ALASKA STATE LEGISLATURE
JOINT MEETING
JOINT COMMITTEE ON LEGISLATIVE BUDGET AND AUDIT
SENATE RESOURCES STANDING COMMITTEE
July 29, 2004
8:34 a.m.

MEMBERS PRESENT

LEGISLATIVE BUDGET AND AUDIT

Representative Ralph Samuels, Chair
Representative Mike Chenault
Representative Mike Hawker
Representative Beth Kerttula

SENATE RESOURCES

Senator Scott Ogan, Chair
Senator Tom Wagoner, Vice Chair
Senator Fred Dyson
Senator Ralph Seekins
Senator Kim Elton

MEMBERS ABSENT

LEGISLATIVE BUDGET AND AUDIT

Representative Vic Kohring

Senator Gene Therriault, Vice Chair
Senator Con Bunde
Senator Gary Wilken
Senator Ben Stevens
Senator Lyman Hoffman

SENATE RESOURCES

Senator Ben Stevens
Senator Georgiana Lincoln

OTHER LEGISLATORS PRESENT

Representative Nancy Dahlstrom
Representative Beverly Masek (via teleconference)

Representative Lesil McGuire
Representative Les Gara

Senator Gary Stevens
Senator Gretchen Guess

COMMITTEE CALENDAR

OVERSIGHT ALASKA NATURAL GAS PIPELINE ISSUES/ACCESS TO ORIGINAL AND EXPANSION CAPACITY

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

Presentations By:

BILL BOYCOTT, General Manager
Kenai Nitrogen Operations
Agrium Inc.

TONY PALMER, Vice President
Alaska Business Development
TransCanada Corporation

HAROLD HEINZE, Chief Executive Officer
Alaska Natural Gas Development Authority (ANGDA)

ACTION NARRATIVE

TAPE 04-16, SIDE A [BUD TAPE]
Number 001

CHAIR SCOTT OGAN called the joint meeting of the Joint Committee on Legislative Budget and Audit and the Senate Resources Standing Committee to order at 8:34 a.m. Joint Committee on Legislative Budget and Audit members present were Representatives Samuels, Chenault, Hawker, and Kerttula. Senate Resources Standing Committee members present were Senators Ogan, Wagoner, Dyson, Seekins, and Elton. Also in attendance were Representatives Gara, Dahlstrom, McGuire, and Masek (via teleconference), and Senators Guess and Gary Stevens.

Number 019

BILL BOYCOTT, General Manager, Kenai Nitrogen Operations, Agrium Inc., said he hoped to provide the committees with the perspective of a value-added manufacturer and relay some of its experiences and challenges in the Cook Inlet and how such may impact the legislature's decisions regarding North Slope gas. He remarked that differing paths in the production of North Slope gas could lead to very different outcomes as well as the development of other opportunities within the state. He went on to say:

> The Cook Inlet natural gas actually generates about 15 percent of the exports from Alaska. That takes the form of ... about 200 [billion cubic feet (bcf)] a year of gas; about 80 bcf of that goes into the [liquefied natural gas (LNG)] facility for direct export. We, at capacity, consume approximately 53 bcf of gas, which we convert to anhydrous ammonia and urea - white pellets of fertilizer. And that export is going: ... the anhydrous ammonia primarily to Korea, the fertilizer all across the Pacific Rim but primarily Mexico.

MR. BOYCOTT relayed that he is quoting the following from a statement made by the McDowell Group that was used in a handout provided to the committee by Agrium Inc.: "By Alaska economic standards, the Agrium Inc. operation is exceptional for its combination of high pay levels, amount and concentration of expenditures in the local area, and the degree of value added manufacturing that occurs in Alaska prior to export. The result is a high multiplier impact." He noted value-added manufacturing consists of taking a resource and converting it to a product of higher value, and that value-added manufacturing occurs at the Agrium Inc. facility and at the refineries in Fairbanks, Valdez, and Nikiski area.

MR. BOYCOTT relayed that for Agrium Inc., value-added manufacturing results in a $9.35 impact on the state's economy for every 1,000 standard cubic feet of gas that is consumed; this impact comes from Agrium Inc.'s payrolls, from businesses that provide support services to Agrium Inc., and from purchases of the resource. By extrapolating such information to the development of North Slope gas, he opined, one can envision that the potential impact on Alaska is quite large. He mentioned that with regard to international competition, there has been a lot of activity lately on the Australian shelf, Trinidad, and

Venezuela; the foregoing industries are already developed to bring a product - such as LNG, methanol, and other petrochemical products - to market, beyond the ammonia and urea that Agrium Inc. is currently in producing.

Number 054

MR. BOYCOTT remarked that such industries share a common thread in that it takes a lot of technology and resources to convert natural gas into the aforementioned products, and so in areas where such conversion occurs, there has been a large impact on the local economy. He added: "This is an opportunity for Alaska. Value-added industry brings a lot to the state; if done properly, it has a potential to have a large economic impact on the state. Already, [from] what we see in the state, there is a large economic impact here, and there is potential for ... additional economic impact ...."

MR. BOYCOTT posited that a lot of industries worldwide are interested in developing gas resources, adding that the high economic multiplier of doing so also helps diversify the economy. He remarked that a large part of the Kenai Peninsula's economic base results from the presence of a refinery - the second largest in the U.S. with regard to nitrogen complexes - which has created a lot of diversity in that economic base. Developing a value-added manufacturing environment requires large amounts of gas that are readily available; entities looking to bring that gas to market in a value-added way; a conducive regulatory environment that will encourage development of the resource in a responsible manner; competitive pricing; an efficient infrastructure, whether new or existing; market access to the product; and political stability.

MR. BOYCOTT concluded by saying that some of the questions to be considered regarding bringing North Slope gas to market are whether Alaska would want to utilize some of the gas instate or just send all of the gas down to the Lower 48, and how best to position itself to take advantage of the gas.

Number 110

SENATOR DYSON surmised that access to infrastructure means being at tidewater or at a deepwater port.

MR. BOYCOTT replied, "One of the things that we bring to the table in Alaska is that we have good access to the Pacific Rim;

[at] the Cook Inlet [facility], we have deepwater wharf facilities." Because of this, agricultural products consumers in Mexico say that the quality of "the Kenai product" is the best they have access to and that they like its availability with regard to a short transportation time. Cook Inlet provides good access to the market, but there are still problems getting the product from the well to the consumer, he remarked, and such should be considered when looking at bringing North Slope gas to market; "We need to ensure that we encourage production of the resource, that the independents that want to come and participate are encouraged to do so and have ready access to the market with the product that they bring to the surface."

SENATOR DYSON raised the issue of competitive value and asked Mr. Boycott to comment.

MR. BOYCOTT said he has not seen numbers that will tell him "what will North Slope gas be delivered into." He mentioned, however, that the higher the gas price is, the more difficult it will be for anybody in a value-added industry to compete on an international basis. It is difficult to "make a call forward" because his industry is very cyclical, he added, and supply-demand levels can drive the value of the product up or down depending on many factors.

SENATOR DYSON asked, "Is it a good assumption that the world demand for nitrogen-based fertilizers will continue to increase?"

MR. BOYCOTT replied, "I believe that's true."

CHAIR OGAN asked about current prices.

Number 0166

MR. BOYCOTT replied that Middle East, Trinidad, and Venezuela's gas runs $1.00-$1.50; there is "some upward pressure" in the former Soviet Union, which used to send its gas into its plants for free.

CHAIR OGAN surmised that it must be pretty hard to compete with entities that get gas at those prices.

MR. BOYCOTT concurred, but mentioned that Agrium Inc. does have an advantage with regard to transportation into different markets; additionally, the overall world-demand plays a factor

in product pricing. Mentioning the possibility of bringing a spur pipeline down into the Cook Inlet, he noted that such would provide access into the existing infrastructure. Currently there are constraints within that infrastructure; there are times when Agrium Inc. leaves gas at the well because it cannot transport it to its plant due to the constraints placed on that piping system. In looking to the future, he offered, it's important to consider not only how the new infrastructure is regulated, but also how the old infrastructure is regulated in order to ensure that gas will be brought into a system that is being managed in such a way that the gas can be effectively brought to market.

