

**ALASKA STATE LEGISLATURE**  
**SENATE RESOURCES STANDING COMMITTEE**

February 1, 2010

3:34 p.m.

**MEMBERS PRESENT**

Senator Lesil McGuire, Co-Chair  
Senator Bill Wielechowski, Co-Chair  
Senator Charlie Huggins, Vice Chair  
Senator Hollis French  
Senator Bert Stedman  
Senator Gary Stevens  
Senator Thomas Wagoner

**MEMBERS ABSENT**

All members present

**OTHER LEGISLATORS PRESENT**

Senator John Coghill

**COMMITTEE CALENDAR**

Pipeline Progress by TransCanada and FERC Filings Update

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

TONY PALMER, Vice President  
Alaska Development  
TransCanada

**POSITION STATEMENT:** Presented overview of TransCanada's progress on the AGIA Pipeline.

**ACTION NARRATIVE**

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**CO-CHAIR MCGUIRE** called the Senate Resources Standing Committee meeting to order at 3:34 p.m. All members were present at the call to order.

## Pipeline Progress by TransCanada: FERC Filings Update

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CO-CHAIR MCGUIRE said the committee's only order of business today was the report from TransCanada on pipeline progress.

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TONY PALMER, Vice President, Alaska Development, TransCanada, introduced project partners and reported that TransCanada had recently filed its Alaska Pipeline Project (APP) with the Federal Energy Regulatory Commission (FERC) to implement the first open season of North Slope (NS) natural gas in history.

He said that FERC has established a unique process for the NS gas in that the filing is not confidential. The goal of an open season is to seek shippers on the pipeline, a pipeline that has two possible routes: Lower 48 via Alberta and US/International via Valdez.

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He emphasized that no single commercial party can guarantee success of a major pipeline project; but rather the project itself must have alignment with its stakeholders to achieve that success. The APP is no different than any other pipeline projects in that area except that it is larger. He explained that large pipeline projects move through a lengthy development stage (the stage they are in now), and if successful, they move forward to construction and ultimately to operation. They will be in this stage until 2014.

The components of that development stage are: prior to open season and that will continue through April 2010, the open season which is expected to be conducted from May to July 2010, and post open season from August 2010 through 2014. If TransCanada and other stakeholders have succeeded with the regulatory and commercial breakthroughs that are required, then they will move to the construction phase.

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MR. PALMER said significant achievements on this project have been made to date. Over the course of decades, producers and other potential shippers have explored and developed gas reserves. This project has 35 or 36 tcf of proven gas reserves and that is a significant advantage relative to some other projects.

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He said that producers/shippers have also examined their transportation alternatives and potential gas markets. Three years ago the state and the legislature came together and established their objectives for this project under AGIA, a significant accomplishment. He assured them that projects do fail without local approval, and they fail despite having federal approval and despite having customers. For this project to succeed they need customers, regulatory approvals and alignment of interests. This is not unique to Alaska, but without these components this project, any project, will fail.

MR. PALMER said the US government and FERC established the regulatory structure for this project with a single-window regulatory agency and a specific timeframe once a complete application is established. This is an advantage to the project. Another advantage is that a federal loan guarantee of \$18 billion has been established, something that was missing 30 years ago.

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He reminded them that 30 years ago TransCanada had all the regulatory approvals for this project on both sides of the border, but they had no customers. Canada also has the legislative and regulatory structure in place for this project under the Northern Pipeline Act (NPA) and that is available only to TransCanada. They also have 25 percent of the pipe in the ground and operational since 1981/2 and it has been moving Alberta gas under this structure. He related that the Mackenzie Project had customers in 2003, but it didn't have regulatory approvals. In fact it made its filing in October 2004 and is hoping to receive regulatory approvals this fall - six years after their NEB filing.

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MR. PALMER said TransCanada has had a right-of-way through the Yukon since 1983 and that is a very significant asset to the project. He said that TransCanada made a filing and after rigorous review they were granted a license in the fall of 2008. He said last June TransCanada aligned with ExxonMobil to advance the pipeline project. This is also significant, but they still want the other two NS producers to join with them. He said to date they have offered equity participation to them and to anyone who will make a large commitment of their gas in the initial open season.

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SENATOR STEDMAN asked if ExxonMobil is a signer of AGIA.

