SENATE FINANCE COMMITTEE
February 19, 2014
5:07 p.m.

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CALL TO ORDER

Co-Chair Kelly called the Senate Finance Committee meeting to order at 5:07 p.m.

MEMBERS PRESENT

Senator Pete Kelly, Co-Chair
Senator Kevin Meyer, Co-Chair
Senator Anna Fairclough, Vice-Chair
Senator Click Bishop
Senator Mike Dunleavy
Senator Lyman Hoffman
Senator Donny Olson

MEMBERS ABSENT

None

ALSO PRESENT

Larry Persily, Federal Coordinator, Alaska Natural Gas Transportation Projects; Deepa Poduval, Principal Consultant, Natural Gas and Power Fuels Group, Black and Veatch Management Consulting.

PRESENT VIA TELECONFERENCE

Jason De Stigter, Senior Consultant, Natural Gas and Power Fuels Group, Black and Veatch Management Consulting.

SUMMARY

PRESENTATION: ALASKA NATURAL GAS, FEDERAL PERSPECTIVE and STATE PARTICIPATION

PRESENTATION: REVIEW OF ROYALTY STUDY and STATE EQUITY POSITION

Co-Chair Kelly stated that the presentations were related to SB 138, which was not currently in committee.

^PRESENTATION: ALASKA NATURAL GAS, FEDERAL PERSPECTIVE and STATE PARTICIPATION

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LARRY PERSILY, FEDERAL COORDINATOR, ALASKA NATURAL GAS TRANSPORTATION PROJECTS, read verbatim from a prepared statement (copy on file):

> For the record, I am Larry Persily, head of the federal Alaska gas line project office.
>
> Thank you for the opportunity to testify today. I hope my comments are useful for your deliberations and answer some of your questions.
>
> I'd like to explain why this time may turn out differently than all the other attempts at a North Slope gas line.
>
> But first, I have two examples of Washington taking notice of what's happening in Alaska.
>
> I know normally Alaskans don't like to hear that the federal government is watching our resource development – but trust me, this time it's OK.
>
> I presented an update on the Alaska LNG project last week at the Department of Interior, speaking to the Alaska Interagency Working Group which created by presidential executive order almost three years ago to track and help coordinate the work of federal agencies for onshore and offshore energy projects in Alaska.
>
> As I started talking about the Alaska gas line, people actually paid attention and asked good questions. They've heard about Alaska gas many times before. And their agencies have spent a lot of time on the many false starts in years past.
>
> But they had heard and read that this time might be different – and they were eager to know what was happening.

They had heard that all of the players are working together on the same project and spending serious money to determine if Alaska's time finally has come.

Between budget cuts, retirements and other staffing reductions, however, federal resource management and regulatory agencies don't have any spare time for another false start – like they went through a few years ago with a proposed pipeline from Alaska to serve North American markets.

Though sponsors of that project tried in good faith to make it work, shale gas put an end to it – but not before federal agencies had spent a lot of time on permitting issues, rights of way, scoping meetings and reviewing draft resource reports for an environmental impact statement.

The Federal Energy Regulatory Commission, Department of Energy, Bureau of Land Management, Army Corps of Engineers and others have more than enough files on their desks without the Alaska gas line.

FERC alone has several Lower 48 LNG export terminals on its work list for environmental review.

The Department of Energy has two dozen LNG export applications waiting for review, including applications from the existing ConocoPhillips plant at Nikiski.

Federal agencies are the same as Alaskans – they don't want another false start.

But every one of those agencies is ready to work on the Alaska LNG project just as soon as an application hits their desk. They would just like to know that this time it has a real shot at making it.

I told them last week what I am going to tell you -- and this is coming from someone who is generally very cynical and skeptical.

This time very well may be different. If the markets perform as expected, if the companies and the state can keep the costs down, if the financial terms look

good to all parties, you could see gas flowing in the 2020s.

The latest non-skeptic in Washington is Adam Sieminski, head of the Energy Information Administration at the Department of Energy.

