

Stranded Gas Hearings (0410131330 Minutes)

State Participation in the Risks and Rewards of a Gas Pipeline Project – October 13, 2004.

From UBS Financial Services:

James W. Ziglar, Managing Director and Chief Business Strategist, Municipal Securities Group;

Robert F. Doherty, Managing Director & Co-Head, National Infrastructure Group;

Charles M. Davis, Managing Director, UBS Investment Bank;

James E. Scott, Managing Director;

Joe E. Forrester, Managing Director

JAMES ZIGLAR, Managing Director/Chief Business Strategist, Municipal Securities Group, UBS Financial Services Inc., turned attention to the packet of information provided by UBS. Tab 1 includes the resumes of all of the people from different parts of UBS who have helped analyze Alaska's project. Mr. Ziglar highlighted the federal loan guarantee, the accelerated depreciation with certain aspects of the pipeline, the accelerated permitting and processing, including judicial review of lawsuits, as well as the application for the enhanced oil recovery [EOR] tax credit to the gas treatment plants are all positive developments encompassed in the recently passed federal energy legislation. Mr. Ziglar related the hope that he could shed some light on some of the possible unique solutions eluded to by Dr. van Meurs. Mr. Ziglar informed the committees that he and his associates would provide testimony on the following topics:

An overview of UBS.

The natural gas market, particularly the growth in LNG and its potential implications for this pipeline project and why action is required.

The project itself and the potential risks and rewards for the state as a participant in the project.

Financing, credit options, and business models, in particular a hypothetical situation in which the state could participate as an equity partner in a meaningful way while mitigating some of the risks.

Summary and conclusions.

MR. ZIGLAR informed the committees that in 2000 Paine Weber was acquired by UBS AG and together with other firms, it became part of the largest private bank in the world and one of the best capitalized firms in the world. He turned attention to pages 3 and 5, which specify some of the rankings that UBS has in a variety of areas. "We tend to think that we are now the premier investment banking firm in the world," he related. Mr. Ziglar highlighted that UBS is ranked first in the municipal bond business, which includes tax exempt and taxable bond issues. For at least the past 20 years, UBS has been involved as either an underwriter or a financial adviser in over 50 percent of all the bond issues performed in Alaska. "The breadth and depth of our structuring experience, particularly in the municipal and corporate area, I think, cannot be overstated when it comes to putting together a transaction of this magnitude," he opined. Furthermore, on the corporate investment banking side energy is one of UBS's strongest calling cards as illustrated by the fact that UBS has managed the largest energy deals performed in the corporate market over the last few years. Moreover, UBS is a dominant player in the energy marketing, trading, and hedging business all over the world. Pages 7-8 outline UBS's activities in the aforementioned area. Mr. Ziglar opined that UBS brings to Alaska the ability to assist the state in managing its assets, risks, and financings in all their dimensions.

CHARLES DAVIS, Managing Director, UBS Investment Bank, UBS Financial Services Inc., informed the committees that for the last 20 years he has spent most of his time working with natural gas pipeline companies and integrated energy merchant companies all over the world. He said he would discuss the competitive environment for natural gas around the world and how it impacts the feasibility of a pipeline from Alaska down to Alberta, Canada. Mr. Davis opined that there's a significant first-mover advantage as it relates to competition between the LNG market and Alaska's project because once the project is underway, the costs become "sunk." When one compares the competitive dynamic of a pipeline from Alaska into Canada, the cost competition will be reviewed on a variable basis as opposed to a full-cost basis. He informed the committees that the global LNG liquefaction capacity is expected to increase from about 6.6 tcf in 2003 to 9.4 tcf in 2007. The aforementioned is important because somewhere between 75 percent and two-thirds of the costs associated with LNG are located upstream of the re-gas terminals. Therefore, once the producers and the countries develop the liquefaction trains and ships, re-gas

becomes relatively inexpensive. He also informed the committees that US LNG imports are expected to increase to more than 2.2 tcf by 2010, which will amount to about 8-10 percent of US natural gas consumption.

MR. DAVIS opined that natural gas is probably one of the most underutilized natural resources in the world. As of 2003, natural gas reserves are estimated at 5,500 tcf, which is about 60 times the natural gas that was used last year. Furthermore, the 12 countries that currently export LNG hold only about 25 percent of the world's natural gas reserves, which means that there's a lot of gas that isn't being utilized. The aforementioned can be a large competitive threat. He informed the committees that the three countries holding about 33 percent of the world natural gas reserves are currently building liquefaction facilities. Although those [facilities] are very localized, the LNG is coming and will be a significant economic threat. He also informed the committees that the economic crossover point for transporting LNG via tanker versus via a pipeline has decreased to a distance of about 1,250 miles for an offshore pipeline to about 2,300 miles for an onshore pipeline. The difference is because offshore pipelines are more expensive to build than onshore pipelines.

MR. DAVIS turned attention to page 11 of the UBS packet, which illustrates that the LNG trade is very localized. The LNG trade can be broken up into the North American trade; the West African trade; the Mediterranean trade; and the Pacific trade. However, there are three geographic regions for LNG export: the Pacific Basin; the Atlantic Basin; and the Middle East. He noted that the thicker the line representing the LNG trade gets the more LNG exports it's meant to represent. The Pacific Basin accounts for approximately 50 percent of all LNG exports. However, UBS believes there will be significant investments in the Middle East and West Africa that will take advantage of significant gas reserves that aren't there today. Furthermore, it's estimated that there will be a 25 percent increase in the number of LNG tankers that will come on line by 2007. Therefore, once the infrastructure is built, the economics of the project become variable rather than fixed.

MR. DAVIS moved on to the import side of gas, which he characterized as a regional market. In the Pacific Basin and Asia, LNG exports account for about 100 percent of the natural gas utilized in those countries. Gas in that region competes with other fuels as opposed to competing with other gas. However, in Europe and the United States, LNG is really a supplement for existing natural gas supplies and thus is more of a gas to other commodities competition. Also important to know is that the price of LNG is declining because of better technology. The costs have went from "2.50 m" to breakeven for full cycle to "4.00".