MR. PALMER responded that ExxonMobil is aligned with TransCanada in advancing this project under AGIA. ExxonMobil has two components of its corporation that are looking at the project. One is on one side of the firewall and is the pipeline representatives; the other component is the production company that is a potential shipper on the project. The production company still has some issues with AGIA.

SENATOR STEDMAN said most of the public he talks to are under the impression that ExxonMobil is a signer on AGIA.

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MR. PALMER said he hoped he hasn't caused any confusion. ExxonMobil Development Company is aligned with TransCanada in advancing under AGIA terms; The ExxonMobil Production Company, as a potential shipper, still has some issues it wants to resolve.

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SENATOR FRENCH said he understands that the shippers want equity ownership in the pipeline commensurate with their open season commitment, and asked how likely it is that the equity participation will be worked out and how much equity will be offered.

MR. PALMER said he couldn't divulge details of negotiations, but TransCanada reached an agreement with ExxonMobil to move the project forward and they are very much looking forward to reaching agreement with BP and ConocoPhillips. TransCanada wants to own a significant share of the project and initial negotiating positions aren't always the case by the time construction starts.

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CO-CHAIR WIELECHOWSKI said the producers own the rights to extract 100 percent of the gas and asked how equity participation works in general in a pipeline like this one.

MR. PALMER explained that normally producers or other shippers are not equity shareholders; but he has heard that the three major producers want to take an equity position in this project. If they do, they would still be a customer of the pipeline just like ExxonMobil.

MR. PALMER explained that ExxonMobil has established a specific firewall and that BP and ConocoPhillips, as pipeline owners, would have to do the same with their Denali interest.

CO-CHAIR WIELECHOWSKI asked if equity is not the norm in building a pipeline, why a company would want to have an equity position in this pipeline.

MR. PALMER answered that he didn't know the motivation of all the major producers, but they have said publicly that they want to understand the structure of the project and manage the risk by being an equity sponsor, as well. AGIA would apply to whoever owns the pipeline. He speculated that producers may also wish to see that the engineering is done in a proper manner, but he hoped that some of those issues had been resolved by bringing ExxonMobil onto the team. He stated that TransCanada thinks they have gotten the expert in gas treatment plants in the world with ExxonMobil. On the other hand they think TransCanada is the pipeline expert in North America.

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CO-CHAIR MCGUIRE said one criticism people have of the TAPS is that the shippers own the pipe. The argument is that it's to control costs and manage risk, but some Alaskans think that is a conflict of interest and have said it prevented the Basin from opening up and kept competition from coming in. She asked what the lowest level of equity position TransCanada is prepared to accept.

MR. PALMER responded that he is not an expert in the TAPS. He explained that under AGIA the state established a number of requirements that ExxonMobil has also agreed to. It limited the amount of equity one could have in the pipeline, stipulated what a ROE will be, both of which limit the tolls, and required taking on certain obligations with regard to rolled in tolls, which limits the structure as to how expansions will be done.

MR. PALMER said he is not in a position to define TransCanada's minimum equity publicly, but he said they would look seriously at any proposal that comes forward by those two major producers as to what structure they need to be part of this project. He will not go into negotiations with a preset number.

CO-CHAIR MCGUIRE asked if it's possible that TransCanada could end up owning less than 1 percent.

MR. PALMER answered no; that would not be acceptable. TransCanada has pursued this project vigorously for 30 years and expects to own a significant share of it; further, it's really too early to define what the deal will be and establish a line in the sand.

SENATOR HUGGINS said the federal coordinator position is currently vacant, and asked him how important that is to TransCanada on a scale from 1 to 10.

MR. PALMER responded that at this early stage of the project, that position should be filled sooner rather than later. The primary responsibility of that role comes from a regulatory standpoint as they move forward beyond the open season. Having that position vacant for the last 30 days hasn't affected the project.

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SENATOR HUGGINS asked if TransCanada might need "some flexibility" with AGIA at a future date.

MR. PALMER answered no; they are satisfied that their rights and responsibilities work. TransCanada has advanced First Nations negotiations in Canada with the parties willing to negotiate with them and have had good interfaces with Alaska Native groups and communities along the project. He also assured them that the unresolved claims from withdrawn partners on a previous project had all been resolved at no cost to TransCanada.

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SENATOR FRENCH congratulated him on the resolution of those issues.

SENATOR HUGGINS recalled reading that the Mackenzie pipeline has some challenges with sanctuaries, noise, and birds and asked if he anticipated that something like this might crop up as an obstacle along the route.

