ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE
February 12, 2007
3:34 p.m.

MEMBERS PRESENT

Senator Charlie Huggins, Chair
Senator Bert Stedman, Vice Chair
Senator Lyda Green
Senator Gary Stevens
Senator Bill Wielechowski
Senator Thomas Wagoner

MEMBERS ABSENT

Senator Lesil McGuire

COMMITTEE CALENDAR

Presentation: Market Analysis of Cook Inlet Gas
Division of Oil and Gas
Department of Natural Resources (DNR)

PREVIOUS COMMITTEE ACTION

No previous action to report.

WITNESS REGISTER

KEVIN BANKS, Acting Director
Division of Oil and Gas
Department of Natural Resources (DNR)
Anchorage, AK
POSITION STATEMENT: Presented market analysis of Cook Inlet Gas.

WILL NEBESKY, Commercial Analyst
Division of Oil and Gas
Department of Natural Resources (DNR)
Anchorage, AK
POSITION STATEMENT: Discussed the price of Cook Inlet gas.

ACTION NARRATIVE

CHAIR CHARLIE HUGGINS called the Senate Resources Standing Committee meeting to order at 3:34:18 PM. Senators Wagoner,

Wielechowski, Stedman, Stevens, Green, and Huggins were present at the call to order.

Overview: Cook Inlet Marketing Analysis by Division of Oil and Gas, Department of Natural Resources

CHAIR HUGGINS noted the committee's focus on Cook Inlet.

KEVIN BANKS, Acting Director, Division of Oil and Gas, Department of Natural Resources (DNR), said there are concerns about gas price, the viability of the Agrium fertilizer business, and the extension of the LNG [liquefied natural gas] export license beyond 2009. He speculated that if none of these were a problem, he would not now be speaking to the committee. The current marketplace is represented by the image of a funnel feeding into a small tube: you can only force so much gas into the marketplace at any given time because it is driven by how much consumption can occur. The response to that demand is entirely dependent on the price and the gas producers, he said.

3:38:25 PM
MR. BANKS referred to graph 3 showing a weighted average of the price of gas paid by the electrical generation utilities. In the last three to four years, prices have doubled at the wellhead because many older contracts have terms tied to the price of oil or to the Henry Hub marker. Increased oil and gas prices in the lower 48 have driven up the weighted average price, he stated.

3:40:02 PM
MR. BANKS said the Cook Inlet market is following that of the lower 48, which may be good because lower 48 markets compete for new investments in Cook Inlet. The high prices are correlated with new activity in the basin. Residential and commercial amounts to less than one third of Cook Inlet gas usage, and two thirds goes to industrial users, which include the LNG plant and the fertilizer plant. The two industries are uniform consumers, he explained, and were initially established by the gas producers in order to monetize their reserves. The LNG plant is still operated by ConocoPhillips and Marathon. Unocal built the fertilizer plant and subsequently sold it to Agrium. Until recently these users have provided the sole means of backstopping peak demand days for the commercial and residential users. On cold days, Agrium and LNG have redirected their gas to Enstar to supply gas for heat.

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MR. BANKS said graph 5 shows daily gas demand. When it is cold, the demand for gas goes up. Most of the contracts with the utilities have incorporated full deliverability. The suppliers have promised to deliver all the gas Enstar will need on a given day, and embedded in the price is that service, he said. A recent pricing mechanism tried to separate that out. There may be more distinct peak load prices as time goes on.

MR. BANKS noted that today's proved, developed, and producing reserves of gas are about 1.65 trillion cubic feet (tcf). This is DNR's estimate of the amount of gas that is available from existing fields without anymore investment, including drilling or compression.

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MR. BANKS said that is about an eight-year supply of gas at today's consumption rates, which is consistent with gas reserves in the lower 48. "Yet to find gas represents undiscovered gas…places where gas is not going to be found in stratigraphic plays." Several gas fields are very small and a few are very large, and there is a large gap in fields that are 200 to 500 billion cubic feet (bcf) in size, he explained. This suggests that there is potential for very large new sources of undiscovered gas that could come on line given the price and consumption, and that gets back to the large funnel filling a small tube, he said. It might be fairly easy to bring a 10-30 bcf field on line today and be able to squeeze the gas into the market, but if 200-500 bcf are found, there will be gas that sits in the funnel unless there are new marketing options.

