ALASKA STATE LEGISLATURE
HOUSE RESOURCES STANDING COMMITTEE
December 9, 2013
10:05 a.m.

MEMBERS PRESENT
Representative Eric Feige, Co-Chair
Representative Dan Saddler, Co-Chair
Representative Mike Hawker
Representative Craig Johnson
Representative Paul Seaton
Representative Geran Tarr
Representative Chris Tuck

MEMBERS ABSENT

Representative Peggy Wilson, Vice Chair
Representative Kurt Olson

OTHER LEGISLATORS PRESENT

Representative Lindsey Holmes

COMMITTEE CALENDAR

ALASKA NORTH SLOPE ROYALTY STUDY - STUDY HIGHLIGHTS

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

DEEPA PODUVAL, Principal Consultant
Management Consulting Division
Black & Veatch
Overland, Kansas
POSITION STATEMENT: Presented a continuation of a PowerPoint presentation on the Alaska North Slope Royalty Study dated November 2013.

JOE BALASH, Acting Commissioner
Department of Natural Resources (DNR)
Anchorage, Alaska

POSITION STATEMENT: Answered questions during the continuation of the PowerPoint presentation on the Alaska North Slope Royalty Study dated November 2013.

REPRESENTATIVE LINDSEY HOLMES
Alaska State Legislature
Juneau, Alaska
POSITION STATEMENT: Asked questions during the PowerPoint presentation on the Alaska North Slope Royalty Study dated November 2013.

ACTION NARRATIVE

10:05:31 AM

CO-CHAIR ERIC FEIGE called the House Resources Standing Committee meeting to order at 10:05 a.m. Representatives Saddler, Tarr, Tuck (via teleconference), Hawker (via teleconference), Johnson, Seaton, and Feige were present at the call to order. Representative Holmes was also in attendance.

Alaska North Slope Royalty Study - Study Highlights

10:06:00 AM

REPRESENTATIVE FEIGE announced that the only order of business would be a continuation of the PowerPoint presentation by Black & Veatch on Alaska North Slope Royalty Study - Study Highlights.

10:07:06 AM

DEEPA PODUVAL, Principal Consultant; Management Consulting Division, Black & Veatch, introduced herself. She continued Black & Veatch's PowerPoint presentation entitled, "Alaska North Slope Royalty Study - Study Highlights" dated November 2013. She referred to slide 37 entitled, "Fiscal Framework- Scope," which essentially shows the scope of the fiscal framework. First, an overview of fiscal structures will help the committee to understand fiscal structures relevant to other LNG projects worldwide and to compare them with the proposed Alaska liquefied natural gas project (AKLNG). Second, the study highlights and analyzes incentives that the state could offer to help facilitate the AKLNG project. Finally, Black & Veatch considers the specific question related to royalty ownership position with the options of royalty-in-kind (RIK) relative to royalty-in-value (RIV), including implications to the state for these

options. Three main systems are in use in the oil and gas industry around the world [slide 38]. First, the concessionary system is similar to the one used in Alaska for oil and gas - which is essentially a tax and royalty based system. Under the concessionary system the host government receives royalties and taxes, generally as a percentage of profit.

MS. PODUVAL indicated the second system is the production sharing contract system, in which production "in kind" is shared between the contractor and the government. The components of the production sharing contract generally include royalty, cost oil, profit oil, and any potential taxes.

MS. PODUVAL highlighted the third system, the contractual service contract, which she described as when the contractor - an independent oil company, is reimbursed and paid a fee, typically in cash, for the services of exploring, developing, and marketing. Of the three systems, concessionary systems generally represent more prevalent and stable environments. In fact, concessionary systems are used in countries, including the United Kingdom (UK), the U.S., Norway, Australia, Russia, and Canada - typically first-world countries. Whereas, contractual systems are more dominant in locations with political or other perceived risks so oil companies are generally more comfortable with the terms locked down within the confines of a contract.

10:11:04 AM

MS. PODUVAL turned attention to slide 39 entitled, "Government Take on LNG Projects, by Country." She stated the light blue area indicates the government participation in commercially operating projects or those with final investment decisions taken. Typically, government take for LNG projects falls in a fairly large range, from 45-85 percent. The actual government take considers project specifics, the jurisdiction, and individual risks such as risk profile, cost structure, and anticipated profitability. For example, Equatorial Guinea, a country with significant political uncertainty and substantial risk, offered low fiscal terms in order to attract investors. She turned to slide 40 entitled, "Government Take in Alaska is between 70%-80% under SB 21/MAPA Fiscal Structure with Significant Federal Government Share." She explained that slide 40 breaks out the government take in Alaska for the proposed AKLNG project. She directed attention to the pie chart on the left that shows the share of cash flow over a 30-year timeframe by stakeholders. On the right, the pie chart shows the discounted cash flows or the net present value (NPV), again,

over the same 30-year timeframe. She identified the projected government share between 72-80 percent, which includes a significant federal government share of close to 20 percent. She described this as being one of the boundary conditions for the LNG project since the state does not have much influence to use that as a lever to improve economics.

10:13:04 AM

REPRESENTATIVE SEATON asked whether the calculations were based on SB 21 [More Alaskan Production Tax (MAPA)] structure rate for oil.

MS. PODUVAL answered that the rate assumed the SB 21/MAPA structure - as it is today - without any modifications. Ms. Poduval, in further response to Representative Seaton, responded that Black & Veatch projected the state's rate under current law for in state utilized gas; however, under the base assumptions the government take is similar for Alaska's Clear and Equitable Share (ACES), as well. She offered to provide more information on this in the near future. In summary, Black & Veatch envisioned the total project would include an in-state demand of 250-300 million cubic feet (mcf) per day, and further assumed the gas will be subject to the $.17/mcf Cook Inlet production tax rate, with an export of 17.4 million tons per annum.

10:15:25 AM

REPRESENTATIVE SEATON related his understanding that the project includes consideration of all of the gas consumed in the state as if it was produced on the North Slope.

MS. PODUVAL agreed that is correct.

10:15:46 AM

JOE BALASH, Acting Commissioner, Department of Natural Resources (DNR), added that the study "ran numbers" for the tax rate on all gas, including down to zero.

MS. PODUVAL turned to slide 41 entitled, "Fiscal & Non-Fiscal Levers are Available to Influence AKLNG Project." Numerous levers are available to provide incentives to the proposed AKLNG project, including fiscal levers such as a reduction of royalty or taxes. Other levers include non-fiscal options such as stabilizing provisions often called fiscal certainty or jurisdiction for arbitration and dispute resolution. These

levers are also important to oil companies, as well as the ability to book reserves for the gas as part of the project. She emphasized the ultimate goal as being to lower or defer the government take. Equally important, another goal is to reduce cost exposure for independent oil companies to reduce their risk profiles. Of course, there are different ways to incentivize the proposed AKLNG project to make it more attractive. It's easier to measure the effect of fiscal levers such as internal rates of return or NPV, but often non-fiscal levers tend to be more subjective, she said.

10:17:57 AM

MS. PODUVAL directed attention to slide 42 entitled, "Eliminating Royalty, Production Tax, or Property Tax Brings Government Take for AKLNG Project down to 65-70%." As Commissioner Balash previously mentioned, the study considered the extent of incentives the state could provide to the AKLNG project by cranking the three fiscal levers - royalty, production tax, and property tax - to demonstrate how each of the variables would affect the AKLNG project. She explained that this slide demonstrates the share of cash flow when each of the fiscal elements changes. For example, she said, the model compares the effects of production tax essentially cut in half and then completely eliminated. Next, the slide treats royalty based on half royalty and no royalty. Finally, the production tax rate was cut from 35 percent, to 15 percent, and then completely eliminated. Similarly, Black & Veatch considered scenarios for property tax from 2 percent in the base case, to 1 percent, then finally eliminating it. She concluded that eliminating royalty, production, and property taxes can reduce the government take to 65-70 percent. By applying fiscal incentives the internal rate of return (IRR) for producers would be reduced by 1 to 1.5 percent. In response to a question, she responded that the circles on the right side of the chart represent the producers' IRR.

10:19:48 AM

REPRESENTATIVE HAWKER asked if these figures highlight the IRR based on Black & Veatch estimates or actual economics.

MS. PODUVAL responded that the estimates are based on the assumptions on costs that would drive the AKLNG project. Of course, a number of scenarios could change since significant uncertainty surrounds the AKLNG project - given how early it is in the project - plus cost profiles. She then turned attention

to slide 43, entitled, "Impact of Fiscal Levers Under Different Price and Capex Market Conditions - NPV 10 ($2013 Billions)," which examines the two biggest fiscal drivers - capital cost and price - to determine their level of impact on the AKLNG project.