MR. PALMER answered that no industrial development goes through without significant environmental and other reviews all through the process. He reminded them that TransCanada has a certificate from the National Energy Board (NEB) to construct this pipeline in Canada and they have a single window regulatory agency to work on issues of this nature. In his view, he repeated, TransCanada is the best party to deal with these issues on the pipeline side and ExxonMobil is the best party to deal with them on the gas treatment plant.

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He said that TransCanada has developed comprehensive Alberta and LNG alternatives and those are available in their proposal; customers will have the opportunity to select between them. FERC also required them to complete an in-state gas study for use in their application and that has been filed; it has been used to define indicative tolls for in-state gas as well as indicative off take locations. Those final locations will be determined in the open season.

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CO-CHAIR WIELECHOWSKI asked if he had a projection of what in-state tariffs would be.

MR. PALMER replied yes. He said the lateral to Cook Inlet has a number of potential off take locations and that affects the toll. Whether it's the Alberta or the Valdez option also affects the toll, because the number of miles that the Cook Inlet volumes travel in the pipeline affects the weighted average calculation. He gave them numbers in 2009 dollars per mmbtu. The off take for Cook Inlet in the Alberta option is on the Parks Highway and that toll is \$1.60-\$2.00; using Delta Junction as the off take the average toll is \$1.65-\$2.05. Using the Valdez option with an off take at Glen Allen (significantly higher mileage) the average toll is \$2.35-\$2.95; the lateral to Cook Inlet (much shorter). So economies of scale are obtained on the large pipe to move a longer distance. They hadn't done any calculations on the toll for the lateral from Parks Highway to Cook Inlet or Delta or Glen Allen.

CO-CHAIR WIELECHOWSKI asked if the Parks Highway off take would be near Fairbanks.

MR. PALMER replied just north of that.

SENATOR FRENCH asked if the first numbers he gave them were to Cook Inlet off take at Parks and off take at Delta Junction.

MR. PALMER answered that they have taken the average mileage for all of the volume in Alaska to get the weighted average toll. So when you come off at Parks Highway, the Cook Inlet volume is actually is farther up the line, a shorter mileage. That affects the weighted average for all in-state customers. So, the numbers he have them would be customers in Fairbanks or Tok if you're going on the Alberta option or customers in Valdez, Fairbanks, or Glen Allen if you're going the Valdez option.

He explained that under AGIA they said they would create a single in-state toll off the major pipeline regardless of the off take.

SENATOR FRENCH asked if the rates were not distance sensitive.

MR. PALMER replied that the rates are distance sensitive, but not *solely*. They have *averaged* the distance and cost for all Alaska volumes and come up with a single weighted average toll for all Alaskan instate deliveries.

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CO-CHAIR WIELECHOWSKI said the whole line is 1700 miles and the tariff is projected to be \$2.80-\$3.50. The route from Prudhoe Bay to Fairbanks is 572 miles, roughly one-third the distance, and he asked why the tariff to the Parks Highway isn't a third of the total tariff.

MR. PALMER replied primarily because of the large gas treatment plant (GTP) that all of the facilities would need. This number does not change. That GTP will be needed to serve Alaskan customers and Alberta or Valdez customers.

CO-CHAIR WIELECHOWSKI asked how much the GTP component costs.

MR. PALMER said it's about one-third the cost of the Alberta option.

CO-CHAIR WIELECHOWSKI said a third of a \$2.80 tariff is \$.95.

MR. PALMER replied yes; that is in the ballpark.

SENATOR HUGGINS said first gas is approximately 12-15 years away in an optimistic scenario and asked when first gas will be available in-state.

MR. PALMER answered the fall of 2020. TransCanada discovered that they had to file GTP information under AGIA and they did so on a conceptual design basis where they assumed two sealifts. When ExxonMobil joined their team, they discovered that was too optimistic and that three are needed. That is the most significant reason for a change in the schedule from their original proposal.

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MR. PALMER went to slide 6, the timeline. The Friday filing begins a 60-day FERC review period. The public comment period will go through February. FERC is not making a judgment about the nature of their commercial terms or the capital cost estimate; the filing is primarily procedural and finding if TransCanada has met the 21 requirements. Their team has talked with FERC representatives and is optimistic that they will get approval. If that is the case, they would conduct the open season from May-July 2010. The application for FERC is for the US component of the project. Canada doesn't have the open season procedure, but they will conduct the Canadian version in Canada at the same time. If the pipeline is just to Valdez, then it will solely be FERC.