MR. DAVIS continued on to the outlook for the US with regard to natural gas and LNG. He informed the committees that in 2002, the US used about 60 bcf of gas a day and that's expected to grow to about 72 bcf in 2010 and to about 86 bcf in 2025. However, domestic production in the US and Canada is flat to declining depending on the [region]. Domestic production in the US in 2002 was about 52 bcf with expectations of increases to 56 bcf in 2010 and 65 bcf in 2025. Therefore, the US is about 10 bcf shy a day today, which will grow to 15-16 bcf by 2010 and to 20 bcf a day by 2025. The aforementioned illustrates that there's a large "hole" to fill, which he characterized as a positive sign for Alaska's project. He reminded the committees that these LNG projects can be brought on in small discrete chunks and the relative cost for the re-gas on the LNG is much less significant than on a large pipeline. Mr. Davis related UBS's belief that LNG will account for about 40 percent of the US natural gas imports by 2010, which is a large increase.

MR. DAVIS informed the committees that LNG has been in the US for about 30 years in the form of liquefaction capacity and re-gas capacity. There are only four terminals in the US today. Most importantly, he related that there are over 200 proposals to build LNG terminals in the US, of which there are probably a couple of dozen serious proposals. Each new terminal will be able to import about 1 bcf of gas a day. Mr. Davis drew attention to page 16 of the UBS packet and opined that pricing is going to be significant with this project. Today the pricing model for LNG or gas around the world is very regional. In markets where LNG and natural gas compete head-to-head, such as in the US, it's typically priced off of an index of gas. However, in Asia, where LNG is only competing with other fuels, it's priced off a basket of fuels.

As more liquefaction facilities are built and more cargos of LNG move across the world, a more worldwide commodity price for LNG is developed such that there are spot cargos going into different terminals and taking an arbitrage of different markets. The aforementioned will make that market much more competitive and allow people to hedge going forward in the LNG market.

MR. DAVIS summarized by highlighting that time is of the essence because competition from the LNG market poses a serious challenge to the feasibility of this project. As more LNG projects are built in the Lower 48, pricing visibility on gas will become more uncertain. Mr. Davis reiterated his earlier testimony that there is a first-mover advantage because once this project is announced and underway, he opined that it will deter several of the LNG projects from being built in the US. "We believe the state ... needs to continue to adopt its proactive attitude in developing this project and develop alternative business models that provide for optimal risk sharing among all the constituencies here," he opined.

ROBERT DOHERTY, Managing Director & Co-Head National Infrastructure Group, Municipal Investment Banking, UBS Financial Services Inc., directed attention to Tab C regarding what is involved in building a pipeline and how the state can utilize its competitive advantages to have a profitable project that's good for the state. [With the passage of the Congressional energy legislation], incredible progress has been made with regard to the federal credit guarantees and a significant amount of risk is taken off the table. Mr. Doherty related that UBS believes there are three critical factors in terms of developing a strategy to get a pipeline completed. One factor is motivating all the participants. Another factor is assessing and mitigating the risk to the state. The third factor is utilizing alternative models in order to customize a solution that will motivate [participants] and minimize risks. These factors are discussed on page 18 of the UBS packet.

MR. DOHERTY stated that designing a strategy to motivate all the participants to commit to the project is the critical strategy that the state needs to implement in the near term. In order to accomplish the aforementioned, the state must understand and exploit each of the participants' wants, needs, and desires. The state must also offer incentives through alternative business models in order to secure the commitment from the participants. He noted that part of using participants is using other people's money first. The aforementioned has to be the state's number one goal, he remarked. Frankly, the Alaska delegation accomplished much of that over the course of last week [with the passage of the energy legislation]. Eighty percent of the overall project, to a certain extent, is other people's money. In terms of this first factor the state must also design a cost-effective transaction from a debt and equity perspective. He noted that each of the successful projects mentioned by Dr. van Meurs capitalized on creating a structure to motivate and incent individual participants to meet their goals and mitigate their risks. The aforementioned can be accomplished in Alaska in a cost-effective and reasonable manner.

MR. DOHERTY turned to the second factor, which is to ensure that the state's participation level is optimized while its risk assumption is minimized. Understanding the level at which the state can participate and the amount of risk the state can assume is paramount. Achieving the second factor requires quantifying potential risks and rewards; designing a model to alter the traditional risk/return profile for a Petro-State such as Alaska; selecting incentives that most closely align with the state's interests; and understanding the state's "out of the project box" risks. He clarified that the "out of the project box" risks means understanding what happens if the project doesn't proceed as anticipated and the impact it will have on other projects in the state as well as other aspects of the state, such as its credit rating. He moved on to the third factor, which is to combine aspects of alternative business models to customize an optimal solution for the state. He opined that the key is in regard to how the structure is created to maximize the return with minimal risk.

MR. DOHERTY turned to the state's position and what it has at stake, which is addressed on page 19 of the UBS packet. He highlighted that Alaska has a massive asset in the ground with a value today of near zero. As Mr. Davis said, if this project doesn't proceed relatively soon, it's possible that the competitive forces from LNG may have that asset remain in the ground with the same near zero value for the foreseeable future. Therefore, if the pipeline isn't built, any in-kind gas, revenues, and incremental tax [revenues] will remain zero. [The chart on page 19 of the UBS packet] regarding the incremental tax

revenues from the pipeline [illustrates] the way in which one can view the value of the stranded assets from a tax perspective. The chart points out the variable revenues. "As it relates to variable taxes, the value of the assets in the ground are fairly dependent upon commodity price," he related. For example, if the market price per MmBtu is \$3.00, the Department of Revenue estimates that the state would collect about \$35 million in royalties, \$106 million in severance tax, and about \$340 million in corporate tax. For a sum total of additional variable revenue, freed stranded assets, in the amount of about \$481 million. The aforementioned doesn't include the project revenues from the transaction, only the tax revenues that would be freed from a project. Mr. Doherty clarified that there are stranded assets in terms of tax revenues, which are sitting in the ground and will not materialize unless the pipeline is built as well as additional project revenues. He noted that there are additional stranded assets in terms of the economic benefit from an operational pipeline in terms of jobs. The key is in regard to how much of the aforementioned incremental revenues the state should commit to the project in the form of equity. He explained that if the project isn't built, the revenues don't exist. However, if the project is built, theoretically the state could commit all of these variable revenues and be in no worse of a situation.

