

ALASKA STATE LEGISLATURE
JOINT COMMITTEE ON NATURAL GAS PIPELINES
Anchorage, Alaska
July 18, 2001
9:06 a.m.

SENATE MEMBERS PRESENT

Senator John Torgerson, Chair
Senator Rick Halford
Senator Pete Kelly
Senator Donald Olson, alternate

SENATE MEMBERS ABSENT

Senator Johnny Ellis

HOUSE MEMBERS PRESENT

Representative Joe Green, Vice-Chair
Representative Brian Porter
Representative Scott Ogan
Representative John Davies
Representative Hugh Fate, alternate

HOUSE MEMBERS ABSENT

Representative Mike Chenault, alternate
Representative Reggie Joule, alternate

COMMITTEE CALENDAR

PRESENTATIONS BY GAS LINE GROUPS

Alaska Gas Producers Pipeline Team
Yukon Pacific Corporation
Foothills Pipe Lines
Alaska North Slope LNG Sponsor Group
Alaska Gasline Port Authority
Kenai Peninsula Borough
Williams Energy Services

WITNESS REGISTER

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ACTION NARRATIVE

TAPE 01-5, SIDE A

9:06 a.m.

CHAIRMAN JOHN TORGERSON called the Joint Committee on Natural Gas Pipelines meeting to order at 9:06 a.m. Members present during the meeting were Senators Torgerson, Kelly, and Olson, and Representatives Green, Porter, Ogan, Davies, and Fate (alternate).

PRESENTATIONS BY GAS LINE GROUPS

Alaska Gas Producers Pipeline Team

9:07 a.m.

MR. JOSEPH MARUSHACK, Vice President, ANS [Alaska North Slope] Gas Commercialization, Phillips Alaska, Inc., came forward,

noting that with him was Ken Konrad of BP Exploration (Alaska) Inc. He informed members that along with Robbie Schilhab of ExxonMobil Production Company, who was not present that day, they comprise the Management Committee of the Alaska Gas Producers Pipeline Team. [In packets was a handout titled "Overview & Status" dated July 18, 2001, which accompanied a PowerPoint presentation.]

MR. MARUSHACK informed listeners that there hadn't been much change in the team's overall objectives [since the presentations before the House Special Committee on Oil and Gas]. The first two months were spent developing a team, now about 100 strong in [Alaska]; Calgary, Alberta; and the Lower 48. The team is trying to determine the major problems, and first has worked on technical aspects. Clearly, costs and environmental considerations are important, as is timing. The team is working on permitting issues, and is believed to be on-track in putting together route-related information in order to make a decision. Mr. Marushack said he is increasingly spending time addressing political and government-related issues, among others.

MR. MARUSHACK explained that the original goal was to have the permitting defined by the end of the year; although it has been pushed back some, he believes the timetable is still within three months of that. He noted that the team will spend more than the \$75 million projected this year because of the complexity and other factors.

MR. MARUSHACK addressed a slide called "Overall Project Scope." The gas treatment facility [at Prudhoe Bay] will be the largest in the world; Natchiq Parsons is the lead contractor. The focus has been on what technology will be most appropriate to use. The facility, the largest of its kind in the world, will require more than 100,000 tons of steel and a huge amount of work in Alaska; that is where most of the long-term jobs will come from.

MR. MARUSHACK continued, addressing "Alaska to Alberta Pipeline System (A-B)." He noted that Fluor Veco - the contractor headquartered in Houston, Texas - is working in a number of locations. The big issues are pressure; diameter; volumes; expandability; and logistics, including procurement, a key timing item. He emphasized the need to find materials and build new equipment to do this, which will require significant effort.

MR. MARUSHACK continued with the same slide, addressing "Alberta to Market Pipeline System (B-C)." He indicated the team is working with The AlasCan Group, of which Natchiq is a part. The issues are a little different: there are routing decisions to make on "A-B," but on "B-C" the decision is whether new pipeline is needed and whether there can be expansion. He stated the belief that it will require some new pipeline, but said expansion is part of it. The technical aspects of "B-C" therefore are probably not as difficult as for "A-B."

MR. MARUSHACK turned attention briefly to the "NGL [natural gas liquid] Extraction Facility" section of the slide, noting that Fluor Veco is assisting the team with that as well. He then turned the presentation over to Mr. Konrad to talk about the technical aspects.

9:10 a.m.

MR. KEN KONRAD, Senior Vice President, Business Unit Leader Alaska Gas, BP Exploration (Alaska) Inc., emphasized that the team is looking in a "macro sense" at whether it can develop an economic project, and within that, determining the route-selection criteria. He noted that previously the team addressed the "seven lenses" of evaluation [economics, environment, gas access, jobs, revenues, safety, and timing] required for regulatory applications. He said this is also important to the governments and stakeholders with which the team has consulted to date.

MR. KONRAD first addressed economics, noting that the scale of investment will be \$15 billion to \$20 billion to get the gas to market. A major project like this brings not only high costs, but also a number of risks. It is clear after six months of work that there will be economic challenges, and it isn't clear whether it will be an economic project. At this point, it appears the northern route has some cost advantage over the southern route, and the team is trying to quantify that.

MR. KONRAD touched on environmental impacts. He expressed a high degree of confidence, based on the work to date, that whatever route is selected, the project can be done in an environmentally sound manner and will meet all environmental regulations. The southern route follows an existing corridor, and only about 200 miles are undisturbed; the northern route is shorter, but crosses 300-400 miles of undisturbed corridor, principally the Beaufort Sea. There are a number of other issues that the team is trying to fully understand, including whale migration on the northern route and compressor station siting, especially on the southern route, which will require more compression facilities than will a northern route.

MR. KONRAD addressed gas access, another key issue. He said the team is doing analysis of what sorts of gas demand could develop, in order to have enough flexibility to address it. To date, the team's work doesn't show any significant large demand within the state, although clearly there is a small amount of demand in Fairbanks and potential demand in Southcentral Alaska; it has been hard to pin that down as a finite number, however, and no one has come forward to date with a specific call on the gas in transit. The team is trying to determine how to structure an open season to address those potential needs in terms of how capacity might be allocated. On the northern route, the team is

trying to look at innovative ideas for getting gas into Alaska in order to make sure those needs are met.

MR. KONRAD turned attention to jobs. Noting the enormity of the project, he said in terms of construction jobs within Alaska, there are more jobs than skilled people, regardless of the route. "We'll need to work to train Alaskans, and irrespective of route, there will be an in-migration of workers [just because of the] scale of the project," he told listeners. "Indeed, it will actually stretch North American resources in terms of finding enough craft and enough industrial capacity to do a project of this magnitude."

MR. KONRAD noted that much of the construction will occur in the wintertime in the northern sections, whereas line in the Lower 48 could be built year-round or in the summer. Therefore, crews from the northern section could be used in the southern section [at that point], which would allow Alaskans an opportunity to work on southern segments of the line. He pointed out that longer-term jobs, not involving construction, appear comparable for both routes. The pipeline itself will provide a very small portion of the overall job market. The pipe will be buried along its length and monitored by "smart" compressor stations that won't normally be manned. Most long-term jobs will be associated with people in an office, in a control room, or operating the gas treatment plant on the North Slope.

MR. KONRAD acknowledged the importance of revenue to the State of Alaska. Clearly, if there is an economic project that goes ahead, it will likely generate tens of billions of dollars for the state over the project's life. To the extent the initial analysis shows the northern route to be somewhat more cost-effective, it would result in somewhat higher revenues for the state. He emphasized the need to do more engineering and "costing" before it can be understood and quantified, however.

MR. KONRAD expressed confidence that this line will be built to the highest standards and will be safe, operating with the highest levels of technology, automation, and control equipment. He mentioned unique issues for either route. The southern route needs to be designed to withstand seismic activity and frost heave, for example. The northern route needs to be designed to withstand ice forces and frost heave. He restated his confidence that it can be engineered, but noted that there is a lot of work in actually doing so. The southern route has more proximity to human populations, but the public should have confidence in the high level of integrity and safety.

MR. KONRAD addressed timing. He reported that one big uncertainty around the project involves the timing of the regulatory process. The team is working with regulators to streamline the process. Given the issues around the northern route, [the team] perceives that it would take longer to permit;

however, that isn't certain. The other timing aspect is how the Mackenzie Valley line, if it goes ahead, will impact this. He said the idea of doing two such "megaprojects" with limited industrial capacity in North America "feels like a challenge." He expressed the need to look at the logistics; if the Mackenzie Valley project gets a "jump," it would be hard to find enough welders, machinery, and equipment to do the two projects simultaneously, and [Alaska's] would have to "dovetail" behind the Mackenzie Valley project. Mr. Konrad emphasized that the evaluations will mature as the team goes through its work program.

MR. KONRAD noted that in addition to the 100 team members, contractors are gearing up, responding to the sense of urgency conveyed by the team. At this point, 500-600 people are working on the project. He cited examples of activities such as surveying. He also noted that technical and regulatory work are proceeding, which he would address later.

MR. KONRAD reported that the team is defining several issues beyond whether the project is economic, including the following: laying groundwork for creating whatever legal entities would be required to construct the pipeline; working on how to shape an open season and determining tariff structures in relation to regulators; and having hundreds of meetings with communities, stakeholders, pipeline companies, governments, regulators, and so forth, in order to give people a sense of what is coming.

MR. KONRAD told members a good portion of the team's activity revolves around technical studies that relate to the economics of the project. For the carbon dioxide plants, to be placed on the North Slope, the team is looking at three technologies to remove carbon dioxide from the gas stream; the effort is to narrow it down to the preferred technology, from both cost and environmental perspectives. Some pending developments, if successful, could result in a real [indisc.]. The team is also looking at NGL removal processes; those are more conventional technologies, but still involve designing a plant as efficiently as possible in order to get the economics right.

MR. KONRAD noted that there is a lot of work around pipeline hydraulic simulations, looking at various pressures, temperatures, diameters, and compression configurations to design an optimum system that is both cost-effective and expandable. Team members are active in the exploration arena, and would like to know that the system could be expandable. The nature of pipelines is such that the more volume that is moved, the lower the unit costs are. There is an incentive, therefore, if there is success in finding more gas, to cost-effectively put it into the line so tariffs are lower for everybody. Mr. Konrad said he wouldn't go into an engineering discussion, but told listeners these are the types of simulations that the team is trying to run in order to optimize the pipeline system.

MR. KONRAD directed attention to a graph and talked about the volumes cited, mentioning 4 BCF/D [billion cubic feet a day] as a "base case" and saying the desire is to optimize around that and then, with expandability, get it up to perhaps 6 BCF/D. He noted that pipeline diameters on the graph ranged from 44 to 56 inches. The smaller the line, the more compression is needed, as well as more compression stations, which affects environmental and cost factors. The larger the diameter and the less the pressure, the fewer are needed, but it costs more for steel. Those tradeoffs are being looked at in order to have the economics be competitive.

MR. KONRAD reported that in addition to hydraulic studies, the team has 13 fairly significant technical studies underway. A big one is looking at the feasibility of using even higher-strength steel than that used in the industry now; this would lessen the pipe-wall thickness, hopefully translating into cost savings; it gets into what mills are capable of producing, for example. He also touched on the logistics in having 3,500 miles of pipeline, including staging facilities and potential fabrication sites. The carbon dioxide facility, the largest of its kind in the world, will likely need to be fabricated at multiple sites; the team is trying to figure out how and where to do that. He also mentioned the thousands of truckloads needed to haul pipe for the project, as well as rail and sea transportation; sealifts potentially will be the largest in the history of the North Slope. These are all big logistical challenges.

MR. KONRAD turned attention to construction technology, noting that over the past ten years or so the industry has migrated towards using drilled river crossings for environmental reasons; that presents real challenges in terms of the pipe size, which will likely be 48-inch heavy-walled pipe; special studies will be required to take the industry another step from where it is now. As for trenching technology - the ability to put big, deep trenches in permafrost - the team is looking at innovative technology so that blasting is not necessary; that could offer significant cost savings. Another consideration is whether existing construction equipment in the industry can be modified to handle the sorts of pipe necessary; studies are going on in that regard as well.

MR. KONRAD brought attention to the regulatory front, noting that a lot of work is going on by folks in the field, both in Alaska and Canada, looking at river crossings, population centers, or where the rights-of-way need to go, for example. In addition, for the FERC [Federal Energy Regulatory Commission] application, it must be known that there are no cultural resources or, if some are identified, how those can be avoided. He noted that there is much landowner discussion, especially in the lower-48 segment. Furthermore, this weekend the team will begin Beaufort Sea sonar surveys of the sea bottom, to get more definition about how the

northern route can be engineered; the team has a conflict-avoidance agreement in place with the North Slope Borough, and permits should be coming shortly from Washington, D.C.

MR. KONRAD concluded by saying there are a lot of "moving parts," all moving in the right direction; he expressed confidence that the technical work would be done by the end of the year, and that there would be enough information to know whether the project is economic and to file the permits. He turned the presentation back over to Mr. Marushack.

9:28 a.m.

MR. MARUSHACK pointed out that when talking about the technical work, the team is talking about feasibility; the design work will come later and will cost hundreds of millions of dollars.

MR. MARUSHACK informed members that he would address three main aspects of government engagement. The team has been in discussions with "almost every agency you can think of, both on the U.S., Alaska, and Canadian levels." In the U.S., he and Mr. Konrad, in particular, have met with the Alaska [congressional] delegation and all key agencies to try to obtain an idea of what is possible; members have met with key agencies in Alaska and with the legislature. They've also met with the Canadian cabinet and some key agencies there. There are weekly discussions, at minimum, among team members, and some people are talking almost daily with FERC to determine what must be in the application, for example.

MR. MARUSHACK noted that putting a FERC application together in less than a year is unheard-of. He stressed the importance of putting in front of FERC or NEB an application that is complete enough that it isn't rejected outright. An incomplete filing is worse than no filing at all, and yet the team still tries to make these deadlines.

MR. MARUSHACK reported that the team hasn't held as many detailed discussions in Canada with the territorial and provincial governments, or with First Nations people, as are needed. He emphasized that much work has been done on getting started on the technical aspects, and that the team is now getting to the governmental and political aspects as members are freed up to do so.

MR. MARUSHACK countered newspaper reports from Canada that indicate this project can't be done; he said the problems aren't insurmountable but are difficult and complicated.

MR. MARUSHACK turned attention to "State Engagement Issues." He said the team just started that process in the last few weeks. He stressed the importance of having dialogue between the producers and the State of Alaska regarding "fiscal stability

uncertainty." As the team has tried to identify the key problem areas, there is an increasing awareness that the uncertainty of risk is a chief problem. He remarked, "None of us have spent this kind of money on a nonsanctioned project before, so we're trying to eliminate risk where we can."

MR. MARUSHACK pointed out that one area of risk involves what the "deal" will be with the state; there needs to be discussion in that regard. The objective is to have the key terms understood prior to the January legislative session. The idea would be to work with the state, trying to "line out" the various aspects so that legislators would have a starting point. Key discussion items include valuation clarity on severance and royalties.

MR. MARUSHACK noted that a number of issues are not pipeline issues, but producer issues. Ad valorem tax certainty is an area involving a lot of cost. One issue with this project is that it will take so much time to develop before the first gas [goes through the line]. To do a present-value analysis creates a big problem; therefore, the team would like to talk about ad valorem issues, a major cost during the initial development phases of the project.

MR. MARUSHACK continued with key items for discussion. Referring to the item "Gas take-in-kind and nomination process" on the "State Engagement Issues" slide, he explained that this gets into what amount of gas is available in Alaska over the long term. So far, the team has seen that the amount of gas at startup in Alaska would be very small when compared to the [ultimate] volume being talked about, perhaps 20 to 30 million cubic feet a day in Fairbanks versus a 4-BCF/D pipeline. The pipeline will require long-term commitments. He asked how that can come together with "growth opportunities" for the State of Alaska. He said [the team] thinks the answer is expandability, but it requires dialogue and understanding of what the opportunities are. Addressing the final key item for discussion, "Project risk and long-term certainty," he noted the need to talk to the state to ensure there is common footing on those issues.

MR. MARUSHACK turned attention to a slide titled "Simplification of State Royalty, Severance Valuation." He expressed the desire to have a common royalty and severance methodology, with the pricing simple and clear. [The team] believes the wellhead price for royalty and severance should be linked to the Lower 48 [with a transportation differential]. He said it should not be that difficult where there is a defined market in the Lower 48. [The slide showed the following components, alluded to in the oral presentation: "Define market price; Agreement on gas valuation terms; Concurrence with FERC/NEB tariff terms; Processing fees."] He suggested that using those components, clarity could be provided regarding the wellhead value.

MR. MARUSHACK told members two issues are of major concern:

economics and politics. The team is working hard on the economics, which it doesn't control but influences through choices about how and where the pipe is purchased, for example, or how to deal with tariff [indisc.] in order to make it as low as possible. However, the team has very little influence on politics, which could kill the project. Those two issues will ultimately decide whether there is a project.

MR. MARUSHACK addressed items on the final slide, titled "Wrap-up," which read:

We are fully engaged in a joint program to evaluate and progress a large, modern pipeline from Alaska to Canada and the lower-48 states

There is a growing market for Alaskan gas, but we must be cost-competitive to be a viable project

It is not yet clear that we can develop an economic project

It is premature to preclude any options at this point

Still targeting completion of engineering and route studies by year end

MR. MARUSHACK finished the presentation by emphasizing that competition in the Lower 48 includes LNG [liquefied natural gas] imports, coal-bed methane, and other gas. This is a strategic project for which it doesn't matter what prices are this year; it matters what will happen eight years from now and for the next twenty years. The team is trying to identify all hurdles in order to figure out how to do a project. He again emphasized that it is not clear whether there is an economic project at this point, and stressed the importance of having a thorough, methodical way of looking at the two route options without precluding any options at this time.

9:37 a.m.

REPRESENTATIVE GREEN noted that during the previous day's hearing, it was asked whether gas could be sold by the producers without modifying the lease agreements [which allow for the gas to be used to lift oil].

MR. MARUSHACK or MR. KONRAD replied that they think so; they have gone through the lease agreements, which they believe allow for major gas sales up to 1.75 BCF/D.

REPRESENTATIVE GREEN responded that according to testimony the previous day, this is one of the big questions - some lease agreements may or may not allow that. He asked whether the team's understanding is that sale is allowed up to 1.75 BCF/D,

with negotiations above that amount.