SENATOR FRENCH asked when he expects the legislature would know what the conditions of the bids are so it can begin thinking about whether they can be satisfied.

MR. PALMER assured the committee that their schedule has nothing to do with the political schedule. TransCanada said two years ago in their application that if they receive conditioned bids, they taking about 100 business days to resolve them. Their application had a schedule which would have had the open season concluding in September of 2009; so five months from then would have been just about now. However, they were unsuccessful in achieving the initial kick off date for the project. They didn't get the license on the date they had predicted, which was in April 2008; but they received it in December 2008. That shifted the entire schedule back. They will most likely get conditioned bids and it will take them a few months to resolve them. That will be done on a confidential basis between the pipeline company and the potential customers. If they receive no bids, the legislature would see an early result. If they receive unconditioned bids for full volume to one or the other alternative, it would also see an early result. He said the legislature and the public would not see the conditions precedent until they have either resolved them or they are irresolvable - sometime around year end 2010.

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SENATOR FRENCH said he is less concerned about the political calendar and more concerned about getting the pipeline built calendar. He asked what utility there is in keeping taxes off the table while the more business-related pipeline vs. shipper conditions are worked out - since that is something the state has sovereignty over.

MR. PALMER said at this point, TransCanada didn't know what conditions will come with the bids and what absolutes and bargaining points will be. He admitted that certain items couldn't be resolved because they are between sovereigns and potential customers.

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SENATOR STEDMAN said he assumed that the AGIA terms are absolute and non-bargaining.

MR. PALMER responded that TransCanada has complied completely with the terms of AGIA and they don't feel like they can unilaterally change the arrangement they have with the State of Alaska; just like they feel the State of Alaska is not in the position to unilaterally change the deal on them either. If customers want to change a term in AGIA, TransCanada will do its best to resolve that. If it can't be resolved they will have to talk to the state.

SENATOR HUGGINS wanted to reconfirm that 3.5 bcf/day is needed for the Alberta option.

MR. PALMER replied that all of his numbers today were based on the 4.5 bcf/day and they would lose customers below 3.5 bcf/day because the economies of scale would become significant.

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SENATOR HUGGINS asked if Pt. Thomson gas is needed for the pipeline.

MR. PALMER said the pipeline company will seek access to any potential gas that exists today or in the future. They can't say today how much gas is available from the North Slope or Pt. Thomson; the producers, the state, and the AOGCC will have to resolve that. TransCanada wants all the volumes available to the pipeline from day-one; that is their goal.

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Slide 7 - Mr. Palmer said TransCanada has a comprehensive, credible and competitive open season plan. Having the engineering skills as well as the capacity and capability of getting regulatory approvals to advance this project on their schedule differentiates them from other pipeline companies.

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He said they had done a quarter of a million hours of work since getting the license to put the application in front of parties.

Slide 8 highlighted the better commercial terms and access that TransCanada is putting forward now than were in its AGIA application. They are doing so in the initial open season for parties that commit this summer, he said, and this is because they realize that a great number of things have changed in the last two years. They see competition in the North American and global markets from other sources of gas - they are in a competition and they want this project to proceed. They are going to offer a discount to customers that commit this summer.

They have comprehensive Alberta and Valdez options and have had discussions with potential customers. TransCanada thinks that the Alberta Hub has inherent advantages - a hugely liquid market, but customers have said they want access to other pipes upstream of it; so they are offering that. In the AGIA application they offered a 25-year minimum term and they have reduced that to 20 years. They have also offered interruptible, overrun and park-and-loan services (short term services) available to Alaskans and to customers that want to go to Valdez or Alberta. They have offered to share the development cost in the event that TransCanada pulls the trigger on the project whereas the initial AGIA application had said that in the event that the project were to be halted the customers had to pay the full development cost. Next TransCanada has offered to reduce the tolls by \$500 million/year.