MR. DOHERTY commented that there needs to be a balance between aligning the participants' desires and interests. He noted the confluence of events in terms of high natural gas prices, LNG competition, and the federal credit guarantee. Although there are a lot of conflicting interests and motivations, the state can still establish an incentive mechanism that targets what people consider to be their risks and mitigate them. He then turned to the differing incentives of the producers, shippers, and state. From the producers' perspective, LNG competition poses the greatest threat to the producers' economics. As more LNG projects come on-line, the risk [to the producers' economics] becomes higher and the producers' willingness to commit will diminish. Furthermore, the commodity price risk is a significant factor. He emphasized that one of the benefits and downsides of this project is that it's 4 bcf a day and thus the commodity risk is "real and large." However, there are ways to mitigate the aforementioned. One can conclude that an increase in the supply of natural gas is a benefit and provides higher potential revenue to the producers. However, injection of 4 bcf of supply into the US could and probably would move the price of natural gas as a whole in the US. By definition, the aforementioned will impact the other natural gas businesses of those enterprises. Therefore, there are conflicting issues within the "sponsors' own house". From the shippers' view, transportation cost is the largest issue. Furthermore, commodity price risk is a significant factor with the shippers. If there is a guaranteed shipping contract, it becomes a significant risk that needs to be mitigated, especially with a 4 bcf project.

MR. DOHERTY turned to the state's perspective, the state has a significant stranded asset. Furthermore, there is a limited window of opportunity, given the federal credit guarantee and competition from LNG. Moreover, the participation level and risk assumption must be fair. With regard to the federal government's perspective, Mr. Doherty clarified that the UBS packet was put together [before the passage of the federal energy legislation], which has resulted in the federal government assuming all the risk. The federal government's decision, he opined, is good for the state and the nation as a whole.

MR. DOHERTY, directing attention to page 21 of the UBS packet, explained that once the motivations and risks are identified, how the "risk box" is assessed is the key. He clarified that UBS views the risk/reward profile as a box and understanding how that box is shaped will help the state determine how it should proceed with a particular project. He informed the committees that there are three areas of risk: type of risk; risk position; and risk assumption. Mr. Doherty turned to the types of risk and began by discussing the construction funding/completion risk. The aforementioned risk was discussed earlier regarding whether cost overruns would actually be a benefit for the state. Although cost overruns may provide benefits for a few, it won't for the state. He related that the construction funding risk is traditionally taken by a sponsor or equity participant. With the federal loan guarantee, the federal government has assumed a portion of that. If the state was an equity participant, the state would assume part of that risk as well. Cost overrun risk is traditionally assumed by the sponsor or an insurance company as it relates to a guaranteed maximum price, although [the latter] is probably not an option for this size of a project. He viewed the cost overrun for the state as a one-time [risk] for the state as an equity participant. With regard to the permanent takeout risk, Mr. Doherty informed the committees that [UBS] will discuss the ability to get around the construction funding loan and enter into a permanent funding contract. The permanent

takeout risk really lays with the sponsors and the federal government through the federal loan guarantee as well as the state as an equity participant. The performance/operational risk would lay with the sponsor and would be a constant risk.

MR. DOHERTY said that production risk at the wellhead would lay with the producer, although there is some risk associated with the state if the state takes in-kind gas. He posed a situation in which the state, as an equity participant and shipper, has a contract with the producers and the other sponsors that isn't tight. In such a situation there is the possibility that if commodity prices fall to a certain level, it would no longer be economic to produce the gas out of the ground. "By definition, the state may not have its in-kind gas," he clarified. If the state, as an equity participant and shipper, doesn't get the gas out of the ground, it's a large problem. The details of the aforementioned should receive a lot of focus. The commodity price risk is a constant risk for the producer, shipper, and the state. Capacity gaps are related to how the shipping contracts are set up, that is can it be renewed when it expires. The initial shipping contracts/renewal risk traditionally lays with the sponsor. The state, as an equity participant, would be classified as a sponsor.

MR. DOHERTY, in response to Chair Samuels, returned to the permanent takeout financing risk. He noted that one can structure around permanent takeout financing risk. He also noted that [the permanent takeout financing risk] would be much more significant without the ability to utilize a federal credit guarantee. Traditionally, an entity needs to bear the construction risk. Once the project is completed, shippers can come on board, longer-term contracts can be established, and long-term debt can be issued. Often bondholders aren't willing to take on construction risk in terms of the long-term financing. However, once the project is built, the bondholders will take on a 10- to 15-year investment as it relates to the debt. In the current environment, the federal loan guarantee provides the ability to move through some of the construction risk issues and permanent takeout financing risks.

MR. DOHERTY returned to his presentation and informed the committees that the risks that he mentioned are those that UBS believes the state should assess and understand in order to determine which to take. Mr. Doherty stated that the state must establish a clear loss position and the duration of the risks must be understood. He questioned, "Do you want to be in the first-loss position so the first dollar of loss is the State of Alaska's or do you want to get into a position to have someone else take the first loss, maybe higher returns, and the state just pay after that initial loss?" He said there are three ways in which to view this. There is the first-loss position, which is similar to a deductible payment. The second-loss position is when another entity incurs the first "X-million" in losses and the state takes the rest. The third-loss position is one in which it's a combination or parity situation.

MR. DOHERTY related the need for the state to establish liability limits in the case of a catastrophic event, as well as potential ongoing exposure. In regard to [the state's] "tail risk", under a normal distribution curve the state would make a "good chunk of money from the project." However, there is a small potential that the state may lose money. There is an even smaller potential that could be catastrophic. From a policy perspective the state isn't in the position of taking the catastrophic risk, he opined. With regard to mitigating that tail risk, the state would have strong and reasonable returns while protecting the "out of the box" project risks. Additionally, the state must address the statutory, constitutional, regulatory, federal, and policy issues.