“We think the economics ultimately will favor construction of an LNG facility in Alaska,” Sieminksi said in an energy newsletter interview this week.

So why this time?

Global LNG demand is the strongest growth industry for energy. Between nuclear plant shutdowns in Japan and Korea; choking coal pollution in China; population and economic growth in India, China and elsewhere in Southeast Asia; high oil prices that can make LNG look affordable by comparison — they all add up to strong demand build for LNG in the Asian market.

The International Energy Agency predicts global demand for natural gas to grow more than twice as fast as oil over the next 20 years. Others predict even stronger growth rates for gas.

Most of the world’s gas trade is by pipeline, but LNG is building. And building at an even faster pace than pipeline deliveries.

Many analysts talk of a 5 percent to 6 percent annual growth rate for LNG demand through 2020, then slowing down to the 2 percent to 3 percent range through 2035.

That would mean the equivalent of a new, good-sized LNG export terminal will need to start up almost every year to meet that demand growth.

And in addition to market growth, older LNG supply contracts are expiring — and some of those older export plants are running low on reserves.

Just this week Egypt, an LNG exporter since 2005, announced it will need to import LNG for the next several years as gas production has fallen short of domestic demand.

All of which means export project developers are chasing not only new demand but replacement contracts for declining reserves.

Someone is going to win that new business. It will be the lowest-cost, stable, predictable suppliers.
The potential competitors to Alaska LNG have their own strengths and weaknesses, as does Alaska.

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Australia?

Seven LNG export projects are under construction and set to open over the next three years. But a majority of that gas is already sold on long-term contracts. Those projects are not Alaska's competition for deliveries to start in the 2020s.

New terminals or expansions in Australia face tough hurdles. Cost overruns on the current projects have got companies worried about repeating history.

Domestic consumers are seeing price increases for natural gas, which is being drawn from the local market to higher-priced export markets.

Dow Chemical claims it cannot get the new gas supply contracts it needs for investments in Australia.

Some local jurisdictions have imposed drilling restrictions on coal-bed gas reserves, which feed three of the export terminals under construction.

Russia?

The country has just one operating export plant, but there's talk of expanding it. Russia has another plant under construction, and thoughts of two more.

The expansion talk at Sakhalin-2, led by Gazprom with partner Shell, is dependent on sufficient gas reserves to justify the work.

Gazprom is also talking about building an LNG terminal at Vladivostok.

Yes, a good location for marketing – it's a short tanker trip from there to Japan, Korea, China or Taiwan – four of the biggest LNG buyers.

But it will take a 2,500-mile pipeline to move the gas from Russia's interior to the coast. The field development costs and pipeline are estimated at $40 billion — not counting the LNG terminal.

To really make the economics work, Russia will need to extend the pipeline and sell gas to China.

The two countries have agreed on everything but the price for the gas. You could say that about a lot of hopeful projects.

Separately, Rosneft and ExxonMobil are doing their due diligence for an LNG plant called Sakhalin-I. They have issued a contract for initial FEED work.

In Russia's distant Arctic, a terminal under construction is called Yamal LNG. It's about halfway between Iceland and Nome.

Estimated at $27 billion, the sponsors talk of making their first deliveries in three or four years.

The tricky part for Yamal is that the Northern Sea Route to Asia will be passable for LNG tankers only a few months each year, and even then only with government-funded nuclear-powered icebreakers as escorts.

The rest of the year, the plan is to ship the LNG aboard ice-class tankers to European ports, where the LNG would be transferred to less expensive standard tankers for the long voyage down the European coast, across the Mediterranean Sea, through the Suez Canal, across the Indian Ocean and into Asia.

Look at the map and you see the economic challenges Yamal faces. Plus its main sponsor, Novatek, has never built or operated an LNG terminal.

Canada?

There are multiple proposals; none have all their government authorizations or a final investment decision.

None have cleared the consultation process with every First Nation in the area and along the pipeline route. The developers that are talking about price are emphatic that they need oil-linked LNG pricing or something comparable to cover their sizable development costs.