MR. BOYCOTT opined that sufficient infrastructure does exist to support all of the demand in the Cook Inlet, but reiterated that Agrium Inc. is not currently able to get all of the gas to market. Despite the fact that Cook Inlet gas is in decline, Agrium Inc. still finds itself in a position of not being able to transport gas due to private ownership and the current way the system is operated; "we have systems running below capacity and yet gas [is] left wanting to be moved." Agrium Inc. faces "private ownership of lines"; constraints on the infrastructure that are both physical and nonphysical constraints; affiliated ownership issues; restricted access; high transportation rates; "and, [in] our belief, [the fact that] the public interest is not always served, because we feel that the way the system is being utilized currently doesn't necessarily encourage the independent to come in and develop the resource."

Number 215

MR. BOYCOTT continued: "As we look at other players who want to come into the Cook Inlet and develop the resource, they find themselves in a position where ... they're constrained on who they [are] actually able to sell that product to because of ... access to the pipelines." He suggested that when considering North Slope development, the legislature should learn from what has gone on in the Cook Inlet in order to ensure that there will be open access to the pipeline systems at fair and reasonable rates. He cautioned that in developing the North Slope, the legislature should do what it can to ensure that the public interest is protected, that new entrants into the state are encouraged, and that business development is encouraged.

MR. BOYCOTT went on to detail some of Agrium Inc.'s motivating factors and its development in the Cook Inlet, and again

commented on the potential for developing value-added industries in Alaska.

SENATOR WAGONER asked whether Agrium Inc.'s parent company does anything with gas liquids in Canada.

MR. BOYCOTT said not that he is aware of.

CHAIR OGAN asked Mr. Boycott to comment on what he sees in Agrium Inc.'s future with regard to gas supplies in Alaska.

MR. BOYCOTT indicated that Agrium Inc. anticipates being able to continue to operate [its Cook Inlet] facility through 2007, but acknowledged that continuing to find a long-term supply of gas might be problematic. He remarked: "I believe that ... if we open the market and open the infrastructure, that we will see the independents expressing an interest in working to develop the resource at competitive pricing."

CHAIR OGAN asked what Agrium Inc. contributes to the local borough tax base.

MR. BOYCOTT said he thinks last year's total tax burden was approximately $2.5 million.

Number 351

TONY PALMER, Vice President, Alaska Business Development, TransCanada Corporation, displayed for the committee a map of the proposed pipeline system, and provided the following comments regarding the topic of "decision-making on expansions":

> Developing the initial pipeline system from Alaska to major North American markets has been and remains a challenging undertaking. Attracting the initial volumes of sufficient scale to make the project economic, under satisfactory terms that share the risks of this project in a deregulated natural gas market, has proven to be difficult. Representatives from the Alaskan producers, pipeline companies, [and the] governments of Alaska and the United States are all working diligently to see the initial pipeline come into service in an expeditious manner. This task remains in our view the most critical at this point for the "Alaska Highway Pipeline" project. TransCanada is focused on working with all

stakeholders to develop a structure that will advance the project and see the initial pipeline in service by 2012, transporting Alaskan gas to major North American markets.

It's also important to ensure that future customers will have fair, non-discriminatory access to the pipeline for expansions or extensions of the initial gas transportation contracts. The State of Alaska, [and] the pipeline owners and shippers seeking future access all need to know the rules of the game in advance in order to encourage extensive natural gas exploration across the state of Alaska. The initial shippers must also be confident that they will be treated equitably relative to future customers.

TransCanada is an independent pipeline company with almost 50 years of experience in North America and many years of international experience. We have successfully managed these issues and encouraged the expansions of our initial facilities without disadvantaging our anchor shippers. My testimony today will focus on the broad requirements and considerations for expansions of major pipeline systems, and later today in my testimony I will elaborate on some of the benefits of certain tariff methodologies for expansions.

Number 395

MR. PALMER offered the following as factors that influence access [to] future volumes [of] an initial pipeline system: the system planning for the initial pipeline - what will be the pipeline diameter, the pressure, the routing, and the initial contracted capacity; the impact on pipeline operations and operational feasibility; the impact on services to other customers, both initial and for future expansions; the ability to comply with safety and environmental laws and regulations; the suitability of arrangements for reimbursement of construction costs and/or the adequacy of the volumes to be transported to support the extra investment and operating costs required for the new facilities relative to required facilities; and the tariff methodology - incremental or "rolled in" tolling for expansion volumes. He went on to say:

TransCanada has selected a pipe platform of 48 inch, 2,500 pounds per square inch, to transport an initial volume of 4.5 bcf a day, with a relatively inexpensive expansion capability, up to approximately 6 bcf a day. This pipe platform, which uses a pipe size with which TransCanada has years of experience - ... we have hundreds of miles of that pipe in the ground today - and [has] a pipe strength of "X80," ... is optimal for the volumes we've described. ... It provides the lowest, long-term tariff for customers and also an attractive and efficient fuel ratio.

The fuel ratio is an important factor in the overall costs of transportation for Alaskan gas simply because of the distance to market. The final engineering design for the pipeline will be completed ... once the initial volumes to be shipped are known and the expectations for the timing, location, and volumes of future expansions are more certain. Based on our system design, the 48-inch pipe platform with an initial volume of 4.5 bcf a day would provide inexpensive expandability for an additional 1.0 – 1.5 bcf a day using primarily additional compression facilities rather than new pipeline loops - a pipeline loop is a ... section of pipe [parallel] to the initial pipeline, generally of the same diameter ... [but] not necessarily. ...

Number 451

MR. PALMER continued:

The fuel ratio will increase at total levels above 4.5 bcf a day with the initial compression, but still remain at very efficient levels. Volumes in excess of 6 bcf a day would require a combination of pipeline looping and compression facilities. It is important to note, of course, that exploration success will drive new pipeline expansions. ... Significant additional gas reserves will have to be proven in Alaska prior to an expansion beyond 6 bcf a day, since 25 years of production at 6 bcf a day totals about 55 [trillion cubic feet (tcf)] as compared to the approximate 35 proven today.

Future expansions beyond the initial 4.5 bcf a day will depend upon a number of factors. The first is the location of the additional gas relative to the existing or future compressor stations and meter stations. Additional volumes must make sense relative to the engineering increment in the pipeline's overall system planning; in other words, the additional volumes need to be sized for logical economic increments relative to the new facilities. For example, with an initial contracted capacity of 4.5 bcf a day, you wouldn't expect to see an expansion of supply for [10 million or 20 million] a day; ... [that] would not be efficient from an engineering standpoint, on this pipeline, for new supply.

You will need large pieces because each additional compressor or compression station or number of compression stations will be significant. That's the norm on large pipeline systems, and that will be in place for this pipeline as well. [It is] generally not appropriate to construct sub-optimal facilities for a small volume, or to contract for a small volume that does not approximate the additional capacity provided by the optimal facilities. However, potential expansions will be examined on a case-by-case basis to determine the economic and operational feasibility. ... The design of the pipeline and operational flexibility can provide opportunities for smaller volume increments. And when I'm describing smaller volume increments, I'm of course speaking to the supply side as opposed to the demand side.

Number 491

MR. PALMER added:

The second factor to be considered is the impact expansion volumes could have on pipeline operations and operational feasibility. In most cases, this is not a concern on expansion volumes because they're incorporated into the pipeline at logical physical locations. Also, operational measures taken by the pipeline company and its future shippers can ensure there are no negative impacts. The shipper will be required to provide its gas at the receipt point - or take delivery at the delivery point - at a suitable

pressure, temperature, and gas quality that aligns with the pipeline's engineering and economic requirements. That is standard across the industry.