MR. MARUSHACK or MR. KONRAD replied, "We haven't seen that as an issue to date." He offered to get back to the committee on that.

REPRESENTATIVE GREEN asked: If the agreements don't all provide for that, or if there is a big question in somebody's mind, will this hold up the project while that is being determined? Or can the project go ahead while that is being resolved?

MR. MARUSHACK and MR. KONRAD indicated [the team] would keep doing all the work it is doing, and offered the impression that the state wants the producers to move forward.

REPRESENTATIVE GREEN responded affirmatively. He noted that in the newspaper there has been mention of extracting the gas liquids downstream in Alberta, Canada. He asked how that would affect the royalties due the state.

MR. KONRAD replied that it is one of the severance [and royalty] issues that Mr. Marushack was talking about; the team will work through that with the state, over the next several months, to come up with an agreed-upon valuation methodology.

REPRESENTATIVE GREEN asked whether the team has started those negotiations.

MR. MARUSHACK or MR. KONRAD answered that there has been one general meeting and one "a little more detailed meeting," so that the people who "work the issues" can start working with the state. That hasn't happened yet, though, except for general conversations; there has been no detailed exchange of information.

REPRESENTATIVE GREEN said the legislative body wouldn't want to come into session in January with that either unresolved or not resolved to the approval of the legislature. The legislators will want to see how those negotiations are going before actually reconvening.

MR. MARUSHACK and MR. KONRAD indicated understanding.

9:42 a.m.

REPRESENTATIVE DAVIES referred to NGL and asked whether there are possibilities for multiple locations for that "takeoff."

MR. MARUSHACK or MR. KONRAD answered probably not, although it may depend on how gas is taken out in Alberta, through one pipeline or multiple pipelines. [Indisc.]

AN UNIDENTIFIED SPEAKER asked whether it can be done on smaller scales.

MR. MARUSHACK or MR. KONRAD suggested NGLs could be taken out and sent to California or Chicago, for example, but wouldn't be taken out along the route. [Indisc.]

REPRESENTATIVE DAVIES said it sounds as if the discussions with the state executive branch are just beginning. He asked whether, in those discussions, state ownership or partial state ownership has been discussed as an option.

MR. MARUSHACK or MR. KONRAD replied no, it hadn't come up, but surmised that it would.

REPRESENTATIVE DAVIES asked whether the team is willing to entertain state ownership as an option.

MR. MARUSHACK or MR. KONRAD said, "The State of Alaska's our partner." He said his personal concern is only a matter of timing and being able to work efficiently on all those issues [indisc.]. He stated willingness to consider the idea of state ownership.

REPRESENTATIVE DAVIES referred to the FERC application. He asked whether it is necessary to have the open season begin in January or right away, or whether the team could do the application and contemplate a later open season.

MR. MARUSHACK or MR. KONRAD replied, "You need to have an open-season process in place to have a complete application."

REPRESENTATIVE DAVIES asked whether the process requires that it start right away.

MR. MARUSHACK or MR. KONRAD replied that he supposed it could be started anytime, but it needs to be done before putting the application in. [Indisc.] Expansion of open seasons also occurs.

AN UNIDENTIFIED SPEAKER noted that at the previous day's hearing, the committee had heard that FERC can extend the open season to keep an application alive "without extending that timeline for that open season."

AN UNIDENTIFIED SPEAKER said it will be a major issue - access or the lack thereof. Just to say "we can expand the line anytime we want is not the correct answer," he added. "It's one of them, but it's not the only answer."

9:46 a.m.

SENATOR OLSON asked what the general sense is, from the producers' standpoint, of state involvement, at whatever level, for this project.

MR. MARUSHACK or MR. KONRAD said from a small businessperson's standpoint, he wasn't sure he would like to see any type of government entity as his partner. [Indisc.]

MR. MARUSHACK or MR. KONRAD added:

We've talked to a lot of prospective partners - pipeline companies, et cetera - and I think our desire would be that, to the extent there are other companies ... or entities involved in this project, that they're bringing value to the project. And if the state can bring value to the project, that's a good thing. If they're going to take value from the project in terms of not being able to make decisions or not being able to be responsive to decisions that need to be made every day in terms of building and operating a pipeline, then that would be a bad thing, and that would be bad for all of us, probably.

MR. MARUSHACK or MR. KONRAD said it isn't a question of needing equity from the state, but of whether it helps to move the project along.

9:48 a.m.

SENATOR OLSON noted that up North there are economic and political issues. He asked about support for the northern route.

MR. MARUSHACK and MR. KONRAD replied that they haven't seen much support [indisc.] the northern route yet. There have been surveys, and the dialogue is started, but they don't have all the answers yet. The reaction is somewhat emotionally based on the perception that there will be more jobs and access to gas from the southern route, as well as being better for the state [indisc.]. There needs to be more dialogue in terms of actual facts around the decision to be made.

9:50 a.m.

CHAIRMAN TORGERSON asked how the group plans to engage the legislature between now and January. He mentioned the issues of taxes and certainty regarding tariffs, for example.

MR. MARUSHACK or MR. KONRAD expressed the need to discuss how to put something together that moves the project along, without a backlash in the legislature.

MR. MARUSHACK or MR. KONRAD added that they would make the request that the legislature and the administration talk as well.

9:50 a.m.

REPRESENTATIVE DAVIES asked what having terms "understood" means.

MR. MARUSHACK or MR. KONRAD answered that ideally there would be a set of possible answers. He said he is thinking of it in terms of corporations, as opposed to the state. He likened it to worker bees' getting together to work out what they believe the proper answers are, and then moving up the line for approval.

CHAIRMAN TORGERSON noted that Mr. Bill Corbus was present from the administration and could address tax issues.

9:51 a.m.

REPRESENTATIVE OGAN referred to the [legislative Majority's] previous fiscal policy of reducing the budget for five years - approximately \$250 million. Now the budget is being increased by \$130-\$140 million in general fund (GF) spending. He asked whether that is having any chilling effect on decisions and concerns about future taxation, for example. He asked Mr. Marushack and Mr. Konrad to respond, as individuals, about any chilling effect on oil and gas development as a whole in Alaska.

MR. KONRAD replied:

Fiscal stability is of great interest to us, both in terms of the rules which Mr. Marushack has talked about and in terms, in a macro sense, that the state is on a steady path. ... As an industry, I think we'd love to see a balanced budget. And we understand it's not that easy, but the general sense of stability would help a lot, and instability doesn't help a lot.

MR. MARUSHACK added that the idea of heading down a path and then having part of the economics taken away is pretty frightening. That is why there is a desire to start engaging in [dialogue with] the state.

REPRESENTATIVE OGAN said his concern is that there are legislators who want to impose an income tax, for example, but he has been hearing, from the industry, concerns about the change in direction. On another issue, he remarked that the Department of Revenue has said the fluctuations in gas prices have a much greater effect on the netback than, say, possibly increased costs of the southern route. He asked whether that was addressed in the presentation yesterday, and whether there is a sense that "what the long-term price is going to be will have a much greater effect." [There was no audible answer.] Representative Ogan then asked: What can we expect by January: Route selection? Project sanction?

MR. KONRAD answered that route selection by the end of 2001 is an aspiration, as is the decision whether or not there is an economic project.

REPRESENTATIVE OGAN asked whether the appropriate entities "or whoever controls the purse strings" will make a decision on route selection or a project sanction by the first of the year.

MR. KONRAD replied that he thought this was discussing applications, rather than project sanction. As Mr. Marushack mentioned earlier, there are hundreds of millions of dollars for engineering and cost-estimating to do after this phase, to actually go out and get "real bids for real work." The final decision to construct the project will be contingent upon getting an approved application and what it looks like in terms of stipulations that are tolerable or intolerable, as well as the actual cost at that point. Therefore, he expects sanction for the project to be down the road some years. Typically, one doesn't sanction a project until knowing it has been approved and until there is an actual cost.

MR. MARUSHACK agreed that the actual time of sanctioning would come some time after receiving the permits. However, the group will be spending additional amounts of money [indisc.].

9:56 a.m.

REPRESENTATIVE GREEN referred to the assertion that if the Mackenzie line gets ahead of this project, there wouldn't be enough workforce to do both simultaneously. He said if that is still a viable route, there will need to be some sort of size or volume determined for the Mackenzie portion of this. He asked whether the Mackenzie line is that far ahead of this project; if so, is the Mackenzie project anticipating going "over the top" with gas coming down, or just building for the Mackenzie delta gas?

MR. MARUSHACK or MR. KONRAD answered that he believes Mackenzie is designing for its own project, and he doesn't know whether that project is ahead or not, although it began earlier. He added, "We're working awfully fast, and I don't know whether they'll go ahead or not."

REPRESENTATIVE GREEN said his concern isn't the size of the line that Mackenzie is thinking about building.

MR. MARUSHACK or MR. KONRAD responded that if the Mackenzie project does it alone, it will be a 1-BCF/D line. "Their gas is coming," he added.

REPRESENTATIVE GREEN followed up on Representative Ogan's concerns. He commenting on the volatility of gas prices, and he asked how long the group estimates a gas contract will be for. He asked whether stability is being looked at from the standpoint of "take or pay" for longer periods of time again, as there used to be.

MR. MARUSHACK or MR. KONRAD answered that those are independent company decisions, and the companies aren't working together in terms of how to market their gas or whether it is short-term, medium-term, or long-term.

MR. MARUSHACK or MR. KONRAD added that the producers will have to commit that "they'll make the gas flow," but as to where it goes and whether it is sold "long term, fixed, or spot" is up to the individual company.

9:59 a.m.

REPRESENTATIVE GREEN remarked that other companies have come forward saying they would like to build the line. He asked, "Is that in your crystal ball, that some other company would build a line, transmit it - like you do in the Lower 48 quite commonly - and you would provide gas for another company to sell, or sell it through another company's transmission?"

MR. MARUSHACK or MR. KONRAD answered:

If someone builds a better mousetrap and then designs a more efficient system than we can design ourselves, we're all for it. They'd take the associated risks. That would be a great thing. So far, no one has stepped forward to do that.

REPRESENTATIVE GREEN asked whether he is hearing, then, that there is no objection to someone else's transporting the gas.

MR. MARUSHACK or MR. KONRAD replied, "No objection, provided it's cost-effective."

10:00 a.m.

REPRESENTATIVE FATE asked how much input the group has on the Mackenzie project. He surmised that it isn't a race. [The reply was indiscernible.] Noting that the group is studying two routes, he then asked whether the group has had discussions about route preferences with FERC.

MR. KONRAD answered that the environmental and regulatory groups are talking with FERC about general concepts relating to how to file permits, although there may have been discussions about route specifics.

REPRESENTATIVE FATE asked whether there is any idea how many [long-term] jobs there would be in maintenance, security, and so forth along the length of either pipeline route.

MR. KONRAD replied that with today's technologies and the buried pipeline, those jobs would be much fewer than for Alyeska [TAPS].

10:02 a.m.

CHAIRMAN TORGERSON thanked Mr. Marushack and Mr. Konrad, noting that he would put additional questions in the form of a letter. He said he'd personally put hundreds of hours into severance taxes, for example. As for the ad valorem tax, he said, "We probably won't engage much of that until we know what your project is." He surmised that "a holiday on that property tax" would be deferred until gas is actually flowing, which he suggested is an incentive to make the line more economical.

CHAIRMAN TORGERSON called a short recess at 10:04 a.m. He called the meeting back to order at 10:08 a.m.

Yukon Pacific Corporation

10:08 a.m.

MR. JEFF LOWENFELS, President and Chief Executive Officer (CEO), Yukon Pacific Corporation (YPC), came forward to discuss YPC's right-of-way and LNG project. He noted that with him was executive vice president [Wayne] Lewis. [Provided to committee members were four items: A TAGS Conditional Right-of-Way Lease dated December 1988; a letter from Mr. Lowenfels to the Highway Gas Policy Council dated April 10, 2001, with a seven-page attachment marked "confidential"; a letter from Mr. Lowenfels to the Joint Pipeline Office dated July 2, 2001, with attachments; and a handout paralleling a slide presentation.]

MR. LOWENFELS called attention to page 3 of the last handout, noting that it depicts an 800-mile pipeline to Valdez, from which markets in the Pacific Rim will be served, specifically in Japan, Korea, and Taiwan, as well as potential markets in Mexico and western North America, including California. The project is "virtually permitted," with all major permits obtained. He indicated there would potentially be a spur line from Glennallen into the Wasilla area, which would provide gas to the entire Southcentral area and to the Kenai Peninsula. Although a potential leg could go from the Fairbanks area down into Canada, that isn't the project as designed today.

MR. LOWENFELS referred to Prudhoe Bay, noting that page 4 shows a picture of the conditioning plant that would be built to condition the gas and take out the carbon dioxide and impurities. The gas would then be transported to Valdez in the existing pipeline corridor, using chilled pipe. Port Valdez would be the terminus and Anderson Bay the site for construction and operation relating to shipping from an LNG facility.

MR. LOWENFELS noted that the project would require a number of LNG tankers, which are state-of-the-art already. Tankers from Valdez could serve markets not only in Asia, but also in Mexico

and North America.

10:11 a.m.

MR. LOWENFELS pointed out that page 9 [unmarked in packets] lists TAGS permits and authorizations. Noting that Mr. Bill Britt [Department of Natural Resources (DNR)] had testified the previous day about the quality of the various projects, Mr. Lowenfels stated, "We feel that our project permits are at the highest level." He said YPC is continuing a wetlands program this summer that will continue for another two summers, with the information collected during the summer being processed in the wintertime.

MR. LOWENFELS explained that the permits allow the ability to come down to the detail required. Page 11 shows a construction index for a series of map filings in the next couple of weeks with the State of Alaska on the state rights-of-way; the index shows the quantity of information contained on each map YPC is submitting, and page 12 depicts one of the maps, with a detail of 1 inch = 1,000 feet. "We know exactly where we're going," he commented, "and we know where we're going in great detail." Not provided was the technical index. He went on to say the maps are part of YPC's graphic information system, and are highly effective and useful in computerized form so the state and federal agencies can know exactly what is going on above and below ground, as well as what is being impacted, for example. This is the highest detail, to his knowledge, of any submissions made to state and federal governments [indisc.].

10:13 a.m.

MR. WAYNE LEWIS, Executive Vice President, Yukon Pacific Corporation, noted that this series and the supporting data will be filed within the next couple of weeks. It follows the filing in early July that is 1 inch = 1 mile. He mentioned a construction series as well as a full geotechnical series, noting that it will be 141 maps.

MR. LOWENFELS said as a result of that detail, shown on page 14, YPC has been able to develop accurate cost estimates of the project. The chart begins at 9.2 million tons a year for startup, expanding to 13.8, and then having a second expansion to 18.4. He pointed out that 9.2 million tons a year equals about 1.2 billion cubic feet a day; at 18.4 million tons a year, that is 2.5 BCF/D.

MR. LOWENFELS noted cost estimates on the chart, and informed members that the pipeline estimate was done in conjunction with Willbros Engineering and Michael Baker Jr.; the LNG facility was "costed" by Kellogg Brown & Root and by Air Products and Chemicals, Inc. Those are the vendor licensees and licensor of the process for making LNG, and these are extremely accurate

estimates, the best possible. The estimate at startup is \$6 billion, expanding up to \$8.3 billion [for the second level of expansion]. It doesn't include the cost of the ship, which will be owned by third parties. He explained that he was trying to make an apples-to-apples comparison between an LNG project and an overland project in order to provide some clarity.

MR. LOWENFELS reported that YPC has learned that developing gas is a challenge - perhaps one of the state's greatest challenges. He noted that many people in the room had been in the business for 25 years or more. He referred to the list of "characters" from 1970 to 2001 on page 17, which included the following: "Arctic Gas, El Paso, Northwest/Foothills, ACETS, MACPORC, Kivalina/Wainwright, GTL, ARC, LNG Sponsor Group, YPC/TAGS." He pointed out several attempts to bring gas to market, emphasizing how complicated and difficult it is.

MR. LOWENFELS referred to page 18, noting that in the 1970s Congress considered three project options [to supply North Slope gas to the Lower 48]. The same options remain today: Arctic Gas of 25 years ago is now the "over-the-top" project; the El Paso LNG project was similar to the YPC project of today; and the Northwest/Foothills project is now the Alaska Highway (Alcan) project.

MR. LOWENFELS reported that the changes are these: First, today Alaskan gas can serve more than one market, whereas 25 years ago each market was potentially a single-market project, taking the gas to Asia or to the Lower 48. Not only has the market to the Lower 48 changed, but the Asian market for LNG has matured, developed, and become clear regarding its demand needs; by contrast, 25 years ago the potential demand by 2000 was projected to be 7 million tons of LNG to Asia, so the change to perhaps 30 or 40 million tons is a good one. Second, 2 BCF/D previously was the biggest LNG project anyone had heard of; by contrast, now people routinely talk about taking 4 BCF/D of gas from the North Slope - and sometimes up to 6 BCF/D.

10:19 a.m.

MR. LOWENFELS addressed the "apples-to-apples" comparison chart, noting four basic configurations. The first would be a 4-BCF/D TAGS LNG project that would serve just North America. He indicated the chart overlays the YPC project on a potential overland project to Calgary, Alberta, and pointed out that the costs are relatively the same. He emphasized that these are YPC's cost numbers, based on 13.6 BCF/D, which differ from those of Mr. Konrad relating to 15 to 20 BCF/D. He said for an apples-to-apples comparison, "the numbers would be 12.8 versus the 13.6." He explained a related page that read:

Capital cost of TAGS and ALCAN project to Alberta differ by less than 6 percent (cost-of-service is about

the same)

Pipeline tariff from Alberta to Canadian/US border with Lower 48 is about the same as the LNG tanker tariff (about \$0.50/mmbtu)

Fuel consumption is about the same

Cost of NGL removal for ALCAN ([about] \$2 billion) assumed the same as cost of LNG receiving terminals

MR. LOWENFELS pointed out that the conclusion on page 26 is that the cost to deliver 4 BCF/D of North Slope gas to the West Coast of North America is about the same as the cost to deliver 4 BCF/D of gas in Canada to the Lower 48 via an Alcan pipeline.

MR. LOWENFELS highlighted one very important difference: The reason people talk about 4 BCF/D for an overland pipeline is that it is needed for economies of scale, "just as we needed somewhere between 1.8 and 2 billion cubic feet a day for our economies of scale for an LNG project." That means there must be 4 BCF/D of that market in North American. He elaborated:

For the LNG project, we are predicated on going to Asia. The meat and potatoes of the project overland is the market in the lower-48 states. For our LNG project, that meat and potatoes becomes just gravy. We don't need all of that 4-billion-cubic-feet-a-day market, competing in the United States.

