption was that the price was what the producers or state would have achieved in the global market less the cost to reach its destination. She detailed that the number did not really change the project economics for the state due to the small percentage it made up of the larger project as a whole. She stated that it was a policy call for DOR or DNR.

Representative Wilson agreed that there was a big difference between what the state was doing for its share versus working to ensure affordability for the state's residents. She remarked that the state could have a partner in its share that could help the state attain a good deal.

Ms. Poduval replied in the affirmative.

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Representative Edgmon surmised that the study did not include any additional initial infrastructure costs associated with building off-take points. He believed an off-take point to the Interior could vary greatly from another location in terms of size and cost. Ms. Poduval agreed. She anticipated that the costs would be small relative to the overall project cost.

Co-Chair Stoltze noted that the committee would hold questions until the end of the presentation.

Ms. Poduval addressed criteria on slide 9 related to preserving the value to the state from royalty and taxes. She addressed whether it was possible for the state to obtain value in return for its incentives to the project and to preserve the state's expected revenues from the project relative to a royalty-in-value (RIV) world. She shared that slides 10 and 11 laid out a forecast of revenue for the project with and without equity participation. She highlighted that the mix between the different sources of revenue changed depending on whether or not the state had equity participation in the project. Slide 10 depicted a RIV scenario with no equity participation. The only

modification to the current fiscal structure was that it assumed that production tax credits currently applicable to oil ($5.00 per barrel) would extend to new gas production. The slide showed forecasted revenues to the state using the assumption that an Alaska LNG project would succeed with the one change in the state's fiscal structure. The revenue was slightly under $4 billion per year; a significant portion consisted of royalty production tax and property tax.

Ms. Poduval moved to slide 11, which showed a revenue forecast with project ownership. The revenue mix shifted, but the state was projected to make slightly over $4 billion per year. She noted that without the equity investment the initial investment required by the state was small; slide 10 showed production tax credits from investment in the Point Thomson field (shown in negative numbers in the years before the project became operational). She addressed the total cash flow over the timeframe included on slides 10 (2012 to 2041). Total projected cash flow (including expenditures and revenue) was approximately $68 billion through 2041. Total projected cash flow in a state equity participation scenario was approximately $72 billion. She explained that the state did not necessarily loose value by taking equity participation; there was a larger upfront investment, but it was recouped through revenues coming in during the project's operating years.

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Ms. Poduval turned to slide 12 titled "Preserve Value to State from Royalty and Taxes." She stated that it was challenging to identify precisely what the state would make in a "do-nothing" scenario, given that the sum would change based on market conditions. She noted that prices and the project's capital costs were significant drivers. She explained that prices that were different than the forecasted numbers shown on slide 12 would completely change the state's revenue forecast. She remarked that the equity participation benchmark was a moving target as well. The graph addressed 9 different combinations of two of the largest risk factors to the project's economics including market prices and project capital cost to determine how much equity the state should own to be able to achieve the same level of revenues it would have achieved in a do-nothing scenario. The analysis had led to the study's

recommendation of the state's equity percentage (between 20 and 25 percent). In a low price environment the state needed a relatively small equity share to make revenues it would have earned without the equity investment. As prices increased the benchmark increased because the state would have made more money as prices rose in a do-nothing scenario. The chart indicated that the state's equity participation should be somewhere between 20 and 30 percent to preserve the state's value. She reiterated that the data assumed that the project would be successful in a do-nothing scenario. She remarked that somewhere between 20 and 30 percent was where the state started preserving the value it would have earned.

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Ms. Poduval communicated that if prices were lower, the state would end up earning more with equity participation. Everyone would make money when gas prices were higher, but the state would not make as much as it would have made without equity participation. She moved to slide 13 titled "Gross Tax Rate Sets the Total State Gas Share and Equity Participation." The slide highlighted that the variable in the mix was the gross tax rate or the "tax gas." With a royalty of 13 percent the tax gas share was somewhere between 8 and 14 percent to get to a total state gas share between 20 and 25 percent. She communicated that setting the tax gas share essentially set the state's equity participation, the state's investment, and the state's revenues.

Ms. Poduval addressed management of risks the state would take on associated with the project (slide 14). Slide 14 looked at the same 9 scenarios of varying costs of investment and price. The blue bars represented the state's revenues in a do-nothing, modified status quo scenario. The green bars showed projected state revenues with equity participation. The slide assumed a 25 percent state equity participation. At a 25 percent equity participation in a low price scenario the state made significantly more revenues than it would have without equity participation. She relayed that in some ways it helped to hedge the risk of prices being low. The base price scenario showed revenues that were relatively close together with and without equity participation; depending on capital costs revenues could be slightly over or under status quo revenues, but the state was kept whole with or without the

25 percent equity investment. In a high price scenario the state would make less with the 25 percent equity investment than it would have without it. The chart showed that the state had essentially flattened its revenue profile and exposure to prices with the equity participation; it would make more in a low price world, less in a high price world, and about the same in a base price world. Some of the downside coming from low prices was taken away, but some of the upside was also taken away from high prices.