The pipeline company also has a responsibility to ensure that the impact of expansion volumes on existing shippers is equitably balanced with the fair treatment of those new volumes. Gas [pipeline companies] are generally contract carriers ... [that] commit to provide a specified amount of firm capacity to their shippers. Additional volumes onto the pipeline do not result in a pro-rationing of the volumes to the initial firm shippers. In other words, expansion facilities are normally needed in order to provide contracted service to new customers on the pipeline. The specific location of the new customer's requested receipt or delivery point can play a ... role in the impact on existing customers and the operational flows on the pipeline.

As in the initial construction of the pipeline system and its day-to-day operation, expansion volumes must comply with safety/environmental laws and regulations. These factors are as critical in determining the precise location of new receipt and delivery points as are economic or engineering factors. In most cases, the pipeline company will own any facilities located on its right-of-way, including any incremental meter stations or compressor stations required to transport the expansion volumes. The pipeline may construct the laterals to receive or deliver additional gas, but those laterals may also be owned by other pipeline companies, gas producers, or other parties.

Number 542

MR. PALMER said:

If the pipeline company constructs the additional facilities, it will calculate the additional potential revenues versus the costs for the new volumes, both operational and capital, as well as [for] fuel. And a capital contribution may be required from the new shipper as an upfront payment to reimburse the pipeline for facilities such as a new meter station at a different location that does not provide service to

the overall customer base. Once again, pretty standard in the pipeline industry.

New major natural gas pipeline systems are underpinned by long-term firm transportation contracts with initial shippers. Historically, long-term firm service has often been the only type of service provided by the pipeline for existing or new customers in the early years of pipeline operation. Firm customers may also be offered overrun service to allow those customers to utilize spare capacity on the pipeline - on an interruptible basis - over and above their firm contracted quantity; and of course the spare capacity on an interruptible basis results from ... operational flexibility due to ambient temperature, load diversity, or other operational considerations.

As the pipeline grid has matured in North America, interruptible service was made available to non-firm customers. In some cases, overrun service has been removed by regulatory authorities to permit broader access to non-firm customers. New expansion volumes ... on a firm basis can affect, either positively or negatively, the availability of overrun or interruptible service to existing customers depending upon the stage of additional facilities constructed relative to the new firm volumes and the overall impact on pipeline system planning.

Number 579

MR. PALMER relayed:

The final significant factor when considering expansion volumes is the tariff methodology for additional volumes. The regulatory model used by the [Federal Energy Regulatory Commission (FERC)] has expansion volumes being charged a tariff that reflects their incremental costs, unless rolling in the incremental costs to existing customers would decrease their tariffs - with some modest exceptions. ... In Canada, the National Energy Board has applied a rolled-in methodology for many years as the primary model for expansion volumes whether or not this increases or decreases tariffs for existing customers.

This philosophical difference has had significant implications for expansions of the Canadian pipeline systems over the past two decades. I will speak to this issue in my second piece of testimony. In summary, we believe that expansion policies that fairly balance the interests of initial and future shippers will lead to optimal long-term results for pipeline customers, owners, and governments.

MR. PALMER made the following remarks regarding the issue of open access:

Earlier in my testimony I described the significant challenges in attracting initial customers to the Alaska Highway Pipeline Project. TransCanada believes that all stakeholders - Alaskan producers and explorers, pipeline sponsors, [the] State of Alaska, and the U.S. Government - have important roles to play in sharing the initial project risks by establishing the conditions necessary for an early in-service date for the project.

We believe that each of these stakeholders and U.S. consumers will be large beneficiaries of this project and should work cooperatively towards a 2012 in-service date. We're a longstanding developer of major pipeline systems, both in North America and [in] international regions, and, in our opinion, certain open-access [conditions can assist in laying the groundwork for long-term success of an initial pipeline project as well as its future growth and development.] [Tape ends mid-sentence; the previous bracketed portion was taken from Mr. Palmer's written statement from which he had been paraphrasing.]

TAPE 04-16, SIDE B [BUD TAPE]
Number 613

MR. PALMER continued:

Governments at the local, state, and federal levels are strong supporters of new pipeline projects. They are also seeking a solid foundation for future exploration and development within gas-producing basins to enhance economic and social conditions in

their regions. The additional revenues to governments from new exploration, development, and production may exceed the royalties and taxes collected over the life of the project from the initial gas volumes. There are many positive examples of this in North America and beyond when a new gas pipeline is constructed into a frontier basin.

Pipeline companies also are strong proponents of new gas exploration in order to attract additional volumes to the pipe and enhance the security of supply for the base volumes. Consumers, both in the supply region and in traditional consuming regions, wish to see additional exploration and expansion of pipes in order to enhance their security of supply and to meet overall demand growth. Gas producers or other potential shippers that have not yet taken out a gas shipping position on a pipeline are also strong supporters of free and open access and fair terms for expansions.

The initial shippers on a pipeline often also want future expansions to provide access to markets for additional gas supplies they may secure. Those shippers incurred significant risks when signing the anchor transportation contracts on the pipeline, and they need to be confident that their initial contracts will be equitably treated relative to the new customers. It is also prudent for pipeline companies to ensure that their access terms for expansions do not disadvantage the initial shippers and have fairly balanced the overall benefits and risks for all stakeholders.

Number 627

MR. PALMER went on to say:

The tariff methodology for expansions can play a large role in determining the timing and degree of future exploration in a new gas basin. TransCanada believes the Alaska Highway Pipeline should be designed and operated to be efficient in design and total cost to initial shippers, and to also provide fair and inexpensive access for expansion shippers. In addition to the design of the pipeline, one method of

encouraging long-run growth in a supply basin is to use a rolled-in tariff methodology for both additional facilities and the fuel.

TransCanada's pipeline systems in Canada have operated with a rolled-in tariff methodology for expansions for many years. Canadian gas has been remarkably successful in capturing new markets in North America over the past two decades. The rolled-in tariff methodology has, in our opinion, assisted in this success. Canadian gas basins are mostly located farther from major markets than the majority of Lower 48 gas. It therefore has a higher transportation cost component and lower wellhead prices relative to most Lower 48 gas.

Therefore, maintaining low transportation costs with an appropriate tariff methodology to encourage expansions has proven to be critically important for Canada. This has assisted in improving the competitiveness of Canadian gas as evidenced by the 300 percent increase in Canada's gas exports into the U.S. since 1985. Rolled-in tolls, combined with the other factors, can be a catalyst to encourage growth in a new gas basin. Although each basin around the world is different, and Alaska has its own unique characteristics, I wanted to illustrate the development of TransCanada's system within the province of Alberta under rolled-in tolls.

Number 649

MR. PALMER then referred to some slides he'd brought with him and said:

[The] first slide you'll see here ... [is] a map of the province of Alberta; on the left-hand side you see our system in 1960. The actual red components are the expansions from our original pipeline system, which was constructed in 1957 through 1960. In 1957 our original pipeline system was 118 miles long, moving 220 million cubic feet a day. You'll see, as we moved to 1970, we continued expansion of that system ...; the red in this case is for what happened in the previous five years ....

I think you'll see from these maps ... how [TransCanada's Alberta pipeline system] has developed since its inception in the late 1950s. You'll see how small our pipeline system in Southeastern Alberta was in the original system; it had modest volumes, few customers, and few receipt and delivery points. It has since grown to a 15,000-mile comprehensive, integrated pipeline system across the province that can deliver approximately 12 bcf a day to customers within Alberta, and to Alberta's borders for delivery into other pipelines to serve customers across Canada and throughout the United States. ...

The next three slides show that not just geographic reach has been extended, but also the [corresponding] impact on TransCanada's Alberta system volumes, number of customers, and receipt and delivery points as the natural gas system has evolved over the past 40 years. The first slide here would show you the very modest volumes that we started with pre-1960; you can see that by 1960 we're about 250 million ... [bcf] a day - and you can see ... these are annual volumes ... - and by 1999 we're up to 4.5 tcf per year that we're moving on our system within the province of Alberta. [The] next slide deals with the number of customers; you can see that we had a couple of customers in 1958, and, as of the late 1990s, we're up to 350 customers ... and [we] currently [have] about 1,000 receipt points [in] our province. So we go generally from our gas plants ... to major markets in Alberta and to the boarders, and you can see the number of delivery points is in the order of 200 at this point.