There is no Prudhoe Bay production facility in British Columbia's Horn River and Montney shale gas plays that would feed the LNG terminals at Kitimat and Prince Rupert. They have to build it. Gas has to pay for it.

The pipelines that would move that gas to the coast are as long as 525 miles and must go through two mountain ranges.

One possible route into Prince Rupert takes the pipeline offshore for up to 75 miles and across either an old mine tailings disposal site or mollusk bed important to First Nations people.

Meanwhile, the British Columbia government is negotiating a new LNG export tax with project sponsors. The legislation been delayed until fall, with companies saying no project decisions until they know the tax.

Tanzania and Mozambique?

An awful lot of gas but minimal infrastructure; still developing their oil and gas laws and fiscal regimes; and local poverty could become an issue for developers and political leaders.

Closer to home, the U.S. Lower 48 states?

It's a tough political battle, pitting oversupply and low prices at home vs. the free market and exports to trade partners.

The Department of Energy has approved six export licenses, totaling 8.5 bcf a day. That's equal to almost 12 percent of current U.S. gas production.

The unknown is if and when and under what conditions the department might start to close down or further delay its export approvals.

And regardless of what government does, the only terminals to be built will be the ones that have buyers and can get financing. Just one is under construction so far, in Louisiana.

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Other issues for Lower 48 exports include cost overruns at the Panama Canal expansion, which is essential for getting tankers out of the Gulf Coast and into the Pacific.

One of the Gulf Coast project sponsors said this week that Asian buyers are putting off new long-term contracts for U.S. gas because of the delay in knowing just how much it will cost to use the expanded Panama Canal.

Local opposition over environmental and safety concerns is not very noticeable for Gulf Coast terminals but is extremely visible for terminals proposed for the Oregon and Maryland coasts.

My point is: Like Alaska, every proposed project, has its own problems, its own disadvantages, its own issues to solve.

The winners, the terminals that get built will be the ones that solve the problems, hold down costs, and convince buyers that they will start up on time with competitive prices.

The pre-FEED and FEED work — front-end engineering and design — is a key part of that effort. The more you do up front, the better the odds of avoiding surprises during construction.

And in a brief advertisement for our office's work, we issued a report today on just what are pre-FEED and FEED and why they are so important. It's available on our website arcticgas.gov.

ALASKA LNG ADVANTAGES

These are substantial and meaningful.

Shorter tanker run from Nikiski to Japan; one week vs. three weeks from the Gulf Coast

Tanker charter rates are running $75,000 to $100,000 a day. Time is money. Big money at those rates.

Or less capital tied up in fewer ships if owner-operated tankers.

Proven gas reserves already being produced. It's important to buyers to know that the gas they're committing to buy for 15 or 20 or 25 years actually exists.

Low production costs compared to greenfield projects in B.C., Australia, East Africa.

Oil will carry the infrastructure costs.

Almost 40 years experience producing on the North Slope.

Liquefaction compressors run much more efficiently at cold temperatures.

Up to 15 percent more efficient (less gas consumed) than in warm-climate LNG sites

ALASKA LNG DISADVANTAGES

These also are substantial and meaningful.

High construction costs in Alaska.

Seasonal construction limitations (pipeline trenching during the winter only).

Summer-only sealifts of material to the North Slope.

Environmental considerations (wetlands, air quality standards, mitigation expenses).

The cost of an 800-mile pipeline to tidewater that competing LNG projects don't have.

And the need for fiscal certainty is a hard sell in the world of Alaska oil and gas politics.

The federal government is ready for the permitting work, but making the finances work is up to the project sponsors and the state.

The rewards to the state of a successful project include public revenues, the lowest cost to move gas to Alaskans, and an industry commitment to keep North Slope gas and oil flowing for decades.

The risks of state investment are cost overruns that require more cash during years of budget deficits, and the possibility that the project will not make as much money as projected or as people want.

I can't help you there, other than to say the LNG world is a competitive market. But it's not an impossible market.

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Co-Chair Meyer wondered who would oversee the regulations the gasline. Mr. Persily responded that FERC would oversee the environmental and safety review. He stated that FERC would conduct the environmental impact study (EIS), but that FERC would not regulate the tariffs or the tariff regulations of the liquefaction plant.