MR. DOHERTY addressed sizing the risk box and the amount of absolute and relative risk the state is willing to assume. He explained that the absolute risk would define the [state's] risk limit while the relative risk relates to ensuring that given the state's position relative to other players, the state isn't out-negotiated. Therefore, the state's return, as an equity participant, is just about as equal or better than the other equity participants. Mr. Doherty recommended that in sizing the state's risk box it should use its expected benefits to establish a base amount of risk assumption. He reiterated the fact that a stranded asset that remains stranded is worth zero. Theoretically, all of the [stranded asset] could be pledged and [the state would] be no worse [off]. The aforementioned is the state's baseline, he said. Mr. Doherty identified the state's expected benefits to be the excess or net revenues from the sale of in-kind gas; the incremental tax revenues; additional economic benefits in terms of jobs and the related taxes.

MR. DOHERTY added that to size the risk box the state should evaluate its own level of risk assumption against that of other participants. The state, he indicated again, should be equal or better than the other participants. This is accomplished by determining the total threshold amount of risk as well as the preferred relative loss position commensurate with expected benefits. He mentioned that one can absorb a first loss, but one must be compensated for it. With regard to risk exposure, the state should analyze the circumstances under which the losses may occur, the extent of those losses, and the probabilities of those losses. He likened the aforementioned to the state's breakeven analysis. Furthermore, the state should quantify its maximum risk assumption under a catastrophic loss situation. For instance, he questioned how the state would protect itself in a situation in which gas prices drop to \$1.50. Mr. Doherty highlighted the need for the state to identify and mitigate ancillary risks, such as the credit ratings of the state. The federal credit guarantee goes a long way for 80 percent of the project costs, he opined. He identified other ancillary risks such as the opportunity cost for other state programs/projects. He specified, "Ideally, the state should structure a business model that limits all these risks to the project box."

JAMES SCOTT, Managing Director, UBS Financial Services Inc., began his portion of the presentation, which can be found behind Tab D of the UBS packet. Mr. Scott acknowledged that the passage of the energy legislation in Congress changes things and moves [the state] down certain paths. He explained that UBS's approach began with a traditional pipeline funding model as a base case against which to compare the state's options. Alaska is unique geographically as well as economically when compared to the Lower 48 and other Petro-States. The alternative models differ depending upon the following dimensions: the level of state involvement/ownership; risk/reward profile of the state; the nature of federal loan guarantee/participation; the state's relationship with other participants; and the capital market implications.

MR. SCOTT directed attention to page 24 of the UBS packet, which addresses the traditional pipeline funding method. He explained that under the traditional pipeline method, the discussion is about project finance which attempts to limit the financing to project revenues. Under a traditional project finance methodology for a pipeline, the sponsors place equity at risk in the range of 20-40 percent. With an 80 percent federal guarantee, the sponsors' equity would likely be in the 20 percent range. Mr. Scott highlighted that FERC regulates tariffs for the pipeline itself with a return on equity in the amount of about 12 percent. The aforementioned is good for the equity participants because there would be a regulated rate of return on the investment. Generally, the project debt is sold non-recourse to the sponsors and the debt holders look to the shipping contracts to support that debt. He related that generally the life of the pipeline is 30 years, the shipping contracts wouldn't be longer than 15 years. Therefore, the debt holders take some recontracting/renewal risk. However, that risk is mitigated with the federal loan guarantee. Mr. Scott pointed out that the total funding cost is the primary determinant of the overall tariff. The capital costs, the return on capital far outweighs the operating costs of a project such as this. Therefore, lower financing costs result in lower and more competitive tariffs.

MR. SCOTT moved on to the marginal tariff analysis, which can be found on page 25 of the UBS packet. This page provides an order of magnitude with regard to changes in the return equity. The matrix on page 25 illustrates the order of magnitude of the change in the tariff to recover capital over the life of the project. He explained that the matrix assumes the following: 100 percent of the pipeline capacity is utilized; total throughput of 4 bcf a day, with the state's throughput being 1 bcf a day; total all-in cost of debt of 7.5 percent with a 30-year amortization period; and total project cost of \$20 billion with the state's share being about \$5 billion.

MR. SCOTT, in response to Representative Croft, specified that with the federal loan guarantee, the focus would be on structures that are 80 percent debt and 20 percent equity. The more equity in the project, the higher the tariff. He explained that [in the traditional pipeline funding method] the total cost of capital, 7.5 percent has been assumed for debt. Therefore, if 12 percent is assumed on the return on equity component of capital, the more equity in the total capital structure and the higher the blended cost of capital overall results. From a cost standpoint, it would be better to have more debt because it costs less than equity. However, there's a finite limit on the aforementioned because the debt holders look to

the equity component to insulate them from loss. In further response to Representative Croft, Mr. Scott agreed that if one goes too far, the 7.5 percent debt won't be achieved. He noted that the FERC return on equity has been 12 percent, but it's subject to change, which is why the 10 and 14 percent returns on equity were also listed.

MR. SCOTT continued on to page 26 of the UBS packet, which relates a hypothetical breakeven analysis for the participants. The table on the left of page 26 illustrates that in a situation in which the gas at the wellhead is \$1.00 MmBtu with a tariff of \$1.73 MmBtu, the total breakeven price is \$2.73 MmBtu. However, if the commodity price is higher than the breakeven price, the producer at the wellhead receives a wind fall. On the other hand, the producer would suffer if the commodity price is less than the breakeven price. The table on the right of page 26 illustrates the daily and annual aggregations at different spot market prices. The key question for the state is regarding how much of the commodity price risk should it assume in order to advance the project.

REPRESENTATIVE GATTO pointed out that the table on the right of page 26 points out that with a spot market price of \$3.00 MmBtu, the daily economic gain is \$1.1 MmBtu. However, a \$1.00 increase in the spot market price to \$4.00 MmBtu results in a daily economic gain of [\$5.1] MmBtu, which seems to be an increase by a factor of eight. The annual economic gain changing the spot market price from \$3.00 MmBtu to \$4.00 MmBtu only seems to be barely one-half difference. Those numbers don't seem correct.