10:21:02 AM

MS. PODUVAL turned attention to slide 43 entitled, "Impact of Fiscal Levers under Different Price and Capex Market Conditions - NPV ($2013 Billions)." This slide extends the analysis to consider price sensitivity and capital costs. Specifically, price uncertainty contemplates lower prices tied to Henry Hub (HH). In light of significant changes in the LNG market, considerable discussion has been ongoing on whether oil-linked prices will be sustainable given the LNG availability in the Lower 48. Consequently, some pressure exists to move towards gas-linked prices. Therefore, Black & Veatch contemplated a low LNG price world in which HH is $4 and adds $6 for liquefaction and shipping the LNG. Additionally, this slide also considered the high price environmental cost compared to the baseline at a $90 real flat price. Therefore, it used $120 and a more aggressive multiplier to arrive at an LNG price. This slide helps illustrate how sensitive the AKLNG project can be, as well as the effect of the state contribution by moving the fiscal levers.

MS. PODUVAL directed attention to the chart at the right entitled "Midstream Capex Sensitivity." This used a 20 percent up and down range for capital cost, which ties into the capital cost range the producers have shared in their public announcements. She concluded that the market prices by far dominate the AKLNG project's economics and dwarf all other variables. Royalty, property tax, and production tax reductions are all very beneficial in improving the producer NPV and IRRs, as well as reducing the state's take. Above all, one thing that jumps out is the overall government take is dampened due to the 35 percent federal government income tax. She explained the result is that 35 percent of the value of the state's transfer to producers flows to the federal government through federal income tax. This leads to exploring ways the state can add value and minimize leakage to the federal government.

10:23:46 AM

MS. PODUVAL referred to slide 44 entitled, "Royalty Alternatives In Kind or In Value." One important option related to Alaska's royalty rights is the choice of its royalty share: royalty in

kind (RIK) or royalty in value (RIV). Each method has advantages and disadvantages, depending on the state or producer's perspective. Comparisons to RIK and RIV are outlined in slide 45 entitled, "Royalty In Kind Versus Royalty in Value." In particular, RIK is attractive to producers since it reduces valuation disputes and removes the responsibility of treating, transporting, liquefying, and marketing the state's share of royalty gas. Moreover, RIK can reduce commercial uncertainty for the AKLNG since it would be considered attractive to the producers. One advantage from the state's perspective - by being a participant - is that RIK can provide the state with better market insight.

MS. PODUVAL listed some disadvantages, including that RIK exposes the state's to various additional risks and could require modifications to current legislation and authority. Further, RIK would also require the state to have international marketing expertise - which the state currently lacks. Further, RIK would require the state to add credit requirements for shipper agreements.

MS. PODUVAL pointed out the royalty in-value option (RIV), on the bottom half of slide 45, noting one of the biggest advantages in that RIV represents the status quo. Certainly, the state has familiarly, as well as established auditing and management capabilities. Further, the state would not have any direct firm capacity commitments. Some disadvantages of RIV include a lack of transparency since the state may not have access to confidential information on the project. Again, third party access would be a challenge, and valuation disputes could occur since a "higher of provision" option and actual market price realized are areas that historically have created disputes between the state and producers. Of course, the state could also be subject to gaming over cost deductions given that the producers have the fiduciary responsibilities to maximize value to their shareholders and those interests don't always line up the state's best interest. Finally, RIV would not be the preferred choice of producers, she stated.

10:26:51 AM

MS. PODUVAL turned to slide 46 entitled, "RIK Risk Profile is Influenced by the Location of Title Transfer from the State to Buyer."

10:27:06 AM

REPRESENTATIVE SEATON recalled it's often proposed that the state's participation in a pipeline would align its interest with those of the producers. He asked whether either RIK or RIV puts the state in alignment or out of alignment.

MS. PODUVAL answered that either could work in terms of alignment with the producers, but it would depend on the details of the royalty structure. She offered her belief that equity participation is almost a separate question since it means a seat at the table and an alignment with producers. Anyway, solutions to the disadvantages to each valuation option also exist so RIK and RIV could both work in terms of alignment with producers; however, it is a matter of identifying the trouble spots. For example, with RIV the focus would be on valuation disputes whereas with RIK one of the biggest issues would be the state's lack of expertise to market the LNG. Certainly, these problems can be solved to achieve alignment, she said. She emphasized Black & Veatch's opinion is that in terms of alignment using one royalty valuation would not necessarily have advantage over the other; however, RIK does represent significant risks to the state.

10:29:16 AM

REPRESENTATIVE SEATON asked for further clarification on alignment in instances in which producers own the product, but one party is not a partner. He asked how alignment could be achieved under those circumstances using RIK given the interests of the two parties.

ACTING COMMISSIONER BALASH responded this question introduces capacity as part of the equation. In fact, equity and capacity in the infrastructure is different than the specific and narrow comparison between RIK and RIV. He acknowledged that how equity, capacity, and production line up will be the key to alignment. In terms of production, the question becomes whether royalty will be RIK or RIV. Still, [capacity] is another dimension to consider prior to considering expansion scenarios and third party access. The specific focus, as it relates to the proven resource at Prudhoe Bay and Point Thomson, will be how to evaluate RIK versus RIV. He recalled Ms. Poduval previously mentioned that RIK is sometimes used as shorthand for equity participation; however, while the two have been linked historically during policy discussions, they represent different choices and different decision points. He hoped the committee can take away that distinction. Certainly, with some aspects it would make more sense with state participation to use RIK, but

in other regards it does not. The distinction between the RIK and RIV decision does not represent whether the state should participate, but instead, it is the recognition that state participation brings in the element of also considering capacity, which will become an important commodity itself on the North Slope to get [LNG] to market.

REPRESENTATIVE SEATON responded that he did not wish to interject ownership into the conversation; however, he expressed interest in further analysis of RIK and RIV, in terms of alignment regardless of ownership of the pipeline.

10:33:47 AM

CO-CHAIR FEIGE asked whether it was fair to assume that the state doesn't necessarily take all royalties "in value" or "in kind," since the state could take a certain percentage.

ACTING COMMISSIONER BALASH answered that it would depend on the parameters of the project and the quantity of the resource. Considering the size of the AKLNG project and proven resource, any switching between "in kind" to "in value" could have a ripple effect in the commercial agreements necessary to support the project in the first place, he said. The state would need to have a series of agreements in place for either "in kind" and "in value" royalty, although he cautioned against the state attempting to have "a foot in both camps" since it will ultimately increase the number of agreements needed to move forward with the project.

10:35:36 AM

MS. PODUVAL directed attention to slide 46 entitled" RIK Risk Profile Is Influenced by the Location of Title Transfer from the State to Buyer." This slide attempts to demonstrate within the context of RIK, that the risk to the state increases as it moves further downstream in the supply chain. This slide shows the transfer of proven reserves for Point Thomson and Prudhoe Bay to the GTP, through the pipeline to the LNG plant, and shipped to a market where it is regasified and utilized by end users. She said if the state took its gas "in kind" but found a buyer for the gas at the wellhead the state would be exposed to volume risk and price risk. First, this is because the state does not control what the producers produce; and second, since the state doesn't control market price. Again, these represent the two dominant risks if the sale occurred at wellhead, she also said.

MS. PODUVAL described the increased risks for the state as it moves downstream to the GTP, the LNG, and the regasification stages. If the state moved further downstream and sold gas at the tailgate of the GTP, the state would be subject to the aforementioned risks as well as the following: 1) capital costs for the GTP; 2) operational risks for the GTP, such as instances when the plant shuts down for maintenance; 3) carbon dioxide disposal and gas quality; 4) balancing and scheduling volumes through the GTP; 5) credit risk for contracting for gas capacity; and 6) any force majeure risk if plant down for a few months. Certainly, as the state moves down the supply chain, more components are added and the state's risk profile would escalate, accordingly, but of course, rewards also come with taking the risks, she said.

10:38:43 AM

MS. PODUVAL summarized that the state can achieve the highest market price for its gas at the end of the supply chain. As the state moves further upstream, it would deduct the cost of shipping, the LNG plant, and the GTP, but generally at a premium. For example, the state might achieve $15 delivering gas at a Japanese port, with the cost of shipping gas from Alaska to Japan at $1. If the state sold its gas at Nikiski instead, the market price would be less than $14, since the shipper would take the increased risk and would want a premium for it. She pointed out that as the state increases its risks, the risks are magnified as each element of the supply chain is added; however, there is a risk premium associated with that, as well. The state must decide what profile of risk the state will be comfortable with, and if the state will be adequately compensated for its risk. In response to a question, she agreed the rewards line read 15 percent of the Japan Crude Cocktail [JCC] minus the cost of shipping, minus the LNG cost, and so on. She further explained that "reward amount" identifies the increased rewards as gas proceeds down the value chain.