3:47:34 PM
MR. BANKS spoke of when Unocal, ConocoPhillips, and Marathon had to find and invent a new use for gas to keep it from being stranded. Finding a half tcf of gas may be like drilling a dry hole, he warned. In the Lower 48, gas from existing fields is dropping similarly to Cook Inlet. He showed a graph of how future gas supplies will require a lot of investment in new conventional fields—"just plain looking through the geology, finding prospects, and drilling them in areas where you have not drilled before." And a portion of new gas in the lower 48 will need to come from nonconventional fields—"this is tight gas and coalbed methane mostly." He noted that the market place has thousands of gas fields and tens of thousands of wells, so it is a very liquid market with lots of producers and lots of buyers, unlike Cook Inlet.

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MR. BANKS said graph 8, entitled Cook Inlet Historic and Forecast Gas Production, 1958-2025, represents the cliff that everyone worries about. In order to keep a steady supply, something must happen, he stated. There will have to be investment in existing fields, but drawing on gas from existing fields has the potential consequence of watering out the well. There could also be new discoveries. And, lastly, gas has to come from unconventional sources like coalbed methane, a spur from the North Slope, or imports of LNG.

MR. BANKS said the supply will depend on how the market responds to the price today and whether or not, in five to ten years, that market response will be demonstrated in new gas, he opined. So far there has been a market response to rising prices (table 9). The graph assumes the offering of every available acre of state land for oil and gas leasing each year "on a fairly routine and regular basis so companies are able to evaluate the land before they make their bids and have an opportunity to know that in a predictable way that if they miss the bid this time, they'll have another year hence to try again." The tracts sold and the bids per acre have gone up, he added. The high bids have been pretty good, and he referred to the appendix, page 16, showing a bid of $45 per acre. There is a lot more competition for the lease sales, he noted. Graph 10 shows that something is happening in response to the increase in prices and a potential for a new market: "a place in the market for new gas." Since 2000, there has been almost a doubling of exploration in Cook Inlet, and 80 percent of the wells have been looking for gas.

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MR. BANKS said gas storage is another feature that is changing in the gas marketplace, and it relates to seasonality, peak demand, and deliverability. The producers have stepped up to the plate, he noted, to manage deliverability in a way that they haven't in the past. With huge gas fields, like Kenai and Beluga, "where there was a lot of gas available by just opening the valve and adding some more compression," now there is a requirement to store gas in the summer for use in the winter. There are four storage facilities, and two are on state land and one is on federal land. There are operational challenges because when gas goes into an exhausted gas field it is not all recoverable. Some of the gas may fall into solution into oil, or "watering out" may occur.

3:56:35 PM
CHAIR HUGGINS asked what percentage of gas gets lost.

MR. BANKS said he would find out. Graph 12 represents a "fairly serious peak-day event" in 1999, and the amount of gas coming out of the east side of Cook Inlet was about 183 million cubic feet (mcf). The graph shows that it has dropped by about one third, he explained. On the Kenai Peninsula in 1999, the gas drawn was about 89 mcf, and it has now almost doubled. The other factor, he said, was that in those days there was no storage. The graph shows a storage draw of 55 mcf from the Swanson River and Kenai gas fields, and it shows a storage draw of 8 mcf from Pretty Creek. "So those storage facilities are actually providing a service today…and supplying gas on those peak cold days to make sure that consumers in the Enstar system are getting the gas that they need." More of the gas is coming from the east side of Cook Inlet now, he said, instead of the west side like it was in the late 1990s. Enstar is making investments to ensure that "the plumbing will facilitate that kind of movement of that kind of production…into the Anchorage area."

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CHAIR HUGGINS asked about the location of Pretty Creek.

MR. BANKS said Pretty Creek is on the west side. He noted that 53 mcf of gas was drawn out of KKPL (Kenai Kachemak Pipeline), which represents the consequence of new developments on the east side of Cook Inlet. "We are seeing production from places that hadn't been producing before," he noted. About 35 mcf of gas was diverted from the LNG plant during the event on January 9, into the local market. That is the importance of having industrial users on the system, he stated.

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MR. BANKS said the concerns about high prices are a fact of life, because Alaska is competing for investments with the lower 48, where the price is high. The Agrium plant is shut down for the winter, and 40 bcf of gas a year was being used by it. He estimates that is will be down to 30 bcf because of the winter shutdown. "So, demand [for gas] is falling off a little bit because the industrial use is falling off and the unavailability, basically, of a base-load supply for Agrium at an economical price for them. Hence, their blue sky project where they will try to develop coal gas as an alternative." He said Alaska is faced with the question of how to respond to ConocoPhillips and Marathon's application to extend the export license through 2011.

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SENATOR STEDMAN asked about graph 6 showing the ratio of proved-developed-producing reserves to production. He asked when the number might become small enough to stimulate exploration versus no interest when there is no market.