Number 690

MR. PALMER added:

As you would be aware, there have been a number of developments that have caused these significant increases – growing gas markets, changing gas prices, supply/demand dynamics, regulation and deregulation, as well as tariff methodology. TransCanada's proven track record in offering the appropriate fundamentals for non-discriminatory, open-access service to its initial and expansion customers, and a rolled-in tariff methodology, have been critical factors in

increasing our number of customers, receipt and delivery points, annual volumes, and geographic reach across the province of Alberta.

A similar story can be told [about] ... our cross-Canada pipeline system from the Alberta border to Eastern Canada and into the U.S. Midwest and Northeast. We started with a single pipeline leaving Alberta, and currently ... you'll see five parallel pipelines in the same right-of-way; that's as a result of expansions over the past almost 50 years.

MR. PALMER concluded:

TransCanada believes that on balance, a rolled-in tariff methodology for the Alaskan and Canadian sections of the pipeline can be a positive factor to enhance the long-term development of Alaska's natural gas basin. It merits serious consideration by the state, the U.S. Government, gas producers, and pipeline companies as the initial project is developed. Thank you for this opportunity to testify at this proceeding, and I am available to answer any questions you may have.

Number 707

REPRESENTATIVE LES GARA asked:

What are your thoughts on open access that could be done in a way that would allow somebody who doesn't have their gas on line yet to have the opportunity to get their gas into a pipe? ... You're not going to have your gas ready to go if you don't have a contract with the pipeline carrier yet. ... How do you do that?

MR. PALMER replied:

Through a number of ways, but the first component would be: what is the appropriate system design for the pipeline, what is the appropriate diameter for the pipeline, what is the appropriate pressure, and what is the appropriate expandability for the pipeline. And then I can tell you that's based upon an understanding of what the initial volumes will be,

what the gas reserves are in the basin, [and] what the expected timeframe is for expansions.

And you can see that our proposal, if the initial volumes are 4.5 bcf a day, is to construct a pipeline system that is expandable, cheaply, up to almost 6 bcf a day. So if you are an explorer in Alaska today and are unable to participate in the initial capacity of the pipeline at 4.5 bcf a day, you would understand that there [will be] relatively cheap expandability right up to 6 bcf a day in logical increments that would allow you to get access to the pipeline in the future; you know that there's going to be future open seasons where you can participate in that.

MR. PALMER added:

Now, the limit on the pipeline system is not 6 bcf a day. Clearly, you can start looping the system as I described ...; you can loop the system beyond that, but, at that point, your costs are higher and tolling becomes much more important. Tolling methodology, tariff methodology - rolled in or incremental - makes a very significant difference when you pass the point [where] ... you're adding capacity with compression rather than pipeline looping. So initially you do it with ... the appropriate system planning ... [in] the initial design? And also ..., generally, independent pipeline companies would commit to have regular open seasons to expand pipeline [systems]; they're in [the] business of growing more additional volumes, growing their business.

Number 741

SENATOR WAGONER asked: "Does it make any difference whether ... the gas is dried on the Slope or Fairbanks ..., as far as shipping product on down into Alberta?"

MR. PALMER said that from a project standpoint, it doesn't make a difference. The owners of the gas will decide where the liquids are removed; TransCanada is no longer a participant in that business. However, the actual unit tariffs will be impacted if the gas doesn't contain the liquids, since there will be "fewer [British thermal units] to spread the pipeline over."

REPRESENTATIVE SAMUELS asked how long it would take for a pipeline to increase its capacity once an explorer finds gas. How long will the explorer have its capital tied up?

MR. PALMER said it could take one to two years, assuming that the pipeline is in service. In response to another question, he relayed that Canada has a policy of having a rolled in tolling methodology, and that some, but not all, other countries do as well. He went on to say:

> I'm not suggesting there aren't tradeoffs to the policy. Of course there are. I'll ... give you an example ...: if you had [an] initial pipeline tariff of 10 cents, and the incremental cost of the new pipe is 15 cents, ... [with incremental tolling] the new customer will pay 15 cents over the life of his contract; if you roll it in, you'll go from the initial 10 cents to 10.5 cents for everyone. And the next increment of pipeline expansion may be 11 cents or it may be 8 cents, and you effectively average them all together. And, over time, it has been effective for Canada to come up with an average tolling methodology because ..., as volumes increase, you have relatively modest changes. ...

Number 792

REPRESENTATIVE GARA asked whether there is any danger that an owner of gas won't sell it. And if so, is there anything the legislature can do to ensure that there will be gas in the pipeline once it is built.

MR. PALMER pointed out that TransCanada is generally an independent provider of transportation services, similar to a railway company; TransCanada will look for customers that will own the product and become a shipper on its pipeline system. He mentioned that although North Slope gas producers have examined the feasibility of building their own pipeline system, TransCanada "holds rights in Canada" and believes - and will maintain the belief - that it has the right to build the pipeline through Canada. He offered his understanding that TransCanada was granted that right as a result of the commitments it made 25 years ago, and [that it] is written into a treaty between Canada and the U.S. as well as in Canadian legislation.

SENATOR ELTON asked for an explanation of the term "anchor shipper."

MR. PALMER said he is using that term to mean "initial shipper." He added: "Clearly, it would not be unusual for a pipeline company on a project of this scale to solicit interest from parties in advance of an open season, [though] not necessarily to pre-commit. And as I described to you, we intend to build a pipeline that has significant expandability."

SENATOR WAGONER asked whether TransCanada has considered using pipe of a size other than 48 inches.

MR. PALMER relayed that TransCanada had given consideration to different volumes - initial and future; different pipeline diameters; and different pressures. He gave some examples of some of the combinations that were considered, but offered his belief that a 48-inch pipe platform would prove optimal. In response to another question, he indicated that as long as any proposed spur line is part of the initial development, TransCanada could "telescope the pipeline down" once there is an understanding of what the spur line's volume will be.

Number 887

REPRESENTATIVE KERTTULA asked Mr. Palmer to describe TransCanada's experience with getting gas into smaller communities and remote areas.

MR. PALMER replied:

> We do serve everything from very small communities to large customers. We're not a local distribution company, I can tell you that. We serve to what is described as a "city gate." So we serve to the border of the local distribution company, but we clearly serve some very tiny ... "farm taps" ... for individual farms as we go through the province of Saskatchewan, and that is on the existing "prebuild" for the Alaska pipeline project.
>
> And there [are], of course, ... commitments to put interconnections at certain locations - in effect, taps off our system on the original pipeline system. We do not have commitments at this point to build the

> laterals away from the pipeline, but we do have commitments to put [in] valves; in effect, to allow future connections to small communities or ... large communities. So we have done that for more than 50 years, domestically and internationally.

REPRESENTATIVE KERTTULA asked Mr. Palmer if he had any advice for getting Alaska's rural communities cheaper energy through the proposed gas line.

MR. PALMER replied:

> Clearly, having access to the pipeline will be important. It would be normal that that would be a condition imposed by a government. I won't describe which government agency, but that would be normal that there would be some imposition of some commitments. Clearly, not every "one man" community can economically get access to [the] pipeline - that would not be normal - but regular takeoffs on the pipeline system would be a normal commitment, understanding that there are costs to that and those costs get allocated to the customers of the pipeline.
>
> There needs to be a balance of interests, and I hope I described for you today that a balancing of interests is the best way to construct a major pipeline system that's going to have a long life and serve its customers both domestically, in the region, and internationally, or back into the Lower 48. You need to balance the extra costs with the long-term potential and your social and economic goals as a state.

Number 929

CHAIR OGAN, acknowledging that a certain amount of processing might be involved, asked what would be the minimum-sized community that could economically get "an offtake."

MR. PALMER said that would be difficult to answer at this point because TransCanada has not examined that issue and is "not in that business and wouldn't understand what incentives the government of Alaska or local distribution companies might be prepared to provide to those local communities."