REPRESENTATIVE SADDLER asked for clarification on the risk premium from .5 percent to 1.5 percent.

MS. PODUVAL answered that it would be an increase in the JCC. For example, if the LNG price at Japanese port is 13 percent of JCC, and the state is not taking on the shipping, it should expect to see a discount of .25 percent to .75 percent of JCC.

10:41:46 AM

MS. PODUVAL reiterated that the LNG price is a percent of oil price and this example uses the JCC as indicative of the oil price. The price at the regas point on this chart is 15 percent of JCC. For example, if the JCC price is $100, the LNG price would be $15. The risk premium would be .25 percent to .75 percent - without taking on the shipping - so instead of 15 percent it would be between 14.25 and 14.75 percent of JCC, she said.

10:42:39 AM

REPRESENTATIVE SEATON, referring to the shipping component, asked whether the shipping component is different for the owner than the shipping contractor. He asked whether an owner would build in shipping profit margins similar to privately contracted shippers.

MS. PODUVAL answered yes; that someone should have an expectation of return for the shipping component, such as the producer or a third-party contractor. Typically, shipping is handled as a long-term lease similar to a pipeline contract and producers would pay a return to the shipping company.

REPRESENTATIVE SEATON asked for clarification on the risk premium price adds to the shipping component.

MS. PODUVAL offered that when producers contract with a shipping company the shippers take on other responsibilities, such as scheduling ships, nominating volumes, and other operational issues. Therefore, additional risks are involved with each supply chain element, including administrative duties.

10:45:45 AM

REPRESENTATIVE SEATON asked whether overhead costs are built in to the shipping component.

MS. PODUVAL answered no.

10:45:58 AM

ACTING COMMISSIONER BALASH offered another way to think about this. He characterized the projects as being a "daisy chain" of contracts. At one end is the buyer at the other end the upstream, or the royalty perspective for the state. Ultimately, a series of contracts ensues and the buyer and seller intersect at some point. Depending on how close or far that intersection

point represents the additional risk the buyer will take on. Of course, the buyer will request a discount in the ultimate sales price to compensate them for its risk. Again, as previously mentioned, LNG projects do not have a transparent market. Instead of transparency or liquidity, each project stands alone and as haggling ensues between the buyer and the seller, each one will be willing or unwilling to take on the responsibilities. Of course, it will need to be worth their while to do so, which is the concept that slide 46 lays out for policymakers as choices are discussed.

10:47:48 AM

MS. PODUVAL continued with slide 47 entitled, "Implementing RIK Presents Challenges and Hence, Costs for the State Relative to RIV." She explained this slide lists factors that can create a separation and value to the state between the RIK and the RIV options. She identified some cost drivers, including GTP costs, upstream field cost allowance (FCA), higher of provision, sales price discount, marketing costs, and credit costs. The overall GTP costs - and whether these costs are included as a deduction or cost - can shift the royalty value obtained by the state for RIV or RIK. For example, Prudhoe Bay is currently allowed an upstream field cost allowance and it is not resolved whether the FCA would be applicable within RIK for all fields. The "higher of provision" adds value to the RIV alternative since it creates some price protection for the state. The higher of provision allows the state to receive the higher of the producer "A" value or the average of producer "B" or "C" in a given market. For example, if one producer reports an unusually lower value, the higher of provision would offer the state some protection, which would not be available under RIK.

MS. PODUVAL explained the sales price discount. Theoretically, under RIV the state receives a portion of what producers earn marketing and selling the LNG. Moving to RIK represents the most significant risk to the state because the state doesn't have experience in international marketing. In fact, she pointed out Asian companies particularly value a long-term relationship of having done business together. The lack of market experience and the lack of supply diversity are expected to drive a significant discount to the state when it tries to market its gas.

MS. PODUVAL explained that supply diversity is important since the producers have a portfolio of LNG projects and access to LNG in the short term if a force majeure or other event would not

interrupt LNG. The state would only have access to the AKLNG project, since it does not have LNG projects worldwide to use for ebb and flow. Thus this would create an additional risk for RIK. Marketing costs would entail setting up a marketing organization to market the LNG and help administer the contracts. Finally, credit costs associated with entering into long-term commitments are borne by producers with RIV and by the state for RIK. She directed attention to the chart on the right as it demonstrates that the state could essentially lose up to 75 percent of the royalty values with the RIK structure.

10:52:24 AM

REPRESENTATIVE SADDLER asked for distinction in colors on the chart.

MS. PODUVAL clarified the chart relates to Royalty NPV 10. The light blue bars show the range of royalty dollars at risk for each of the factors on the x axis. For example, under price discounts the royalty value could be as low as $700 million NPV or as high as $2 billion depending on the assumptions used and how much discount the state suffers trying to market its own LNG. In further response, she explained that the NPV multiplier is 15 percent of JCC previously discussed.

10:53:49 AM

REPRESENTATIVE SEATON referred to price discounts and asked whether the RIK is a positive up to $2 billion or if it only represents a potential loss.

MS. PODUVAL answered that it represents a potential loss of $2 billion since Black & Veatch did not envision a scenario in which the state would achieve a premium relative to the market price that producers could achieve. Therefore, the state could suffer 1 to 3 percent of the LNG multiplier as a price discount relative to what the state would receive under RIV with the producers marketing the LNG. In response to a question, she agreed the chart shows the RIV $ 2 billion with RIV and a loss of $1.3 billion under RIK.

10:55:22 AM

CO-CHAIR FEIGE commented on the lack of diversity of supply for the sales price discount cost driver. He related a scenario, in which the state attempts to market gas, but if an interruption of the gas delivery from the North Slope occurred, it would

effectively cut the state off from marketing its LNG; however, other producers could fulfill contracts from their portfolio of LNG holdings. Thus, the producers could command a higher price, but the state would need to assume the risk of the state losing its supply.

MS. PODUVAL answered that is correct.

10:56:02 AM

REPRESENTATIVE TARR brought up the state's lack of expertise. She asked whether the state would have an opportunity to engage with a consortium with another marketing company with experience.

MS. PODUVAL said that certainly would be an option. The state could join an organization and grow its own expertise in marketing. Keep in mind that the state would take on different risks to do so when arguably the oil and gas companies are among the best at marketing. Certainly, the state has the alternative to access that expertise, she said.

10:57:14 AM

MS. PODUVAL turned to slide 48 entitled, "RIK Creates Additional Risk and Cost of the State Relative to RIV." She recapped the risk and costs, such that the state would need to build its own marketing organization to address origination, logistics, contract administration, and accounting to market the LNG. Additionally, the state would face challenges in competing with the producers who have well established LNG marketing expertise and global portfolios. Further, the state would be subject to counterparty risk in all of its contracts across the LNG supply chain. Next, the state would need to make firm capacity commitments along the LNG supply chain, which could total up to $1 billion per year. She cautioned that the state could be exposed to negative royalties if the LNG price is too low. Finally, the state could face short-term and long-term production volume risk since it has no control over production volumes.

MS. PODUVAL concluded that the producers have the experience dealing with market uncertainties and they are best equipped to help the state address those risks.

10:59:09 AM

REPRESENTATIVE SEATON asked to have the volume risk discussed. He related his understanding that if a volume risk exists downstream, the economics are chaotic. He asked whether a volume risk exists relative to producers or just with sufficient gas volumes available on the North Slope to fill the pipeline.

MS. PODUVAL answered that one of the main differences between the volume risks assumed by the state in RIK is related to capacity commitment. This study estimates the level of capacity needed through the GTP, the pipeline, and the LNG plant when making sales commitments. It's important to realize that when volumes produced are higher or lower than the capacity commitments, they both represent risks to the state. Under RIV, producers can manage their risks and aided by their long-term forecasts can better manage their production and capacity requirements. Conversely, the state would need to rely on the producer's estimate and the state's 12.5 percent royalty. Under RIK, the state would base its decision on the volume capacity through the supply chain commencing once the project is built and rely on information the producers provide.

11:01:10 AM

REPRESENTATIVE HAWKER remarked that he has been hearing significant absolute statements from the consultants today in terms of the state's marketing under RIK. However, little has been said about contractual risk mitigations under RIK, which could answer some of the questions raised, he said. He asked whether all of risks could be mitigated contractually through complex joint marketing agreements in the final commercial structure of the pipeline project.

MS. PODUVAL answered yes; absolutely.

11:02:18 AM

REPRESENTATIVE JOHNSON asked how it would affect the economics of the project if the state used RIK for in-state consumption, which would exclude the need to liquefy. He understood that currently the market isn't available to sustain the AKLNG, but he suggested that perhaps 30 years from now the market could be sustained. He wondered how it would affect economics if the state "grew" its RIK as industry continues to grow. For example, as development happened and new mines opened and operated that need gas, it would also affect the demand.