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To put that into context, Mr. Palmer explained, the state is putting forward \$500 million under AGIA to assist with development costs; but TransCanada is putting forward \$500 million per year for 25 years if the project goes into service. They have done so with a couple of factors primarily. He reminded them that their application had a formulaic approach for return on equity (ROE), which when they filed would have yielded 14 percent. Now they are proposing a flat 12-percent ROE for parties that commit their gas now. Secondly, they had proposed a 100 percent capital recovery through depreciation over the initial contract term (so if a customer had taken a 25-year contract term, over that life they would have recovered their entire capital). Now they are proposing to recover only 80 percent through depreciation. So, TransCanada is shifting significant risk to itself that gas will be available and that the market will be viable after years 2020 or 2025 depending on the customer's length of term. Lastly, although it doesn't affect the short term tolls (the \$500 million), for expansions they had proposed a 60/40 debt/equity ratio, and they are now

proposing 70/30. The lower the equity ratio, the lower the tolls. Pipeline companies like thick equity ratios, he said.

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SENATOR STEDMAN asked him to estimate how these three things would impact the tariff.

MR. PALMER responded if this project goes into operation the \$500 million/year is cold hard cash out of the pockets of the shareholders and into the pockets of the customers and Alaskans as sovereign tax collectors. In other words, the state is putting its money up for development costs, and if this project does not succeed, those dollars are out of pocket just like TransCanada's development dollars are - and the \$500 million/year never comes to fruition. However, if this pipeline goes into service, the deal they are offering is to customers that sign up this open season - they will see \$500 million/year. In his view they are talking cold hard cash in service starting 2020. The 12-percent ROE combined with the 80-percent capital recovery reduce the tolls on the Alberta alternative by about \$.29/mmbtu.

SENATOR STEDMAN wanted a further breakdown of the \$.29/mmbtu.

MR. PALMER answered that the ROE is \$.20 and \$.09 for the [indisc.].

SENATOR STEDMAN asked him about the third item.

MR. PALMER answered that the third items does not affect the \$500 million, because it affects expansions, and the tolls he had provided were for the initial 4.5 bcf/day volume only. He didn't have an estimate of the impact of expansions which would be based on volumes and timing.

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Slide 9

MR. PALMER reviewed that two pipeline options are being offered for shipper assessment in the APP open season. Option one is a 48 inch, 4.5 bcf/day 1700-mile pipeline from Alaska's North Slope to the Alberta Hub, and then into existing infrastructure to markets across the Lower 48. Shippers can come off upstream of the Alberta Hub as well, if they wish. Option two is a 48-inch, 3 bcf/day 800-mile pipeline from the North Slope to Valdez where the gas would be converted to LNG in a facility to be built by others. He had not examined the cost of the liquifaction plant or the ships needed to transport the LNG to

either Lower 48 markets or to international markets, because that is not TransCanada's area of expertise.

SENATOR STEDMAN asked if they were still looking at 2020 for resolving Jones Act exporting to international markets issue.

MR. PALMER replied that TransCanada had defined how quickly they could get the pipeline in to service, but not how quickly a potential customer would be able to get an export permit.

SENATOR STEDMAN asked if someone was to go to Valdez, wouldn't they have to figure out the liquefaction plant and the Jones Act ships, and find customers, either domestic or international, today to facilitate a successful open season within a reasonable time compared to the Alberta route.

MR. PALMER said those were good points, but TransCanada hadn't made that a requirement of foundation customers. Clearly anyone that wants to go to Valdez will have to make arrangements for liquifaction and ships and find markets, but that is their business. Likewise, anyone who decides to go down the other alternative will have to decide to sell their gas at the Alberta Hub or make arrangements to take it to market beyond there.

SENATOR STEDMAN said he understands that very well, but asked if both options are on the table during the open season, for TransCanada to select the Valdez alternative as the preferred alternative, it would have to have a higher probability of success and these issues would have to be well under way. "Help me put those two together so this isn't a "red herring."

MR. PALMER said that potential customers have commented that TransCanada has "stringent credit requirements for foundation customers" and have indicated that if they are ready to execute the precedent agreements and meet their credit requirements and they are a foundation customer (larger the 0.2 bcf/day) TransCanada will not impose downstream pipeline requirements like export permits and other obligations, because they will have an obligation to pay tolls to TransCanada. He explained that the obligations are different for both routes, but significant. Parties that want to deliver to the Lower 48 can find an existing terminal at Costa Azul on Baja, Mexico, and then they could come back into the Lower 48 San Diego/LA markets through existing pipelines.

SENATOR STEDMAN said the Los Angeles (LA) Basin isn't large enough to handle Alaska's volume.