10:22 a.m.

CHAIRMAN TORGERSON asked whether Mr. Lowenfels could make that comparison without including the tankers.

MR. LOWENFELS answered that he would show it later, because the cost of service includes the tanker tariff. The tanker portion of the project can be taken into account by either owning the tankers and including them in the cost of service as an ownership item, along with maintenance and operations, or by taking a cost of service that a tankering company would charge for the tariff. Mr. Lowenfels added that the tanker transportation is "out of our original cost number of 8.2." He suggested perhaps it would be clarified as he continued.

10:23 a.m.

MR. LOWENFELS said there is no question ANGTA [Alaska Natural Gas Transportation Act] benefits are restricted to that Alcan route. Alaska LNG to North America may involve some ANGTA issues; clearly, the "over-the-top" route has the same ANGTA issues. He noted that FERC may have jurisdiction over the pipeline that goes through Canada, but doesn't currently have jurisdiction over the

TAGS project - which is entirely within Alaska - except for the export site [at Valdez] and the safety of the LNG facility.

AN UNIDENTIFIED SPEAKER offered that if there is delivery to the West Coast, there may be FERC involvement.

MR. LOWENFELS said there would have to be some tweaking to the permits, but the framework is there. He continued with his presentation, saying it isn't limited to a 4 BCF/D market in the U.S. There are international markets as well. He referred to testimony before a committee the previous year that YPC was looking at Mexican markets and potentially bringing gas from Mexico over the border into California. Today, he noted, there are seven proposed new LNG terminals under discussion. Four very large companies, including El Paso and Enron, have announced they are going to build LNG receiving facilities in Mexico [indisc.] United States.

MR. LOWENFELS said the numbers range from a new demand of about 22 BCF/D up to 30 BCF/D needed in the Lower 48, with 8 new BCF/D needed between now and the year 2010. Clearly, the LNG potential for serving a good portion of that market has been put in place, and is in play right now by these large companies. He noted that many of these companies are involved in Alaskan gas today.

MR. LOWENFELS told members that similar to the overland pipeline options, increasing the size of the TAGS project to a 4-BCF/D project only improves the economies of scale. He added, "We think our economies of scale work at less than 2 billion cubic feet a day." Furthermore, similar to the overland project, taking gas by LNG maintains the security of a supply of gas to the U.S. and from the U.S. to [indisc.].

10:27 a.m.

MR. LOWENFELS noted that the second LNG market obviously is Asia. Included in the packet were the actual slides from [Shiguru] Sam Muraki, the buyer of LNG from Tokyo Gas Company Ltd. who spoke to the legislature [at a joint hearing February 15, 2001, before the Senate Resources Standing Committee, the House Resources Standing Committee, and the House Special Committee on Oil and Gas]. Mr. Lowenfels pointed out that the pages in the packet show the existing LNG trade; various prospects for new LNG demand in Japan, Korea, and Taiwan; and the demand out of Asia and the Pacific in general, including "a little bit of India and China," of 25-50 MTA (million tons per annum). He noted that these numbers come from the second-largest buyer of LNG in Asia.

MR. LOWENFELS pointed out that [YPC's] numbers are not that much different "because, frankly, we take our numbers from the buyers in Asia." He recalled that Mr. Muraki had indicated the future natural gas trade, as far as he was concerned, involved Alaska. Mr. Lowenfels noted that the page in the packet shows gas coming

from Prudhoe Bay to the Asian market. He also noted that Mr. Muraki had indicated Tokyo Gas has contracted for new construction of two LNG tankers, which are being constructed "even within our borders." Mr. Lowenfels said new Asian demand for LNG by the year 2010 is projected to be 50 billion tons a year. That is a big change from discussions 25 years ago.

MR. LOWENFELS reported that one thing that hasn't changed in those 25 years is that Asia is still [Alaska's] largest trading partner. He listed seafood, timber, coal, and LNG since 1969; he stated the belief that more LNG will cement that relationship and that [Asia] will continue to be [Alaska's] largest trading partner.

10:29 a.m.

MR. LOWENFELS addressed page 40, which shows LNG prices as of January 2001. He said one of the great ironies is that the LNG price in Asia "during the life of our project has always been sustained high enough to be able to handle our project." He elaborated:

The only reason, it seems to me, why we're talking about an overland project is because last year the prices went up, and all of a sudden the prices looked like they were going to be high enough to be able to afford an overland project. And so we got interested in the overland project.

But the prices have been high enough in Asia throughout the history of Yukon Pacific. And if you take a look, in January they paid \$4.88 average for their LNG; Alaska, \$4.54 for the LNG. And the prices are reported on a lag-time basis. The last prices I saw, I think, were April prices - very, very similar, if not just a little bit higher.

MR. LOWENFELS asked, "Well, what does that mean in terms of our being able to serve that market?" Noting that the [TAGS] cost of service to Asia is depicted on page 41, he suggested the cost of service to California could be determined by looking at that page as well. He stated:

We believe that we can deliver that gas, without a wellhead price - so we don't have a fuel cost price included, and we don't have the wellhead price - but our cost of service to Asia ranges between \$2.69 and \$2.91. Going back one page, to page 40, you see that they're paying \$4.88. There is an awful lot of room there, it seems to me, for some negotiation with regard to a wellhead value that is attractive not only to the producers but also attractive to the State of Alaska.

And that sensitivity that [Commissioner] Condon was talking about yesterday is grossly amplified when you're talking about the difference between \$3 and \$3.10. But it has less of a difference if your cost of service ... is \$2.91 and the price that people are willing to pay is \$4.88. There is a lot of room in here for value for the state and for the producers, and for [indisc.] some project.

The future LNG market? Well, there's no question that the LNG demand in Asia, as indicated by Sam Muraki, is going to be about 50 million tons per year. TAGS is commercial at 13.8 million tons per year. The cost of service is \$2.69 to \$2.91 per MMBTU. The price they're paying today is \$4.88. I think we've got the economics of a good project.

10:31 a.m.

MR. LOWENFELS turned attention to the third LNG market: in-state use. He noted that Commissioner Condon or perhaps another state official had indicated the previous day that "they are in fact doing some studies on what potential in-state use would be." Mr. Lowenfels said:

We've looked at it. The state's looked at it before. We've heard numbers anywhere from 200 to 500 million cubic feet a day under existing circumstances. If there were to turn out to be some changes in the Cook Inlet with regard to a [indisc.] facility or the urea facility, those numbers would change. If there was an entity such as Netricity or one of these groups that's ... up from California - they're talking about the potential of using Alaskan gas ... in order to help the "tech" industry - those numbers, again, would change. But there's no question, gas is needed in Fairbanks. There's no question, gas is needed in Valdez. And there is becoming a very serious question that that gas is needed here in [indisc.] area.

MR. LOWENFELS noted that the [Cook Inlet] gas resource is in decline. He said TAGS can still deliver North Slope gas in time to offset any decline that is projected with regard to Cook Inlet, at a price competitive with the current Cook Inlet price. He returned attention briefly to the cost-of-service numbers on page 40.

10:33 a.m.

MR. LOWENFELS discussed potential configurations of a Valdez-based LNG project, listed on a page that read:

Potential configurations of the TAGS project

1. Stand alone at Valdez with LNG export only to Asia (current TAGS configuration)
2. Stand alone at Valdez with LNG only to North America (4 bifid option just discussed)
3. In combination with an ALCAN pipeline project via a Y-line to Valdez from Delta Junction
4. Stand alone at Valdez with LNG delivery to both North America and Asia (LNG supply hub in Valdez)

MR. LOWENFELS said he doesn't like the term "hub," but likes the idea of a supply area that can serve multiple markets. That is what Valdez will become with an LNG project. He noted that the third listed option would be to Canada, and emphasized that these options didn't exist 25 years ago, nor did the [indisc.].

MR. LOWENFELS told members an LNG "Y" or hub at Valdez clearly has intriguing advantages. First, it is "basically ready to go." It doesn't require waiting for a lot more permits to make a corporate decision that the project makes sense and so forth. A smaller Asian project and a larger lower-48 project than previously contemplated are among the possibilities. For example, a 4-BCF/D [LNG] project could provide 1 BCF/D to Asia and 3 BCF/D to North America, or 2 BCF/D to each. There are any number of changes. He went on to say, "The bottom line is, our budget ... needs about 2 billion cubic feet of gas a day to be a very good economic project. Anything over that makes these things even better. Multiple markets give us an opportunity."

MR. LOWENFELS explained that the project infrastructure would be entirely within Alaska. He remarked, "We're anticipating 12 to 15 thousand [indisc.] constructing this project in ... Alaska. And we expect that there would be 600-700 people working directly with the project once it was completed. And you add on from the potential spin-offs, spur lines, et cetera, and I think you're talking about a much higher potential."

MR. LOWENFELS told members the international politics revolving around the TAGS project versus an overland project are minimized. He stated:

We do not have to worry about Canada. We might even be able to induce the Mackenzie delta people to bring their gas to Alaska, which is [indisc.], not the other way around.

And certainly the flexibility to accommodate changing markets - in Asia, we have a sustained price; in North American markets, we do not. One might develop, and if

it does, we've got a system that can serve that particular [indisc.]. So it's a very, very intriguing change. We have become a multiple-market location, as opposed to a single-market location.

10:36 a.m.

MR. LOWENFELS turned attention to a handout titled "LNG Positives." He noted that LNG is portable and can serve multiple markets. Alaska LNG offers diversity of supply from the world's most stable supplier to the Asian markets, which are quite concerned about stability. Mr. Muraki had come before the legislature and insisted that the governor was wrong, and that in fact Asia does want Alaska's gas. Asia's long-term supply projects are backed by 20-year contracts with the world's largest utilities, for example, whereas yesterday the CERA [Cambridge Energy Research Associates] consultant indicated a long-term contract in the Lower 48 is about a year. Alaska has been an extremely reliable supplier to Japan for 32 years. Finally, all potential TAGS configurations can use [YPC's existing] permits.

MR. LOWENFELS emphasized that YPC would willingly work with the state, and would consider state ownership of a project. "We like the idea of a port authority," he added. "We like the idea of transparency. We want the state to be involved in ownership of this project [indisc.]."

10:37 a.m.

MR. LOWENFELS concluded his visual presentation, saying the following:

We believe that when you compare the economics of projects, you need to start with the same daily volume. That's why we talked about 4 billion cubic feet of gas. You have to make apples-to-apples comparisons, not only in costs but in permitting timelines and engineering timelines

2005 to 2010, the Asian LNG demand is easily large enough to enable TAGS ... to reach its [indisc.] scale, and the Asian LNG market is not based upon a speculative commodity pricing like the lower-48-state [indisc.] are. Instead, they [indisc.] long-term contracts. These are the standard.

And, again, the TAGS project does not necessarily have to rely upon the riskiest of the markets, which is the lower-48 states. Again, with our project, any gas sold to the lower-48 states is gravy. For an overland project, it's the actual meat and potatoes - it's the whole deal.

So, in summary, we think that development of the North Slope gas [has been and will be] challenging. We've got to take a look at project size [indisc.] economics of shipping large amounts of gas to the West Coast, of LNG, are about the same as the economics of ... shipping that same amount of gas to the lower-48 states.

An LNG project to the West Coast has to address the issues of ANGTA, no question about it. An LNG project is compatible with [an] Alcan Highway project, with the Foothills project. I don't think you'd want to necessarily get to [indisc.] with a brand-new highway project; one's already been permitted, and we have very strong feelings that, in fact, that particular project has advantages which should be taken advantage of.

And an LNG hub in Valdez allows Alaska gas to serve multiple markets including the lower-48 states, Mexico, Asia, and possibly more.

10:39 a.m.

MR. LOWENFELS turned attention to his letter in packets to the Highway Gas Policy Council, dated April 10, 2001. He explained that it had been sent to all the council's members. He stated:

This letter is an explanation of [an] analysis we did of the Purvin & Gertz report which was submitted to the State of Alaska and relied upon [indisc.]. We looked at the Purvin & Gertz report, and we ... could not believe that the numbers they used for the LNG project were the numbers they used. They used generic numbers for an LNG project that was to be located on the equator, where the efficiency is very bad, versus our numbers for an LNG project located in a very cold climate, where the efficiency is extremely high.

They ... used generic cost numbers, instead of the exact cost numbers which we have developed. They used the wrong number for the price of LNG from Asia. There are any number of things they did which, when we used ... their methodology and went back in and corrected the numbers, we came out with a complete reversal of the value of this project to the State of Alaska. And, in fact, we came out with a wellhead netback price for an LNG project of over a dollar.

Now, I'm not suggesting that that's what ... the wellhead price ought to be. But I am suggesting that the Purvin & Gertz report was flawed. We've asked the highway council to ask Purvin & Gertz to come back and comment on our numbers [indisc.].

We've asked Purvin & Gertz to comment. We showed them what we were going to submit to everybody. They thought, for a little while, we were going to be a client, and we had a little bit of cooperation. And when it became clear we were not interested in becoming a client until we knew that the work that could be done would be reliable, communication [indisc.].

We would urge you, as part of your comparison, as part of your analysis, to contact Purvin & Gertz and to ask them to comment on our analysis of their report, because we believe their report is extremely flawed. And they, in fact, have created a lot of the hubbub about this particular ability to bring gas down to the lower-48 states.

We're not concerned about the fact that 40 large companies - oil companies, pipeline companies - are subscribers to this report. We are concerned that the governor of the State of Alaska indicated at one point that this report was influential in his deciding to back the highway [route] over an LNG project. And if that's true, then we'd better make sure that what's in this report [indisc.]; that's why we included our analysis, and I would urge you - I would request, ask you - to ask Purvin & Gertz [indisc.].

MR. LOWENFELS thanked the committee.

10:42 a.m.

REPRESENTATIVE GREEN mentioned the flexibility to go to markets in Asia and the Lower 48, as well as "off-take" in California. He asked about the Northwest.

MR. LOWENFELS answered that YPC would look at Mexico, California, Oregon, and Washington. Currently, two sites are being promoted by Outside companies in Mexico that have capabilities of serving California. There is quite a bit of interest in serving the West Coast either directly or [indisc.]. He said they are all feasible to some degree. There are obviously problems in California with citing, as well as [indisc.] problems with moving gas to the West Coast of the United States. [Indisc.]

CHAIRMAN TORGERSON asked Mr. Lowenfels to comment on the Russian gas to Japan and what influence that would have on the market.

MR. LOWENFELS answered that it nibbles away at the Alaskan market, just as LNG projects coming into the East Coast of the U.S., for example, nibble away at that market.

TAPE 01-6, SIDE A

MR. LOWENFELS said [YPC's] conversations with Tokyo Gas indicate "they're not all that pleased with the idea of having a pipeline come through Canada." He added that there are still some international treaty problems and Japan is "still at war" with Russia. That is, therefore, not a "slam-dunk" project. It will challenge the ability of Alaska to get as large a share as possible.

CHAIRMAN TORGERSON clarified that he was referring to Sakhalin LNG.

MR. LOWENFELS responded, "We kind of include that in our numbers; we think that's a 'go.'"

CHAIRMAN TORGERSON commented, "They've upped their reserves to something like 86 trillion feet there in that basin. ... It's comparable to Alaska, I suppose."

MR. LOWENFELS concurred, adding that it's another indication "as to why we need to get into that marketplace." He remarked that the Sakhalin project has phenomenal problems relating to ice and the location of the fields to be connected, "not to mention the geopolitical stability of the area."

CHAIRMAN TORGERSON asked what YPC's major barrier is to a project's going forward and whether that barrier is getting the gas from the producers.

MR. LOWENFELS answered that once the producers conclude it is an economic project, "they'll let somebody else transport their gas." He noted that there are questions about Prudhoe Bay that need to be followed up on.

CHAIRMAN TORGERSON remarked, "Our royalty isn't enough to sustain your project."

MR. LOWENFELS responded:

Unfortunately, it is not. Now, I understand that there are some problems with [the] price ... we're able to charge from our royalty gas, as well. [Indisc.] And we keep hearing these secret numbers. But it's kind of important, I think, for people who want to try to buy the gas to know what the state can sell it for.

10:45 a.m.

REPRESENTATIVE DAVIES asked whether Mr. Lowenfels has an estimate of the long-term price of gas on the West Coast.

MR. LOWENFELS said he did not; it is very hard to predict. He added that in his office, there is a folder with ten statements

made by gas executives in the Lower 48 about desperately needing the gas in Alaska to come to the Lower 48, and that the prices will be high enough to support that; at the bottom of those statements are the names of the individuals, [with the date] 1979. He said it takes 12 to 18 months for new gas supplies [indisc.] to come online.

CHAIRMAN TORGERSON asked whether there were further questions; none were offered. He called an at-ease at 10:47 a.m. and called the meeting back to order at 10:51 a.m.

Foothills Pipe Lines

10:51 a.m.

CHAIRMAN TORGERSON introduced Mr. John Ellwood. He stated his understanding that Foothills Pipe Lines Ltd. ("Foothills") is owned 50-50 by TransCanada PipeLines Limited ("TransCanada") and Westcoast Energy Ltd. ("Westcoast"). The chief executive officers of both companies were present.

MR. JOHN R. ELLWOOD, Vice President, Engineering and Operations, Foothills Pipe Lines Ltd., informed the committee that with him were Mr. Dennis McConaghy, Executive Vice President [Gas Development] of TransCanada and Co-Chief Executive of Foothills; and Mr. Mike Stewart, Executive Vice President [Business Development] of Westcoast and Co-Chief Executive of Foothills.

MR. ELLWOOD offered a presentation based on a PowerPoint packet distributed to members [titled "Alaska Highway Pipeline Project Update; original punctuation and capitalization is provided unless bracketed.] [Much of Mr. Ellwood's testimony was difficult to discern because of the sound quality.] He discussed the agenda on page 2, which read:

- Review ANGTS Advantages
- Overview of Alaskan Benefits of ANGTS
- Current Status
- Withdrawn Partners Issue
- Open Access
- Potential State Participation
- Potential Gas Delivery to Southcentral Alaska
- Path Forward to ANGST
- Questions and Answers

MR. ELLWOOD next referred to a page titled "Alaskan Northwest Natural Gas Transportation Company Corporate Ownership," and mentioned a corporate entity point of view. He pointed out that TransCanada and Westcoast would own Foothills; Foothills and TransCanada would jointly own the Alaska Northwest Natural Gas Transportation Company (ANNGTC), which holds the certificates to build the Alaska portion of this project, whereas Foothills would hold the Canadian certificates.