ACTING COMMISSIONER BALASH acknowledged he previously mentioned the department has additional work underway to examine the in-state energy perspectives and implications, as well as expansions to the state in a project such as this. Those two modules will be discussed with the consultants during the next few days, he said. While, the department hasn't hit the "go" button just yet on the work, it would likely do so in the next 48 hours.

REPRESENTATIVE JOHNSON answered that he was encouraged by the short timeframe of 48 hours. He relayed his constituents' belief that the greatest use of Alaska's gas is for Alaskans. While he understood the export component, he offered his belief that [the legislature and the state] must perform due diligence on in-state gas or it will do a disservice to the communities, the legislature, the administration, and perhaps the consultants. Certainly, this must be part of the discussion since it brings it down to the level of considering heating homes, or creating jobs, and his constituents have that concern, he said. He emphasized that in-state gas is his number one priority in terms of the proposed LNG pipeline since the long-term benefits represent jobs and the welfare of the state. In turn, he expressed a willingness to take more risks for his constituents than for exporting gas Japanese consumers.

11:06:23 AM

CO-CHAIR FEIGE recalled a discussion on royalties, equity, and capacity. He asked whether the design capacity has been discussed when it comes to the future ability to meet in-state demand.

ACTING COMMISSIONER BALASH answered at some point during the development of the project commitments to capacity - specific volumes in each component - will be required. He acknowledged that the risks will need to be assessed, such as whether the state would initially start off with a full share of the liquefaction and tailor contracts for the sale of LNG to step down overseas volumes in order to keep more at home. Another option to address the concern, in terms of volume of supply available, will be to ensure that the pipeline can be expanded as necessary. He acknowledged the North Slope gas resource is tremendous and it could serve the state as the economy grows and additional exploration of North Slope gas occurs - non-LNG gas. He also acknowledged that at some point the state will need to identify much of Alaska's royalty gas to reserve for in-state use.

11:08:37 AM

REPRESENTATIVE SADDLER asked for clarification on negative royalties.

MS. PODUVAL responded that the value received for royalty for gas "in kind" would be lower than the cost for the capacity commitment.

11:09:04 AM

REPRESENTATIVE SADDLER asked for clarification on counter party risk.

MS. PODUVAL pointed out a "daisy chain" of contracts binds an LNG contract together. This includes the sales and purchase agreements - with buyers at the end market - shipping contracts, various marketing contracts, and capacity commitments throughout the supply chain. Therefore to some extent, the state can be a counter party to any or all of these contracts. She related a scenario in which the state is "at the other end of the agreement" selling to an Asian company. In that scenario, the state and the Asian company would both be counter parties to each other. Furthermore, if any of the people are not creditworthy over the 20-year contract timeframe, the state would be exposed to that risk, she said.

11:10:28 AM

CO-CHAIR FEIGE asked whether the state could be put in the position of bidding against its partners. He related a scenario in which ExxonMobil Corporation, ConocoPhillips [Alaska, Inc.], and BP Exploration (Alaska) Inc., all sought to sell gas in the marketplace. He asked whether the state would be competing with itself if it was also attempting to sell a share of the same stream of gas.

MS. PODUVAL answered yes.

CO-CHAIR FEIGE asked whether the state could be played by the buyer.

MS. PODUVAL agreed it could happen.

11:11:27 AM

REPRESENTATIVE SADDLER asked for examples of contractual mitigation steps to reduce risk.

MS. PODUVAL said one option discussed earlier was to set up a consortium with smaller LNG sellers to create a diversity of supply, which could be an example of potential contractual agreements to help mitigate risk. Another possibility would to address the issue within the sales agreement and transfer the risk of supply loss to buyers. Typically, a standard sales and purchase agreement (SPA) would identify the volumes the seller is obligated to provide over time and the sales price associated with it. However, the state could modify the contractual terms to identify exceptions - such as a force majeure at the LNG plant, or if production on the North Slope falls below a certain volume - and contractually transfer the risk. However, the exceptions would come at a cost reflected in the sales price.

REPRESENTATIVE SADDLER asked whether it is possible to divest risk.

MS. PODUVAL answered yes; however, it will come at a cost since the counter party may be willing to take risks not normally taken in the market. It's important for the state to identify the best way to mitigate its risk given the options it has available. Certainly RIV would be one option and it could transfer many inherent risks to the producers, who arguably have better tools to mitigate the risks. Alternatively, with RIK methods do exist to transfer risks contractually for a price and the state must decide the direction to proceed once the options are offered.

11:14:40 AM

REPRESENTATIVE SADDLER remarked it seemed important to maintain the relationship with the producers and market RIV gas as another way to increase alignment.

11:14:58 AM

REPRESENTATIVE JOHNSON asked whether marketing consortiums exist today.

MS. PODUVAL asked to defer the question to a later date, although she commented she was not aware of consortiums in the sense that Representative Tarr previously mentioned.

11:15:28 AM

REPRESENTATIVE HAWKER offered his belief that the aforementioned mitigation under discussion related to a consortium of small companies. The state would contract with the major shippers to mitigate and share risk, although the composition wouldn't restrict the consortium to small players or non-shippers. He related his understanding that this would refer to a general mechanism related to commercial agreements and not royalty agreements.

11:16:34 AM

MS. PODUVAL turned attention to slide 49 entitled, "Summary: Alaska Fiscal Framework." She concluded that 70-85 percent is high for the government take given the complexity of the AKLNG project. Further, the projected IRR of approximately 15 percent may be insufficient for producer investment relative to their alternatives. She further concluded that well-designed incentives to lower project costs and modify fiscal structure can help make the AKLNG project competitive in market. For example, as discussed earlier, measures can reduce leakage to the federal government and make the project more competitive in the market. Ms. Poduval emphasized that the state taking its royalty as RIK could substantially increase risk and creates loss of value to the state. In particular, producers have more experience navigating the LNG supply chain and managing associated risks.

11:17:46 AM

REPRESENTATIVE SEATON asked for clarification whether that means when the state assumes greater risk that the IRR for the producers is actually enhanced.

MS. PODUVAL answered that the specific question of RIK and RIV would be considered intangible benefits. Theoretically if the royalty method works efficiently it should be revenue neutral for the state and the producers; however, she was uncertain whether the producers necessarily gain value in dollars by the state taking its royalty "in kind." She offered her belief that from the producer's perspective, RIK would avoid valuation disputes and therefore, it would reduce administrative burden, which would benefit producers.

REPRESENTATIVE SEATON understood the royalty options as being negative to the state, but he pointed out that [RIK] is not a positive either.

MS. PODUVAL answered that producers would definitely consider RIK as being beneficial to them; however, she was unsure that benefit is achieved as a dollar amount. In other words, the producer's revenues aren't going to be higher if the state takes its royalty "in kind" versus "in value". Instead, she reiterated that the producer's benefit and dollars may be gained by avoiding valuation disputes and subsequent legal disputes, as well as reducing their administrative burdens.

11:20:20 AM

MS. PODUVAL turned attention to slide 50 entitled, "Risk Allocation & Commercial Structure - Scope." She highlighted that the goal was to understand how key risks could impact the AKLNG project and stakeholders as well as to provide an assessment of the alternatives for financial and equity participation by the state in the AKLNG project. She turned to slide 51 entitled, "There Are Various Uncertainties Related to the AKLNG Project that Could Impact the Economic Benefits to the Different Stakeholders." After all, many of the risks are beyond the control of the state and beyond the producers, but price and capital costs are two key drivers. Additionally, the project schedule, the cost of debt, and escalation tie into the aforementioned key risk factors.

11:21:45 AM

MS. PODUVAL explained two charts on slide 52 entitled, "Price and Capital Cost Related Uncertainties Emerge as the Key Factors Driving the Project Economics." These charts show the NPV to the state and producers. Essentially, the charts are set up as a tornado plot with the black line intersecting the middle identifying the "base case" level. By varying the uncertainties [listed on the vertical axis] the slide shows the impact on the NPV for the state as well as for the producers. She explained the graphs, such that price and capital costs represent, by far, the dominant factors that affect NPV. Escalation, project capital cost, and cost of debt are other key uncertainties, as well, she said.