MR. PALMER answered that is right.

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SENATOR STEDMAN asked how many companies fit into those criteria that operate in North America.

MR. PALMER said he didn't know, but it is their view that all major producers on the North Slope fit those criteria. Beyond those there are other highly credit worthy parties in other locations around the world as well, but he didn't know if they would show up to become a customer.

CO-CHAIR WIELECHOWSKI asked why anyone would build a 48-inch line to Valdez.

MR. PALMER replied that some customers specifically requested it (48-inch, 3 bcf/day pipeline) and TransCanada has tried to be responsive to those parties.

CO-CHAIR WIELECHOWSKI asked if it would be cheaper to go to 36 inches, because it doesn't make sense to have that big of a line for a smaller throughput.

MR. PALMER replied if you only wish to move 3 bcf permanently, that is true, and while he couldn't speak to the motives of potential customers, he thought they might want expandability.

CO-CHAIR WIELECHOWSKI asked him which customers asked for it.

MR. PALMER said he couldn't respond to that, because TransCanada treats all of its discussions with customers on a confidential basis.

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SENATOR FRENCH asked to make it clear that TransCanada is ready to build an all-Alaska pipeline from the North Slope to Valdez.

MR. PALMER said yes. He emphasized that both companies had put forward this proposal under the APP. So, in the event that TransCanada gets a 3 bcf/day customer that wants a 48-inch pipeline and will sign up and has the creditworthiness, they are ready to move forward with that project.

SENATOR STEDMAN asked if the US has export restrictions on gas across the ocean and wouldn't it take congressional action to do that.

MR. PALMER said he didn't know for sure if there was a specific statutory restriction; he had heard various opinions.

CO-CHAIR MCGUIRE said they would get some information on that from the DOE. She said that question was asked on the edge of the shale discoveries. The answer was that going to an Oregon or Hawaii market would be acceptable, but not to a foreign country.

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SENATOR WAGONER said the bulk of their discussion at that time centered on not the exportability, but the current license that the Port Authority said it had to export gas. They were questioning whether that was going to be honored and were told it would "cause a lot of heartache" at the congressional level.

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CO-CHAIR MCGUIRE said a broader conversation had to do with the possibility of shipping gas to Asia as an economic opportunity for Alaska. The mood last year in D.C. was one of national security and not exporting. She asked what if TransCanada gets a division in the volume between the Valdez option and the Alberta option and it doesn't make economic sense.

MR. PALMER replied that she described the most difficult situation and since they don't have sufficient volume for either one, in that circumstance the tolls would be unacceptable for both parties, at that point they would try to work with the parties to switch to the other side so they could have one viable project.

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SENATOR HUGGINS asked what the psyche and excitement would be in Alberta for this project.

MR. PALMER answered that the economy seems to be turning around in the last couple of months, although not in the natural gas side. A number of oil sands projects that people had deferred seem to be starting to resurrect and there are more announcements from major producers. He would hope that Alberta citizens would be excited to see this gas come forward in 10 years time to fill their existing pipelines, because it will mean lower tolls for them. It would also mean more business for them in general, but one wouldn't find a universal view on that issue.

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SENATOR HUGGINS said the Alberta tax regime has been "a moving target" and asked if they have figured out what that target is and how significant it was in terms of the slower business climate over the last couple of years.

MR. PALMER answered that it hadn't been resolved when he left last Tuesday. Most people think the Alberta government is going to propose a different royalty tax structure for natural gas - and soon. They will hear varying views from parties as to how significant that has impacted the Alberta economy. Some would say that is *the* major factor for the slowdown in the natural gas business; others would say the lower gas price is the main factor. He suspected both factors were considerations.

He said that both options include an opportunity for Alaska communities to take gas off the pipeline; there will be a minimum of five off takes. There will be a huge gas treatment plant and a 58-mile transmission pipeline connecting the Pt. Thomson field to the plant. So, customers that have gas at Pt. Thomson may choose to move gas on that pipeline. Anyone that solely has gas at Prudhoe Bay would not ask for service on that piece of pipe. That is not AGIA reimbursable.

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Slide 10

SENATOR STEDMAN asked the range of costs for the treatment plant.

MR. PALMER replied approximately one-third of the Alberta option, or \$10-13 billion.

SENATOR STEDMAN commented that is substantially higher than they had anticipated.

MR. PALMER answered yes; that was the most significant factor that had changed in terms of cost from the original application to today.