MR. SCOTT said that he would have to check with the individual who ran those numbers. Mr. Scott continued with his presentation and related that in the current environment, the state may need to assume a portion of this risk in order to make this project viable. He then turned to page 27 of the UBS packet, which discusses some of the alternative business models that UBS reviewed in looking to move the project forward. The alternative business models reviewed are as follows: state owned/direct support or equity participation; federal credit support; credit support by the state; "pure investor" support by the state; no credit support by the state; hybrid financing options.

MR. SCOTT noted that the 20 percent equity contribution that the state will contribute can't be covered by the federal loan guarantee.

MR. DAVIS said that he would now discuss a potential business model that would be well-recognized and well-received by the financial community. He explained that he would walk through a project finance structure that outlines equity ownership, flows of gas, and flows of money. He clarified that there are two streams of money. One stream of money is from the commodity, which is the sale of gas. There is also a stream of money that comes into this model by virtue of a tariff that the shippers pay. He noted that through both of the aforementioned streams, the state receives money. He related the financial community's perspective of a FERC-regulated pipeline in which the shippers bear all the commodity risk while the owners of the pipeline bear no commodity risk. He emphasized that it's all about the contracts. Therefore, the people who ship the gas down the pipeline are on the hook to pay the tariff regardless of whether the gas flows or doesn't. If this pipeline is 100 percent contracted, the only thing the debt holders and the owners of the pipeline should care about is the contract.

REPRESENTATIVE CROFT asked if it has to be that way. He asked if there's ever been a profit-sharing [contract].

MR. DAVIS said it's never done that way. In the US, natural gas pipelines are regulated by FERC. There is a debt/equity structure and a reasonable rate of return on the equity is allowed and one is allowed to recover his or her debt and all the operating expenses. The operating expenses include the variable and fixed operating expenses, which means a return on and of capital. Theoretically, if a pipeline is fully contracted and it doesn't run full out, then [the state] will earn a fixed return on its money.

REPRESENTATIVE CROFT surmised, "I don't care if my tenants are making money or not as long as they pay the rent."

MR. DAVIS agreed, but noted that there is a risk that the tenant could default and the [lesser] would be on the hook for that. Mr. Davis noted that the Alaska project poses a unique situation in that it's likely that the owners of the pipeline will be the shippers, and therefore there would be a perfect alignment of interest between gas flowing down the pipeline and money being paid. However, he posed a scenario in which a third-party company ran the pipeline and related that there might be a risk that the third-party company had to build this pipeline and only 75 percent of the capacity is contracted. Therefore, 75 percent of the risk is covered and [the third-party company] would be on the hook for the remaining 25 percent, which he said it would try to sell on the spot market. Furthermore, [the third-party company] would have to obtain a tariff below market because the shipper realizes that [the third-party company] needs the shipper more than the shipper needs the [the third-party company]. Therefore, although the tariff may be \$1.75, the shipper will offer to pay \$1.00 tariff. The competitive dynamic will be such that the [the third-party company] will realize that \$1.00 is better than zero, and therefore the tariff will be below the market tariff.

REPRESENTATIVE CROFT related his understanding that the vast majority of pipeline projects are such that the shipper carries the risk.

MR. DAVIS reiterated that a FERC-regulated pipeline has to follow certain rules. However, there is no requirement for the [the third-party company] to contract for the capacity; [the third-party company] could take 100 percent spot risk, but the most that can be charged is the maximum rate that he assumed the state would contract upfront in this deal. Therefore, the upside is capped and the downside is limited by zero, and somewhere in between is where the rates will be established. He reiterated that this is a unique situation in that the equity holders of the pipeline are also the shippers and producers of the pipeline, and therefore have the risk up and down the value chain. Mr. Davis suggested that committee members separate the returns from the pipeline and the returns from the commodity because the pipeline will be a fixed charge on which [the state] will be on the hook and can't get off regardless of whether [the state] sells or ships gas.

REPRESENTATIVE CROFT recalled that the governor was very careful to say that he and the legislature haven't decided whether it will be a producer-owned line or not. He opined that the shippers and owners aren't necessarily the producers.

MR. DAVIS related his understanding that there is 4 bcf a day of production and it works out nicely with three producers with 25 percent and the state at 25 percent. He noted that these numbers are interchangeable. In fact, the state could own the pipeline entirely and all the benefits and risks would go to the state. The difference is that the state wouldn't have natural gas to go on the pipeline to ship. Therefore, the example Mr. Davis is laying out is that if the state owns 25 percent of the pipeline regardless of who owns the other 75 percent, the state would have 25 percent of the gas that it would have to get to market. The state would have to be the shipper on somebody's line. Therefore, he questioned why the state wouldn't become an equity owner if the state is a shipper accounting for 25 percent of the revenue. He reminded the committee that the state would sign the same gas contract regardless of whether the state owns the pipeline or is part owner of the pipeline, although the length and terms of contract may differ. In all likelihood the state will want to sign a long-term gas contract because the state will want that portion of its economics fixed.

MR. DAVIS [referring to page 28 of the UBS packet] explained that in a traditional pipeline funding model, there will be a LLC with a non-recourse to the sponsors, which will actually build the asset. He assumed that \$20 billion would be required to build the pipeline. The scenario presented assumes the state and three sponsors each have 25 percent ownership in the project. Each sponsor is obligated to put in \$5 billion. There is also the assumption that the state has 1 bcf a day of in-kind gas, which is important because it mitigates the state's risk from a shipping standpoint. The scenario assumes that the state enters into a shipping contract for 1 bcf a day. On the sponsor side, the producers with the other 3 bcf a day of gas can enter into a shipping contract as well. He noted that there continues to be the assumption that the pipeline will be financed on an 80:20 project basis. He also noted that the equity participants would be obligated to pay the tariff whether the gas is shipped or not.