Senator Olson wondered if FERC would still not get involved in the regulatory issues, even though it is an international project. Mr. Persily responded that those issues could not be regulated.

Co-Chair Meyer noted that the cost of gas in the open market ranged widely. He queried the cost of AKLNG, and wondered if Alaska would make any money. Mr. Persily responded that there were some projects in various

countries where gas was sold fairly cheaply. He stressed that the most dependable buyer would get the best price of gas.

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Co-Chair Meyer wondered what Alaska would need to make the project economical. Mr. Persily responded that he did not know the cost of running the gas through a liquefaction plant. He felt that all of the numbers proved that Alaska could be competitive in the current market.

Co-Chair Meyer felt that there had been very similar presentations in the past. He wondered why Mr. Persily was optimistic about this particular project. Mr. Persily responded that the current market was in the right place for this project.

Co-Chair Meyer wondered if the project was different because it was a partnership with the industry. He felt that the project was risky, because the oil companies may discover other options. He stressed that the state did not have any other options. Mr. Persily agreed, and furthered that the federal government understood that this project was different, because the three main oil and gas companies seemed to be working together. He felt that the companies could book the natural gas on the North Slope as "reserves."

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Co-Chair Kelly wondered if Mr. Persily felt that Alaska was "ahead" in the market. Mr. Persily stated that Alaska was behind because it would take longer to build the gasline. He felt that there were many different issues that were encouraging and discouraging for AKLNG development.

Co-Chair Kelly noted that many other projects were maturing, but may not be considered competitors because of their current long-term contracts. Mr. Persily stated that 60 percent of Australia's supply was already sold in long-term contracts. He stated that Alaska's competitors would be other non-sanctioned projects.

Co-Chair Kelly wondered if there was a possibility that the Australian projects would not be able to deliver. Mr. Persily replied in the negative, and explained that those

projects would be extremely profitable. He stated that the sponsors of those projects would not immediately make a profit, because there would be more capital to recover.

In response to a question from Co-Chair Kelly, Mr. Persily replied that Japan purchased more LNG than China. He stated that China had other options, and received approximately half of its LNG through a gasline directly.

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Co-Chair Kelly queried any insights on how the project may be financed. Mr. Persily replied that once the contracts were binding, the financing would be available. He furthered that no one company would incur the entire risk.

Senator Dunleavy wondered if any Australia and Alaska customers would overlap. Mr. Persily responded that Australia and Alaska were competitors, because Alaska may be providing more gas than Australia. Companies may want to be a part of the entire market, because they like diversity in their portfolios.

Senator Dunleavy queried the physical description of Alaska's gas. Mr. Persily replied that the current gas was perfectly suited for Japan. He remarked that the methane and ethane gas was a high BTU, and was higher than the US market.

Senator Dunleavy wondered if the Australia gas was mainly coal-bed methane, or a combination. Mr. Persily responded that, of the six land-based projects in Australia, one-half were conventional gas and the other half were coal-bed methane gas. He stressed that the coal-bed methane gas did not have a high enough BTU content for the Japanese market. He explained that they would either "spike it" with propane or other gas liquid to increase the BTU value, or burners would need to be adjusted.

Mr. Persily remarked that the federal government was immune to litigation.

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^PRESENTATION: REVIEW OF ROYALTY STUDY and STATE EQUITY POSITION

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Co-Chair Kelly noted that Senator Bishop and Vice-Chair Fairclough would absent for the second half of the meeting.

DEEPA PODUVAL, PRINCIPAL CONSULTANT, NATURAL GAS AND POWER FUELS GROUP, BLACK AND VEATCH MANAGEMENT CONSULTING, discussed the PowerPoint presentation, "Observations on Heads of Agreement, Presentation to Senate Finance Committee" (copy on file). She stated that she would be discussing a royalty study, and incorporating the Heads of Agreement (HOA) within the context of the study.