11:23:18 AM

MS. PODUVAL moved to slide 53 entitled, "Risk Allocation and Management." She said this slide explores risk allocation, risk mitigation, state participation, and implications. First, with respect to risk allocation, the two factors of cost and time

risks in project execution are highly dependent on the nature and extent of the project organization. She pointed out most of the recent LNG projects have a single operator through the supply chain [upstream, transport, and liquefaction], as well as having an integrated consolidated control, which helps reduce the capital and scheduled risk. Second, with respect to risk mitigation, risk management is executed in several ways: 1) pre-final investment decisions (Pre-FID) commitments from the buyers - which are almost mandatory. In fact, the majority of project volumes are contracted before FID to ensure market to verify that the market exists prior to committing capital; 2) end user participation, which is a trend that entails buyers to have an equity stake in the project. It helps to have some skin in the game and to ensure market for the volumes; and 3) government participation, in which the host country participates in LNG projects, typically through a national oil company (NOC) in combination with the independent oil companies - these are typically LNG majors who bring international LNG experience to the project. Further, the state's equity participation can allow the host company to capture an upside in prices; however, it also exposes the state to a downside since it must commit capital to the project.

11:25:50 AM

MS. PODUVAL turned specifically to Alaska with slide 54 entitled, "Equity Participation by the State of Alaska Could Have Tangible Benefits for the Project as Well as the State." First, to the extent the state transfers some value to the producers through modification of fiscal terms, obtaining an equity interest in the project in exchange for that transfer of value is far more beneficial to the state than a simple reduction in fiscal take. For example, as previously discussed, the effect and impact the state can have in reducing or eliminating its royalty production tax and property tax would transfer value to the "other end of the table" and benefit the state. Equity participation can also create a greater alignment of economic interests between the state and producers. Additionally, state ownership would lower the upfront capital cost to producers, which could create potential economic uplift. In fact, this is especially important when it is a high-cost project with AKLNG. Equity participation would allow for TransCanada PipeLines Limited (TCPL) equity participation and operation of the pipeline and GTP. Next, equity participation could help facilitate greater transparency in the AKLNG process and access to information. Additionally, equity participation also allows the state to influence access for third parties in

the most critical potential bottlenecks of the project - pipeline and marine terminal. Although equity investment in the supply chain allows the state a seat at the table, it does not necessarily provide for a vote in the decision-making process. Thus, joint venture agreement structuring is critical in helping ensure the benefits are achieved.

11:28:24 AM

CO-CHAIR FEIGE referred to transferring value to the producers and exchanging royalty value for equity value. He asked whether the implication is that it should be done on a one to one ratio or whether the ratio should be different.

MS. PODUVAL answered that it would depend on how the state wants to structure [its agreement]. If the state wants to provide an incentive to the producers, rather than reducing production tax or royalty, it should use dollars for an equity stake since that would reduce the producers' cost while also giving the state value.

CO-CHAIR FEIGE understood a certain amount of leverage would be gained, as well.

MS. PODUVAL answered yes; absolutely.

11:29:43 AM

CO-CHAIR FEIGE asked what benefit the state would achieve if it granted TCPL equity participation since the Alaska Gasline Inducement Act (AGIA) does not currently give TCPL an equity position in the proposed AKLNG project.

MS. PODUVAL answered that the state could obtain several tangible benefits with TCPL participation. First, TCPL is an experienced pipeline company with experience in Arctic pipelines. Thus having TCPL's expertise as builder/owner/operator of the AKLNG pipeline could help maximize the state's equity in the AKLNG project. Further, another benefit would be that TransCanada as a third-party non-producer could attract more shippers on its portion of the project. Therefore, having TCPL involved could help the state achieve its objectives of open access and open the North Slope for other exploration and production.

11:31:07 AM

CO-CHAIR FEIGE suggested it could be argued that the state could hold the equity shares and offer that same additional capacity.

MS. PODUVAL agreed that the state could do so, as well.

11:31:16 AM

REPRESENTATIVE SADDLER asked how TransCanada would acquire equity participation. For example, he asked whether it would be subrogated.

MS. PODUVAL answered that the equity portion could range from zero up to the level of state's equity stake.

REPRESENTATIVE SADDLER suggested the state's participation in the equity position may be dependent upon giving TransCanada a portion, as well.

MS. PODUVAL agreed.

11:31:47 AM

ACTING COMMISSIONER BALASH responded to the question whether the state could offer interests or opportunities for expansions to third parties directly rather than relying on a company such as TransCanada. He offered his belief that it wouldn't be a perfect comparison, but it goes back to the RIK and RIV issue of who is best equipped to market the gas. Certainly, expertise has value, and a company whose core business is pipelines knows the problems from a technical perspective and a commercial perspective. In fact, pipeline companies have a well-defined and well-understood set of solutions to various problems that might occur. Again, he reiterated the value of expertise obtained from pipeline company participation.

11:32:52 AM

REPRESENTATIVE SADDLER asked whether it would be possible to transfer some of the state's outstanding obligation in matching funds to TransCanada to convert it to some equity position.

ACTING COMMISSIONER BALASH answered that anything is possible. He said he didn't want to "go down a rabbit trail," but what becomes of the AGIA license and whether it continues to function or if the state can step out of the license into a different arrangement (with TransCanada) is all very much in question.

11:33:50 AM

REPRESENTATIVE SEATON referred to the bullet point on equity participation related to greater transparency. He recalled under Governor Murkowski's administration that the operating agreement and owner rights were secret and still remains so. In fact, he pointed out this information was never released to the legislature. He highlighted that this has created problems for the legislature, which he characterized as an "end game hand grenade." He asked how the state can work the project terms into a transparent agreement to avoid the aforementioned issues.

ACTING COMMISSIONER BALASH responded that at various times along the way Governor [Parnell] has laid out benchmarks leading to a specific course of action, stage, or gate in the AKLNG project development. He said, "One term I've heard him use publically as well as privately is the need for commensurate steps. That as the project sponsors take steps towards development and get more committed to the project, the state is prepared - at least under his direction - to take additional steps." He likened it to being "a series of pops as opposed to a bang. "That is one thing that could distinguish what it is we're trying to achieve here, versus prior attempts to bring the parties together."

11:36:21 AM

REPRESENTATIVE SEATON said he appreciated the response and the broad goal pieces; however, he cautioned that it is the details that matter. He recalled that the partners previously were opposed to operating agreement details being released. He wondered whether the administration was confident that the situation would be different if the state enters into an equity investment with potential partners. He expressed concern that the legislature might be asked again to ratify whatever the administration negotiates and finalizes.

ACTING COMMISSIONER BALASH offered his belief that the state's administration understands the issue better than its predecessors; however, he wasn't prepared to speculate what other parties are thinking.

REPRESENTATIVE SEATON asked to put it on the table that the state needs to be concerned about the confidentiality issues interfering with the need for transparency.

ACTING COMMISSIONER BALASH interpreted Representative Seaton to say, "We can't have anybody stand up and say, 'You have to vote

for it to find out what's in it.'" He commented that he was fairly certain everyone learned that lesson.

11:39:42 AM

CO-CHAIR FEIGE understood the process would instead be for the administration to work with parties and incrementally reach agreements.

ACTING COMMISSIONER BALASH answered that he is correct.

REPRESENTATIVE HAWKER stated he was glad to hear the administration's intentions.

11:40:42 AM

MS. PODUVAL moved to slide 55 entitled, "Alternatives for the State to Participate with an Equity Investment in the AKLNG Project - Description." She explained that three alternative structures for equity participation were considered. First, an equity alternative, in which the state makes an equity investment and receives an equivalent share of gas produced as royalty and tax gas. Under this scenario royalties would continue to be received under the SB 21/MAPA structure with all upstream costs being allocated to oil. She highlighted that this analysis assumes a 70/30 debt equity structure for the state's investment, with a 5 percent and 12 percent return on equity, as well as considering equity investment at 15 percent and at 35 percent.

MS. PODUVAL highlighted the second scenario. Black & Veatch considered an equity alternative in which the state completely owned the pipeline. Under this structure the producers would pay a tariff to the state for transportation services on the pipeline. Producers would benefit from the lower cost of debt as well as a low return on equity required of 6 percent - intended to provide an incentive to producers, while the state would benefit through lower netbacks for royalty and production taxes. Alternatively, comparisons were made with one financed with 100 percent debt and the other with 100 percent equity. Third, Black & Veatch considered a scenario in which the state had a 12.5 percent equity stake through the supply chain GTP and LNG. This would be an approximation of the state's royalty share. The state's share of capacity would be used to treat, transport, and liquefy royalty gas. The state would benefit with lower cost of debt at 5 percent and a lower return on equity requirement. For comparison, again, the upper and lower

bound assumed financing at 100 percent debt and next with 100 percent equity.