SENATOR STEDMAN asked why the state should support construction of this line, because under a price prediction for 2020-30, the price of oil would be \$110-125/barrel and the state would essentially be giving gas away as well as offsetting its oil revenue.

MR. PALMER replied that he had provided him with USDOE forecasts of gas and oil prices and he didn't want to comment on the state's tax structure upstream.

SENATOR STEDMAN said they needed to look at this "embedded but multiple." He has been told not to worry about it, because it only happens on occasion. Some have heard that the way the state's tax is calculated every month that one month of no revenue would be one month too many. If the energy multiples are even remotely close to this forecast, he said, the state has a substantial problem embedded within the tax structure.

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MR. PALMER said he wouldn't comment on oil/gas ratios, but he would present him with some information as to what the ratios have been historically and what they are projected to be - assuming the DOE's forecasts are perfect.

Slide 13 Oil price forecast: DOE's oil price forecast has changed significantly over the last couple of years. In the fall of 2007 when TransCanada made its filing, the most recent forecast indicated that oil prices in 2020-30 would be in the \$57-65 range. It was a little higher in their next year's forecast. However, the most recent forecast they made in April and December 2009 are "hugely higher, significantly higher." The gas forecasts don't have the same divergence.

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He explained that an average of the oil/gas ratios of the two forecasts that were made in December 2006 and December and the one in the 2020/30 timeframe was 9.1/10.1. The forecasts that were completed in April 2009 and December 2009 showed it will be 15.6/16.1. Because he saw this divergence and because they are talking 10 years before the pipeline goes into service and 25-year contracts, potentially, he thought it would be prudent to go back and look at the oil/gas ratio over the last 35 years. So, gas prices in 1975 were 44 cents/mmBtu and oil prices were \$11.16/mmBtu - the oil/gas ratio that year was 25.4. It generally ran in the high teens through low 20s through 1981 and subsequent to that, they had ratios that ranged from 14 to as low as 6.4. They never got to the range of the DOE's 1981 forecast until last year when they predicted a shift in North American gas price versus imported oil. So, the ratios from 1982 - 2008 were not the ones the DOE was predicting would take place over the 2020/30 timeframe.

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SENATOR STEDMAN said several years ago when they sat here looking at PPT, they were looking at a stranded gas arrangement of 20 percent in kind for gas and during that time concerns were

raised over Cook Inlet and it was carved out and set at 5 percent. They basically ignored the rest of the gas environment because other than the oil and gas basin on the North Slope and Cook Inlet, there really wasn't any other gas around. Legislators thought they would deal with it later if gas was found in the Nenana Basin or somewhere else.

As the process evolved, the PPT was modified and now ACES and AGIA are on the table, and they have still not dealt with gas taxes. So the state still has this embedded 6:1 energy equivalency ratio. There was no linkage between that and what was going on in the market place then, and he is very concerned that if the producers show up, love AGIA, sign up to lock in the current tax structure, that would put the state in a precarious position - because they would have to tell the public "not only did we turn down one potential arrangement where the state would have 20 percent of the gas in kind, now we're going to get absolutely zero." That is unpalatable to industry as well as the state, because you can't have a one-party-take-all-and-leave-the-other-with-zero anywhere in the world and have it work for very long.

SENATOR STEDMAN said he didn't know how they would get around that, but he did know there is clearly a big spread between 20 percent in kind and zero. He is alarmed when he gets told it is just an aberration and not to worry about it when it appears to not be an aberration.

MR. PALMER said he isn't qualified to comment on upstream taxes. He pointed out that the DOE had accounted for the shale gas in its new forecast. Most parties would say their gas price for North America is in the range of most other forecasts, but it is relatively higher for oil than a number of other consultants'. Certainly, most parties would say that if this ratio persists for an extended period of time, people should see a massive increase in demand for natural gas relative to oil - because it's highly competitive. He didn't know what the price of oil will be, but he has tried to present a consistent forecast for oil and gas from the same source he has given them for more than two years.

CO-CHAIR MCGUIRE commented that the 6:1 ration was heard in this committee.

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Still on slide 10, he highlighted the tariff ranges that Senator Stedman stipulated before based on that forecast of \$2.80-3.50

at the Hub with a gas price of \$6.25-7.65. That leaves a margin in the order of \$3-4 for the customers after they have paid the transportation. This, in TransCanada's view, makes the project technically and commercially viable. Of course, it's up to customers to decide if that is acceptable and the preferred case, but that amounts to \$120-150 billion over the course of 25 years. From that customers would have to pay their costs, take their profits and share with government.