CHAIR OGAN predicted that there will be a tremendous amount of interest by some communities regarding getting "hooked up," and suggested that TransCanada give that issue some thought as its representatives travel throughout Alaska endeavoring to garner community support.

MR. PALMER agreed to do so, but cautioned that any of TransCanada's responses to communities regarding that issue will be conditional based on whether it is looked at from a purely economic standpoint or from a local, state, or federal government's or local distribution company's standpoint.

CHAIR OGAN remarked, "I would much rather see barges of propane going down the Yukon River, rather than barges of diesel going up the Yukon and Kuskokwim [Rivers]." He offered some examples of areas and communities that might be good choices for handling the appropriate processing. He predicted that it would be helpful to be able to say to communities what the costs of hooking them up to the gas pipeline will be, so that individual communities can take those costs into consideration when determining the feasibility of whether or not to get hooked up.

MR. PALMER said that is good advice, and relayed that TransCanada has some commitments to serve small communities in the Yukon, and so will endeavor to be responsive to communities regarding this issue.

REPRESENTATIVE SAMUELS, with regard to access by an explorer, asked who has input in determining whether an expansion will take place.

[The counter numbers roll over to 000.]

Number 000

MR. PALMER offered his understanding that the pipeline company will have some say over whether a proposed increase in supply is sufficient to warrant additional facilities. However, the standards regarding what amounts of gas are sufficient to warrant an expansion will be established by the FERC and the National Energy Board (NEB), and so some "modest incremental volumes" might be allowed under those standards depending on the circumstances. In response to another question, he remarked that it would be unlikely that the FERC and the NEB would have conflicting rulings regarding expansions. He noted that the NEB

does have the authority to impose an expansion on a pipeline company, under certain circumstances, though the FERC does not.

SENATOR SEEKINS asked Mr. Palmer what the capacity is of a 48-inch pipe platform.

MR. PALMER reiterated that the maximum pressure would be 2,500 pounds per square inch, to transport an initial volume of 4.5 bcf a day with a relatively inexpensive expansion capability up to approximately 6 bcf a day. He added that there would be six separate compressor stations located throughout Alaska. In response to another question, he reiterated that the term "pipeline loop" refers to a second piece of pipe parallel to the initial pipe that is interconnected and that is run in combination with additional compressors to relieve the pressure constraints and allow additional pipeline volume to be transported. He mentioned that the cost of "looping" is dependent on several factors, though many of the initial costs of building a pipeline would not reoccur when building a loop. He estimated a modest cost savings of 10-20 percent to build a loop as opposed to building the initial pipeline.

SENATOR SEEKINS surmised, then, that any increase in Alaska's instate needs could be met via pipeline loops.

MR. PALMER concurred.

CHAIR OGAN asked whether "takeoffs" for looping are designed into the original construction.

MR. PALMER said yes, adding that although loops generally originate from near compressor stations, "hot taps" can also be done and are a relatively normal procedure.

Number 159

SENATOR WAGONER asked about "farm taps."

MR. PALMER reiterated his earlier comments regarding farm taps, adding that this service is provided at a specific rate and that TransCanada owns the interconnection.

REPRESENTATIVE KERTTULA asked how many "shipper owned" pipelines there are in Canada and whether they follow the same rules under the NEB as other pipelines.

MR. PALMER replied:

> The only ... major gas pipeline that I'm aware of that has been constructed by the shippers was the "Alliance Project." It was constructed primarily by natural gas producers; subsequent to the initial contracting, pipeline companies acquired the original equity from the original owners. That occurred through the construction stage and right up until recent times - post construction. ...

REPRESENTATIVE KERTTULA surmised, then, that Canada didn't have anything analogous to the Trans-Alaska Pipeline System (TAPS) or "the one proposal by the producers."

MR. PALMER replied, "There are clearly some examples on the oil side; on the natural gas side, like in the United States, ... the vast majority of the pipeline infrastructure has been constructed by what I would call independent pipeline companies over the past 50-75 years."

Number 208

REPRESENTATIVE GARA said his concern is that by the time the proposed pipeline gets interconnected with "Canadian pipes, we reach a point where all of sudden there's so much Canadian gas that there's not enough room for our 4.5 bcf to go through" to the Lower 48. He asked whether such is a possibility.

MR. PALMER offered his belief that under certain conditions, that is not a possibility. He elaborated:

> The lead time, in our opinion, to build the project from Prudhoe Bay to Alberta will be longer than to build from Alberta to market. ... We believe ... that it's expected that there will be some spare capacity on the Alberta system and the systems away from Alberta for you to move at least a portion of your 4.5 bcf a day to market without expansions. It's an open question, at this point, whether or not there will be 4.5 bcf a day of spare capacity when this gas comes.
>
> I think we would argue a couple of things. [First] that decision can be made a couple of years after the decision is made [to build] ... the project from Alaska to Alberta - just from a physical timeframe

> standpoint - and, [second], as I've described to you, the pipeline companies are going to compete for your business to move that incremental capacity away from Alberta at whichever markets you or the gas producers wish to serve. ... That happens today - you see that competition occurring from Alaska to market.

TAPE 04-17, SIDE A [BUD TAPE]
Number 001

MR. PALMER used an example in which one wanted to move 4.5 bcf a day to Chicago every day. "You would have to judge two years or so after the decision was made [to build] ... the pipeline from Prudhoe Bay to Alberta, how you want to move that gas," he said. One option would be to move the gas on existing pipeline systems, which are generally at a lower price because of the depreciated costs. Another option would be to build a new pipeline for say, 2 bcf a day, which could be constructed and receive regulatory approval faster than the piece from Alaska to Prudhoe Bay because the new construction would be along existing corridors and isn't as complex a project. Mr. Palmer said that he didn't believe Alaska's gas would be stranded in any fashion. In fact, he predicted that there would be competition to move the gas to market.

CHAIR OGAN relayed his experience from the Energy Council that most factor in 4.5 bcf a day worth of gas and the worry is with regard to where the supply is coming from beyond that. Even with 4.5 bcf a day being Alaskan gas, "they're" looking at importing 20 percent of the U.S.'s gas from LNG from foreign sources. It's clear that there's a market for gas, he remarked.

REPRESENTATIVE GARA relayed his understanding that some gas can be offloaded in Alaska and there could continue to be an efficient pipeline from Alaska to Alberta. However, he posed a scenario in which it becomes economic to do the line to Valdez as well, and there are substantial markets in Asia for LNG through Valdez. He asked if the aforementioned would require a looped pipe from the North Slope to the Alaska cutoff point or could it be accommodated through additional pressure stations.

Number 025

MR. PALMER noted that he wasn't present to testify to the specifics of an LNG project. However, he posed a scenario in which there is a volume of 1 bcf a day for a LNG project out of

Valdez after the construction of the initial pipeline. In such a situation, one would need to review the stage of development of the pipeline system at the time. If, two years after construction of the 4.5 bcf a day pipeline, there are sufficient reserves, markets, and the economics at work, the entire system wouldn't have to be looped because there is expandability up to about 6 [bcf a day] by using compression. However, if the pipeline has been expanded to 5.5 [bcf a day] or so for North American markets, there would be some looping once it went beyond 6 bcf a day.

CHAIR OGAN expressed the need to obtain information or presentations regarding the jurisdiction of the FERC and the National Energy Board (NEB). He inquired as to the hurdles of shipping gas that originates in one country, moves through another country, and ultimately arrives in the country of origin.

MR. PALMER noted that for almost 50 years Canadian gas has been moved across the border into the U.S. via multiple pipelines. With regard to tolls and tariffs, on the Canadian side, the NEB regulates it, and on the U.S. side, the FERC regulates it. The aforementioned hasn't constrained the movement of gas over the last 50 years. Mr. Palmer, turning to the specific situation presented in Chair Ogan's question, pointed out that such was addressed 25 years ago when Canada and the U.S. established a treaty that would, under certain terms and conditions, allow the movement of gas from one country through another country and on to the country of origin. For example, the government of Canada agreed that under the treaty, it wouldn't discriminatorily tax the pipeline project.