Ms. Poduval looked at slide 3, "Long-Term North Slope Oil and Gas Revenues are Driven by AKLNG Project Success." She explained that the graph showed forecasted revenues from North Slope oil gas, both with and without the AKLNG project. The blue line showed the revenue forecast that was based on DOR's estimate of oil production. The green line showed the AKLNG project coming online in 2024, and it showed that the project would bring in revenue of $4 billion to $4.5 billion above the current forecast based on North Slope oil production. The slide was intended to put the opportunity in context.

Ms. Poduval discussed slide 4, "Putting the HOA Within the Context of AKLNG Timeline." The timeline for the AKLNG project was outlined on the slide. The first step of the timeline was the Pre-FEED. The Pre-FEED was the initial version of the frontend engineering and design work. The Pre-FEED phase would get more and better information on the project's design and cost. She announced that the Pre-FEED phase would take approximately 18 months. Depending on the outcome of the legislative session, Pre-FEED could begin mid-2014 and end 2015. The next phase of the project was the FEED process, which is when the detailed engineering would be planned. The FEED process will also determine more granular cost estimates. The FEED process was anticipated to take two to three years, including some of the permitting. She stated that the final investment decision would occur at the end of the Pre-FEED process. Somewhere between now and the end of the FEED phase, the parties

would have finalized the commercial agreements, the costs of the project, and estimated revenue streams. At that point, the companies will make the investment decision. She stated that the construction phase could take about five years. She announced that the Pre-FEED phase saw a very small proportion of the total project cost was at stake, because it was only approximately 1 to 2 percent of the overall cost. The FEED stage only required approximately 3 percent of the totally investment. The largest investment occurred after FEED, with about 96 percent of the cost. She explained that the HOA contemplated taking the process through the Pre-FEED. A staged gated approach was generally used in project development, and at each stage the parties made commitments for spending the dollars in the next phase. The HOA was consistent with that approach, because it committing each parties to complete certain tasks to move the project through the Pre-FEED stage.

Co-Chair Kelly wondered if the percentage of investment on the slide represented the state's investment. Ms. Poduval replied in the affirmative, and explained that it was also proportional to the total project's investment.

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Ms. Poduval highlighted slide 5, "Royalty Study Highlights and Recommendations." The slide showed the key findings from the North Slope Royalty Study for DNR, and its recommendations. The findings included the following:

- Global LNG market is growing and competitive
- Government take and cost structure for AKLNG projects are high
- AKLNG is expected to be a large, complex, high cost project
- Project structure is likely to be producer-owned integrated
- Various risks inherent in project and state participation

Ms. Poduval announced that the recommendations were the following:

Improve commercial attractiveness of project

Retain value to the state

Create Alignment between state and producers

Recognize and manage risks actively

Ms. Poduval felt that the combination of the study findings and the recommendations would result in state equity participation.

Senator Dunleavy wondered if the presentation would include LNG different models that were currently in the world. Ms. Poduval responded that the information was included in the Royalty Study. She stated that there were three main structures. The integrated structure was a single ownership through the entire value chain, which was the GDP Pipeline and LNG plant. The second structure was a merchant structure, and could work by having the Upstream producers sell the natural gas to the LNG plant which would be owned by a third party. The LNG plant would buy the gas, and sell the LNG. The third structure was a tolling arrangement, which was similar to what was used in pipeline contracts. It required a service fee to provide a certain service. It could be set up to pay the GDP, pipeline, and the LNG plant a tariff to pass through; but the producers did not necessarily need ownership of those three points.

Senator Dunleavy asked if he could get a print out of those three models with various provinces, states, or areas that utilize the different models. Ms. Poduval agreed to provide that information.

Senator Dunleavy stated that an integrated model was being considered in Alaska. Ms. Poduval agreed.

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Senator Dunleavy queried why the model best suited Alaska's particular circumstance. Ms. Poduval announced that project control was one of the most important reasons why an integrated project structure worked for large, complex, high cost projects, because the sponsors were very careful about managing costs and schedules. The integrated project structure gave the sponsors the ability to see the project

through to fruition. She also stated that the producers preferred the integrated project structure.