MR. ELLWOOD turned attention to pages that listed the "ANGTS Advantages." He addressed the first listed advantage, "Earliest Timing," which read:

ANNGTC/Foothills was selected by the United States and Canada to construct and operate the ANGTS and have secured the following:

Federal Lands ROW [rights-of-way]

Federal ROW on State lands

FERC Certificate

NEB Certificate

US Corps 404 permits

Yukon ROW

British Columbia Map Reserve

Each of these components could be expected to require 18 to 36 months to secure after a green field application is submitted.

10:55 a.m.

MR. ELLWOOD turned attention to the second ANGTS advantage, "Flexible Framework," which read:

The ANGTS framework provides an existing, tested and accepted framework for expediting the delivery of ANS gas to the Lower 48

Canada has repeatedly reaffirmed its intention to fulfill its commitments reflected in the ANGTS framework

The ANGTS framework allows for updates to the existing U.S. and Canadian regulatory framework to modify the project, including initial required shipping capacity, the use of updated technology, environmental review, open access and negotiated rate structure

The ANGTS sponsors are committed to working with the State, ANS producers and other potential shippers to develop a project that achieves the commercial and economic objectives of all parties

MR. ELLWOOD, referring to updates, explained that in Canada [Foothills] has expanded its pipeline facilities five times since

the original part of the project was completed. Each was under the [ANGST] regime, and each time [indisc.] up to modern standards.

10:56 a.m.

MR. ELLWOOD discussed the third ANGTS advantage, "Land Tenure." [The packet contained a map and sections addressing Alaska, the Yukon, and North B.C.] He noted that in Alaska, there are 434 miles of right-of-way declared, both on federal and state lands. Approximately 200 miles are under active application at this time. In the Yukon Territory, [Foothills] has declared a right-of-way across the entire territory. And in northern B.C., Foothills holds "map reserves" in British Columbia [indisc.].

MR. ELLWOOD discussed the fourth ANGTS advantage, "Land Tenure," which read:

Best alternative for delivering Alaskan gas to the Lower 48

Can be constructed with proven technology

Has been extensively reviewed

Relies on existing infrastructure

Will minimize adverse environmental effects

Delivers gas to Alaskan consumers

MR. ELLWOOD noted that the extensive review has included environmental and technical review. Regarding the existing infrastructure, this project doesn't require constructing major new roads, for example.

10:58 a.m.

MR. ELLWOOD addressed the final ANGTS advantage, "Best Access to North American Pipeline Grid," which read:

Access to the North American grid enhances the success of the Alaska Highway Pipeline

Foothills, TransCanada and Westcoast have built and operate most of the gas pipelines in Canada

Offers expanded market opportunities for Alaska Gas

Foothills, TransCanada and Westcoast recognized as experienced, reliable and cost effective pipe builders and operators.

MR. ELLWOOD noted that "expanded market opportunities for Alaska gas" includes reaching all North American market centers by going through facilities that "ourselves or our shareholders own or participate in."

10:59

MR. ELLWOOD turned attention to "Alaskan Benefits," noting that [the companies] had commissioned a study some time ago under a joint venture between a Calgary company and an Anchorage company to look at economic impacts and benefits; their results indicate the following [provided in packet]:

Based on \$3 to \$5 mmbtu gas price range over 25 years	
Increase in Gross State Product	\$55 to \$122 billion
Increase in employment	26,000 person years
Increase in state and local gov't revenues	\$12 to \$29 billion
Increase in gross revenues for Alaskan Producers	\$36 to \$103 billion
Gross revenue gains to Gas Producers through earlier (3 years) connection	\$4 to \$12 billion

MR. ELLWOOD paraphrased from the next page, "Current Status, ANGTS Update," which read:

Finalizing state lands right-of-way [in Alaska]

Negotiating a Memorandum of Understanding with Joint Pipeline Office

Continuing dialogue with:
Government officials in Ottawa and Washington
Aboriginal Communities
ANS Producers
ANNGTC Withdrawn Partners

11:00 a.m.

MR. ELLWOOD turned attention to "Current Status, Discussions with Gas Producers/Shippers," which read:

Ongoing discussions with North Slope Producers

Contact with other interested parties such as exploration and development companies [active on the North Slope but which don't yet hold any reserves],

power generators and power marketers

MR. ELLWOOD next discussed the page titled "Current Status, Discussions With Aboriginal Communities," which read:

Continuing to build upon positive relationships
Foothills has developed over two decades

Building support through discussion of the community
benefits of pipeline development

MR. ELLWOOD paraphrased from the page titled "Withdrawn Partners Issue," which read:

ANNGTC Withdrawn Partners have right to recover monies
under certain circumstances

It is recognized that the Withdrawn partners issue
needs to be addressed in the overall commercial
resolution of this pipeline development.

This is an issue between ourselves and the Withdrawn
partners

The process to re-enlist Withdrawn Partners has begun
and although in the early stages, so far we have seen
some encouraging signs.

MR. ELLWOOD explained that originally there were 11 partners in
the Alaska Northwest Consortium, but the only two remaining are
Foothills and TransCanada. Those [withdrawn] partners have a
right to recover some money.

11:02 a.m.

MR. ELLWOOD next addressed "Open Access," which read:

Alaska's interests best served by continued gas
exploration and development

Access to pipeline vital to E&P activity

Financing for the initial pipeline will require long-
term shipping contracts

Additional future capacity provided by:

Additional compression

Looping

Combination of both

Additional capacity will be available to all [shippers
and second-generation producers] on an open access
basis

As a pure pipeline service provider, it is in [Foothills'] interests to provide expanded capacity to meet demand

11:04 a.m.

MR. ELLWOOD addressed "Potential State Participation," which read:

We understand the State is looking at ways to directly participate in a pipeline development

There are several ways the State could participate in the ANGTS

- As a lender or guarantor
- As a shipper
- As an equity partner

ANNGTC/Foothills would consider discussion of these or other matters of interest to the State

Gas to Southcentral Alaska

Current gas demand in Southcentral is approximately 220 Bcf per year

This volume could be delivered via a 16-inch spur line connected to the ANGTS near Fairbanks

As a pure pipeline service provider, it is in Foothills interests to serve additional supply and market areas whenever it is economic to do so

MR. ELLWOOD clarified that there is no particular point chosen for a connection to the ANGTS near Fairbanks.

11:05 a.m.

MR. ELLWOOD addressed "Path Forward for ANGTS," which read:

Foothills

Continuing to work toward goal of commercial alignment with Producers and potential Shippers

Finalizing state lands ROW

Building support in Canada for two stand alone arctic pipelines

Recommendations to Joint Committee

Publicly encourage gas producers and pipeliners to bring collective strengths to the table and accelerate development of the ANGTS

Support the conclusion that only ANGTS meets the Governor's goal of earliest possible start for the pipeline project

MR. ELLWOOD thanked the committee and offered to answer questions.

CHAIRMAN TORGERSON asked the presenters to talk further about the discussions with the producers, including what barriers they see right now regarding [ANNGTC/Foothills] "coming together with the terms."

AN UNIDENTIFIED SPEAKER, apparently on teleconference, mentioned endeavoring to have collaboration in order to have them better understand the merits of the ANGTS [indisc.].

CHAIRMAN TORGERSON asked whether the withdrawn partners are an issue to them also, and whether that is a barrier.

THE SAME UNIDENTIFIED SPEAKER answered that it is an issue [indisc.].

CHAIRMAN TORGERSON asked the speaker to briefly mention Mackenzie Valley. He requested verification of his understanding that the speaker is involved in at least a proposal to build a pipeline out of there.

THE SAME UNIDENTIFIED SPEAKER said Foothills itself is not [indisc.] engage in a line from the delta to [indisc.] for a pipeline. Both TransCanada and Westcoast separately are looking at the possibility [indisc.].

11:08 a.m.

CHAIRMAN TORGERSON noted that "almost everyone's had their opinion of which route goes first and the impact to the other route." He requested comment on that.

AN UNIDENTIFIED SPEAKER said he'd heard with interest some of the questions and comments about what is going on in Canada, including a suggestion that FERC regulate the pipeline in Canada. "I don't see that happening," he said. He added that there is a dynamic going on here: Canadians, including the government and certain commercial proponents, are actively looking at the development of the Mackenzie delta [indisc.]. When looking at that development, probably three or four things will drive it. One is "producibility." In Alaska, 7 BCF/D today is being reinjected back into Prudhoe Bay; that is ready to go, under the right economic conditions. By contrast, that doesn't exist in

the Mackenzie delta. He stated:

Probably - in our opinion - two to perhaps upwards of five years of exploration and development activity ... is going to define both the scope and timing of that development.

The second large issue is the regulatory process. There are 13 or 14 overlapping regulatory jurisdictions. There are required permits [indisc.] development up the Mackenzie Valley [indisc.]. By our count, somewhere in the neighborhood of 425 individual permits in the group are [indisc.]. That regulatory process needs to be permanent. But the good news is that the regulatory agencies are starting discussions about harmonizing that regulatory process. But the reality is that you [indisc.]. Sometimes you get that clarified, and that's absolutely the key to anybody proceeding down a path of trying to permit a pipeline.

Then I think the third issue is that it's very well known and well reported in the media what the aboriginal groups' aspirations to participate and perhaps even legally own and operate a pipeline up the Mackenzie Valley. ... From our perspective, we ... recognize that First Nations participation will be a part of [indisc.]. How that is actually achieved is going to take some time, and I think you've seen that the groups are not completely aligned. ... That's going to take timing, and I think that's ... one of the risk elements to the combined "over the top/up the Mackenzie Valley" concept, if you will, that really underscores what I would view as a compounding [indisc.]. It's very much ... timing and economics.

11:11 a.m.

AN UNIDENTIFIED SPEAKER said [indisc.]. The two resources both have to come to market and [indisc.] be thought of as crowding each other out. The only other observation is that Mackenzie Valley [indisc.] is largely self-contained. He said he believes there is an opportunity for them to "get their act together" over the next 12 to 18 months. He mentioned Alaska and being as expeditious as possible.

11:12 a.m.

REPRESENTATIVE GREEN referred to testimony the day before, mentioned in the newspaper that morning, that there could be some resistance in Canada to this sort of pipeline. He asked what the feeling is about that either being the case generally or being any kind of obstruction.

AN UNIDENTIFIED SPEAKER asked whether that was to a highway pipeline. [There was no audible response.] He said he believes there are some parts to that. No doubt, the federal government in Ottawa hopes it [indisc.]. There is a potential of "regional development implication and benefits, [indisc.] developing reserves in the Mackenzie [delta] area."

THE SAME UNIDENTIFIED SPEAKER continued, saying he believes it is also pretty clear in Ottawa that energy has not been an issue for perhaps 15 years. However, the price has gone up in the past 12 months; although it has subsided a bit, it has rekindled energy as an issue on the "political stage" in Ottawa, which is just "getting mobile" in this regard.

THE SAME UNIDENTIFIED SPEAKER pointed out that there is a treaty in place between the two countries, but the [U.S.] government hasn't yet asked [Canada's] federal government about it. He stated:

[It is] my view - it would be a very strong one - that if asked, the Canadian government is going to live up to the treaty that exists. Now, in terms of resistance, you could ... look at that ... in a regulatory permitting sense. Clearly, starting and using what we have, the existing approval, is going to mitigate against resistance that could arise in a green field application, from an environmental side and from a competitors' [indisc.].

ANOTHER UNIDENTIFIED SPEAKER mentioned using the ANGTS [indisc.] and getting [indisc.] to market. By contrast, there are other formulations wherein all the issues about how Canada will respond to bringing Alaskan gas across [indisc.]. That's a much more formidable undertaking. He said the treaty isn't going to assign the various conditions involved in [indisc.] lived up to by the Canadian government.

CHAIRMAN TORGERSON noted that the previous day there was a presentation by a representative from Cambridge Energy Research Associates, who was talking about potential political conflicts between the State of Alaska and the Canadian government - to his own understanding, mainly because of "our" opposition to the "over-the-top" route. Chairman Torgerson said that representative had no response to his question about "the premier of Alberta saying 'no pipeline unless I steal all the liquids.'" He said that is the same thing. All the governments have responsibility to constituents to get the highest and best use. Chairman Torgerson went on to say:

So when we exercise our rights, then we're considered to be - in his view - counterproductive to what's happening in Canada. But we also know there [are] other premiers that tried to block the Alaska route and

went to Ottawa to ask for legislation to block the Alaska route until the Mackenzie delta [project] was built. And that's also public knowledge. ...

He was referring to that, and I think that's what Representative Green was talking about, the perceived - at least in his thoughts - conflict between the State of Alaska and ... the Canadian government. ... Again, I don't see that; I see us as doing things that we think [are] right for Alaska, no more than all the rest of them are, and it's part of the mix when you sit down and try to work these things out.

AN UNIDENTIFIED SPEAKER responded:

When I get confronted with that, that there's no doubt that there is some sentiment in Ottawa that disagrees with the legislative approach that [indisc.] have taken here in Alaska, [indisc.], that, to me, is just kind of bristle and background noise that I think ultimately ... is irrelevant.

When I say to the people in Ottawa, about the debate over the routing - and I [indisc.] this to the energy ministry - is just go up to Alaska and talk to a few [indisc.]. You'll find out what people think about routing. And I know, Senator, you were in Alberta ten days ago. And you've seen the benefits of what development of the natural gas industry and value-added industry [indisc.] in that and do to an economy over a period of time. And I think it's pretty simple, in my mind, how to counter that. ...

In terms of Premier Klein, I think Premier Klein's statements about having to say about where the liquids are processed - and [indisc.] saying "extracting my fair share on the way" or something like that? - I view that as a way of engaging in the issue and staking a claim that he wants to be part of the debate.

I think the analysis isn't that the Alberta government has [indisc.] at stake, in an ownership sense The Alberta government wasn't interested in seeing [indisc.] getting access to those liquids in a market sense to make better use of the existing infrastructure that's in Alberta. And I think he ... could have been perhaps more judicious in his choice of words; but that's what that was about.

11:18 a.m.

ANOTHER UNIDENTIFIED SPEAKER added (indisc). He mentioned including optimizing the existing ability in Alberta and in the

infrastructure that takes gas from Alberta to the Lower 48. He said the advent of Alaska gas will be "useful and synergistic to how that infrastructure is currently being used." He offered that regarding the interests of Alberta on the liquids issue, "the alignment will let the market decide." He added:

They do have a fundamental alignment that I think can be built on. Again, that goes to the issue of [indisc.]. And some of our companies have had a long ... experience with extraction issues, and although the Alberta government [indisc.], I think they fully understand the notion of [indisc.] and how those decisions are going to be made.

CHAIRMAN TORGERSON clarified that he doesn't blame the premier for what he did. He then said:

He has certain avenues available to raise red flags when he wants more value added in his -- as well as the State of Alaska and the Yukon ... the Northwest Territories, and all four are using whatever tools they have ... to make the highest and best use for ... their particular constituents. ... I made that clear through his chief of staff at the meeting that you folks set up for me, that ... came by and visited with us there. So we'll have more business with [them] a little later on.

11:21 a.m.

REPRESENTATIVE DAVIES referred to a comment made earlier by the producers that the simultaneous construction of a [Mackenzie] Valley and highway pipeline would tax North American resources and perhaps world resources. He asked, "Do you concur with that? Is that a substantial issue?"

AN UNIDENTIFIED SPEAKER concurred that simultaneous construction of two such projects would be very difficult to achieve, given the capabilities of the pipeline construction industry in North America. He said it would be far better to sequence the two, one behind the other.

REPRESENTATIVE DAVIES referred to the state ownership issue. He asked, "Do you see any real opportunities for the state to add value to your proposal? Or is that just something that you are willing to consider for political reasons?"

THE SAME UNIDENTIFIED SPEAKER responded:

I think we've said in our presentation ... we are willing to consider it. I think both of our respective companies would come from ... the view that government ownership is not the preferred way to go. But if that was what was required to actually make something go

[indisc.], that would be considered.

Our experience, ... and the company of Westcoast, is that we don't want to have government involvement make an uneconomic project economic. This project has to be economic to start with. [Indisc.]

AN UNIDENTIFIED SPEAKER said the state has a legitimate interest in how the final [indisc.], but other dimensions of equity ownership are available to the state [indisc.].

11:24 a.m.

REPRESENTATIVE GREEN returned to the topic of gas liquids. He noted that the producers are talking about a significant pressure to keep the gas liquids in a gaseous phase. He asked, "If that weren't required - for example, if we were to withdraw those in the state and ship dry gas - we wouldn't need that high a pressure; therefore, we wouldn't need ... the technology for steel. Would that significantly reduce the cost and ultimately the netback to the state?"

AN UNIDENTIFIED SPEAKER answered that it certainly could change the capital costs of a project. Lower pressure would require a reduced wall thickness of the pipe, which is cheaper to buy. Whether it changes the total, however, is not so clear because it also reduces the volume that can be put through the pipe. [Indisc.]

REPRESENTATIVE GREEN replied that he certainly subscribes to that. However, the concern he'd heard expressed was not knowing where the kind of steel needed [for higher pressures] can be obtained, or what kind of mill would be necessary. He said he is thinking there is another way around it, which may be to reduce the pressure.

11:26 a.m.

REPRESENTATIVE GREEN noted that in the U.S., FERC and other agencies limit the amount of transportation or pipeline tariff to be paid. He commented that "tariff" is a sensitive term in Alaska because of the TAPS line, and added:

There wasn't a garden-variety-type determination; it was depending on arm's-length-type of sales. ... You have a producer that [transmits] and then it goes to his refinery. So "tariff" was a real difficult thing to determine [and] has always been a point of conjecture. It hasn't been so with gas lines. And I'm wondering if Canada has that same sort of a regulatory regime that would limit the amount of tariff that would be charged - a percentage.

AN UNIDENTIFIED SPEAKER commented on gas liquids:

Our analysis would indicate that more modest pressures will still carry a significant quantity of liquids off the North Slope. ... [Indisc.] probably get us into the range where we're carrying very large quantities of liquids off the North Slope [indisc.]. Cooling the liquids may be able to be stopped; you could argue it can be done [indisc.].