11:44:09 AM

MS. PODUVAL turned to the graph on slide 56 entitled, "State Equity Participation at Appropriate Levels Could Allow SOA and Producers to Retain Higher Share of Project Revenues." This showed stakeholder NPV 10 comparisons with the various stakeholders. She explained that the first bar of the graph shows the base case. The next two sets of bars show the equity alternative, with the [fourth and fifth] bars with the state owning the pipeline, and the final set of bars shows 12.5 percent state investment. Essentially, the slide demonstrates that midstream investment - the option at the very right of the slide - reduces the netback for royalty and increases royalty and production tax to the state. Thus, this would benefit the state, but producers would lose a portion of the project the state owns. The 100 percent pipeline ownership scenario can benefit the state and the producers since it would lower the overall cost for one critical element of the supply chain. This would benefit the state when the state uses debt to finance its investment rather than equity. However, the equity alternative can benefit both the state and the producers at an appropriate level of investment. She offered to cover this alternative in more detail in subsequent slides.

11:45:48 AM

MS. PODUVAL, referring to the gray bars on slide 56, explained that this makes sense since the producers benefit across all of the scenarios. One of the factors that makes the equity alternative more attractive is the state would participate across the entire supply chain. Certainly, this can be powerful for the state since it creates a path through the entire supply chain. For example, the state could use it for itself or to create access for other producers with activity on the North Slope.

11:46:47 AM

REPRESENTATIVE SEATON, referring to slide 55, asked for clarification on the statement that the state would benefit through lower netbacks for royalty and production tax. He further asked for the rationale that would result in a lower netback with 100 percent state ownership.

MS. PODUVAL answered that state investment in the pipeline would essentially lower the cost of the pipeline for everyone since the state enjoys a lower cost of debt. Additionally, the state's expectation for return on equity will be lower than producers demand for return for their investment. Thus, it would be an incentive the state would offer to producers by requiring a lower rate of return. The computation for the tariff across the pipeline when using two assumptions of lower cost of debt and lower return on equity, would lower the per unit cost of transportation for the pipeline. Therefore, since it results in a lower pipeline tariff and it would make the royalty calculation higher because it allows a smaller deduction.

11:48:16 AM

REPRESENTATIVE SEATON related his understanding that it doesn't relate to lower netbacks for royalty; instead, it would result in higher netback for royalty and a higher wellhead price.

MS. PODUVAL agreed that the wording is confusing. She reiterated that it would result in a higher netback to the state because of lower deductions.

REPRESENTATIVE SEATON related his understanding the difference in scenarios calculations is that the state would have less of a NPV, perhaps 6 percent instead of 12 percent. Referring to the aforementioned scenarios, he asked for further clarification on whether the state would be willing to accept less interest on investment than the producers. For example, if the producers held a large part of the project, the transfer of value would lower the overall project cost, while increasing producer return on investment.

MS. PODUVAL acknowledged that is the underlying assumption for the alternatives shown [on the chart]. Certainly, it is also feasible the state would want an equivalent 12 percent return on equity on its investment; however, participation could also be beneficial to the producers since it would reduce the upfront capital cost due to the $10 billion it would not need to invest.

11:50:29 AM

REPRESENTATIVE SEATON asked for further clarification, if the interest rate was the same, that it would still gain value and not reduce the state's interest.

MS. PODUVAL acknowledged that the producers would gain value due to the reduction in the upfront capital investment.

11:50:46 AM

CO-CHAIR FEIGE asked whether the tariff would be set by FERC or the Regulatory Commission of Alaska (RCA) if the state owned 100 of the pipeline.

ACTING COMMISSIONER BALASH responded that the decision on jurisdiction and specific authority for either regulatory body is fact specific. Certainly, an argument could be made that a very large LNG export project would be subject to Section 3 of the Natural Gas Act (NGA); however, an argument also exists that Section 3 would be limited to liquefaction, but Section 7 [NGA] would apply to the pipeline. Still, another argument could be made that Section 7 jurisdiction on the pipeline and GTP does not apply, since the RCA has jurisdiction. Ideally, the state would avoid endless litigation and achieve a result that would protect the broad interest of all parties as well as the public.

11:52:27 AM

CO-CHAIR FEIGE remarked that the uncertainties need to be resolved. He asked whether the administration has taken any action to resolve jurisdictional issues.

ACTING COMMISSIONER BALASH answered that the options range from "crystal clear" certainty from the Congress - which could take time - to seeking a preliminary declaratory order from the FERC to some negotiated resolution.

11:53:09 AM

REPRESENTATIVE LINDSEY HOLMES, Alaska State Legislature asked whether the first scenario, the equity alternative would assume the state takes its royalty "in kind."

MS. PODUVAL answered not necessarily, since it could be either RIK or RIV.

REPRESENTATIVE HOLMES related her understanding that the equity alternative also assumed a 70/30 debt to equity ratio; however, it changes under the third scenario - the 12.5 percent SOA - and assumes either 100 percent debt or 100 percent equity. She asked for clarification on the change in assumptions.

MS. PODUVAL responded that the scenarios Black & Veatch used attempts to identify a reasonable range of alternatives for the state. An equity amount hasn't yet been determined, so 15 percent and 35 percent equity were selected. The 70/30 debt to equity ratio used represents a base case assumption - typical for investment on LNG projects - which the state would likely use to structure its investments. Certainly, additional scenarios could have been provided, such as 15 percent equity participation with 100 percent debt; however, Black & Veatch chose to pick the mid-point of the debt to equity structure.

11:55:31 AM

REPRESENTATIVE HOLMES acknowledged significant discussion has occurred with respect to a potential 12.5 percent alignment since it represents the current royalty share. She asked for an estimate using a 12.5 percent using a 70/30 debt to equity ratio.

MS. PODUVAL answered that it would fall somewhere between the results of the two scenarios [100 percent debt and 100 percent equity].

11:55:57 AM

REPRESENTATIVE SEATON surmised the source of the state's investment would be from the constitutional budget reserve (CBR) account or more likely the state would use Alaska Permanent Fund (APF) with a projected 8 percent return on investment. He asked whether any issues arise in using the APF's equity and investing it at less than the projected 8 percent long-term return.

ACTING COMMISSIONER BALASH offered to address a couple of things. First, the returns cited are based on a general return that the U.S. Department of Treasury has managed in its portfolio, which includes more than just the CBR. Second, with respect to the Alaska Permanent Fund Corporation (APFC) funds, Commissioner Rodell [Department of Revenue (DOR)] has made it clear that the state does not direct the Alaska Permanent Fund. He then said, "If the investment opportunity is attractive to the trustees in the APFC, then so be it." Therefore, the department has chosen not to suggest the APFC might be the source for capital for a state investment. Finally, in terms of an equity position, it is fluid so where the state starts might not be dictate where it will end up. Certainly, this goes back to the potential for a TCPL role. For example, if the state's share of midstream project costs $5 billion or $6 billion,

having any pipeline company partner to take on the role of providing midstream transportation services, with acceptable terms, means the state would not need to come up with the $5-6 billion to finance the pipeline. The state should keep this in mind as it contemplates the source of capital to fund the AKLNG project. In response to Co-Chair Feige's comment on the possibility of selling it to lessees, Committee Balash remarked that the administration would not enjoy options unless it starts with the equity position.

11:59:12 AM

MS. PODUVAL moved to slide 57 entitled, "Appropriate Level of State Equity Participation Needs to be Balanced to Achieve Benefits to SOA and Producers." As previously discussed, the equity alternative is most likely to be attractive since it involves participation in each element of the LNG supply chain; however, it does raise the question of the appropriate level of state participation in the AKLNG project. The purpose of the next few slides delves into this specific question and considers what it would mean to the state if its participation is 15 percent equity participation versus 35 percent level. She stressed that the project economies are extremely sensitive to the assumptions regarding capital cost and market prices. She highlighted that the slides outline nine scenarios that consider the combination of high and low capital costs and market prices to identify the effect it has on the state. More specifically, it projects whether the state is better or worse off at these two levels under each of the proposed scenarios.

12:00:43 PM

MS. PODUVAL explained that the SB 21/MAPA fiscal structure did not include any production credits for gas so the analysis included a modified status quo, wherein the production credits that currently exist for oil are extended to gas. For example, a $5 per BOE credit for gas would be equivalent to reflect new oil. The analysis examines the project economics under the modified status quo and under the equity alternative for both the state and the producers across a combination of scenarios. Turning to slide 58 entitled, "Equity Participation at 35 [percent] More Beneficial to State than at 15 [Percent]," she noted the top two charts assuming a 15 percent state investment and the bottom two charts assume a 35 percent state investment.

MS. PODUVAL elaborated that the two charts on left show the state's NPV through the 30-year analysis period, whereas the two

charts on the right show the producer's NPV for the same timeframe. The blue bars project the modified status quo whereas the green bars depict the equity alternative. She explained when the green bar is at or above the blue bar that means the equity alternative is equivalent or better than the status quo. The top left chart indicates that the green bar is lower in six of the nine scenarios so at 15 percent investment, the state is better off staying in a modified status quo than investing in the AKLNG project. However, keep in mind that in addition to the project investment, the state agrees to take its tax as a gross share of production. Thus under the equity alternative state's take would be the 15 percent equity investment in the project and 15 percent share of the gross production, she said.