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Ms. Poduval shared that the second significant risk to the project resulted from capital costs. Slide 15 addressed whether the state had found a way to manage its risk exposure to capital costs flowing out. The highest risk to the project was in the initial years before cash flows began coming in when the state had "cash calls" on investment (especially during the construction period). She discussed the importance of acting to manage and reduce the state's risk. TransCanada's participation in the project allowed the state to retain 20 to 25 percent of the gas share, while being responsible for approximately 13 to 18 percent of upfront costs. She advised that the goal should be to maximize the state's share of the gas (due to revenues it would bring in) while minimizing the upfront costs. An upfront investment was made in order to achieve revenues. The issue was especially important if cost overruns occurred on the project. She advised the committee to expect that project overruns would occur due to its size and complexity. She referred to other projects of the same magnitude that had experienced cost overruns resulting from equipment and skilled labor. She pointed to Australia as an example where large LNG projects had struggled to stay within budget due to inflationary pressures. Producers would try to manage costs closely, but costs were more likely to increase rather than decrease.

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Ms. Poduval turned to a chart on slide 16 related to the reduction of capital cost exposure resulting from TransCanada participation. The blue lines represented the state's investment in current dollars from a 20 percent to a 25 percent equity share. The red lines showed the state's required upfront investment with TransCanada participation. She relayed that TransCanada's participation reduced the

state's upfront investment by about $3 billion under the $45 billion cost estimate scenario and by $4 billion under a cost overrun scenario of $54 billion. The strategy was one of the ways the state could manage the upfront risk; it did not mean the state would not have risk associated with the remainder of its investment.

Ms. Poduval addressed the risk of potential loss of value associated with RIK. She detailed that the state would be in competition with skilled producers with a history of marketing LNG globally. The HOA included the intent of producers to offer to negotiate separately to market the state's share of gas (to avoid triggering antitrust provisions); the share of the gas would be proportional to each producer's share of producer capacity. She advised remaining aware of the issue as the details continued to be negotiated. Under the arrangement the state would benefit from the producers' marketing expertise rather than competing with it; it could recreate some of the same benefits that would be achieved by RIV.

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Ms. Poduval relayed that the fourth aspect of managing risk was related to the structure on equity participation (slide 18). The royalty study highlighted various aspects of the arrangement and agreement structure between the state, producers, and TransCanada in a way that would allow the state to achieve its objectives. She pointed to four HOA elements beginning with "project within a project," which specified that the major stakeholders could operate their projects somewhat independently from a regulatory perspective. The structure also allowed expansion to be initiated by any one of the parties without agreement by all parties (the provision was subject to some constraints and should not negatively impact the project operation, which was fairly standard). Stage-gated commitments were another effective way of managing the state's risk because the state would not make an upfront commitment covering the entire project development process. The state's first commitment would be to get through the pre-FEED stage; it would enter into additional binding agreements when it entered the FEED stage. She reiterated that the strategy was a fairly standard way of developing LNG projects; commitments by the state that were proportionate to the project's current status were beneficial.

Ms. Poduval continued to address slide 18. The final HOA element shown on the slide was "access to information." She detailed that a seat at the table should allow the state to have access to information such as what producers were contemplating with respect to the project development, what contracts were under negotiation for technical aspects, and commercial agreements between producers. All of the HOA aspects would be fine-tuned and solidified in the commercial agreements that would happen at a later date. She advised that the state had to be vigilant to include terms in the commercial agreements that will help it to achieve its objectives including open access, expansion, a seat at the table, and access to information.

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Ms. Poduval moved to slide 19 titled "HOA Score Card Relative to Criteria." She believed the HOA reflected terms and a structure that would allow the state to achieve the royalty study recommendations of alignment through equity, improve commercial attractiveness, and preserve value to the state. The equity participation along the entire supply chain and a structure that enabled the state to be a vertically integrated participant helped in the creation of alignment. By investing state equity upfront it simultaneously increased producer returns and preserved the state's value relative to a status quo scenario. One risk to the state associated with vertical integration was that the state would not control the upstream; the risk would need to managed and come through commercial offtake agreements with producers. She detailed that the state would receive a share of the gas, but it would be in the producers' control to determine the amount of production. She addressed the management of risks including price exposure, capital costs, RIK marketing, and structure of participation. She reiterated earlier testimony that equity participation dampened the state's exposure to prices; it improved state revenues in a low price environment and gave up some of the upside in a high price environment. She added that equity participation would help the state manage the risk of lower than expected prices. She discussed that TransCanada's participation would lower the state's initial cash calls; it helped the state achieve a higher percentage of gas without spending an equivalent portion of the capital up front. She addressed RIK marketing risk and believed the HOA reflected producer intent to market the state's share of gas; the arrangement details had not been

finalized. She elaborated that the structure of the state's participation would be in the details of commercial agreements; ensuring the state had access to information, could enable open access and expansion of the project, and allow other explorers and developers capitalize on the project. She stressed that the areas were important for the state to maintain vigilance on during negotiations.