Co-Chair Kelly queried the definition of "alignment." Ms. Poduval responded the "alignment" referred to all of the parties having their incentives lined up similarly. She remarked that the producers' desires could be different from the state's desires.

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Co-Chair Kelly asked for information regarding the "black box." Ms. Poduval responded that Trans-Alaska Pipeline System (TAPS) was a producer owned oil pipeline, which created a number of disputes with producers at every step of the way of how it was values and the tariffs. She explained that the disputes occurred because it created a relationship where there is opposition. She stressed that those disputes created project inefficiencies. Some other objectives of the state for the project included open access, allowing third parties to develop oil and gas on the North Slope to bring more oil and gas revenue to the state. She announced that those objectives were not necessarily the same as the producer's objectives. She stressed that the state would be at the mercy of the producers, if the state was not a part of the project.

Senator Dunleavy remarked that there were different models for various reasons. Ms. Poduval agreed.

Senator Dunleavy surmised that the integrated project structure was appropriate for Alaska, because of the scale of the project. Ms. Poduval stated that it was appropriate for the scale and complexity of the project.

Senator Dunleavy remarked that there were other projects in the world that used the integrated project structure, and the concept of alignment was imbedded in that structure. Ms. Poduval responded that his summation was generally true.

Senator Dunleavy wondered if there were integrated models that were not in alignment. Ms. Poduval stated that an integrated model created alignment, but stressed that it depended on the parties who were a part of that integrated project. She stated that sometimes the integrated structure only included the sponsors, with no state involvement.

Co-Chair Kelly stated that Senator Dunleavy's questions would be part of a very detailed presentation.

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Ms. Poduval addressed slide 6, "Criteria Applied for Evaluation of HOA Tie in to Royalty Study Recommendations."

Improve Commercial Attractiveness

Preserve Value to the State

Manage Associated Risks

Create Alignment Through Equity

Ms. Poduval displayed slide 7, "HOA-Alignment through Equity Participation." She shared that there were different ways that the HOA created alignment through equity participation. She shared the different elements in the HOA to create alignment:

Royalty Gas and Tax as Gas = State Gas Share

State Gas Share = State Equity Share

State Equity Share Impacts State Investment and State Revenues

State Holds Equity Along the Entire Supply Chain

Commitments made in a Stage-gated Manner
Current decisions focused on enabling pre-FEED

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Ms. Poduval looked at slide 8, "Improve Commercial Attractiveness of AKLNG Project." The slide showed the impact on the producer rate of return on the project. The blue bar represented the producer return under the status quo. She explained that "modified status quo" assumed that there would be something that needed to be changed for gas from a fiscal perspective, before the project had any chance of progressing. She stated that modified status quo assumed that the production credit, similar to what was currently applied on oil, was provided to gas. The blue

portion assumed a $5 per barrel of oil equivalent credit, and was also applied to gas. She stressed that the modified status quo was the "watermark" by which the presentation's measurements were taken.

Ms. Poduval highlighted slide 9, "Preserve Value to State from Royalty and Taxes."

> Obtain value in return for the state's incentives to the project
>
> Preserve the state's expected revenues from the AKLNG Project relative to an RIVE world without State equity participation

Ms. Poduval addressed slide 10, "Preserve Value to State from Royalty and Taxes." She explained that the slide was a forecast of the state's revenues from the AKLNG project, under the modified status quo. It showed SB 21, with a production credit for gas. She pointed out the total cash flows on the bottom of the graph. Under the assumptions that were built into the graph, the state would have made approximately $70 billion from the LNG project. The right side of the chart showed the breakdown of the cash flows and total revenues to the state. She stated that there was approximately 30 percent of royalty; approximately 40 of production tax; and the remainder was property tax and state corporate income tax.