12:03:17 PM

MS. PODUVAL directed attention to how the scenarios affect producers, noting with 15 percent equity, the producers do better in 6 of 9 scenarios. Changing to 35 percent state investment, the state would be better off in 8 of 9 scenarios than maintaining the status quo as modified by SB 21/MAPA. Whereas, the chart on the right shows that at 35 percent the producers do not lose much value either. Therefore, these charts show how equity participation can potentially benefit the state and the producers. She acknowledged while 35 percent does not represent the correct number, it is getting closer. In fact, by adjusting the figure a little lower, it approaches the number in which the state benefits, but perhaps not as quite as much as shown on the chart. One of the factors that helps make this work is federal leakage. To the extent that the state participates, it represents the portion of the project that is shielded from federal taxes and the value could be effectively shared between the state and the producers.

12:05:50 PM

CO-CHAIR FEIGE commented that the funds could be kept in Alaska as opposed to being passed on to the federal government.

MS. PODUVAL agreed it could be shared between the state and the producers versus the state passing the value to the producers, who in turn pay a portion to the federal government.

12:06:07 PM

REPRESENTATIVE SEATON referred back to the analysis on slide 57. He asked how much $5 BOE would be compared to the value of a barrel of gas.

MS. PODUVAL said it assumes 6 as a thermal conversion factor so $5 is equivalent to $.83/MMBtu of gas. She repeated the equivalent at $.83/MMBtu.

12:07:16 PM

MS. PODUVAL turned to slide 59 entitled, "State Equity Participation Between 20% and 30% Offers NPV 10 at or above the Modified Status Quo Levels for the State." She commented that the bars would need to be equal in order to work for the state and producers. In essence, 15 percent and 35 percent equity participation doesn't achieve that effect, although 35 percent is closer to the right figure, she said. Next, Black & Veatch considered the equity level of participation that would make the bars the same height. In other words, Black & Veatch sought the percentage that could make the state's position under modified status quo the same as what it would achieve through equity participation. Of course, that figure varies depending on the assumptions for capital cost of the project and market since those factors drive the amount of royalty and production tax under the status quo. She referred to the investment prices listed on the bottom of slide 59, including low, base, and high price. Each of the three price assumptions represents different levels of investment. She directed attention to the middle of the chart, and said that somewhere between 20-30 percent feels like the right level of state equity participation, which would allow the state to match or better the status quo.

12:09:01 PM

REPRESENTATIVE SADDLER asked whether the modified status quo assumes significant value would go to the federal government.

MS. PODUVAL answered yes; that the producers would be subject to 35 percent taxation.

12:09:20 PM

MS. PODUVAL directed attention to slide 60 entitled, "SOA Equity Investment in AKLNG Creates Risk Exposures that Need to Be Considered and Managed," which highlights that equity investment doesn't come without its own risk exposure. She noted this will need to be carefully considered and managed. This slide lists

five bullets that identify the state's risk exposure. One, the state would risk exposure due to cost overruns and "cash calls" above the appropriation levels - to the extent that the actual capital costs exceed the budgeted amount. Two, as an equity investor in the project, the state would be obligated to make available its share of capital cost contribution. In fact, this represents a significant and real risk of the AKLNG project given its very high costs structure and strong inflationary pressures in the LNG market. The state would assume all force majeure risk through the GTP pipeline and the LNG terminal. This was previously discussed in terms of RIK, but would be very much true as an investor in the project. Three, the state has no control over upstream operations and volumes produced. This means the state could have excess or insufficient capacity relative to volumes produced. Further, balancing production volumes and volumes through the supply chain on a short-term and long-term basis would be a risk the state would have to actively manage and mitigate. Four, if the state assigns its equity position with a third party, such as TransCanada, and contracts for capacity with the third party, the state will likely have to provide credit support to the entity. It would do so through long term contractual commitments, she stated. Finally, if that were to happen, the state would be responsible for all demand charge obligations throughout the life of the contract regardless of gas supply availability and market conditions. As previously discussed with the RIK option, this presents another scenario in which the revenues earned on LNG sales may not offset the costs of capacity charges [for treating, transport, and liquefaction, which could result in a negative cash flow to the state].

12:12:01 PM

REPRESENTATIVE JOHNSON, referring to the second and last bullets, asked whether the state would be responsible for all risks or a proportionate share.

MS. PODUVAL responded that the state would be responsible for every project component, proportionate to its share of the project. In further response, she agreed that the state would not assume all the risk.

REPRESENTATIVE JOHNSON asked whether that would also apply to demand charges.

MS. PODUVAL agreed it would apply to all contractual demand charges, but it would not be proportionate since the terms would

be contractual. In response to Representative Seaton, Ms. Poduval answered that the $5 BOE is equivalent to the production credit given to new oil, which would remain flat at $5 per barrel.

12:13:59 PM

CO-CHAIR FEIGE asked for clarification on the force majeure risk since the state is currently self-insured. He further asked whether the state could cover some risk with an insurance policy and the availability of such insurance.

MS. PODUVAL answered that she was unsure.

ACTING COMMISSIONER BALASH explained that commercially insurance options are available, but he was unsure of whether the state is eligible since it self-insures. He offered his belief that the department would need to discuss this further with the DOA.

12:15:09 PM

REPRESENTATIVE SEATON recalled Representative Hawker previously raised the issue of commercial agreements with a third party. He asked whether those types of agreements are available globally, such that one company or entity has alternative sources of supply agreements with other suppliers.

ACTING COMMISSIONER BALASH answered that unusual risk policies can be tailored by high-end firms such as Lloyds of London. He related his understanding that the company could write an insurance policy for anything, but it is a matter of the charge. He identified the "what, when, and where" variables would need to be considered. With respect to the counter party risk question, he remarked that, "You're only as strong as your weakest link," he said. So where the link breaks will dictate the amount of exposure. For example, how much demand charges will be owed to various parties depends on how far the buyer had to come upstream in order to assume the risks, counter party claims, and obligations. He said he was unsure of whether the state would want an insurance policy for the GTP; however, without a GTP the state will not have LNG since the carbon dioxide must be removed prior to any liquefaction trains.

12:17:42 PM

REPRESENTATIVE TARR, referring to the first and fourth bullets, asked whether it was possible to compartmentalize. She related

a scenario in which TCPL was the owner/operator of the pipeline, so the pipeline would be removed from the GTP and liquefaction terminal part of the project. She asked for clarification on how the state could assess opportunities, for instance, how to become equity partners in the aforementioned scenario. She further asked whether anyone would be a better operator for the terminal than TransCanada.

ACTING COMMISSIONER BALASH acknowledged that those opportunities would exist. He said he could identify a handful of companies who have expressed either an interest in building a liquefaction plant, participating in a liquefaction plant, or some other part in the proposed LNG project. Certainly, the state would need to clearly weigh the relationship of that party to the buyers, he said. He recalled that former DOR Commissioner Harold Heinze addressed the Royalty Oil and Gas Development Advisory Board recently and had emphasized his view that it's important to get the buyers invested in the infrastructure in some manner so they don't ever walk away from the sales contracts. This would leave a handful of companies within each of the LNG buying countries, with a significant amount in Korea in Cogas, and a wider selection of parties would be interested in Japan, he said. For example, Mitsubishi has historically been interested, but there are others as well.

12:20:04 PM

REPRESENTATIVE JOHNSON related a scenario in which he assumed the state did not take any royalty gas "in kind." Referring to the second bullet, he asked whether the state would have any delivery risk throughout the GTP, pipeline, and LNG terminal. In other words, the state would only have to replace "what's broken" as opposed to the gas delivery.

MS. PODUVAL answered that it would depend on the arrangement the state makes for that gross share of production attributable to the state under this alternative.

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REPRESENTATIVE JOHNSON assumed the state would not be subject to risk for the supply for the upstream and midstream activity if the state obtained RIV and delivered it to the terminal without shipping or marketing its gas.

MS. PODUVAL offered her belief that would generally be true, as previously discussed the state would have operational and

capital risk for each of the midstream components, but not be the counter parties to those agreements.

REPRESENTATIVE JOHNSON remarked that the state would not need to buy gas for Japan on the open market; instead the state would be responsible to only fix what was "broken" such as the GTP or pipeline. He asked for clarification that the state would only be subject to operational risks.

MS. PODUVAL answered that is correct.