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Representative Munoz wondered what would happen to the state's equity share if TransCanada was not involved. She wondered whether the state's ultimate equity share would be impacted if it invested more money up front.

Ms. Poduval replied that TransCanada's absence would not necessarily impact the state's equity share. She elaborated that the state taking equity participation and the optimization of the equity position were two separate decisions. The level of equity participation was negotiated between the state and producers; the participation was driven in part by the amount of gas the state would need to be kept whole relative to revenues in a status quo world. The HOA put the necessary state share between 20 and 25 percent. The decision to include TransCanada would not change the state's gas share, but it would affect how much the state spent upfront to achieve the gas share. Their analysis showed that in the case of a 25 percent equity participation, the state could achieve between $400 million to $500 million additional revenues per year with TransCanada involved; it could also invest between $2 billion to $4 billion less with TransCanada's involvement than it would by going alone and taking a 20 percent equity share. The state needed to take the tradeoff into account and to determine whether there was a way to maximize equity and reduce risk associated with initial capital costs.

Co-Chair Austerman assumed that the state could move forward on its own if it chose to put the money upfront through bonds, debt, or other. The objective of TransCanada was to reduce the upfront cost and some of the risk to the state in the beginning of the project.

Ms. Poduval agreed that the state could move forward without a partner. She elaborated that the issue pertained to what the state wanted to spend its money on and how much it could borrow.

Co-Chair Austerman discussed a scenario where the state had TransCanada as a partner. He referred to a buyout provision in the MOU that would enable the state to buy back a portion of the investment percentage. He assumed the buyback would not take place until revenues were coming in from the project.

Ms. Poduval replied that the current structure would give the state the option to buy back between 30 and 40 percent in the TransCanada entity holding the state's interest. The decision would be made at the end of the pre-FEED stage; it would not be after revenues began coming in.

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Vice-Chair Neuman wondered how to amortize the state's investment. He pointed to the assumption of $17 per mmbtu to Asia and the deduction of costs including transportation, liquefaction, the pipeline cost of 12 percent charged by TransCanada, the gas treatment facility, and transmission back to the point of production. He spoke about taking gas in value and taxes. He believed the assumptions were gross and not net.

Ms. Poduval answered that the study accounted for the adjustments in the analysis. The other sources of revenue for the state that made up the $4 billion in annual revenue came from property taxes, the return the state would earn from ownership in the project, and the state corporate income tax.

Vice-Chair Neuman asked for a copy of the costs. He spoke to the assumption under SB 21 of the $5 per barrel credit. He spoke about oil at $100 per barrel in addition to the $5 per barrel equivalent and the calculation used to determine the cost of gas. He mentioned a 35 percent tax and the value provided to the state.

Ms. Poduval asked for clarification on the question.

Vice-Chair Neuman was trying to determine how the 14 percent number and the value had been reached. He discussed that the state would invest close to $100 million in the project 10 years before it would receive a return. The investment would be up to $14 billion; he spoke about the

estimation of the time value of money. He requested additional figures to help clarify value to the state.

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Co-Chair Stoltze wondered why it was necessary to discuss anything but the numbers under the current tax regime. Ms. Poduval replied that given the cost structure of the project and the current fiscal structure, the project would have a difficult time competing in the market; something would have to change to make it commercially attractive. She relayed that a fiscal reduction or a structural change would be the most obvious options for the state to consider.

Co-Chair Austerman asked whether the price of gas was attached to the price of oil in the assumptions used by the study and DNR. Ms. Poduval replied in the affirmative.

Co-Chair Austerman had read about angst associated with what the long-term contracts had been in the Southeast Asian market. He believed efforts were underway to change the dynamic to a gas price based on gas price.