SENATOR ELTON opined that it's important to discuss this further at a future meeting because there is also the issue of access. He posited that perhaps Alaskan access to the capacity of the pipeline will impact access of Canadian gas from the Northern Territories.

Number 092

HAROLD HEINZE, Chief Executive Officer, Alaska Natural Gas Development Authority (ANGDA), informed the committee that his presentation would be from the perspective of a public corporation of the state. He noted that he provided the committees with a copy of Title 38, the portion dealing with the state's position with regard to pipeline right-of-ways. He

acknowledged that [the state] is preparing to consider Stranded Gas Act applications, which is different law. However, in Title 38, there is a very clear statement by the legislature with regard to the policy on how pipelines are to provide service and why. The policy, he emphasized, speaks to any pipeline, intrastate or interstate. Therefore, Mr. Heinze said he would translate the aforementioned policy into specific things that should be contemplated in this specific case of a pipeline going down the highway into Canada.

MR. HEINZE began by explaining that a takeoff point is [a point at which] gas can be taken out and something is done with the gas, and perhaps some of the gas or liquid is returned into the line. The take-off point could also be a place at which there could be production in the line. He highlighted that getting gas to the tidewater is a specific issue that's very important to Alaska. He said that he would specifically like to discuss the gas spur line to the Cook Inlet area. He turned attention to the Power Point presentation from the ANGDA, which included a diagram entitled, "Benefits to Alaskans". The diagram, he explained, illustrates things which could happen that could be good for Alaska [if there is a natural gas pipeline].

Number 136

MR. HEINZE said that the obvious reason one would take gas off a large pipeline is to make electricity. The diagram lists some communities that he believes might have enough electrical demand that it would be worth putting in a major gas-fired, efficient, co-generation power plant. If gas is taken off the pipeline and propane is removed, [there could be propane distribution centers] as listed in his presentation materials. For instance, a propane distribution center in the Tok Northway area would be very significant in terms of impacting the residents' quality of life. All of the fuel in that area has to be brought a very long distance, and therefore the transportation component of the fuel cost for the area is very high. However, the fuel [from the natural gas pipeline] would be going right by the area.

MR. HEINZE remarked that it's logical to review some places for which the use of fuel is at a high enough density that there could be a distribution system for gas. Certainly, Fairbanks has enough of a population that it would make sense, at some point, to have a distribution system if there was a plentiful and affordable supply of gas. Additionally, the military bases represent areas for which there is a high concentration of

energy use. Although all of the areas listed for the [electric power plants, propane distribution centers, and piped gas distribution systems] may not make the cut, there could be more than just two or three takeoff points. He opined that there should be take-off points for electricity, propane, and local distribution spaced at distances of at least every 100 miles and at least at every compressor station.

Number 189

SENATOR DYSON inquired as to the number of customers it would take to make it economical for all of the [necessary equipment].

MR. HEINZE replied, "We really don't know yet." However, he said that one of the things that should be required as part of the Stranded Gas Act submittals to the state is a standardized, simple design to accomplish "these purposes." The testimony from TransCanada, he surmised, indicates the need for at least the concept of "stubbing out" in order to make connections. He said that such is fairly modest in cost. He emphasized that these are cost elements which he estimates are .1 percent of the $20 billion project. In this type of concept, he said he didn't envision the pipelines providing anything other than the "stub out." He opined that an unattended facility might work for 100 miles of highway line feeding propane and would work for a Glennallen-sized power plant. The issues of dropping pressure and cooling gas and dropping out propane can be addressed via a very simple mechanical systems, he pointed out.

MR. HEINZE turned to the issue of getting gas to tidewater. The first important reason for getting gas to tidewater is because a large percentage of the population lives on the water. Therefore, getting gas to tidewater can result in getting gas to those communities on the water via barges or other methods. Between Ketchikan and Kotzebue there are at least 50 major communities that may be helped by having this type of energy availability and pricing. He noted that he is taking a long-term view. He then turned to LNG, which provides an economy of scale to "the loading" in Alaska. "The fact that you go into other markets with our gas allows you to achieve some economies of scale," he said, adding, "we keep the savings for ourselves ... - we lower our cost ... [in order] to get our fuel ... cheaper." Additionally, the notion of exporting may also help with the cost of getting shipments to coastal communities.

MR. HEINZE directed attention to the new industrial or manufacturing plants about which Agrium Inc. provided a presentation. He mentioned that Agrium Inc. painted the value-added feature in a way that is relevant to Agrium Inc.. However, Mr. Heinze pointed out that Agrium Inc.'s LNG plant and the fertilizer facility are large, but Agrium Inc.'s economics would improve with expansion. The reason Agrium Inc. hasn't expanded is a lack of supply. Therefore, if the state had a large amount of gas available for [Agrium Inc.'s LNG plant and fertilizer facility], Agrium Inc. would review the issue of expansion, and a certain number of entrepreneurial folks would be attracted. He clarified that he is referring to true entrepreneurs.

Number 262

MR. HEINZE opined that gas to tidewater could be done at a cost of service, which would be a $1.50 under the delivery cost to the world market. The aforementioned $1.50 looks very possible in terms of a price advantage in Alaska. He noted that the ANGDA has been reviewing the spur line issue by choosing the Glennallen to Palmer project to review in more detail. The aforementioned project was chosen because, of all the possibilities, it's the only one without any right-of-way information on file with the state. Furthermore, the Glennallen to Palmer project seems to be a good model for any of the other spur lines in the system.

MR. HEINZE said that in about a month, the ANGDA will put out a report that includes alignment, potential costs of delivery of gas through the system, et cetera. Looking at this from an intrastate pipeline view, it would fall under the gas transportation pipeline part of the statute, AS 42.06. Furthermore, [the gas pipeline] wouldn't be under the FERC's jurisdiction; rather, it would be under the RCA, the processes for which seem reasonable and appropriate. He posited that the statutes related to "intrastate" may be burdensome and complex. Although Mr. Heinze said he reserves the right to suggest a revision to the language in the future, he stressed that on an intrastate basis, Alaska is in reasonably good shape.

MR. HEINZE informed the committees that the concept of the ANGDA as a state-owned gas transmission company functioning as a utility will offer a tremendous "cost to service" advantage to Alaskans. However, that doesn't mean that the ANGDA wouldn't go to a company such as the ENSTAR Natural Gas Company to design,

build, and operate something. Still, when one looks at the state as an owner/financer of this type of project, [the ANGDA] is very attractive. He relayed that in working on this matter, it has been determined that there is a "bullet line" concept that could be adopted [to address a Cook Inlet gas shortage], though this idea has not progressed to the point of determining a specific [route/location].

MR. HEINZE added that a bullet line, as is implied, means that the line goes as directly as possible. One logical route is to follow the Trans-Alaska Pipeline System (TAPS) right-of-way to about pump station 7 and then move cross country as straight as possible, and go by McKinley Park. He mentioned the possibility of a bullet line following TAPS down to Delta and taking the turn with TAPS to Glennallen on down to [Cook Inlet]. He emphasized the need to conceptualize a pipeline that delivers a fairly sizable volume of gas to this area.

Number 370

MR. HEINZE reminded the committees that there is already a policy specifying the need to make the gas available in Alaska. However, there are two basic threats to that policy through the current system. One threat is the physical ability to take gas off. Mr. Heinze suggested that prior to any open season, the legislature should set a basic condition that some locations be specified as to where some gas will be taken off. He said that if the legislature can't get an entity interested in building a pipeline through the common land to [submit a proposal specifying take-off points], he would do it if the legislature appropriated money for that purpose.

CHAIR OGAN opined that it makes good business sense for any company building a pipeline to make as much gas as possible available to local residents.

MR. HEINZE turned to the issue of tariffs, and noted that because this is an interstate gas pipeline, [the ANGDA] has no control over intrastate tariffs; rather, the FERC does. If there are multiple drop-off points under the system, there's no guarantee that the tariff will reflect the fact that the gas wasn't transmitted all the way down. For instance, it might cost $2.39 to take the gas off anywhere in Alaska, which is the same as taking it to Alberta. Therefore, Mr. Heinze suggested that as part of the Stranded Gas Act, one of the conditions should be a "distance proportion" tariff requirement within

Alaska such that a tariff to the border has to be set and, thus, if [the gas] only goes halfway to the border, only half the tariff is collected.