MR. DAVIS, in response to a question, clarified that the state would be on the hook for only its portion of the tariff. If the tariff is a \$1.50, then [the state] would be on the hook for a \$1.50 times a bcf a day, which amounts to \$1.5 million a day. The important thing to note is that the state, as a 25 percent owner, would suffer the consequences if it ships its 1 bcf of gas a day, but the other shippers don't live up to their end of the bargain. However, that would be highly unlikely because one wouldn't enter into shipping contracts with an entity that isn't investment grade and can't pay its obligations.

REPRESENTATIVE GATTO posed a situation in which there are four participants, one of which goes bankrupt. In such a situation would the same amount of gas be produced or would the amount of gas owned by the bankrupt participant not be available, he asked.

MR. DAVIS related that in such a situation, the bankruptcy judge and the creditors want to maximize what they will receive. Therefore, if there are reserves behind the pipe, the bankruptcy court will want to ensure they move those reserves to market to be sold. Therefore, those reserves will flow down the pipe and the tariff will be paid. He clarified that his point is that if one of the participants is in bankruptcy, the gas doesn't have to be transported for free. The difficult situation is one in which the gas marketer, who isn't naturally (indisc.) on gas, goes broke and there is no gas to flow down the pipe. In that instance, it's more likely that the bankruptcy court aggregates the contract.

REPRESENTATIVE GATTO inquired as to the state's liability if other participants without reserves go bankrupt.

MR. DAVIS answered that the state would be liable for its portion of the tariff. Given an 80:20 debt/equity structure, the state could probably afford for one of the equity holders to go bankrupt. He reminded the committee that the way these contracts are structured "that is not non-recourse, the equity is non-recourse." No one can force [the state] to put another dollar into the [corporation] once it's built. However, with a contract, the state can be forced to perform unless in bankruptcy. If all three shippers went bankrupt, the state would only be liable for its portion of the tariff and in all likelihood, the state's equity would be eliminated because the project would go into receivership because it couldn't repay its debt obligations based solely on the state's portion of the tariff. He suggested that there would probably be debt service reserves built into the structure such that the state could stand low commodity prices for some number of years before [the project moved into receivership].

CHAIR SAMUELS surmised that could be considered the "tail" that was mentioned earlier, and therefore something would be given up at the high end.

MR. DAVIS agreed, and noted that the extent of the liability would be the state's equity in continuing to ship gas. Presumably, the state would continue to ship gas. However, in all likelihood if gas prices went to a \$1.00 and stayed at that price from 2011-2050, building the pipeline would be a huge mistake. "I don't think there's any way you're going to be able to structure yourself around that outcome, unfortunately," he said. In further response to Representative Gatto, Mr. Davis stated the state would likely be required to purchase business interruption insurance by the debt holders. Therefore, if the pipeline is irreparably damaged, the insurance would pay to rebuild the pipeline which would be recoverable in the rates. Moreover, the shippers would pay for it.

MR. DAVIS continued his presentation and directed attention to [page 29 of the UBS packet]. He explained that the state receives 25 percent of the gas in-kind and the state sells that gas, the proceeds of which will likely be used to pay the tariff and any excess funds will flow back to the state on the commodity side. The money going into the operating entity will be used to cover the operating costs of the pipeline company. Any excess funds will flow back out as dividends. In response to Chair Samuels, Mr. Davis said that FERC [filed tariffs] provide for a 12 percent [return on equity].

CHAIR SAMUELS surmised, "In your scenario on the three-quarters and one-quarter, we'd get our 3 percent, they'd get their (indisc.) percent and the profit on an ongoing basis."

MR. DAVIS explained that if there is a \$1 billion equity component, each year the state would receive \$120 million in return on the equity that the state invests. Furthermore, as the pipeline depreciates, the state will receive [a portion] of the state's capital. Therefore, of the \$5 billion the state's "notionally" investing, the state will annually receive one-thirtieth of that back as well. At the end of 30 years, the state would've received all of the money that it invested plus the equity and a 12 percent return. What happens in the real world is that entities continue to invest in pipelines after the 30 years. "Ultimately, no government agency is going to let somebody run this pipeline for free and so there will be some type of incentive rate structure put in; you'll always be able to earn a return on the pipeline," he explained.

MR. DAVIS turned to a hypothetical way to fund this hypothetical case [which is discussed on page 30 or the UBS packet]. In the hypothetical case the state would enter into a shipping contract for 1 bcf a day with the operating company. One way to fund that obligation would be to issue \$4 billion of revenue bonds, which is 80 percent of the project debt, backed by the federal loan guarantee. The state would also have a \$1 billion tax-exempt revenue bond backed by various sources of credit support. The \$1 billion would "notionally" be the state's equity portion of the project. Mr. Davis noted that rather than funding the \$1 billion with debt, the state could write a check for all or a portion of it. He noted that there are various ways in which to protect that, such as the general fund, the property taxes, the permanent fund, et cetera. The dividends that would come out of the operating company would be used to pay back the revenue bonds because that will be the return on the capital. He characterized the equity side of this as the "freeboard" because the state would receive say 12 percent annually plus one-thirtieth of the money back every year. The aforementioned would go straight into the state's [coffers] or be used to pay off these bonds. Mr. Davis explained that the state might need this other credit support because the other source to pay off the debt is the tariff, which allows the state to capture 100 percent of its costs. Therefore, this would be geared to a 1:1 ratio, which is frowned upon in the financial market because the state wouldn't be able to cover its obligations if anything went wrong under such a scenario.

MR. DAVIS pointed out [referring to a chart on page 31 of the UBS packet] that if one looks at the excess revenue to the state, one sees that the gas price in Alberta has to be around \$2.00 mcf for the state to breakeven. He noted that this project probably wouldn't be built unless the project is 100 percent contracted. Mr. Davis then turned attention to page 32 of the UBS packet, which outlines the expected benefits and potential risks to the state. One obvious benefit to the state would be the freeing of significant stranded assets that would provide a lot of liquidity to the state. Furthermore, the state, as an equity participant, would be able to contribute in-kind gas in order to support the state's portion of the pipeline. Moreover, the state, as an equity participant, would have limited its risk exposure to \$1 billion with a \$20 billion project. "If you look at that risk-reward continuum, you get 25 percent of the upside, you're bearing 5 percent of the cost in a disaster scenario," he related. He highlighted that the combination of shipping contracts, federal loan guarantees, and the state's moral obligation creates a clearly financeable structure in the current market.