Ms. Poduval agreed that the statement was fair. She detailed that the effort was mostly driven by Japanese buyers who were the largest purchasers of LNG and made up the premium and highest price market for LNG. The Japanese market was trying to capitalize on a number of low cost LNG brownfield projects in the Lower 48 that were being converted from regasification facilities to liquefaction facilities. The projects had all been built when Alaska was contemplating the Alaska Gasline Inducement Act (AGIA). The expectation had been that Lower 48 gas prices would be extremely high, that there would not be sufficient gas to meet the country's own needs, and that it would be necessary to import gas. She elaborated that a number of regasification projects converted back into gas. With the emergence of shale gas and a surplus of gas in the Lower 48 all of the projects were being converted with a liquefaction facility; the cheap shale gas was converted into LNG and use to serve markets such as Asia. The projects all had low cost structures because they had no upstream costs and used many of the same facilities that had originally been built for regasification. The liquefaction plants had to be constructed, but the pipelines and storage tanks were already there. She

detailed that there were a finite number of projects with a low enough cost structure that allowed them to offer a gas-linked LNG price to the Asian markets. The Japanese buyers were aggressively negotiating with the projects to include the gas in their portfolio. However, the majority of LNG projects did not have that low cost structure; the typical cost structure was expensive enough to require an oil-based price to make the projects profitable.

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Co-Chair Austerman noted that in the rest of the world, market was not based on oil price, but on the cost of moving gas. Ms. Poduval answered that the projects would need an oil-linked type price level to support their high cost structure, just like Alaska.

Representative Munoz remarked that all parties would assume risk associated with the project. She asked why the state would take the responsibility for TransCanada's investment and risk if the project failed. Ms. Poduval replied that TransCanada would essentially pay what the state would have otherwise paid in the project's development stages. She detailed that the off ramps represented that the state would pay TransCanada what it would have paid anyway without TransCanada in the mix.

Representative Munoz asked whether the costs were limited to costs the state would have paid without TransCanada's involvement or if they included the full costs put forward by TransCanada. Ms. Poduval replied that the costs were equivalent. TransCanada would pay what the state would have paid for the portion of the project. Additional costs that would accrue to the state if it exercised the off ramps would be carrying costs associated with TransCanada's money. Carrying costs would be slightly over 7 percent annually for TransCanada's investment. She advised the committee to think about what the opportunity cost to the state would have been if it had made the investments; what the state would have foregone and whether it would be more or less than the 7 percent.

Co-Chair Austerman wondered whether risk involved in a state and TransCanada partnership was neutral. He wondered if the state would have the same risk if TransCanada fell to the wayside. Ms. Poduval deferred the question to the administration or the Department of Law.

Co-Chair Stoltze referred to a vote on the TransCanada contract from the past. He recalled that he and Vice-Chair Neuman had voted against the contract. He referred to concerns that there had been a "handcuffing" to the partner.

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Representative Gara recalled that when analyzing oil and gas deals in the past the legislature had received a comparison of the state's government take versus those in other countries. He discussed the governor's proposal that included a royalty plus a production tax rate of 7 to 13 percent. He asked if Ms. Poduval could provide a government take comparison between Alaska and other countries with a substantial natural gas business. He wanted to know where the state would be on the royalty with a 7 percent or 13 percent tax rate. He did not want to hamstring the governor by capping the number. Ms. Poduval replied that she would provide the data.

Representative Gara discussed his understanding of the state's relationship with TransCanada. He spoke to a reduction in costs to the state and wondered if TransCanada would be a proportionate owner. He asked if it was that simple. He asked which of the three facilities TransCanada would own and contribute to. Additionally, he wondered what the state would get and what TransCanada was obligated to.

Ms. Poduval replied that as currently contemplated TransCanada would hold shares in the GTP and pipeline only; in all scenarios the state would hold the share of the LNG plant. In a scenario where the state had an equity share of 25 percent, TransCanada would hold 25 percent of the GTP and pipeline and the state would hold 25 percent of the LNG plant. There was an option for the state to buy back up to 40 percent of TransCanada's holding company for the two components. She elaborated that 40 percent of the 25 percent held by TransCanada would amount to 10 percent; if the state exercised its buyback option, the state would have 10 percent of the GTP, 10 percent of the pipeline, and 25 percent of the LNG plant. TransCanada would be left with 15 percent of the GTP and pipeline.

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Representative Gara spoke to the idea that a pipeline was lucrative (as long as it contained gas). He discussed 10 to 14 percent rates of return and the guarantee of gas; he remarked that the state would give up 60 percent of that amount. He wondered about the value of the portion TransCanada would not buy into. Ms. Poduval replied that the items would be equally valuable; there was nothing that would distinguish the pipeline from the GTP or LNG plant. She discussed return that the pipeline would earn. She explained that a similar commercial term would be applicable to the GTP as well as the LNG plant; the same return on equity could be obtained on any of the components. The state could have a long-term service agreement through any of the components that included a return on equity that could be identical for all three components (e.g. a 12 percent return on equity).

Representative Gara asked for verification that TransCanada's share meant that it would pay its proportionate cost to achieve its share. Ms. Poduval replied in the affirmative.

Co-Chair Austerman thanked Ms. Poduval for her presentation.

Co-Chair Stoltze discussed the schedule for the following day.

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ADJOURNMENT

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The meeting was adjourned at 3:31 p.m.