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Ms. Poduval discussed slide 11, "Preserve Value to State from Royalty and Taxes." She stated that the slide was a model of what the state's revenues would be with equity participation. She remarked that there was a period of negative revenues, which was the equity participation. She stated that the equity participation meant that the state was investing in the project. She pointed out that the bottom line showed that the state made approximately $72 billion with the equity participation over the time period. She announced that the state would make approximately the same amount that it would without equity participation, although it was slightly different. She explained that the make-up of the revenue changed. She remarked that the royalty value was preserved, and increased. The property tax decreased, because 25 percent of the project did not pay property tax. She pointed out that the property tax

decrease was compensated by the project ownership of midstream revenues, which were the returns that were earned from the investment in the mid-stream.

Ms. Poduval highlighted slide 12, "Preserve Value to State from Royalty and Taxes." She stated that the slide represented what might be a good range for the state to discuss equity participation in the project: where it makes sense for the producers and the state. She pointed out that there were so many uncertainties associated with the project, so it was difficult to determine the number that should be met. She remarked that capital cost of the project and the market prices impacted the royalty and production tax earnings to the state. The point of the chart was to establish a "ballpark" of the percentage of earnings to the state. This was a representation of how much equity and how much gas was needed to have an arrangement with the producers where the state was not losing value. She stated that the slide had different scenarios of capital costs and market prices. The graph tried to solve for the equity participation level where the revenues the state would make without equity participation would match the revenues that the state would make with equity participation. She pointed out the 24 percent at the center of the graph. She remarked that the previous slide assumed 25 percent equity participation, and the number at the bottom was slightly better than the status quo number of $68 billion. If there was a model of 24 percent equity participation, those numbers should have been equal. She stressed that the chart of slide 12 reflected the percentage of equity where the status quo and revenues were equal. She stressed that 20 to 30 percent seemed like the right area for the state to participate with equity in the project.

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Ms. Poduval displayed slide 13, "Gross Tax Rate Sets the Total State Gas Share and Equity Participation." The level of equity participation would be determined by the gross tax that the legislature would decide. She stressed that the royalty was somewhat fixed at or around 13 percent. The share of the gas was equal to the share of equity, so the variable was how much tax gas was taken. The different levels of gas tax determined the percentages of share of equity in the project. The gross gas share must be 14

percent to achieve a 25 percent equity share in the project.

Ms. Poduval looked at slide 14, "Manage Risks - Equity Investment Helps to Hedge Price Exposure." The first highlighted risk was price exposure. She stressed that price was the first and biggest risk factor to the project. It was a main driver of the revenues that the project would incur. The graph showed the different levels of market variables and uncertainties. She stated that the slide was intended to understand the total cash flows to the state. She pointed out the far left bars corresponded to a low price environment. She stressed that the state would earn more with equity participation than without equity participation under a low price scenario. She stressed that equity participation dampened the state's risk exposure under a low price environment. She stressed that, under a high price environment, the state's revenues would be lower with state participation than without state participation. She announced that, in general, equity participation flattened the state's revenue profile. It was driven by the fact that part of the state's revenues were dependent on what was earned in the midstream, and the return on the investment. She stressed that those driving factors were not price sensitive.

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Ms. Poduval displayed slide 15, "Manage Risks - Capital Cost Exposure Reduced through TC Participation."

> Highest risk exposure is prior to project start when cash calls are not supported by project revenues
>
> TransCanada (TC) participation allows State to retain 20 to 25 percent of gas share while being responsible for only 13 to 18 percent of the upfront costs
>
> This is especially important if cost overruns occur on project

Ms. Poduval addressed slide 16, "Manage Risks - Capital Cost Exposure Reduced through TC Participation." The slide showed what the state's total investment in the project would be, if it went alone and partnered with TransCanada. She stated that the left side showed the midway estimate of the project at $45 million. She stated that participation

with TransCanada reduced the deal upfront cash investment by approximately $3 billion. The right side of the graph assumed a cost overrun, and showed that it would reduce the state's investment in the project by $4 billion.

Ms. Poduval discussed slide 17, "Manage Risks - Reduce Potential Loss of Value through RIK."