MR. DAVIS said that most of the risks to the state have been reviewed. However, he reminded the committee that if other sponsors don't perform on their obligations, that would be bad for the state. If the volume of equity gas produced by the shippers doesn't meet its contractual shipping obligations to the pipeline, the state will still have to pay its contractual obligation. Although there will be various sources of excess revenue to make up that difference, the state would still have to pay its contractual obligation. He noted that the state could sell that capacity to someone else. Again, it would be a bad outcome for the state if the revenues from the sale of the gas are less than the [shipping] tariff and the state would suffer directly the difference between the sales price for a molecule of gas and the cost to ship it down the pipeline. Therefore, UBS's analysis has determined that the gas price would have to go to less than \$1.73 in Alberta. However, he reminded the committees that other sources of revenue in the project would help mitigate the aforementioned to some degree. Mr. Davis said that the state should also keep in mind that the state, as a shipper, will want to make sure that whoever contracts for the tariff within the state has the financial resources to meet that obligation. Again, he highlighted that it will be difficult to input an equity component in the capital structure of higher than 20 percent if the state has an 80 percent federal debt guarantee.

SENATOR THERRIault requested [referring to page 31 of the UBS packet] some clarity regarding when the state is in the black.

MR. DAVIS clarified that the state would be in the black at \$2.00. However, if the price of gas falls below \$1.73, the state would have other sources of money to offset that [price]. He, reminded the committees that other producers wouldn't be able to avail themselves of those other sources of money.

SENATOR ELTON pointed out that if the state is an equity owner, it would also receive revenue from throughput.

MR. DAVIS agreed, but characterized it as "it's like losing money and making it up on volume." He posed a situation in which the state's tariff obligation to itself and its bondholders is \$1.75. If the state can only sell the gas for \$1.50, then for every molecule of gas shipped down the pipeline the state would lose \$.25.

JOE FORRESTER, Managing Director, UBS Financial Services Inc., highlighted the significance of the federal loan guarantee in terms of changing the state's risk profile and guaranteeing market access at the best possible rates. Mr. Forrester suggested that the committees bear in mind that under existing law, federally guaranteed debt for a project of this type must be taxable. "You can do a piece of a project with the federal guarantee debt on a taxable basis and the remainder of the portion on a tax-exempt basis, if you comply with applicable rules," he related. In the hypothetical case presented by UBS, if the state attempts to do any portion of the \$1 billion on a tax-exempt basis and are subject to the general rules applicable to other kinds of tax-exempt financing by other tax-exempt issuers there will be constraints upon the business structure the state develops. In this context, if one is discussing 25 percent ownership by the state, the impact of the private activity bond rules is the nature of the sales contracts at the other end of the pipeline. Generally speaking, the private activity bond rules, in the context of a revenue producing project, restrict the amount of the project that can be financed with tax-exempt bonds that are subject to private business use. "And if you have a long-term contract, the tail end of the pipeline to sell gas to other than a state or local government unit or a 501(c)(3) entity, that represents tainted private use and you fall into the trap of issuing taxable private activity bonds," he explained.

MR. FORRESTER, referring to page 34 of the UBS packet, stated that he would be remiss in not mentioning taking advantage of the unique status of the Alaska Railroad Corporation under the IRS code. Prior to 1984 and again in 1986, a number of entities were entitled to issue tax-exempt bonds for purposes beyond the constraints and limitations imposed by the IRS code on domestic, state, and local government units. He noted that in the case of the ARRC, the Railroad Transfer Act contained limited exemptions from those constraints. At least for railroad purposes or projects connected to the railroad, ARRC should be able to issue tax-exempt bonds free of the private activity bond limitations. If one just looks at the words, there are no limitations at all. Therefore, ARRC would be authorized as a matter of "black letter writ" to finance the entire \$1 billion of remaining non-federally guaranteed state contribution on a tax-exempt basis. Furthermore, it could finance the ExxonMobil Corporation equity contribution on the federally guaranteed part. Whether the aforementioned authority could be used on a real world matter, is a political decision the state faces. Mr. Forrester concluded as follows:

Nonetheless, I think it's important to realize that the important thing from the standpoint of the state ought to be to develop a business plan that makes sense away from tax-exempt financing, see if you can then tweak that business plan to enable you to take advantage of tax-exempt financing or to finance pieces of the project on a tax-exempt basis that don't involve the kinds of private business issues that the pipeline itself might present.

SENATOR GUESS requested that Mr. Forrester review the model in which the state wouldn't use ARRC for the \$1 billion of equity the state must provide in the hypothetical case.

MR. FORRESTER clarified that the following is his personal view, not that of UBS. He opined that Alaska has gained a great victory with the federal loan guarantee, which he characterized as the linchpin around which the state should build its business model. He foresaw the US Department of Treasury and the IRS

getting very upset with an attempt to finance free of the private activity bond rules a project that wasn't a "twinkle in the eye of Congress" when the special language was inserted for [ARRC] and the Railroad Transfer Act. The state must ask itself whether it wants to fight the aforementioned battle in order to achieve only incremental financing cost benefit when the state can develop its business model such that 20 percent of the sales are at the tail end of the pipe into the spot market and clearly fit within the private activity bond rules and not rely on ARRC's exemption.

REPRESENTATIVE CROFT noted that the aforementioned refers only to the bonding part [of the project] and there's another tax advantage, which is the [state's] tax-exempt status. Representative Croft related his understanding that the state would decide not to take advantage of the state's tax-exempt bonding status, and therefore the state loses some tax benefit there while retaining its [tax-exempt] entity status. He asked if those two status are roughly equal or is one more important than the other in terms of long-term profitability.

MR. FORRESTER opined that the [tax-exempt] entity [status] is much more important than tax-exempt bonding, although he mentioned that it would be nice to have both.