ANOTHER UNIDENTIFIED SPEAKER said on the tariff side they fully expect this would be a negotiated tariff between equity owners and shippers. [Indisc.] "We do have experience with how this works," he added, citing a project that went into operation last fall between northwestern British Columbia and Chicago, which to date is probably the largest natural gas pipeline project built in North America; it has a negotiated toll structure. He suggested that when pipeline companies own pipelines, there is a natural balance of commercial interests from a financial perspective. Although not having exact terms in mind, they expect it would be some negotiated toll structure based on long-term shipping agreements to provide appropriate balance between risk and [indisc.].

[ANOTHER UNIDENTIFIED SPEAKER added some indiscernible comments about interests in the pipeline.]

REPRESENTATIVE OGAN referred to comment that they don't foresee FERC regulating Canada. He asked whether that is addressed by the treaty, for example. He asked what the presenters envision and how the treaty fits in.

AN UNIDENTIFIED SPEAKER replied that the Northern Pipeline Agency in Canada would regulate construction of the Canadian portion of it. When it goes into operation, NEB would regulate the ongoing operation, and FERC would do the same in Alaska.

ANOTHER UNIDENTIFIED SPEAKER expressed confusion regarding comments made about ANGTA by the FERC representative the previous day. The unidentified speaker said the ANNGTC - of which Foothills and TransCanada are the active partners - has a conditional FERC certificate under ANGTA. And to suggest that there is no application in front of FERC with respect to ANGTA, he believes goes contrary to fact.

11:31 a.m.

CHAIRMAN TORGERSON asked, "If the producers file under the [Natural] Gas Act for a right-of-way, are you folks going to proceed to represent your interests at court or through legal action?"

AN UNIDENTIFIED SPEAKER answered by first referring to the

companies before the committee that day. They have been at this since the mid-1970s, have spent a fair bit of money, and have waited a long time, he said. Not only do they believe they have something worth some commercial value, but they truly believe that if the desire is to expedite construction of a pipeline from Alaska, using the ANGTA framework and building on what is in place [indisc.]. He said there are commercial interests to protect. He added:

We have very strong legal views, ... from our perspective, of what rights we enjoy under the decisions and approvals that were rendered in the late 1970s. We have a view about whether or not an application could be heard under the Natural Gas Act. We have a very strong view as to whether or not anybody else can get past us to the ANGTA framework. And ... our view would be ... that we don't want to go down that road. We think it's in the interests of everybody to collaborate and build on what we have.

ANOTHER UNIDENTIFIED SPEAKER mentioned collaboration and people holding the keys to an expedited regulatory treatment, saying he believes there is an inevitability about it. He also mentioned timing, as well as regulatory and legal forums under the ANGTA regime. [Indisc.]

CHAIRMAN TORGERSON suggested it is to nobody's benefit to take this to court, which would delay it. He asked whether there is any way to expedite a decision from FERC. He noted that there may not be an application until March or April. He asked: Is there a process through which FERC can formally be asked some of the questions on the routing, for example, or does it just require waiting and seeing?

AN UNIDENTIFIED SPEAKER answered that with respect to the development of ANGTS, no decision is needed. It is authorized. "They have issued their certificate to us," he added. Noting that there potentially will be amendments, he said those can only come after the commercial deal is pulled together, and after the full project scope is understood. "Nothing is needed from FERC at this point," he reiterated.

REPRESENTATIVE DAVIES first requested elaboration about the relationship between FERC and [indisc.]. He asked how they will coordinate once things are up and running. Second, he asked what the presenters' stance is now with respect to their discussions with the producers. He asked, "Have you made an offer to them, or ... are you waiting for them to do their due-diligence process they're going through, and then see where that shoe lands?"

TAPE 01-6, SIDE B

AN UNIDENTIFIED SPEAKER mentioned all the things necessary to

make this happen, saying a mechanism relating to the treaty will help to achieve that.

ANOTHER UNIDENTIFIED SPEAKER added [indisc.], mentioning the due-diligence process of finding alternatives, the need for more collaboration, and the need to have a better understanding of the relative merits "of our alternative" in order to help them expedite their coming to terms with the routing selection.

CHAIRMAN TORGERSON thanked the presenters and announced that there would be a short at-ease.

Alaska North Slope LNG Sponsor Group

11:40 a.m.

CHAIRMAN TORGERSON announced that next the committee would hear from the [Alaska North Slope] LNG Sponsor Group ("Sponsor Group"), composed of Phillips Alaska, Inc., BP Exploration (Alaska) Inc., Foothills, and Marubeni Corporation.

MR. STEVE ALLEMAN, Commercial Manager, Alaska North Slope LNG Project, noted that present was Mr. George Findling. He informed members that both he and Mr. Findling are residents of Anchorage, employed by Phillips Petroleum Company; however, he himself was speaking as the commercial manager for the Alaska North Slope LNG Project.

MR. ALLEMAN referred to presentations to the House Special Committee on Oil and Gas on February 27, 2001, and to the Senate Resources Standing Committee on April 7, 2001. He noted that the Sponsor Group had indicated it is in the midst of Stage 2 activities, scheduled for completion by the end of this year. Although most of those activities are still works in progress, he would offer an overview of ongoing LNG efforts. He stated:

The Sponsor Group ... began working in October of 1998 to try to make an Alaskan LNG project economically viable and cost-competitive in the market. Phillips, BP, Foothills, and Marubeni ... are the current and ongoing sponsors in this LNG effort.

From the very beginning, we have maintained a strong market focus. Most of our sponsors have personnel living and working in East Asia. We have longstanding LNG market relationships that allow us insight into what the marketplace is saying.

For example, early in Stage 1 we challenged the conventional wisdom that an Alaskan LNG project has to be sized at 14 or more million tons per year. Our market evaluation indicated that we needed a smaller project to give us the best chance of getting a toehold

in this fiercely competitive LNG marketplace.

So the focus of the Stage 1 technical work was to innovatively redesign a smaller market-entry project where costs could be deferred and overall risks reduced and yet still be expandable later as ... demand [grows]. The result was a 7-8 million tons per ... year design, which we currently estimate would cost about \$5 billion without ships. This market-entry project is the basis for our point-forward work. ...

Through our ... personnel in East Asia, we are quite aware that the East Asian market is very interested in Alaska LNG. There is no myth or mystery about the positives that the market sees in LNG from Alaska. But we are also very aware that this is only part of the story. The more crucial question is: Under what conditions would the market move from interest in Alaska LNG to commitment to purchase?

11:43 a.m.

There is significant East Asian LNG competition in the form of potential and in-progress large expansions and new grassroots LNG plants. As we detailed in our presentations during the session, there are over 60-80 million tons per year of potential LNG projects fiercely competing for 20-40 million tons of East Asian LNG demand that is projected to be needed by the end of the decade.

Unfortunately, Alaska is not yet cost-competitive with the majority of these other LNG projects on a unit-cost basis. Further, we cannot yet demonstrate an economically attractive capital payback project with assumptions that are reasonably saleable to the market [or] to the investors. This all comes back to Alaska's unique competitive disadvantage: the 800-mile gas pipeline to tidewater.

As to where we are today, the LNG Sponsor Group is in the last half of its Stage 2 work program. In Stage 2, we are using the Stage 1 market-entry project design and working on primarily commercial - but also technical - ways to reduce costs and risks. ... We expect to complete these deliverables on schedule, by the end of this year and within our \$3 million budget.

These efforts include continued engineering design and cost optimizations that have already identified over \$400 million of additional capital-cost reductions in this stage.

The LNG Sponsor Group is currently evaluating synergies around sharing facilities with a southern-route lower-48 pipeline. There are cost-savings opportunities in the gas-treating plant and the pipeline transportation and compression from Prudhoe to the takeoff point.

We should also keep in mind that while sharing infrastructure will reduce costs, it will not eliminate [them]. The costs for treating and transporting would be realized either as capital or as fees [indisc.] We are in the middle of that evaluation, but intuitively we don't expect sharing alone to eliminate the competitive disadvantage of the pipeline.

We mentioned during session that we have already looked at the potential value of a joint public-private entity in Stage 2 and have found no compelling advantage to such a joint project at this time. We have communicated this as part of our ongoing discussions with the [Alaska] Gasline Port Authority, expressing to them, in part, that any benefits ... passed to private enterprise will then also be [taxable].

Further, public borrowing rates are unlikely to offset private entities' potential tax deduction of interest and depreciation. I would hasten to point out that does not preclude a public entity from developing a competitive [project] on its own.

Also ongoing is an evaluation of key risks and mitigation strategies for this project. While this work is not finished, there have been no ... big surprises to date. Risk items such as price, price and cost escalation, cost overruns, and other expected risk factors that are typical for any project of this size and magnitude are also very much a part of this LNG project.

While much of our Stage 1 focus was on East Asian markets, we are currently exploring the potential for alternate markets in the Lower 48 and Mexico. That effort is also in mid-cycle review and is on schedule for timely completion. We expect to find that the California[-Mexico] market is subject to the same market forces and that all other gas sources, including LNG import projects, will do their part to make ... this market fiercely competitive.

With this California-Mexico market focus, we have not forgotten about East Asian markets in our Stage 2 efforts. Marubeni continues to staff our Market

Liaison Office out of Tokyo to gather feedback and respond to market questions. We are also in the process of analyzing other competing ... LNG projects into East Asia and how these projects are estimated to compare to our efforts on a cost-of-service basis. That evaluation is on schedule for completion by the end of the year.

However, as we presented during session, Alaskan LNG has a long way to go to be cost-competitive, particularly on a unit-cost basis, into East Asia, primarily because of the 400- to 800-mile buried Arctic pipeline. The industry benchmark for capital cost per million tons per annum (MTPA), excluding ships, is reportedly around \$250 million per million tons per annum (per MTPA). Because of the pipeline, unit costs for our Alaska LNG stand-alone project are above [\$600 million per MTPA].

Finally, an externally generated environmental assessment for permitting the Nikiski route is nearing completion. Once that work is done, we will develop an overall permitting strategy for expeditiously moving forward with either the Nikiski or the Anderson Bay route and site, if market conditions and cost competitiveness improve to the point of initiating a project. While that external work has slipped about a month behind our schedule, it is still expected to be complete [prior to the end of Stage 2].

I tried to be quick, but hopefully this overview will give you a flavor for our past and ongoing efforts with the Sponsor Group. As stated, we fully expect to complete our Stage 2 work on time and within budget before the end of this year. Once we have all of our results, we will then be in a much better position to determine what, if any, next steps make the most sense for LNG.

11:48 a.m.

REPRESENTATIVE GREEN asked whether Mr. Alleman or Mr. Findling was present during the YPC presentation. [There was no audible answer.] He asked why there are such divergent views regarding LNG.

AN UNIDENTIFIED SPEAKER answered that it relates to different views of the marketplace. [Indisc.]

REPRESENTATIVE GREEN said YPC had shown a rather stable price. He asked whether, in Mr. Alleman's estimation, that cost will start to subside because of the additional supply of LNG

worldwide.

AN UNIDENTIFIED SPEAKER replied, "We're not discouraged by what we're seeing ... in the LNG marketplace [indisc.]." He acknowledged that it is competitive, there are a lot of different projects, and it could be expected to have some pressure on [indisc.].

ANOTHER UNIDENTIFIED SPEAKER explained what he believes is the fundamental difference:

We see an [indisc.] oversupply in marketing to Asia, and that oversupply looks more cost-competitive than we are. We just don't think the market, the buyers, are going to opt for a higher cost abroad until that lower-cost [LNG] has been cleared out.

11:50 a.m.

REPRESENTATIVE PORTER asked Mr. Alleman to expand on the idea that port authority or state ownership didn't seem to pencil out because of an offset in depreciation, for example. He said he'd thought the tax break and benefit would be substantial, whereas it sounds as though it is not.

AN UNIDENTIFIED SPEAKER restated the question, asking how it is that a public entity, which has a tax exemption, would not add value to a project.

ANOTHER UNIDENTIFIED SPEAKER answered:

The reason is, is that what we were looking at was a collaborative project between an entity like the port authority - or some other governmental authority that had tax exemptions - and a private entity like ourselves.

And the ... inability to have benefits comes from the following: Even if the revenues from the project are exempt from the income taxes [indisc.], when they try to pass benefits for that to us, in some form or fashion, it becomes taxable income to us. So what they were saving on one side may end up being an income tax on the other. So when you take the whole enterprise together, the tax savings here turn into tax [indisc.] there, and the overall project isn't [indisc.].

Now, what Steve [Alleman] mentioned in his testimony, that doesn't address the issue of where the public entity does the whole thing [itself]. It keeps those tax benefits for [itself] and doesn't try to pass them on to private entities. So we were looking at a narrow case of a ... cooperative project, and that's where the

tax benefit can be [indisc.], tax relief.

AN UNIDENTIFIED SPEAKER said that doesn't include any other combinations or some type of averages.

ANOTHER UNIDENTIFIED SPEAKER replied that [indisc.] a tax ruling that the tax exemption goes because of the fundamental governmental [indisc.].

11:53 a.m.

CHAIRMAN TORGERSON asked whether the partners in the study also will be partners in the project, and whether that decision had been made.

AN UNIDENTIFIED SPEAKER answered:

The way we have our project defined right now is that we buy gas from the producers, build and own a gas-treating facility, own the gas pipeline, own the LNG facility and the ships. There's several different ways to do that, ... but [indisc.] come in and own the pipeline - as you heard the question today, about "that may be a more effective way to do it." So that hasn't been settled to date, exactly how that ownership [indisc.].

CHAIRMAN TORGERSON, for scheduling purposes, noted that Mr. Alleman had said the Sponsor Group wouldn't have much more data until the end of the year to share with the committee. He asked whether that is accurate.

AN UNIDENTIFIED SPEAKER said he would be glad to let Chairman Torgerson know if something became available.

11:54 a.m.

REPRESENTATIVE DAVIES asked: Suppose there were a 50-50 equity partnership [indisc.]. Wouldn't the 50 percent of the equity that came to the state be subject to that tax advantage and, in fact, bring the overall cost of the project down?

AN UNIDENTIFIED SPEAKER responded that Representative Davies was correct. He added that the piece [the Sponsor Group] was looking at was where the port authority would provide a financing vehicle and, by doing so, [indisc.] some tax advantages to "us." The fundamental theory wasn't that [indisc.]. The idea was "to try to pass as much benefit, to make the project more attractive to us, and to [indisc.]." He added, "But you're correct: the expenses that a governmental entity [indisc.] the equity, those revenues that are derived from that [indisc.]."

11:55 a.m.

CHAIRMAN TORGERSON asked whether there were further questions; none were offered. He thanked the presenters, then announced that the committee would take a lunch break until 1:15 p.m.

Alaska Gasline Port Authority

TAPE 01-7, SIDE A

1:15 p.m.

CHAIRMAN TORGERSON noted that there was only a half hour for the following presentation; he suggested it may be necessary to continue it during the Fairbanks meeting [in August]. He reported that interesting discussions during the break with members had changed some of his own thoughts on "what their authority was."

AN UNIDENTIFIED SPEAKER noted that a member of the Alaska Gasline Port Authority group is the mayor of Fairbanks, Rhonda Boyles.

MR. CHARLES E. COLE, Vice Chairman, Alaska Gasline Port Authority (AGPA), came forward, noting that he was speaking at the request of George Ahmaogak, Sr., mayor of the North Slope Borough [chairman of AGPA]. He introduced the following people: Rigdon Boykin, senior partner in the national and international law firm of O'Melveny & Myers, LLP; and Brent Surpy (ph), senior vice president of Bechtel Corporation.

1:16 p.m.

MR. COLE informed members that AGPA, formed pursuant to Alaska Statutes in October 1999, is composed of the North Slope Borough, the Fairbanks North Star Borough, and the City of Valdez; it was ratified by the electorate of each of those communities in October 1999.

MR. COLE explained that AGPA's initial ordinance provided for ownership and construction of the gas line; that was the principal idea, with the premise of distributing the net revenues of the ownership of the gas line as follows: 60 percent to the State of Alaska; 30 percent to all communities throughout Alaska, with a minimum contribution annually of \$50,000; and 10 percent remaining with AGPA. Under its present concept, AGPA would use that 10 percent to reduce the cost of energy to outlying rural districts in Alaska.

MR. COLE addressed AGPA's mission. Beyond the previous description, the fundamental mission is to enable the development of ANS gas to the maximum benefit of all Alaskans. Ownership of the pipeline by AGPA offers the possibility - and likelihood - of substantially lowering the effective costs of transporting gas from the North Slope to the market, as well as improving the economics to a degree necessary to make development of that gas

financially viable.

MR. COLE reported that the group retained by AGPA consists of Bill Walker of Walker Walker and Associates, general legal counsel; Rigdon Boykin of O'Melveny & Meyers, LLP - "the brains behind the operation"; and expert organizations retained to help AGPA develop the economics of the project. He noted that AGPA has entered into a memorandum [of understanding] with Bechtel Corporation to develop cost estimates for the conditioning plant, pipeline, and LNG facilities at Valdez. Furthermore, the internationally known firm, Taylor-DeJongh, Inc., as well as Merrill Lynch, will perform financial modeling and act as financial advisors.

MR. COLE lauded Mr. Boykin, O'Melveny & Meyers, and Bechtel Corporation for their work. He noted that following [the presentation], AGPA would furnish "hard" numbers about the cost of the construction of the conditioning plant, pipeline, and LNG facilities in Valdez. Bechtel Corporation has put in 55,000 man-hours into the development of those numbers, he pointed out, and has provided a remarkable work product. Taylor-DeJongh has done the same, he added, noting that that firm has run numbers and continued to refine them for the past two years; those numbers also would be provided, along with the sensitivity analysis that firm has done based upon a number of variables.

1:22 p.m.

MR. COLE reported that the focus has changed a little over time, as AGPA has learned more about the project from work done by Bechtel, Mr. Boykin, and Taylor-DeJongh. The original premise was that [AGPA] would build and own the project, take the natural gas from the North Slope to Valdez, make LNG there, and sell it to the Far East. In order to do so, it was decided to make a comprehensive model that includes conservative costs - an estimate for all aspects of the line, including construction, financing, and operations. The costs would include development costs, permitting costs, and various financing fees and interest during construction.

MR. COLE mentioned working capital, six months of debt service reserves, and interest. He also noted that construction costs were to be all-inclusive: equipment; "capital spares"; construction; freight; catalysts and chemicals for the initial fill; commissioning and startup costs; engineering services; escalation of 8 to 10 percent, depending upon the facility; a 10 percent contingency; insurance; licensing fees and contractor risk; overhead; and fees.