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He said when TransCanada did its AGIA application, slide 11 showed that gas prices were running just below \$6 through most of the range and went up to \$6.60 toward the end of 2030. The fall 2007 forecast was very similar; the April 2009 forecast was the highest and is based on recent high gas and oil prices; their most recent forecast for 2020/30 is \$6.25/7.67; about 60 cents higher per mmbtu on average for that 10-year period than what TransCanada used in its AGIA application.

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Slide 12 - the Valdez alternative: The capital cost range of \$20-26 billion, in service in 2020, and the tariff range of \$2.45-3.15. Now he has to predict where that gas would go. If it was going to go to the Lower 48, there would be some determination relative to the Henry Hub. If it went to the Costa Azul terminal, most parties would say the Henry Hub prices would have to be reduced by about 75 cents from the numbers he has. If it went to Asia as LNG, customers would receive an oil-based price. So, customers would have to determine if it would continue to be an oil-based price or if shale gas will be a phenomena only in North America or elsewhere in the world.

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SENATOR FRENCH asked him to quantify a little better what the Asia premium is.

MR. PALMER answered that most parties would say that the "Japanese Cocktail" is in the 80-percent range of btu value. So if you take the \$120 and divide it by the btu value of approximately 6 and multiply that by .8, you would be in the ballpark - \$15-16.

SENATOR WAGONER said the producers would not have a \$16 profit because of all their other costs - transportation and LNG trains, for instance.

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MR. PALMER agreed. On slide 14 he had highlighted what steps are necessary to make this project a success. He recapped if TransCanada gets conditioned bids, they will work with those customers to resolve them. They will continue with engineering, environmental, and other work to advance the project and meet all the AGIA obligations. They will work forward as regulatory situations allow and continue to seek alignment with BP, ConocoPhillips and other major players on the project.

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He summarized on slide 15 what other parties need to achieve. Producer/shippers will have to resolve any conditions they have with TransCanada and make arrangements for downstream transportation to an ultimate market. They will have to secure that market and in the case of LNG, they will have to get an export permit if they are going to the international market. The state will need to resolve upstream tax or production issues with producers/shippers, and continue facilitating project permitting. The US federal government and FERC need to establish the final loan guarantee levels that are currently at \$18 billion. The Senate Finance Committee has passed a \$30 billion guarantee and if that were to become law, it would lower the cost, particularly if they have access to the federal financing bank. That means the interest rate would be lower, another benefit. Governments in Canada and Native groups on both sides of the border need to align and continue facilitating project planning.

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CO-CHAIR MCGUIRE asked him to elaborate on the federal loan guarantees.

MR. PALMER related that they have had extensive discussions with a dozen or more financial institutions as to what credit requirements will be needed to make this project go. They have also had preliminary discussions with the DOE and other players in the US federal government as to how they see the process moving forward on terms and conditions; and Congress will have to wrestle with the magnitude of the loan guarantee. TransCanada needs to know how the loan guarantee will be structured - what the fees will be and how they will have access to the federal financing bank - this is critical in understanding whether the guarantee is valuable to the project or not.

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SENATOR WAGONER said TransCanada already had the NEB permit, but he wanted to know if Nova was going to double the size of its

petrochemical plant in Alberta and the status of the liquids for it.

MR. PALMER answered that TransCanada acquired Nova's pipeline interest a dozen years ago, and sometimes TransCanada uses the word "Nova" to describe its pipeline system in Alberta. He stated that Nova Chemicals is a completely separate company from TransCanada and has had nothing to do with them since 1998. In fact, they have subsequently been acquired and have a different name. He said today there is significant spare capacity in Alberta to remove liquids - ethane, propane, butane - from the gas stream. Those liquids need a petrochemical plant to be processed - like the one the Nova owns at Geoffrey. Huge capacity is available now and going forward.

SENATOR WAGONER asked how big the Pt. Thomson to Prudhoe pipe will be.

MR. PALMER replied a 1.1 bcf/day pipe and he recalled it would be 32 inches.

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CO-CHAIR MCGUIRE thanked Mr. Palmer for his overview and adjourned the meeting at 5:30 p.m.