MR. DOHERTY provided the following conclusions [referenced on page 35 of the UBS packet]. He related that optimal risk sharing is critical to the project's success, which he indicated meant using other people's money first. He highlighted the benefits of securing the federal loan guarantee for a portion of the project; securing non-recourse project financing; securing long-term fixed commodity price and throughput contracts from producers/sponsors; securing a portion of contingent commodity risk protection from shippers. Mr. Doherty turned attention to page 36 of the UBS packet, which relates UBS's conclusions regarding the state as an equity participant. He opined that the state as an equity participant is viable if structured appropriately. With the state as an equity participant the state frees its stranded assets; can contribute its in-kind gas to purchase 25 percent of the project as an equity participant; can create effective and appropriate risk sharing among the state, other equity participants, and the federal government; and can mitigate some of the commodity price risk.

REPRESENTATIVE CROFT turned attention to the following statement on page 36 of the UBS packet, which read: "State effectively contributes its in-kind gas to buy into 25% of Project as an equity participant." He questioned how the state will use its in-kind gas to [buy into 25 percent of the project].

MR. DOHERTY explained that if the state is a 25 percent owner of the project, the state needs to contribute 25 percent of the gas. Therefore, if the state structures its royalty regime such that it has beneficial interest in 25 percent of the gas being produced, the state would be on equal footing with a one-quarter participant in terms of the gas being contributed to the project or an equivalent shipping contract rate as well as an equivalent return on capital in the program.

REPRESENTATIVE CROFT surmised that the state has a royalty share of about one-eighth and a severance [tax] that approximates that in terms of impact. However, he didn't believe that the state owned one-quarter.

MR. DOHERTY agreed. He specified that UBS is suggesting the state review the overall Stranded Gas Act as well as the overall negotiating position of the state's potential returns and taxes for this gas to possibly combine [the severance tax and in-kind royalty] for a larger percentage. Mr. Doherty posed an example in which the percentage is 15, and suggested that the state could modify its equity level participation.

CHAIR SAMUELS surmised then that Mr. Doherty is saying that under the state's current deal, the state could take its eighth and the severance tax and property tax and could roll it "on to a ball" and say that [the state] gets 25 percent of the gas.

MR. DOHERTY agreed.

REPRESENTATIVE CROFT surmised that would modify every lease [the state] has now. He commented that the Stranded Gas Act wouldn't just be rewriting the tax structure.

MR. DOHERTY interjected that there would be a different regime.

MR. DOHERTY pointed out that on page 37 of the UBS packet it lists aspects that UBS hasn't addressed today. The detail of those are found in Appendix 2 of the UBS packet. He said that there are other avenues available to mitigate risk or contribute to the overall pipeline system, in terms of alternative business models, that although ancillary to the federal guarantee and equity participation, can still bring value. Mr. Doherty said that UBS has attempted to provide a road map with regard to the risks, assessing those risks, mitigating risks, establishing a hypothetical business model from an [equity perspective that is viable and provides significant return to the state in nearly all commodity price environments].

SENATOR GUESS inquired as to how a situation would be structured such that there would be access for future development as well as the ability to use natural gas in-state.

MR. DOHERTY suggested that there are several factors already in place and can be put in place to ensure that access. First, if the federal loan guarantee is utilized, it includes several provisions that ensure Alaskans can participate from an equity perspective and utilize the gas from the North Slope for local Alaskan use. Furthermore, [the federal loan guarantee] includes significant ability for Alaskan corporations to participate. As it relates to how the state decides to negotiate the underlying contracts with the participants, the state clearly has significant latitude to incorporate policy and economic issues as well as other important aspects that aren't financial.

MR. DAVIS addressed the issue of expansion. He explained that once the base pipeline is in place, expansions are economic because they increase compression on the pipeline or can loop the pipeline. Therefore, every expansion to the pipeline results in a decrease in costs for all the shippers. Therefore, he suspected that there may be the opportunity to expand the pipeline. He related that in his experience with pipeline expansions, the first couple of expansions are very economic.

CHAIR SAMUELS interjected, "Everybody wins if it goes down, and then there's an argument on incremental after that, I believe is what we've been told."

SENATOR ELTON recalled that on page 35 of UBS's packet it discusses risk sharing and expresses the need to secure long-term fixed commodity pricing for shipping contracts. He inquired as to the duration of a typical shipping contract now. He also asked if a typical shipping contract spreads the risk.

MR. DOHERTY turned to the hypothetical case in which the state is an equity participant, and related that there is a natural hedge in terms of entering into a long-term contract for that gas because that equity participant owns it. Furthermore, if the sponsors and the current owners of the reserve participate as shippers, there is a natural hedge there as well. If the contract is less than the term of the debt, there is some renewal risk. However, from the bond market perspective, that renewal of the contract risk can be moved through structurally.

SENATOR ELTON asked if the aforementioned is predicated on the producers being the pipeline sponsors. Furthermore, will the answer remain the same if it isn't a pipeline by the producers, he asked.

MR. DOHERTY said that the state would receive significant benefits from the federal loan guarantee.

MR. DAVIS interjected that Alaska is a unique case. If the sponsors of the project are the producers, the sponsors will be willing to enter into much longer contracts than the state would be able to under a third-party shipper scenario. He opined that in today's market, the likelihood of getting users to sign up for a significant portion of the capacity say 12 years hence for 15 years in the future is remote. Therefore, he suggested that it is going to be the producers. He related that in today's market, a very long-term contract is 10 years and for a pure project advance pipeline a 15-year contract would be long-term. The market

has become much shorter term in the last five years.

MR. ZIGLAR concluded by saying that the UBS presentation has tried to provide the committee with "the good, the bad, and the ugly." He noted that although there is a lot of good with the project, there are some risks. He opined that most people as well as the US Congress would agree that this pipeline is good for national energy security. Furthermore, this project would have a great positive impact on the state and its economy. The congressional action was positive and seems to express the need for the state to move along [in constructing the pipeline]. Based upon a number of scenarios reviewed by UBS, UBS believes that the Alaska project is both feasible and financeable. Furthermore, UBS believes that the state can participate as an equity participant with reasonable risk and an attractive return to the state if the state decided to be an equity participant.