MR. COLE told members AGPA was able to develop those hard numbers. In May 2000, Bechtel Corporation completed its [indisc.] cost study, based upon all the factors just mentioned. Then Taylor-DeJongh performed its economic modeling. The initial base

case provided a new cost estimate for the gas processing facility at the North Slope, the pipeline, and the LNG facility. That data served as a base for development of various alternatives. It also provided a realistic and fiscally conservative methodology for looking at solutions to improving the economics of the project.

1:25 p.m.

MR. COLE asked: Guess what we found? The answer: It didn't work. Out of these hard numbers, therefore, and by taking a hard look, AGPA reached two basic conclusions. First, the economics of the project clearly are affected by the amount of liquids, both as natural gas liquids (NGL) separated out on the Slope and inserted into the pipeline, and as propane separated out as liquid propane gas (LPG) in Valdez. The value of these liquids, as shown in the financial report, is substantial. Second, the project needs to be combined with other potential projects in order to share the cost of the pipeline and the gas conditioning facilities. Furthermore, since June 2000 the economics have changed substantially in the East, Mexico, and the Lower 48.

MR. COLE reported that based upon the cost information put together by Bechtel Corporation and the financial modeling of Taylor-DeJongh, AGPA now believes the most economic and beneficial project - for both Alaska and the producers - is a two-project "Y" line, with one branch to the Lower 48 along the highway, split at "Big D," and the other branch going down to Valdez along the Alyeska pipeline route. In addition, there would be a spur line from Glennallen to Anchorage.

MR. COLE explained that AGPA believes using one or both of these routes would substantially reduce the potential for "environmental assaults" on the project and related delays. In addition, the economies of scale would be improved by combining these two projects, reducing the pipeline cost for each project from \$7 billion to \$4.85 billion - a savings of slightly more than \$2 billion for each project, for a total savings of \$4.3 billion.

1:28 p.m.

MR. COLE listed components of the "Y" line project: a conditioning plant on the North Slope with the capacity to condition sufficient gas to put into a 6-BCF/D; a 550-mile, 56-inch-diameter pipeline operating at 2,220 maximum pounds per square inch from the North Slope to Delta Junction; a 150-mile, 44-inch-diameter branch line carrying 3 BCF/D to the [Canadian] border along the "Foothills route"; a fractionation plant in Calgary or the U.S. to extract the LPG from the lower-48 branch; a 256-mile, 46-inch-diameter pipeline also carrying 3 BCF/D to Valdez; a spur line to Anchorage from Glennallen; a fractionation plant to extract the liquid propane in Valdez; and a 15-million-

tons-a-year LNG plant - fully ramped up - and port facilities in Valdez.

MR. COLE provided figures for the "hard" costs: \$4.2 billion for a conditioning plant; \$9.7 billion for the pipeline, including the two branches; \$450 million for the LPG fractionation plant at Valdez; and \$3.65 billion for the LNG plant and port facilities. Therefore, the total construction cost would be \$18 billion.

MR. COLE next listed the "soft" costs: nearly \$5 billion for interest during construction; \$900 million for an owners' contingency; \$1 billion for debt service reserve; and \$1 billion for fees and working capital. Therefore, the "soft" costs would total \$7.8 billion, approaching 50 percent of the construction costs.

MR. COLE noted that subtracted was preconstruction revenue of \$3.2 billion. Therefore, the total financing cost is somewhat over \$22 billion. He said these are "pretty good numbers." He cited the vast experience of Bechtel Corporation in this area, reiterating that Bechtel had spent more than 50,000 man-hours in developing those numbers.

1:33 p.m.

MR. COLE acknowledged this isn't the only way it will work. He reiterated that the thinking of AGPA has changed as the numbers have been developed and reworked; they are prepared to make the numbers available with the hope that further optimization of the design will reduce costs even further. However, from their standpoint, the project has been demonstrated to be financially viable, and it should be attractive to producers, the state, and Alaskans in general.

MR. COLE reiterated that when AGPA started, the mission was just the LNG plant from the North Slope to Fairbanks and down to Valdez. The shift in focus came because that project didn't work economically.

MR. COLE reported that the financial results of the two-project Y line show it would yield to the producers \$2 to \$3 billion per year, and to the state \$750 million. Payments in lieu of taxes could be made, approximately \$150 million. Available to communities throughout the state would be \$110 million, and for the construction of infrastructure the cost would be \$37 million.

MR. COLE listed the benefits of a port authority concept: the income from the venture will be tax exempt; the port authority can finance this project with nearly 100 percent debt - some of the bonds would be tax exempt, and project financing would be non-recourse financing; the port authority has substantial political advantages both within and outside the state; and the port authority would not be subject to FERC and could distribute

a lot of money in-state. Mr. Cole told listeners:

I have long felt that we in the state of Alaska must be on guard to make sure that our residents and our consumers don't get ripped off by the cost of energy that we supply to the country. We people in Alaska should realize consumer benefits to our crude oil and to our natural gas. ... The port authority concept would give us more control over costs of this natural gas, which I think is very, very important.

1:38 p.m.

MR. RIGDON BOYKIN, Senior Partner, O'Melveny & Myers, LLP, said they had prepared a slide of an economic analysis of what the liquids do. He explained:

For example, I think you heard earlier today one of the groups said that LNG is not economic and it would cost \$700 per ton of production versus what the norm is with between \$200 and \$300 per ton of production capacity. That's true on the surface. However, if you allocate liquids to reduce that cost, it brings us to a competitive position worldwide.

This slide basically does that. It basically shows you that, where they get the \$700 per ton of LNG. It basically comes from the LNG plant [indisc.] \$273. The pipeline adds another roughly \$300, and the conditioning plant adds another \$140. However, if you take the benefit of the LPGs, the propane, that will [be] taken out, whether it's in Calgary or in Valdez, and offset this; it brings the cost per ton of LNG down to \$340. That's at \$12.50 per barrel for the LPGs.

If you assume a \$15 price, for example, for the LPGs, which is probably closer to a historic price, it would reduce the EPC cost per ton to \$267. So, that's the real comparison you ought to use when you're looking at this project versus a project in Darwin or wherever.

MR. BOYKIN went through the benefits, saying he'd put in a little more over 8 BCF into the processing facility and had taken out a little over 2 BCF of carbon dioxide and other chemicals that can be reinjected in the wells. He added, "So we're actually buying a little over 6.7 BCF of gas."

MR. BOYKIN noted that they'd decided to establish a benchmark to measure things against, and they'd posited a price of the gas at the wellhead of 75 cents [indisc.] on a absolute off-the-top basis and 35 cents as a subordinated payment.

AN UNIDENTIFIED SPEAKER asked how that number compared with

Chambers'.

MR. BOYKIN replied that Chambers was talking about the range of 70s in one of their studies. He used 75 cents at the wellhead for the producers, and they decided to use extremely conservative prices for the sale of the gas and LNG. He added that he "hoped like the devil that Jeff's numbers and others panned out, but he couldn't use them because they are not a good historical average they could finance off of." He said they assumed a price of \$3 for the sale of gas in Chicago and a price of \$2.50 at Valdez for LNG. This equates to roughly a price of \$3.10 in Japan. They also assumed a tariff from the Alaska-Canadian border to Chicago of \$1.20, a number derived from Canadian transporters.

MR. BOYKIN said in the slide he was presenting, the really significant number is 120,000 barrels of propane extracted in Valdez and 140,000 of LPG extracted somewhere in Canada or Chicago down the line; he indicated there is a huge value to those numbers. The benefit to producers from 75 cents per MBTUs would be a little over \$2 billion per year. The state would get in \$371 million royalty and severance tax, \$81 million in royalty and severance tax on the NGLs, and \$148 million in corporate income tax.

MR. BOYKIN reported that he assumes [indisc.], which would be less than the customary 20 mils, of \$114 million, and the \$222 million for the state and the \$148 million, which would go to Alaskan municipalities (\$111 million directly and \$37 million to build infrastructure to deliver gas to non-pipeline-corridor communities). Even after doing all of that, \$532 million will be left over. That can be distributed to stakeholders in the process, whoever they might be. It could go to increasing the 75 cents to the producers, or it could be used as a cushion. It could also run sensitivity studies. If the price for LNG and gas is 10 cents higher, it would generate \$200 million extra per year. So if it were \$4 versus \$3, basically, that amounts to \$2 billion per year. He said he doesn't believe it will be \$4, however. He believes it will be closer to CERA's prediction of \$3 to \$3.25.

MR. BOYKIN said in any event, the decrease in interest rates of one-half percent will increase revenue by \$120 million per year. An increase in the sales price of the NGLs and LPGs of \$2.50 per barrel increases the revenue by \$300 million per year. And a reduction in the construction costs, for example, using existing equipment on the Slope, increases the amount available for distribution by \$120 million per year. The AGPA has a lot more data available in the study prepared for the committee. He noted that if the committee wants any sensitivities run, AGPA will be glad to do that; he offered to give the committee access to special data as well.

CHAIRMAN TORGERSON announced that he would like to pick this

topic back up when the committee meets in Fairbanks on August 14 and 15.

MR. COLE said he could furnish the committee with a 40-page presentation that contains very detailed data; that will give committee members time to study the data before the next meeting.

CHAIRMAN TORGERSON noted that one of the reports is marked confidential.

MR. COLE asked Chairman Torgerson to use his discretion about its use. He suggested using the data to ask questions of other parties to test the data itself.

REPRESENTATIVE FATE asked if the models will be available to other investigators on the pipeline so that the committee can ask questions later regarding whether the models can become benchmarks to measure data against.

MR. BOYKIN or MR. COLE replied that the answer is yes and that they would encourage that. He noted if people don't ask everyone the hard questions and challenge assumptions, "we're never going to get there." He feels AGPA will be better if challenged, as will others, and hopefully out of that process something [better] will be developed than any single entity has.

MR. COLE said if, after studying the data, the committee would like AGPA to run further assumptions before the next meeting, AGPA would be pleased to do so.

REPRESENTATIVE OGAN asked if Mr. Cole's statement, that the AGPA is not subject to FERC, is based on the assumption that it will be shipping to Japan. He asked what the situation would be if AGPA shipped to the West Coast. He pointed out that the committee has heard some conflicting viewpoints in the last few days; for example, if one molecule goes to the West Coast, FERC will have its fingers in the pie.

MR. COLE said that is true for a private project; however, this is a government-owned project that is defined out of the Natural Gas Act, so it would not be subject to FERC jurisdiction even though a branch of the pipeline will eventually get gas to the Lower 48.

REPRESENTATIVE OGAN asked if Mr. Cole has looked at the possibility of AGPA owning the pipeline to that point.

MR. COLE said he believes so; however, the economics would be maximized to the degree AGPA owns everything across the entire state, because the return AGPA is willing to accept is much lower than the return anyone else is willing to accept. AGPA would basically be transporting gas across a greater distance for a fraction of what a private entity would charge. That enables

AGPA to give a higher price to producers and give a lower price for in-state use.

SENATOR KELLY asked whether municipal- or government-owned pipelines anywhere else that are transporting gas for interstate use are not regulated by FERC.

MR. COLE said there are a couple of small lines in the South, to his knowledge.

SENATOR KELLY asked if that gas is utility gas.

MR. COLE replied that it is hooked in to make the pipeline, so it would be in interstate use. He noted that if it were owned by a private entity, it would be subject to FERC jurisdiction; however, FERC has explicitly disclaimed jurisdiction on it.

1:53 p.m.

REPRESENTATIVE DAVIES asked what AGPA's assumption is regarding when the pipeline gets to the Canadian border. He asked if the economic model is based on the pipeline to the state boundary or whether the analysis is based on the pipeline to Henry Hub.

MR. COLE said AGPA talked to producers in Canada regarding what the cost would be for them to do it from the Canadian border down to Alberta and from Alberta to Chicago. Those studies have been done, so it didn't make sense for AGPA to duplicate that. The number reported was that the charge from there would be \$1.20.

REPRESENTATIVE DAVIES asked what his assumption is about ownership.

MR. COLE said AGPA is assuming it would not own it.

The committee took a brief at-ease from 1:55 p.m. to 2:05 p.m.

Kenai Peninsula Borough

MR. DALE BAGLEY, Mayor, Kenai Peninsula Borough, said their group includes representatives from the Mat-Su as well. The Cook Inlet Pipeline Terminus Group's main goal is to promote a Cook Inlet route that provides the most benefit to Alaska. He told the committee:

We're not proposing to build the pipeline, but if there is going to be an LNG pipeline to tidewater, we are advocating that it should be a Cook Inlet route instead of a Valdez route. ...

Thirty-five TCF of natural gas has been discovered on the North Slope, and no one has been looking. When a pipeline is built, search for natural gas will begin.

There are some predictions that 100 TCF will be discovered on the North Slope. To put this in perspective, EnStar provides for the natural gas needs of 100,000 consumers in the Mat-Su, Anchorage, and the Kenai Peninsula. They use approximately 50 BCF of natural gas per year. Thirty-five TCF ... would last prime EnStar consumers for 700 years. Actual reserves could actually last consumers for over 2,000 years.

The bottom line is that there is plenty of natural gas for in-state use as well as export use. There is enough natural gas on the Slope for an LNG export pipeline, gas-to-liquids production, and a pipeline to the Midwest.

BP is currently constructing an \$86 million gas-to-liquids pilot plant in Nikiski. The Midwest Canadian gas pipeline is becoming more likely every day. If the in-state LNG pipeline is filled along with the Midwest pipeline, both projects can share costs from the North Slope to Fairbanks, making both projects more economically feasible. Both groups that are proposing an LNG line are looking to share costs with the Midwest line to Fairbanks. The important point is these projects are not in competition with each other. There is enough gas for one LNG export pipeline, gas-to-liquids production, and a Midwest pipeline.

Phillips has been producing, shipping, and marketing LNG from Nikiski for 32 years. Since acquiring ARCO, Phillips now has a 44 percent ownership in the Sponsor Group. Foothills Pipeline, a Canadian firm, has Arctic natural gas pipeline construction expertise and experience. Foothills is also looking at the Midwest pipeline. Marubeni Corporation, a Japanese Company with Asian market experience, has opened a Sponsor Group office in Japan. BP is a recent addition to the Sponsor Group. BP would like to see natural gas and a gas-to-liquids pilot plant in Nikiski. They are also looking at the Midwest pipeline.

These are the right players. They have the natural gas reserves. They have the expertise and experience that comes from decades of producing natural gas. They have worldwide natural gas marketing experience. They have successfully permitted and built projects throughout the world.

The Sponsor Group has successfully permitted and built projects throughout the world. The Sponsor Group has finished phase one of their feasibility study. They spent \$20 million on their first phase and are now in phase 2. During the first phase they considered routes

all across Alaska. They narrowed their choice to a Cook Inlet route and a Valdez route. Soon they'll make a decision between the two routes. On the map you'll see the proposed Cook Inlet pipeline follow the oil pipeline from the North Slope to Fairbanks. From Fairbanks, the proposed pipeline would branch off to Cook Inlet.

The port authority group is proposing a line to Valdez with consumers in the Southcentral area paying for residential lines to Southcentral. If the over-the-top route happens, it may be even longer before a stand-alone LNG North-Slope-to-tidewater pipeline will be economically feasible.

The Cook Inlet LNG line will be a \$7 billion construction project. In addition to the pipeline, there will be a conditioning plant on the North Slope and a billion dollar LNG plant. There will be jobs during the engineering phase and during pipeline construction. There will [be] jobs along the route and at the LNG plant located at the pipeline terminus. There will be jobs from support industries that will develop throughout the state. These will be quality jobs that will promote growth in Alaska and will create many more jobs throughout our economy. Consumer needs, industry needs and space for new industry - these are the three main reasons for a Cook Inlet LNG line.

On consumer needs, the gas reserves in Cook Inlet are declining and are not estimated to last longer than 20-30 years. Locating the terminus on Cook Inlet is the only option that serves the majority of Alaskan consumers. Seventy percent of all Alaskans live along the route or in the Cook Inlet area. There are consumers along the route including Fairbanks, Nenana, Healy, Denali, and Talkeetna. Anchorage has many residential and business consumers.

Mat-Su is the fastest-growing area in Alaska. This growth needs natural gas. The Point MacKenzie project would use this gas to expand their industrial area near a port. Natural gas could be used to make electricity, fertilizer, fuel cells, and things that we haven't even thought of yet. Nenana could use barges to ship compressed gas or LNG to villages in the Bush. This pipeline should benefit the majority of Alaskans.

MR. BAGLEY showed the committee photos to illustrate his testimony. He said Anchor End is the biggest taxpayer and largest employer on the Kenai Peninsula (\$30 million annual payroll). It is the largest fertilizer producer in the world; it recently bought this plant, has plans to expand the facility, and

needs plenty of gas.

MR. BAGLEY said Phillips has been producing LNG for 32 years, with their tankers coming into Cook Inlet every 10 days. Their LNG facility in Cook Inlet is known across the world as a premier plant and serves as a prototype for new facilities. Furthermore, Southcentral Alaska has thousands of residents who work for natural-gas-dependent industries; if their needs continue to grow, there will be less gas available for industry use. The Alaska natural gas pipeline would protect these jobs.

MR. BAGLEY told members Cook Inlet has space for a large LNG facility and new industry. Industry has looked there, but there wasn't a guaranteed supply of natural gas. Having a guaranteed supply of natural gas opens up possibilities for communities along the Cook Inlet route. He reiterated that the three main reasons for the Cook Inlet LNG pipeline are: to provide for in-state consumers, [to provide for] industry, and because they have the space for the LNG plant and new industry. He told members:

Every August, we have an industry appreciation day to thank the oil and gas industry, as well as commercial fishing and tourism industries. You are all invited to join us this year, Saturday, August 25, Kenai Green strip, for the Industry Appreciation Day Celebration.

...

Cook Inlet is wide and safe. The narrowest part is 12 miles wide. The natural geology of upper Cook Inlet protects from tsunami damage. Last year 1,000 shiploads of natural gas was safely shipped through Cook Inlet.

MR. BAGLEY continued to say that Cook Inlet has a close relationship with the natural gas industry. The regulatory agencies are in place and are familiar with Cook Inlet natural gas production and transport. Cook Inlet has a trained work force and the infrastructure to support expanding the natural gas industry. He added that in-state gas needs should not be ignored.