CHAIR OGAN commented that the aforementioned makes good business sense.

Number 450

MR. HEINZE said, "As an Alaskan of many decades, I am not prepared to trust this issue to an agency in Washington, D.C." He went on to note that the argument is that the millions of consumers in the Midwest shouldn't have to subsidize the delivery of gas to the few thousands of customers in Alaska, and such an argument might resonate in Washington, D.C.. He said that there's an easy way to deal with this issue through the fiscal terms of the Stranded Gas Act. He reiterated his belief that when the legislature faces a contract, it should consider including a "distance proportion" tariff requirement within Alaska.

MR. HEINZE turned to the "open season" process, and informed the committees that one of his responsibilities is to think about how to make the LNG project interact in a positive manner with the highway project. One of the keys to designing the LNG project is to determine the gas composition. He emphasized that he has no knowledge of the gas composition on which the pipeline design was based. The aforementioned isn't public information. The informational issue is extraordinarily important because the legislature is going to have to make a multi-billion dollar decision on the Stranded Gas Act contract. He stressed the need to check the information, at least at some level.

MR. HEINZE posed a situation in which there is a 120-day open season, which, if it started in June, would mean that the 120 days would expire during the legislature's interim. Such a situation would potentially require the legislature to be called in for a special session. Mr. Heinze opined that the concept of a fair and equitable "open season" process would ring truer if there was more disclosure. He offered his belief that the committees could've asked Agrium Inc. what it's process would be in terms of due diligence in making a major commitment during an open season period; he acknowledged, however, that such wouldn't happen quickly. "The more prepared we are, the better this can work," he added.

MR. HEINZE turned to the access issue with the LNG project. At this point, there hasn't been much discussion regarding market access because people assume that the market is there. However, that's not the case with LNG because LNG has to have a place to go. The place "we logically want to go" is the West Coast. He showed the committees a map from the FERC that notes proposed [facilities], many of which would be in the Gulf of Mexico. Although the "lassiez faire" approach by the FERC seems to be working, he opined, there is concern that of the many proposed [facilities] on the West Coast, only one of those may occur in the U.S. under the FERC's jurisdiction. Furthermore, if that proposed [facility] is proprietary, Alaska LNG could be "locked out on this." He noted that he has raised this issue with the FERC and he raises it today because he believes it's an issue that should receive some thought.

Number 561

CHAIR OGAN recalled the Energy Council meeting in Alabama where when driving east of Mobile, about every fifth house had a sign in its yard saying "No LNG". He commented that he felt right at home, and further commented that there are people everywhere who don't want anything built. Therefore, one of the topics of the Energy Council has been in regard to how to site an LNG plant because of the resistance to it. Now the only place folks are thinking of building LNG plants is offshore, where there would be major security issues.

MR. HEINZE agreed with Chair Ogan. He then noted that he didn't discuss the East Coast because of the number of proposals is modest while the resistance is very high. He characterized the aforementioned as a local struggle. However, he reiterated that the good news is that the offshore opportunities are in the Gulf of Mexico, whereas the West Coast is always going to present a difficult situation.

CHAIR OGAN commented that the Gulf of Mexico is a fairly mature oil province, and therefore one would think there wouldn't be as much resistance. "America is going to have to wake up or start paying a lot more money for gas; same thing ... for the Cook Inlet," he said.

MR. HEINZE returned to the map and explained that the blue arrows show the LNG coming in. In wrapping up his presentation, Mr. Heinze recalled Senator Bunde asking, at another meeting, whether any other states involved with [gas pipelines] get

involved with tariff and access issues. The State of Wyoming [under the] Wyoming Natural Gas Authority is one such example.

TAPE 04-17, SIDE B [BUD TAPE]
Number 632

MR. HEINZE continued, "[tape begins midspeech] ... if you'll drill more wells, I'll build a pipeline to you," adding that the aforementioned dialogue occurs around the world. He returned to the topic of the "Alliance pipeline," which was built because a bunch of producers broke the deadlock and took the risk of building a pipeline. In Wyoming, the state has decided that it was losing so much money from the royalty in Texas that it decided to step in. Therefore, within the last few years, the Wyoming Natural Gas Authority was activated. [The Wyoming Natural Gas Authority's] bonding is $1 billion to build pipelines in order to "de-bottleneck" its gas.

MR. HEINZE said the tariff difference from the world price has been well over $1.00 because of the difficulty of getting from Wyoming to the marketplace. The objective is to drive that number down to $.50. Therefore, every unit of production is going to be worth more. Additionally, the pipeline capacity will be expanded so that the take out for Wyoming is increased from 4 bcf to 6 bcf a day. He commented that Wyoming is a very conservative place, and that he didn't believe the state receives any federal money for education so that the federal government can't be involved in how the state runs its schools. Mr. Heinze said that the Wyoming model will be reviewed and explored.

Number 668

SENATOR SEEKINS offered his understanding that during the time when a gas pipeline is built, the FERC decides how risky the pipeline is and specifies that the [entity] can make somewhere between the guaranteed return on the ownership of 12-14.5 percent. He asked if the cost of financing is part of the capitalized cost of the return.

MR. HEINZE explained that pipeline financings are done in a "debt equity" structure. For example, if the debt is 70 percent and equity is 30 percent, then for tariffs, whatever the bond rate is [on the debt] can be included as a cost; in other words, what is paid in interest is a cost and becomes a component of the tariff. Another component of the tariff pertains to how

many dollars of equity there are and what is allowed to be earned on that equity, which is the 12-14.5 percent.

MR. HEINZE said that in a "cost of capital" sense, it's reasonable to use a 70:30 percent [debt to equity ratio] with a 12 percent return on the equity and 8 percent on the debt. For smaller projects, such as a spur line, [the ANGDA] is looking at 100 percent debt, which is typically how a local utility would do it. On a 100 percent, there is the potential for a low interest rate. "That's why I'm able to show you some numbers that indicate that our cost of service would be a lot less than other people; now, I'm not making that claim in [regard] to a $20 billion project or even a $10 billion project, but I am as far as smaller projects that are more Alaska-sized," he stated.

SENATOR SEEKINS surmised, then, that a company with a lot of cash could leverage "pledging," receive a low interest rate, and roll it into the tariff.

MR. HEINZE said that traditionally, a pipeline company favors using a higher percentage of debt if it can be obtained without materially increasing the debt rate. Oil companies, on the other hand, tend to be very equity oriented, and perhaps would structure it at 50:50. He predicted that the state would probably aim for 90:10 because the state isn't oriented toward the return on the investment as much as it is oriented toward getting the lower cost of service.

SENATOR WAGONER turned to the "bullet line" option and asked about timing, the sizing, and the capacity of it [with regard to] handling the needs of the entire Cook Inlet basin.

Number 724

MR. HEINZE proposed a scenario in which the [bullet line] started at Point Thompson with a 24 inch line that is laid down over the TAPS right-of-way, which would be followed down to Delta and then over to Glennallen. Such a line could easily be designed to handle a half billion cubic feet a day if not a billion cubic feet a day. He pointed out that by going down the TAPS right-of-way, there is a pad, gravel, and access. The desire would be to keep it as simple as possible, and such a system could be built fairly fast because the lead times for procurement wouldn't be too long and only a couple construction seasons [would be necessary]. With regard to the question of [completion] by 2008 or 2009, he said he didn't believe [such

was possible], nor did he believe [the legislature] would be wiling to make such a decision in the next couple of years.

MR. HEINZE informed the committees that he was one of the reviewers of the Department of Energy study discussed by the ENSTAR Natural Gas Company yesterday, and although the study concludes that the exploration potential is there, he relayed his concern with a scenario in which nothing happens within the next two to four years. If the aforementioned happens, then something like a bullet line would be a solution if other things haven't progressed. Mr. Heinze specified that his concern is in regard to dealing with the Alaska issues in a wide variety of scenarios because there are various ways that this could play out.