12:21:58 PM

MS. PODUVAL turned to slide 61 entitled, "Ensuring Transparency & Open Access will Depend on the Actual Terms Negotiated for State Participation." She explained this slide highlights the importance of the term details. First, state equity participation and investment in the project could have significant benefits as has been discussed today. Again, the details that constitute any agreement between the state and producers will be critical to achieve the aforementioned benefits and help ensure transparency and open access. Equity participation should provide transparency as well as access to each segment subject to equity participation in the AKLNG project. Second, having a position on the management committee should help ensure transparency and access to information. Third, participation through secondees - the actual teams - on the GTP, pipeline and LNG plant would demonstrate yet another way the state could have access to information and achieve transparency through its equity participation. Fourth, structuring an undivided joint interest or creating a "pipe within a pipe" could also help facilitate expansion. In short, while significant benefits exist with equity participation, the state must intelligently manage and mitigate associated risks. Finally, the state must be mindful of the details of the negotiated agreement to achieve transparency and access to information.

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MS. PODUVAL directed attention to slide 62 entitled, "Summary: Risk Allocation & Commercial Structure." To summarize, the AKLNG faces risks that could affect the economic benefits to the stakeholders with market prices and capital costs as the two key risks identified. Next, direct equity participation by the state can offer benefits to all parties involved in the AKLNG project, but the accompanying risk profile changes should be

managed. Finally, the various commercial terms related to the state's equity participation will determine whether the state can achieve its transparency and reach its objectives. She characterized this as being a classic case of "the devil being in the details." She offered her belief that the [AKLNG] idea is a good one but the execution is very critical. She concluded her PowerPoint presentation.

12:25:48 PM

REPRESENTATIVE JOHNSON returned to liability issues. He remarked that parties sue the "deep pockets" in the U.S. courts. He related a scenario in which the state is an equity partner up to the tidewater. He asked whether the state can be held liable for the natural gas shortage and if the state can be sued as a "deep pocket" prior to any gas delivery.

MS. PODUVAL answered yes; it is a possibility. Naturally lots of people exist who are ready to sue. However, the likelihood of success in litigation against the state also depends on how the contracts are structured. She offered her belief that this is a risk that can be managed.

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REPRESENTATIVE JOHNSON asked whether any minority equity partner in a pipeline has successfully been sued - anywhere in the world - for failure to deliver gas.

MS. PODUVAL answered no; not that she was aware.

12:27:31 PM

REPRESENTATIVE SEATON asked whether the administration has developed a list of potential conflicts of interest for the state as a participant in a commercial operation.

ACTING COMMISSIONER BALASH answered that this study was commissioned to assist in understanding the value proposition as it specifically relates to the state's royalty. He explained that the administration "opened the aperture" to examine some tax implications to better understand the economics of the netback on royalty. He acknowledged the issues in question are ones that a state agency has previously examined. He advised Representative Seaton that a body of documents was generated near the end of former Governor Knowles' administration in the early 2000s that touches on some of the issues. Granted, some

of the issues will be different since the agency examined a North America pipeline rather than an LNG project so the needs or benefits will change; however, but a number of the issues remain relevant. Fortunately, earlier this year, the legislature passed and the governor signed HB 4, which establishes a separate legal entity, a public corporation of the state, but one that is separate from the state. Certainly, that would offer one avenue for the state to shield the general treasury and agencies from some actions and commercial entanglements. At the same time, how the state might effectively use that corporation depends on the circumstances involved.

REPRESENTATIVE SEATON commented that equity participation and ownership was critically important to the previous conversation so his interest is for the administration to identify the potential conflicts of interest and how to overcome them.

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REPRESENTATIVE SADDLER referred to slides 58 and 59, and asked whether the low, base, and high prices could be characterized as 20, 25 and 30 percent participation.

ACTING COMMISSIONER BALASH answered that the low base and high base on investment refers to whether the Capex estimates came in on budget, under budget, or over budget.

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REPRESENTATIVE SADDLER acknowledged he may be missing something. He asked why gaining the equity participation rate equivalent to the modified status quo is to the state's benefit. He further asked whether the benefit was related to the taxes or if she could identify the net benefit for the state or the producers.

MS. PODUVAL responded that the study attempts to determine if it is possible for the state to provide value and incentives to the producers, but not lose value itself. In essence, it asks the question of what is the level of equity investment necessary so the state does not lose value. As a result the analysis showed that somewhere from 20 percent to 30 percent is the point at which the state has incentivized the producers by contributing significant capital to the project, yet the state would achieve sufficient value and not lose value relative to status quo.

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REPRESENTATIVE SADDLER referred back slide 58 and asked Ms. Poduval to identify the equilibrium point.

MS. PODUVAL pointed out that two levels of state investment on slide 58 are charted: 15 percent and 35 percent. She explained that 15 percent represents the state's investment in the project and the 15 percent gross share as royalty and production tax paid by producers. As the slide indicates, at 15 percent level the state has lost value in the process [in most instances]. Basically this is because the status quo almost always better than the equity investment in the project. It follows that 15 percent isn't the right percentage for the state to incentivize producers without losing value. At 35 percent equity participation, while the state benefits across eight of the nine scenarios the producers may or may not benefit. Therefore, 35 percent gross share of production and 35 percent investment would be set too high she said. Referring to slide 59, she pointed out that this slide examines the capital cost and price to identify the level when the two are equal. Of course, it isn't a number since the point moves with the cost of the project and market prices achieved, she said.

12:34:46 PM

CO-CHAIR FEIGE commented the charts don't identify intangible benefits to the state in moving the project forward.

MS. PODUVAL agreed.

12:35:13 PM

REPRESENTATIVE TARR related her understanding that going beyond 35 percent is not being considered since it would further impact producers negatively.

MS. PODUVAL answered that is correct.

REPRESENTATIVE TARR asked whether the consultant has considered which portion of the project makes most sense for the state to invest in and also develop expertise going forward to make the state more competitive in the market.

MS. PODUVAL answered that pipeline ownership is one component of the project, which is why state investment makes sense. Certainly, the biggest reason would be that the pipeline could create the most significant bottleneck in terms of access. The

LNG plant could also be expanded in trains - modular units that can expand the LNG plant itself. Similarly, a similar approach could be applied to the GTP, as well. She explained that the pipeline - depending on how it is sized - can be expanded using additional compression up to a certain level, but beyond that any expansion can only be achieved by looping, which is prohibitively expensive. Therefore, it represents a good component for investment since the state would have control over the pipeline structure and development.

12:37:17 PM

CO-CHAIR FEIGE noted that before gas can be removed from the North Slope, the Alaska Oil and Gas Conservation Commission (AOGCC) must render a decision on the allowable amount. He asked whether the administration taken any steps in that regard or if this is not a concern yet.

ACTING COMMISSIONER BALASH agreed that it will be a concern, but the department has not taken any formal steps to date. He acknowledged some informal conversations have occurred with individual members of the AOGCC in terms of timing and requirements. He offered his belief that the success case and path will involve the support of all of the working interest owners as well as the operator being in the lead. In fact, the operator has an incredible body of technical data, reservoir information that cannot be matched. Their participation and engagement with the commission in a success case will be the lead. Certainly, the administration can consider and examine certain things. In fact, in the resolution of the Point Thomson litigation, the state engaged with the working interest owners in matters that specifically related to Point Thomson, but also tangentially to Prudhoe Bay, he advised.

12:39:16 PM

CO-CHAIR FEIGE referred to space capacity in the pipeline. As Ms. Poduval previously stated, the ability of the new entrants to North Slope gas exploration scenarios will depend on the ability to get the gas to market, plus spare capacity in the line. He offered his belief producers have come up with a project that the economics will work out to cover capital expenses. However, spare capacity will be necessary to ensure future access for exploration or access for future discoveries, for example in the National Petroleum Reserve - Alaska (NPRA) or on the North Slope - at White Hills. He further asked how much spare capacity is needed to be built into any pipeline. The

state could build a line for existing capacity, but generally speaking, the state needs to decide how much extra capacity will be needed, the cost, and whether the state should fund it as additional equity in the pipeline portion of the midstream supply chain.

ACTING COMMISSIONER BALASH acknowledged these are excellent questions, which are ones the department has already considered internally. He suggested the committee could obtain some information from some of the known companies, such as Anadarko Petroleum Corporation, BG Group. He remarked that Shell [Western E&P Inc.] could present a perplexing set of considerations if the producers brought in natural gas from the offshore since no royalty interests or direct production tax implications. Likewise, how that would be reconciled within the structures being considered would likely be important to them, too. He surmised that in order to bear the costs of offshore development, the producers would need a large volume of hydrocarbons. Certainly, this raises some questions, which are a little further off, he said. The questions that relate more directly would be that some of the other companies or some newer lessees, such as Repsol [S.A.] and ENI who certainly have a presence in the LNG marketplace and have likely considered some opportunities in Alaska.

12:43:29 PM

ADJOURNMENT

There being no further business before the committee, the House Resources Standing Committee meeting was adjourned at 12:43 p.m.