MR. BAGLEY reported that the Kenai Peninsula Borough has discussed the port authority concept; if it is needed to make an LNG line economically feasible, they are prepared to team up with other municipalities and make it work for them too. He remarked, "At this time we are in the wait-and-see mode on that."

REPRESENTATIVE OGAN said there was no doubt in his mind that as far as the total benefit to Alaskans, LNG is probably going to provide more benefits to Alaskans than any other project. He asked what Mr. Bagley thought.

MR. BAGLEY replied that he thought an LNG facility and terminus

at tidewater were very important. He didn't have a problem with a Midwest line either. He hoped the economics would change enough for the Sponsor Group to consider an LNG line to tidewater in Cook Inlet for the reasons he'd outlined.

REPRESENTATIVE GREEN asked if the attitude in the Nikiski or Kenai areas is that if the energy was there, that community would still welcome the spin-off types of industries.

MR. BAGLEY responded that they would be very receptive to new industry.

AN UNIDENTIFIED SPEAKER said he was on the assembly of Nikiski for 14 years, and they had been inundated with a lot of ideas about new industry. He said they have repeatedly been told they have less than a decade of natural gas reserves. They would support at least a spur coming down to serve Anchorage and Mat-Su.

CHAIRMAN TORGERSON announced an at-ease from 2:17 to 2:19.

Williams Energy Services

MR. JEFF COOK, Vice President, External Affairs, Williams Energy Services, introduced the new president, Diane Prier, who previously served as Vice President of Operations at their Rocky Mountain mid-stream operations. Williams is forming a dedicated team to study the commercialization opportunities with Alaska natural gas. It has 10 members and is called the Williams Arctic Project Team. One of the members is Wayne Buck, lead for the Regulatory Government and Community Affairs. He most recently lived in Kentucky and now lives in Tulsa. To make the presentation today was Mr. Caven Carlton, who has been serving as director of Business Development, but is now the project team director.

MR. CAVEN CARLTON told the committee, "We're not here pitching our own project, even though we have a lot of economic interest in participating in a natural gas project and the associated opportunities." He offered a slide presentation, noting that Williams has about 14,000 employees nationwide and 500 in Alaska. Their energy assets stand across North America, and they are currently the second-largest natural gas pipeline company in North America, behind El Paso, which took the lead from them two years ago. On an average day, they move about 20 percent of all natural gas that moves in North America. They have probably the largest natural gas-to-liquids gathering process of any pipeline network in North American, and that gives them the opportunity to add value to this project.

MR. CARLTON reported that in Alaska, Williams has a 200,000-barrel-per-day refinery at North Pole and an almost billion barrel terminal in Anchorage, as well as a minority interest in

the TAPS line. They currently market the royalty oil for Alaska and pay about \$12 million in taxes to the state.

MR. CARLTON explained that his sixth slide highlighted their core values and beliefs. They have commitment to communities. Cuba Waddlington, their president this year, serves as the National Chairman for United Way of America and won the Spirit of America award, which is given to the best corporate citizen for United Way.

MR. CARLTON highlighted the four major points about their view of an Arctic pipeline project. First, they believe Arctic gas is necessary to meet North American demand growth. Second, they think it is essential that opportunities within Alaska be analyzed, which goes to the heart of their petrochemical feasibility study. Third, they are in strong support of the Alaska Highway route as being the best and fastest way to get gas to market. And fourth, they think this project will benefit significantly by participation of more strong pipeline members.

MR. CARLTON addressed the first point. A compilation of studies on natural gas forecasts say by 2010 there will be about 19 BCF/D of natural gas demand growth in North America. They believe conventional supply sources, including the western Canadian sedentary basin, will generate about 10-15 BCF/D of supply growth during that period. That makes a 4-9 BCF/D shortfall that will be needed by 2010 in order to get to the 30 BCF/D. He commented, "Arctic gas would certainly fill that hole."

MR. CARLTON summarized the next four slides, saying they are a detailed study of how they believe the gas will flow through the North American market once it hits the Chicago line. They don't believe all of the gas will go to Chicago, although a large part of it would. They are a 14 percent minority-owner of the line going there; on the West Coast portion they own 24 percent. The Northwest Pipeline System that serves the Pacific Northwest also has significant expandability and can accommodate some of the gas going there.

MR. CARLTON reported that one area that needs to be sufficiently addressed is how to minimize risk associated with this project. He remarked, "It is a several-billion-dollar project, and that level of risk and the long lead time [have] a tremendous ability to push back or potentially prevent this project from happening." He pointed out that the Energy Marketing and Trading business has been set up to mitigate those risks and to look at how they could help with the state's royalty gas to minimize that risk to the state. He said certain fixed-pricing arrangements they could enter into would allow that to happen.

MR. CARLTON noted that Slide 15 illustrates that a collar is a combination of a cap and a floor. A "swaption" is a combination of a swap and an option, which gives the state an option, at some

point in the future, to enter into a swap arrangement. This is where Williams sets a predetermined price, for instance \$3 for the gas; if the price realized for that gas is lower than \$3, "we essentially bear that risk." If it's higher than \$3, it's essentially trading risk and giving certainty and guarantees going forward. He said this is not unique to Williams. He added, "There are a number of other strong energy marketing and trading companies We're certainly very proud of our own trading and marketing outfit, but there's a very health marketing and trading industry in North America."

MR. CARLTON skipped to Slide 18, "Opportunities Within Alaska." Williams is initiating a feasibility study for in-state gas use and an in-state petrochemical industry. Their team is assembled and is putting together a detailed action plan. There are 100-150 separate bullet items they have identified that need to be researched and analyzed before they can conclusively say whether it's feasible to have a petrochemical industry in Alaska and what investment opportunities there are. He didn't have any answers today.

MR. CARLTON explained that there are a lot of complexities involved with in-state uses, like moving a high-pressure in-state pipeline system and wanting to have a small delivery off of it; it's challenging economically to make that work. He added, "Not to say that it can't work, but that is an avenue that has to be explored."

Mr. CARLTON said second, they are looking at whether there is an opportunity to do things like natural gas power generation, which is exploding all across the Lower 48. The latest statistic he heard is that every other day, for the next two years, a new natural gas-powered generation facility will come online. Williams wants to build power generation facilities along with their gas pipeline facilities. He added, "We've been extremely successful in accomplishing that. ... I think right now our portfolio is about 15,000 megawatts of natural gas power generation."

MR. CARLTON said they are looking at petrochemical opportunities in the state. First, one must look at removing the natural gas liquids. There are ethane and propane and C4/plus, which is probably less likely to play a part in a petrochemical business in the state. He highlighted that the volume of natural gas liquids that might be needed to have a viable petrochemical industry in the state would be minimal if the economics work. They would not need all of the natural gas liquids in the state. For example, he said, "If you were to build a world-scale ethane cracker in Alaska, you would use approximately 8-10 percent of the ethane in the gas line. This could give Alaska a large foothold for the petrochemical industry."

MR. CARLTON said a key point is that if the industry does make

sense here, the infrastructure issue will have to be addressed. Williams has significant infrastructure in Alaska today, with a 200,000-barrel-per-day North Pole refinery; it is situated on 600 acres and is uniquely situated best for other opportunities if they work economically. He emphasized that they have significant amounts of "pet-chem" experience across North America, providing 200,000 barrels per day in NGL food stock and producing ethylene and propane at a refinery in Memphis and two different locations in Louisiana. They also currently have a project going in Red Water Facility.

MR. CARLTON explained that Slide 21 provides an idea of what their facility is capable of. Yesterday it produced 42,000 barrels of jet fuel, and it is one of the major suppliers of jet fuel in North America.

2:38 p.m.

MR. CARLTON told members, "The Alaska Highway route is the preferred route for this pipeline." First, the belief is that this route can be placed in service considerably earlier than any other route by at least a few years; he thought it could be in this decade. Second, they feel it is essential that the regulatory, environmental, political, and technical hurdles associated with an over-the-top route not be underestimated. Third, a stand-alone Mackenzie Valley pipeline can be built when those supplies are ready, but they are not ready now. He added, "There are still several years of exploration and production work that need to take place ... before they could finance a pipeline of that magnitude."

MR. CARLTON noted that the next point Williams makes is that pipeline participation is extremely important in this project. He said:

I'm referring to a company like Williams or major pipeline companies in North America. One of the things that accompanies a large, capital-intensive, long pipeline project is delay and the numerous amount of hurdles ... that must be achieved. ... It is an extremely complex, time-consuming process. This is something that over the last 90 years has become what we do.

MR. CARLTON explained that they think it's important that healthy working relationships be formed with key stakeholders along the right-of-way, and that there be a significant amount of consulting. They have already consulted in the Yukon Territory with key aboriginal groups along the pipeline right-of-way for the Alaska Highway route there. He remarked, "That was extremely well received."

MR. CARLTON made a further point: in North American all long-

haul natural gas pipeline companies are owned and operated by natural gas pipeline companies. There are probably one or two exceptions of a short-haul offshore type where producers own their systems. He said, "Pipelines can add value if you get this project happening." This would be their highest priority. He added, "Currently, Williams has about \$30 billion in assets and estimates have been made of \$20 billion for the potential cost of this project. That gives you an idea of just how large this project is."

MR. CARLTON referred to Slide 25 and said Williams had been involved with this project since the 1970s and was the project director for the Alaska portion of things. In 1994 they had 750 employees and contractors, at their peak. They were extremely involved in selecting the routes.

MR. CARLTON turned his attention to Slide 27, pointing out that those were their expansion projects. They have approximately \$4 million - \$5 million of gas pipeline expansion projects that are lined with steel today.

MR. CARLTON next addressed Slide 28, which shows a 900-mile large-diameter pipeline scheduled to deliver Rockies gas to southern California. In 1985 this idea first came up. They were successful in getting numerous stakeholders onboard to get it built, getting it in service in 1992. They have just started expanding it from 700 MCF/D to 2 BCF/D, which should be completed by 2003. It's the largest expansion in a pipeline ever, showing Williams' experience in building complicated pipeline projects over a long period of time.

MR. CARLTON said their Gulf Stream pipeline project is \$1.6 million project and they partner with Duke Energy. It is the only undersea long-haul pipeline in North America. They broke ground on June 1, 2001. Slide 31 shows that Williams purchased the largest LNG import terminal in North America, about an hour south of Washington, D.C. They are reacclimatizing that facility to go into service next year. Slide 32 shows that they have established the 10-member team to pursue Arctic development.

MR. CARLTON urged anyone to call with questions and offered to answer questions from the committee.

REPRESENTATIVE DAVIES asked if Williams is one of the [indisc.] partners.

MR. CARLTON replied that Williams is a partner. He added, "Most of the key players that are out today are [indisc.] partners. So, we're not unique." He said he thought this project would need at least one strong U.S. pipeline company and at least one strong Canadian pipeline company in order to capitalize on their knowledge and experience, both technical and regulatory.

[AN UNIDENTIFIED SPEAKER asked a question about developing a smaller scale project in Alaska; the answer was indiscernible.]

2:49 p.m.

MR. CARLTON said he'd heard that it is not technically possible or attractive to take out natural gas liquids in the state, and that the primary processing would be in Alberta.

REPRESENTATIVE GREEN referenced the slides showing anticipated growth that stopped with the Ohio-West Virginia area. He asked if that was because they don't serve the Eastern Seaboard states or is because of some other reason.

MR. CARLTON replied that Williams' largest market is the Mid-Atlantic. He has tried to approximate existing natural gas pipeline corridors.

REPRESENTATIVE GREEN asked why long-haul pipeline are operated by pipeline companies rather than owner-transporters.

MR. CARLTON replied that historically all expansions of all natural gas long-haul pipelines are built, owned, and operated by pipeline companies. He said there is no decided advantage. Natural gas pipelines have been looked at as a lower-term investment than other opportunities. Williams is eager to invest capital in it.

REPRESENTATIVE GREEN said Slide 27 shows a significant expansion (\$5 billion) going on right now. He asked, if Williams became heavily involved in a gas transportation line, whether that would be a significant amount of their total worth. He also asked if the company was in a position to take another expansion like that.

MR. CARLTON responded that they had no uncertainty whatsoever. He added:

We are extremely eager to take a key role in an Arctic pipeline project What I want you take home from this slide is not that we're stretched and don't have any more resources; it's that we're gathering more experience today in building pipeline than anyone else. ... Most of our growth has happened on expansions to our systems.

REPRESENTATIVE GREEN said they have an anticipated growth of \$700 million to \$2 billion, almost a 300 percent increase. He asked how they accomplished that fantastic growth.

MR. CARLTON replied that commercially the capacity was set up for 700 MCF/D. This is the only pipeline that takes Rockies gas to southern California. It provides direct access; they don't have

to go through a local distribution company. "It is a very premium pipeline," he added. He said at the time it was built, they knew it would be expanded. So it was planned and done at or below the existing toll. With the California situation, there has been huge demand to get new natural gas supplies into the state. In March of this year, he said, "we approached the FERC and said, 'We have the ability in three months' time to add 135 MCF/D to the system, and we need your help.'"

MR. CARLTON said it usually takes one or two years to get a pipeline project certificated. He added, "I think it took us three weeks that FERC approved our project. It's the fastest it's ever happened in the history of FERC."

2:57 p.m.

REPRESENTATIVE FATE asked what he meant that economies of scale are difficult, yet along some of their pipeline they have created power generation at a very minimal cost. He asked if they had determined the cost of the small power generation along that pipeline.

MR. CARLTON answered [most of his answer was indiscernible], "I think if [it] can have loads on the order of 100 or 200 MCF/S, it becomes much more feasible. It's whenever you look at your 5 to 10 MCF/D that it becomes more of a challenge economically, especially on an high-pressure system."

REPRESENTATIVE FATE said they wanted to review some of the assumptions to see if they could outlet the gas at high pressure to a liquefied natural gas plant, for example, where it crosses the Yukon River.

MR. CARLTON offered assistance on that, saying they have four LNG production facilities on their pipeline system today.

REPRESENTATIVE OGAN asked how Williams overcomes the hurdle of wanting to build a pipeline without owning any gas.

MR. CARLTON said that was a good question. He added, "It's very clear to everyone including us that the producers hold the cards." He said their goal was to find a way to work with the producers. They are not trying to compete with them, but want to position themselves to add significant value to this project.

CHAIRMAN TORGERSON said he looked forward to getting an update in Fairbanks.

#sb221

3:03 p.m.

SENATOR ROBIN TAYLOR, Alaska State Legislature, sponsor of SB 221, first thanked the committee for taking the amount of time

they have on this issue. He then brought attention to SB 221, which provides for an all-Alaskan pipeline and is the only legislation pending that would do so. His primary concern in introducing it is jobs for Alaska, and following that, "Alaskans need to be on the construction of any future pipeline, a partial owner, if not a total owner of the project, so that Alaska, for the first time, receives a true fair share of the project."

SENATOR TAYLOR noted that many have said producers and owners have to be in agreement before any gas goes down a pipeline. He commented, "Well, Alaska happens to be one of those owners, and it's high time that gas was no longer locked and frozen on the North Slope, but was freed up. And it has to get to at least a deep water port before it can be provided to world markets."

SENATOR TAYLOR said an all-Alaskan pipeline to Valdez is not only possible, but the permits exist today, and YPC has pledged to contribute their permits to this project should the legislature pass it. He commented that he was disturbed by the remarks of Mr. Small [of Cambridge Energy Research Associates (CERA)], who indicated that if in the future Alaska wishes to build a pipeline to the Midwest, Alaska will have to have to be "more conciliatory" towards the Canadians. He stated:

The idea of having Alaska's heritage and future held hostage by foreign governments and foreign politicians is disturbing to me. I am comforted by the fact that we have sufficient gas on the Slope of known reserves today - to say nothing of what the potential reserves are for our future - that Alaska can easily develop both pipeline projects. That is, we can first develop an all-Alaska pipeline following the existing corridor and branching off probably at Glennallen and going to the Anchorage bowl. If there's anything that will provide long-term jobs and security for the people of Alaska in the development of its gas resources, it is [an] all-Alaska pipeline.

SENATOR TAYLOR said there is significant support throughout the Alaskan community for this proposition. He also mentioned that the liberal government in British Columbia is going to move forward in developing gas resources off the coast of British Columbia. Furthermore, Bolivia announced yesterday it would be building a \$5 billion, 5,000-mile natural gas pipeline and tanker route, taking landlocked gas out of Bolivia and shipping it into Mexico and then to California. He stated:

The rest of the world is trying to take advantage. If we have to wait for the owners to get onboard for the producers to be happy, for us to secure enough support from the Canadians that they're willing to now talk to us about how many jobs they're going to develop, if we wait for all those things to occur, I firmly believe

the markets are going to filled and the window of opportunity will be lost.

SENATOR TAYLOR concluded by saying he looked forward to discussing the all-Alaskan gas pipeline project with the committee. [End of discussion of SB 221.]

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3:09 p.m.

The committee took an at-ease.

3:40 p.m.

CHAIRMAN TORGERSON announced that the Joint Natural Gas Pipeline Committee meeting had begun for the purpose of discussing committee business. He noted that the next meeting will be held in Fairbanks on August 14 and 15. He will work on the agenda. Representative Davies will be requesting that the committee meet at the conference room at the University of Alaska. He noted that the September meeting will be held in Kenai but the dates have not been set yet. The October meeting will be held in Anchorage.

REPRESENTATIVE OGAN asked about the sound system at the Fairbanks facilities because he has been getting reports that the current meeting has been difficult to hear in Juneau. He also reminded Chairman Torgerson that the Council of State Governments and the Community Council will meet.

CHAIRMAN TORGERSON said he is not aware of the sound system in Fairbanks, but he added that the Anchorage LIO meeting room has never been used before; they know now to add a microphone for the testifiers.

REPRESENTATIVE DAVIES said he hopes to secure the Board of Regents' conference room in Fairbanks because it has a good sound system.

CHAIRMAN TORGERSON asked members to contact him about any particular items they want placed on the agenda for the next meeting. He plans to finalize that agenda around August 1, and he plans to schedule a presentation from the port authority groups and from the expert on state ownership. He hopes to have an update from the administration on sharing some of its ongoing studies. He also plans to ask the FERC to send a representative and to ask Nan Thompson from the RCA to attend so that the two can discuss who has the authority. He found the presentations by the FERC and RCA representatives to be confusing and contradictory. He will send letters to them with questions to be answered.