MR. HEINZE added: "If nothing is happening in a few years and if this area is not finding gas, we better figure out something because, again, I've sketched through the alternatives [and] none of them are pleasant." One of the alternatives would be to build coal-fired power plants because there is a lot of coal in the area. Another alternative would be to resurrect the "Susitna Hydro Project." And, yet another option would be to import LNG from Indonesia. Mr. Heinze explained that the ANGDA's concept of the bullet line is to make sure there is a fallback option that makes some sense in Alaska and under Alaska jurisdiction.

Number 771

SENATOR SEEKINS returned to Wyoming's situation and relayed that in talking with a Senator from Wyoming he was surprised to learn how much of the natural gas infrastructure deals with coal bed methane and its transportation. He offered his understanding that about $1 billion a year is brought into the state treasury from coal bed methane. He asked whether that's part of the reasoning behind Wyoming's increase in marketing.

MR. HEINZE pointed out that Wyoming has a lot of stranded gas that can't be gotten to market because there aren't enough pipelines going out. Furthermore, the pipelines in the area are already full. Therefore, the options are to build new interconnects or do something to "de-bottleneck" the system in order to address the transportation issue. The billion dollars worth of bonds is in reference to "de-bottlenecking" the system and making it more attractive [by] lowering the shipping charge and increasing the volume.

MR. HEINZE said that with regard to the coal bed methane, Wyoming was probably the major coal producer in the U.S. several decades ago. Due to the decline of coal being used for electric power generation, Wyoming has seen [coal production] wane. Still, there is probably a huge coal resource base and parts of Wyoming have determined that they can utilize that resource base through a coal bed methane approach rather than an open pit mine. He noted that Wyoming also has very large conventional oil and gas resources. The gas resources were only found recently due to their depth. He mentioned that at this point, there are estimates that Wyoming was losing $135 million worth of taxes and royalties because the gas was stranded. There are also estimates that with the improvements through the pipelines, the state would realize additional revenues in the amount of $500 million a year.

SENATOR WAGONER emphasized that if gas isn't taken to Cook Inlet by 2009, or more gas reserves aren't discovered, the economy of the entire Cook Inlet Basin, including Anchorage and the Mat-Su Valley, will be in trouble. Without cheap gas, the entire economic wellbeing of Southcentral Alaska is at risk. Senator Wagoner posited that Alaska has the cheapest natural gas in the U.S., but that will change if care isn't taken.

MR. HEINZE said that all the factual information that he has supports the anecdote that [Southcentral Alaska] grew largely on the basis of cheap energy. However, that's over and the problem is that the supply situation could be worse than the price situation.

CHAIR OGAN expressed the need to have someone discuss the costs to off-take gas out of the pipeline. Chair Ogan announced that he was going to ask [Legislative Legal and Research Services] to review the state law in regard to ensuring Alaskans access to the gas.

The committee took an at-ease from 11:20 a.m. to 11:25 a.m. [The at-ease was inadvertently recorded.]

Number 902

REPRESENTATIVE KERTTULA thanked everyone for his or her efforts. She then relayed that her biggest desire is to hear what the administration is doing regarding this issue. She highlighted the last question on the agenda: "What is Your Company Willing

to Offer on Access Beyond What Is Required By Law?" She noted that Mr. Rutherford and Mr. Heinze talked about the aforementioned question vis-à-vis the right-of-way. She expressed interest in an outline of the ideas with regard to this question, as well as an outline regarding what the legislature should specifically look at in a contract. She also expressed interest in obtaining more information with regard to how rolling in rates would work.

REPRESENTATIVE LESIL McGUIRE expressed interest in anything that would provide members a more solid understanding of the process that the FERC goes through, the interactions it has with the NEB, how the decisions are made, and the what the role of the state would be. She suggested that it would be interesting to hear from a representative from Wyoming in regard to what it went through to arrive at its decision.

SENATOR GRETCHEN GUESS expressed the need to have the discussion regarding the FERC with the FERC rather than just listening to others offer opinions on what the FERC might do. Perhaps, it would also be helpful to have someone from the NEB. She, too, expressed the need for information with regard to the mechanics of rolling in rates.

CHAIR OGAN suggested that the shippers may have a bit of "heartburn" with [rolling in the rates] because it will increase their costs.

SENATOR GUESS remarked that she didn't understand the mathematical process with regard to how one methodology is determined over the other.

[The counter numbers roll over to 000.]

Number 010

SENATOR SEEKINS highlighted the fact that the legislature has to wait and see what is proposed while simultaneously attempting to plan statutes that would facilitate reasonable development, remove possible statutory impediments, and protect the interests of Alaskans. He likened this situation to buying a car that one hasn't yet seen. Senator Seekins opined that the process is difficult because he is trying to be prepared to make a wise and reasonable decision in a short period of time on something unknown. He said he agrees with the suggestion of having a representative from Wyoming speak about Wyoming's experience.

CHAIR OGAN noted that Senator Cole, a Wyoming state legislator, will be present for the Energy Council meeting, and therefore he offered to have his staff try to schedule a meeting with that senator during that time. He encouraged everyone to come to the Energy Council meeting.

REPRESENTATIVE GARA said he agrees with those wanting a briefing on the FERC rules and suggested that there also be a briefing from a supplier that relies on the FERC rulings but isn't a pipeline owner. He suggested that there is a chance that a pipeline project in this state will be hampered if those who are in possession of large amounts of gas don't want to sell it unless it is through their own pipeline. He offered his understanding of the argument that if someone is willing to build a pipeline and [those in possession of the gas] won't sell it, it's a waste and the lease to sell gas would be lost. The aforementioned could be litigated for 10 years or so and ultimately kill the pipeline project. Therefore, he suggested the need to review whether there is anything the legislature can do to ensure that existing gas supplies are made available, under fair terms, to a pipeline. Until there is such an agreement, a pipeline can't be built, he opined.

CHAIR OGAN directed attention to what he termed as "Ogan's Golden Gas Rule," which is that those with the gas make the rule, and opined that the aforementioned is a problem. He acknowledged that many have wanted to build a transportation system and many dollars and much time have been spent and still the state remains without a gas pipeline.

REPRESENTATIVE GARA said that's his point, and clarified that his question is whether the legislature can do anything to control [the state's] own destiny.

CHAIR OGAN highlighted that the market has changed, especially the Lower 48 gas market; cheap gas is now a thing of the past.

Number 129

SENATOR DYSON remarked that the need for gas for Alaskans is huge. He noted that he was impressed with the legislature's action to not allow the "over the top" route, and suggested the producers would've eventually concluded [that it was not feasible] due to permitting and environmental issues. He suggested that the legislature should take actions which

acknowledged that having gas available for Alaskans is of the highest priority. The royalties, he surmised, aren't enough to meet the needs of Alaskans. However, he maintained that if the major [producers] are going to be forced to supply gas to Alaskans, then it should be done in a manner that is fair.

SENATOR WAGONER agreed, and suggested reviewing a legislative package that could address some of the potential problems highlighted today.

REPRESENTATIVE HAWKER remarked that this process has been extremely valuable and from it he has created a list of less than 10 items that are parameters by which the proposals could be evaluated. He expressed the need to obtain a better understanding of the international treaty and the interplay between the FERC and the NEB. He further expressed the need to explore the issue of ownership of a potential line, particularly in relation to a Canadian-owned company.

CHAIR OGAN suggested having a panel discussion in the future.

TAPE 04-18, SIDE A [BUD TAPE]
Number 001

CHAIR OGAN reiterated the need to discuss the costs of the off-takes and who would pick up the costs if it were too expensive for a community. He suggested reviewing whether the aforementioned could be accomplished through federal or state subsidies or through a joint partnership with the corporate entity that constructs the pipeline.

ADJOURNMENT

There being no further business before the committees, the joint meeting of the Joint Committee on Legislative Budget and Audit and the Senate Resources Committee was adjourned at 11:55 a.m.