HOA includes intent of producers to offer to negotiate separately to market State's share of gas - proportional to each producer's share of producer capacity

SOA only obligated to elect RIK if the producers make "satisfactory arrangements for disposition of the state's share of LNG"

SOA would benefit from producers marketing expertise rather than competing with them

Could recreate marketing benefit of RIV

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Ms. Poduval looked at slide 18, "Manage Risks - Structure of Participation." She stressed that, in theory, it seems like a good idea for the state to have equity participation, because everyone has an equal share of the gas and equity. She remarked that the details of the terms could either help the state achieve its various objectives or not. She stated that the state's objectives included enabling access, enabling project expansion, and having access to information. The HOA included different elements that focus on how to achieve the objectives. The HOA contemplated a framework of a project within a project, where the state's share of the project could be a considered a separate project. The state, through its negotiations with TransCanada, can set its own tariff for that part of the project. The state can expand its part of the project, and the pro-expansion principles outlined in the HOA state that any party can expand the project, as long as it's not to the detriment of what the other parties achieve from the project. She announced that the combination of the state and TransCanada can solicit an expansion in the project.

Senator Dunleavy looked at slide 4, and remarked that there was capital commitment at various steps of the project. Ms. Poduval agreed.

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Senator Dunleavy stressed that each step costs money to keep the project going. Ms. Poduval explained that it was consistent with how these types of large projects develop. The state's investment was part of what made the project attractive to producers. She pointed out that the producers' participation was significant, and would be contributing 75 to 80 percent of the project cost through each stage of the process. She stressed that all of the elements of the HOA should be considered principles, so the project was currently a work in progress.

Senator Dunleavy wondered if there were four partners or five partners in the project. He specifically wondered if TransCanada and the state were sharing a singular partnership. Ms. Poduval replied that the parties in the HOA were ConocoPhillips, ExxonMobil, BP, the state, AGDC, and TransCanada.

Senator Dunleavy asked for her to restate that answer. Ms. Poduval responded with ConocoPhillips, ExxonMobil, BP, the state, AGDC, and TransCanada.

Senator Dunleavy surmised that there were six separate partners in the arrangement. Ms. Poduval agreed.

Co-Chair Kelly wondered if the state, AGDC, and TransCanada were considered a collective partner. Ms. Poduval replied that the six parties that she mentioned were the signatories to the HOA. She stated that the arrangement was that each producer would have their own share of the gas and midstream; the state would have its own share through AGDC; and TransCanada would participate through the state's equity participation. The state would bequeath to TransCanada a portion of its equity in GDP and pipeline.

Senator Bishop felt that the participation of TransCanada should be considered a "joint venture." Ms. Poduval responded that she did not want to misrepresent the legal terms that were used for the project.

Senator Dunleavy surmised that there were four participants, but possibly six entities. Ms. Poduval agreed.

Vice-Chair Fairclough asked for more information regarding the use of the word "bequeath." Ms. Poduval responded that the state will assign a portion of the equity through TransCanada.

Vice-Chair Fairclough asked for more information regarding the value to the state.

6:56:27 PM

Ms. Poduval highlighted slide 19, "HOA Score Card Relative to Criteria."

Alignment Through Equity

Equity Participation Along Supply Chain; Royalty and tax as share of gas

Improve Commercial Attractiveness

Increases Producer IRR Shares/Reduces Producer Risk

Preserve Value to the State

State could be Cash Flow Neutral relative to status quo depending on final equity share

Manage Risks

Price Exposure: Equity Participation in midstream dampens exposure to prices

Capital Costs: TC participation lowers State's cash calls prior to commercial operation

RIK Marketing: HOA reflects intent of Producers to negotiate to market State's share of gas

Structure of Participation: Project within a project, Stage gated commitments, Access & pro-expansion principles, Access to information

JASON DE STIGTER, SENIOR CONSULTANT, NATURAL GAS AND POWER FUELS GROUP, BLACK AND VEATCH MANAGEMENT CONSULTING (via teleconference), stated that he had nothing more to contribute to the conversation, and was only available for questions.

Co-Chair Kelly discussed housekeeping.

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ADJOURNMENT
7:01:50 PM

The meeting was adjourned at 7:01 p.m.