CHAIRMAN TORGERSON informed the committee that the second item of

business pertains to approval of committee travel to Whitehorse, Yellowknife, Vancouver, and Edmonton to visit with their legislative counterparts to establish a better line of communication. He has been in contact with all of them. He just left Calgary and set up good contacts there. He noted that Ronda Thompson has created a preliminary schedule.

MS. RONDA THOMPSON, Staff, International Trade Office, Alaska State Legislature, informed the committee that because they will be traveling during the summer months, they have a better chance to use ERA airlines and fly directly from Anchorage to Whitehorse. Direct flights are available on Monday, Wednesday and Friday. She suggested leaving on July 30 or August 1.

MS. THOMPSON informed members that to accomplish the goals of the committee, they will need to spend a couple of hours in the Yukon. It is also most important that the committee spend a fair amount of time in Yellowknife with Ministers Kim Antoine and Roger Allen; they have visited the Alaska legislature many, many times. Ms. Thompson noted that elections were recently held in Alberta; the new cabinet is very anxious to meet with the committee and Premier Klein in Edmonton. Ms. Thompson also mentioned arrangements made to visit with Minister Pearl Calahasen. She said she has heard that several members of the NEB would be agreeable to meeting as well. The new cabinet in Victoria is only one month old, she noted. The cabinet, the new Prime Minister of British Columbia, Gordon Campbell, and the Minister of Energy are a lot more amenable to mending fences and to getting to know the committee members. The airfare will cost about \$2,000 per person. Pickup and delivery from the airports will be handled by the Canadian government.

CHAIRMAN TORGERSON clarified that the total cost per person will run about \$3,000. He pointed out that the Joint Natural Gas Pipeline Committee has no budget, so travel costs are to be submitted to the presiding officers upon return. He has spoken with both presiding officers, who said they would not disapprove travel reimbursement. He commented that he would like the North Slope legislators to accompany the committee on the Yellowknife portion of the trip, particularly Representative Joule and Senator Olson. He asked committee members to let him know whether they plan to go and then the timeline will be arranged.

The committee discussed possible dates for departure. Chairman Torgerson tentatively set the departure date on August 6 and asked Ms. Thompson to poll all members.

3:53 p.m.

CHAIRMAN TORGERSON said the third item of business before the committee is the contract with a firm to monitor activities in the U.S. House and the U.S. Senate. He proposed to Representative Green, in his capacity as chairman of the

Legislative Council, that the committee enter into a small contract with a firm to monitor the activities of the national energy policy in Washington, D.C. The firm would advise the committee when hearings will be held so that a committee member could attend the hearings. He has selected C.J. Zane, who works for Dyer, Ellis and Joseph, a law firm in Washington, D.C. Mr. Zane has submitted a proposal to monitor activities at a cost of about \$5,000 per month from July through December. Representative Green has agreed to sign the contract.

CHAIRMAN TORGERSON announced that the next issue is whether the committee should hire a lobbying firm for activities in Ottawa and in Washington, D.C., to represent the legislature's interests if, and when, an energy bill starts moving. He suggested the committee needs to take the time to go to Washington, D.C., or else hire a lobbyist. He said he does not have a proposal prepared, but any proposal would have to be approved by the Legislative Council.

REPRESENTATIVE OGAN said he feels the Alaska legislature is fairly well represented in Washington, D.C., since [former Senator] Drue Pearce is a top advisor to the Secretary of the Interior and Alaska's congressional delegation is in agreement with the legislature on this issue. He questioned how much additional money should be spent to hire consultants and lobbyists.

CHAIRMAN TORGERSON asked Representative Ogan, or any committee member, how many calls he got from those folks notifying him the energy bill was being worked on during the last week. [No one responded.] Chairman Torgerson said that was his point. He said he is not sure whether the legislature needs anyone to lobby, but if it did, and no committee member was available to do so, the legislature could be in a weird position. He repeated that he doesn't have a proposal to hire anyone. He pointed out that C.J. Zane was chief of staff for Congressman Young. He said in a perfect world, someone would call a committee member, but he is concerned that no one will call.

REPRESENTATIVE OGAN said he would be happy to assign his staff to monitor the congressional committee schedules.

3:58 p.m.

CHAIRMAN TORGERSON said he believes all staff should be monitoring that, but his concern is that the information is not flowing freely from Washington, D.C., to this committee. He told members these issues need to be discussed and placed before the Legislative Council for funding. He thought the next Legislative Council meeting could be at least one month away, and a request-for-proposals process would take awhile, so it could be as late as September or October before anyone is onboard.

CHAIRMAN TORGERSON said, regarding the fiscal regime, the committee will need a legislative number "cruncher" regarding whether or not any money is given to the administration. He said from what he has seen, he does not trust the administration's numbers and would want someone to go over them. He feels the Division of Legislative Finance could do some of the work, but he believes the committee should hire an expert. He noted that the producers have expressed interest in entering into that kind of discussion, and it will be hard to do unless someone with international status can put it together. He pointed out that Pedro van Meurs was on contract with the administration. The administration had requested \$75,000 for fiscal regimes, he noted, but pulled the request.

CHAIRMAN TORGERSON referred to open-season access, saying he thought it might be settled when FERC and RCA representatives come to Fairbanks, but he doubts it. He said this is a major issue and DNR is a little bit squeamish about making a legal opinion public. He surmised that the committee will have to hire someone to take that issue on.

REPRESENTATIVE OGAN expressed interest in dovetailing the open-season issue with the hub concept, and finding some way to delineate complete state authority to points on the hub. That way, if it gets to Delta, the state would have control of any new gas sales or open seasons. He suggested there may be a way to legally construct something along those lines to bypass FERC authority.

CHAIRMAN TORGERSON said he isn't sure that is exactly the same; it is similar to the FERC-versus-RCA issues. He repeated that he was confused by the testimony from the team.

REPRESENTATIVE FATE said he thinks it is a matter of determining whether FERC is ready to determine, for tariff principles, whether they consider the wellhead to be literally at the wellhead or, if they move down and have the wellhead as a new setup, it could be called a hub and would be exempt from FERC. He personally feels that is a stretch, but he believes the committee should get a legal opinion on it.

4:03 p.m.

CHAIRMAN TORGERSON said he does not disagree. He noted that the next item, ANGTA versus the Alaska [Natural] Gas Act, is also an issue; at best, there are several opinions on how that is to be applied. The committee probably needs some legal advice on that also.

REPRESENTATIVE FATE commented that the committee did hear conflicting opinions.

CHAIRMAN TORGERSON noted that it is difficult for the committee

to take formal action before the Legislative Council if it does not have firm dates.

REPRESENTATIVE OGAN suggested asking Jack Chenoweth [of the Division of Legal Services] to look into some of these issues.

CHAIRMAN TORGERSON said he could, but he is not an expert. He informed the committee that Mr. Chenoweth wrote the opinions on [SB] 164, which the Office of the Attorney General disagreed with. He said regarding FERC issues, he would guess the committee would need to hire a Washington, D.C., firm that watches that committee all of the time.

REPRESENTATIVE DAVIES asked Chairman Torgerson if he has been in communication with FERC staff.

CHAIRMAN TORGERSON said he visited with FERC department heads when he was in Washington, D.C. They are willing to sit down and work through the questions so the committee understands them, but the testimony yesterday made the answers more confusing.

REPRESENTATIVE DAVIES suggested making that attempt first.

REPRESENTATIVE DAVIES asked Chairman Torgerson if he has a strategy for evaluating the question of whether the state should take an equity interest in any of this.

CHAIRMAN TORGERSON said, other than what Commissioner [Pourchot] talked about, he sponsored a bill that the legislature passed, a bill that had a fiscal note.

REPRESENTATIVE DAVIES asked Chairman Torgerson if he would rely on that.

CHAIRMAN TORGERSON said the law required DNR to report and share the data with the committee every 30 days. All of the data was supposed to come to the committee. One of the problems the committee is having with the reports is that the committee is given a summary, but it is not being told how the conclusions were made. He explained that is the problem with the fiscal regime: the committee does not know the underlying methodology or components of DNR's decision making. He noted the report is due back to the legislature on January 31. DNR has hired CH2M Hill to do the risk assessment portion, as well as a New York financial firm that does a lot of consulting on pipelines.

4:07 p.m.

REPRESENTATIVE GREEN noted the key is to get a monthly update because January 31 will be a late date for the legislature to be getting information.

CHAIRMAN TORGERSON said he believes the committee should request

that the Legislative Council at least go forward on fiscal regimes and the open season access issues. He noted he missed the model on GTL, LNG and Alcan and over-the-top pipeline routes. When the Department of Revenue made their presentation, they actually had another one, which he thought the committee would see, which was all four modeled out and netbacks on all four of those. He suggested the committee could ask the Department of Revenue to show it that model. He stated that his guess is that the committee will eventually end up hiring an economist to advise the legislature on the numbers so that the legislature can look at this from its perspective.

REPRESENTATIVE OGAN commented the committee is running a parallel course with the administration.

CHAIRMAN TORGERSON said unfortunately, that is probably true.

REPRESENTATIVE FATE felt it is true and is caused by the fact that the administration is not communicating its findings to the legislature. The Legislative Budget & Audit (LBA) Committee broke loose a good portion of the funds the administration requested, \$1.5 million, \$923,000 plus \$180,000. It is very clear that the Pipeline Coordinators' Office will be doing some of the things the committee is discussing: trying to get information.

CHAIRMAN TORGERSON said that his recommendation to LBA is to fund studies through the committee, rather than the administration. However, the CERA study is a little different. CERA offered all legislators the password at one time so that they could access daily reports. He said that LBA turned down the rest of the requests for the labor study and for hiring lawyers [to monitor activities in] Washington, D.C., and Ottawa. So, essentially, the committee and the administration will run parallel courses because the administration will find the money to do those things.

CHAIRMAN TORGERSON continued, saying the governor has a \$.5 million contingency fund for these sorts of expenses. He had the CERA contract; instead of paying it out, however, he pumped \$180,000 over to the Department of Revenue, so that gave him another \$180,000. Again, if the administration wants a study done, it will find the money, but he doesn't believe LBA should fund it and then have to beg for the information. He noted that most of the money LBA dealt with the previous evening was pre-application money, and it is the legislature's match, the 95:5 portion. As much as he doesn't like to give them anything, they do need desks, telephones, and so forth.

REPRESENTATIVE GREEN remarked, having served on the merger committee, that he finds the amount of information missing to be incredible. Although he opposes this duplication of efforts, he believes it is necessary because the legislature is not getting

information from the administration; he believes the legislature could be duped into the wrong decision. If the legislature gets the information six or seven months from now and is expected to make a decision, he believes the legislature would be doing it blindfolded. The studies will be costly, but the project will be extremely important to the state for 50 years.

CHAIRMAN TORGERSON agreed this project will involve billions and billions of dollars, so if the legislature has to spend a couple of millions of dollars, he will not oppose it. He pointed out that the administration will have to spend a lot more than that; it spent \$1.5 million on the merger. He stated that it doesn't bother him to say he doesn't know the answer and that they should hire an expert. The open-season and open-access issues are huge and recently surfaced. He said he has spent a lot of time on the fiscal regimes, but it has not been in relation to the gas side. Chairman Torgerson said since a Legislative Council meeting is not planned, he will not ask for a motion, but if this comes up before the Fairbanks meeting and the Legislative Council meets, he will notify members and set up a teleconference.

REPRESENTATIVE GREEN said, should the committee decide that one or more of these issues needs a special study, it goes beyond his signatory authority and he fears the committee will not find problems until the middle of September.

CHAIRMAN TORGERSON remarked that the committee will need its own fiscal analysis of the severance tax. The producers have said they would like to have that cleared up by the end of the year. At any rate, the committee should have the models. Initially, the committee can get that from the Department of Revenue, but the larger question on Alaska's severance tax or fiscal regime is one that only five or six people in the world can answer. The committee needs to hire one of those experts to compare Alaska's situation to this.

CHAIRMAN TORGERSON went on to say he is sure the recommendation will be that Alaska needs to have a more progressive system in which price is added as a component to the formula. In that way, if there is 3 million cubic feet per day, for example, it wouldn't be charged per well, but anything above that should be price-sensitive. So at \$5 per barrel, instead of making \$500 million, the state would make \$800 million; at \$2, the state would make nothing. That same recommendation has been made whenever anyone has looked at Alaska's fiscal regime.

4:17 p.m.

CHAIRMAN TORGERSON announced that the committee would take a recess until the public testimony period.

4:26 p.m.

CHAIRMAN TORGERSON called the meeting back to order for the purpose of taking public testimony.

MR. SCOTT HEYWORTH, Director, Our Gas, Our Future, said he is so impressed with the hard-hitting questions the committee has been asking. He offered his sincere appreciation for the committee's efforts. He noted that he had three points to make. First, he has not heard any good news from the industry or about anything during the last two days. However, he has heard two things that concern him. He heard Mr. Marushack discuss how the state will make tens of billions, which tells him that the oil industry will make hundreds of billions.

MR. HEYWORTH said second, the newspapers, specifically the Anchorage Daily News and the Journal of Commerce, have been reporting a price of \$10 billion for the Canadian highway pipeline. Yesterday, when Commissioner Pourchot made his report, he set the cost at \$15 billion [according to page 10 of his report]. This morning, Mr. Conrad testified that the cost of this project is \$15 to \$20 billion. In 48 hours, the price of the pipeline doubled. Backbone estimated six months ago a cost of \$16 to \$20 billion. His group has been talking about \$15 to \$20 billion for the entire nine months of its existence. Everyone denied it could cost that much, yet today that amount is on the record. He surmised that the cost will be closer to \$25 billion six or eight years from now.

MR. HEYWORTH noted that YPC has estimated \$6 billion. He further noted that Mr. Jeff Lowenfels has never changed his number; he stays with good, hard facts, while the industry, and sometimes the administration, has been making the argument that LNG to Valdez is uneconomical because it will cost too much. He questioned how - if at \$6 billion it was uneconomical - it will be economical at \$20 billion.

MR. HEYWORTH stated that his third point is the most critical. Mr. John Ellwood of Foothills said the U.S. and Canadian governments have not sat down and talked yet. But Mr. Ellwood emphasized that he believes the Canadian government will abide by the ANGTA treaty. He noted that is significant because the Canadians in the early 1980s built the Southern pre-built as part of the ANGTS agreement. They built their part of the pipeline for 2.6 BCF, [under] ANGTA treaty law. Now, the governor and industry are suggesting 5 BCF, according to Mr. Roger Marks. That is illegal. Canada is going to abide by the treaty. He questioned why Canada would want 4 BCF of Alaska gas coming down through their field when they have Canadian gas to explore. He said he understands their point.

MR. HEYWORTH said he'd polled residents of Anchorage three weeks ago. The poll results show 65 percent favor Valdez, 26 percent favor the highway, and 10 percent are undecided. He noted that 40 percent of the voters reside in Anchorage. Alaskans do not

favor the highway project, and it will take an incredible turnaround for anyone to be behind the Canadian route.

MR. HEYWORTH concluded by saying he supports LNG to Valdez. He asked the committee to work together with the administration to get a best interest finding for the citizens of Alaska to determine the best project. He noted that this project will bring revenues to Alaska for 50 to 70 years; this project is a very important responsibility.

CHAIRMAN TORGERSON asked the next witness to testify.

MR. JERRY McCUTCHEON, representing himself, said none of the proposed gas lines are feasible. The situation is worse today than 20 years ago. Inflation does not work in reverse - there may be better plants, but it will not be much cheaper to put the pipe in the ground. He suggested the committee get the Van Coolin (ph) report from 1974. In that report, the author projects various gas withdrawals and the effects on the reservoir. Mr. McCutcheon said:

The interesting part to that is about as much oil that you recovered out of that - Prudhoe Bay - Van Coolin predicted it could be recovered in the first place; so what the effects will be [indisc.]. So [indisc.] round about public document 95-73, on page 570, said Prudhoe Bay [is] producing 15 billion barrels - and this was 1977 - while they were telling us 9.6 billion. They told Congress 15. Well, that's not real [indisc.] back in those days. Well, we are headed for the 15, and it's just not 15 because the OOYP has grown a bit.

The producibility of Prudhoe Bay, if we don't take the gas on it, is about 20 billion, so we are a little more than halfway there [indisc.]. Projections of what would happen to the reservoir when the high amounts of gas that you can take out of it: remember one thing - it is absolute, everybody in the oil patch - the highest recovery from any oil reservoir occurs when it is produced at or above a bubble point [indisc.] discovery pressure. Prudhoe Bay was at 4,400 pounds; we're less than 3,400 pounds now. It wasn't supposed to get below 36, I think something like that - it's just going on because there is no control over it. [Indisc.] raise the proportionate amount of pressure. The money is in the oil.

If you really wanted to do something, build a stupid gas line from MacKenzie delta to Prudhoe Bay and shove 20 TCF of gas down Prudhoe Bay. That will get you your oil. Then, following that, gather up all of the field

fuel, the power plants and the rest of the stuff at Prudhoe Bay and stuff it down there. For every volume of gas that you [indisc.] in a power plant, you produce 9 volumes of injectable gas. That will help the pressure and stop the critical pressure decline and may even reverse it.

I've heard some of the numbers up there, but it's hard to find out what it [indisc.] fuel catch the exhaust gases from and shove them back down in Prudhoe Bay. No one can get a gross number of how much of the fuel is being burned up there.

That's all. Go get yourselves a [indisc.] and consider repressurizing Prudhoe Bay. Remember, on the Kenai Peninsula they had absolutely no use for gas and they had Swanson River, so they decided to go for gas injection and then they decided they didn't want to do a water [indisc.], but they did one anyway. Anyway, the main thing that they did is that they went over to the Kenai gas field and they leased gas from Union Marathon to stuff down there. They leased it for 10 cents an MCF.

About ten years ago, with Chevron, I think, or maybe it's longer now, Chevron was still running it - Union Marathon came to Chevron and said when are we going to get our gas back? We in our wildest dreams never thought that you would [indisc.]. Well, we don't see any; we're done with it. In order for Union Marathon to get their gas back, they had to buy the damn [indisc.]. Think about it: we've lucked out twice. There was no use for the gas when the Swanson River was found. There was no use for the gas for Prudhoe Bay. Everything else [indisc.].

MS. THERESA OBERMEYER, representing herself, expressed concern about the nomination of Ben Stevens to the legislature and testified on other matters unrelated to the gas line.

There being no further testimony or business to come before the committee, CHAIRMAN TORGERSON thanked participants for attending and adjourned the meeting at 4:40 p.m.