MR. BANKS noted the relationship of the table on page 6 with the graph on page 10, which shows the number of wells that have been drilled. In 1995 there was a growth in exploration, suggesting that when the markets got close to an "R/P [Reserves/Production] of 10 years, that the producers began searching for more gas." The dramatic increase in price is having an effect. "It looks like people want to start doing something in a hurry just somewhere north of an R/P of 10 years."

4:04:06 PM
SENATOR STEDMAN asked if the access to credits from the PPT [profits-based petroleum production tax of 2006] will stimulate exploration in Cook Inlet.

MR. BANKS said access to credits will be important to Cook Inlet. He said there are already several incentives that have been offered to the producers there.

SENATOR WAGONER said there are other drilling incentives as well, and Marathon is taking advantage of them.

4:04:55 PM
MR. BANKS said the PPT allows for deducting expenses not only for exploration, so the PPT will be valuable to existing players in Cook Inlet.

SENATOR STEDMAN asked if there is enough gas out there for the industry to either find or produce. He asked if the bullet line and the LNG are red herrings.

4:05:58 PM
MR. BANKS said if he were exploring he would be trying to figure out how much those alternatives would cost the consumer and what the competition would charge for gas and use that as an estimate of his own economics. He surmised that the exploration in Cook Inlet is fraught with a lot less headaches than the other two alternatives, which are expensive alternatives, as well. "I believe we have some cushion between what we see as today's prices in the Cook Inlet and what the cost of those sources of gas would be, and so if I can deliver gas for less than I think a bullet line. I would start searching for gas in the Cook Inlet to compete with it."

SENATOR WIELECHOWSKI noted the estimated 1.8 tcf of undiscovered gas and asked if the correct analysis is to compare the cost of finding and bringing it to market to the cost of building a bullet line or spur line.

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MR. BANKS said it has to do with the expectation of price and probability that the price would be yielded. Every explorer is looking at the odds of finding gas and the probabilities of the alternatives.

SENATOR WIELECHOWSKI asked for a rough estimate of drilling and exploring versus the cost of a spur line from Glennallen.

MR. BANKS said he hasn't done that estimation.

CHAIR HUGGINS said there have been 320 holes drilled in Cook Inlet, and that is a small number compared to like-size areas in the lower 48. Should the state have a strategy to find someone to "drill holes," because the gas is "out there and all we gotta do is drill for it?" Last year the administration looked at putting incentives on the table for Cook Inlet, he noted.

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MR. BANKS said more incentives are possibly needed. There is also more information, "if more explorationists could have a handle on that." But he is not sure what the state can do in encouraging commercial arrangements among those incumbents who have that data and those newcomers who need the data. He said he would like to examine that to "see if there is some way to leverage more data into the hands of those who are eager to spend some money to find gas."

CHAIR HUGGINS asked if he will start working on that.

MR. BANKS said it will be one of his goals.

4:10:54 PM
CHAIR HUGGINS said storage has merit, and he asked if it is based on industry initiative or if Alaska has a strategy to promote it.

MR. BANKS said it is an alternative the producers have entertained because it offers an alternative to more risky investments in their own existing fields to improve deliverability. Given the choice of expanding the deliverability

from existing fields or storing gas, storage is cheaper. It is a natural consequence of the marketplace. The storage issue is somewhat exciting because in every other market in the lower 48, storage has a very important function, and it exists at both ends of the market, he said. There is storage near the producing regions and at the market place for peak demand days. Storage in Cook Inlet has the same economical use, and it could facilitate gas from a spur or bullet line.

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MR. BANKS said the LNG facility plays a similar function. The Nikiski tanks could supply storage for future peak-day use.

SENATOR WIELECHOWSKI asked about state revenue from the Agrium and LNG plants, and what they pay for gas in comparison to what Southcentral consumers pay.

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WILL NEBESKY, Commercial Analyst, Division of Oil and Gas, DNR, said page 35 in the packet shows the proceeds that the fertilizer plant realizes from the sale of its product into its market. The royalty value used to be tied to those fertilizer prices but not since Agrium's purchase of the fertilizer plant. He said he can tabulate the revenues from royalty dispositions of gas to the fertilizer plant, and "they do tend to be, today, at the lower end of the royalty revenue spectrum from the standpoint of proceeds per unit of royalty gas disposition." He noted the graph on page 33, illustrating the values received for LNG disposition in Japan and compares them with the Henry Hub spot price as well as the Department of Revenue's published prevailing value. The line shows the destination value that was received for LNG disposition and is not the same as Alaska's royalty value. "Our royalty proceeds, in an important way, are tied to the destination value, but we have different settlement agreements with Marathon as well as with ConocoPhillips regarding the royalty proceeds tied to their dispositions that end up being LNG exports."

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MR. NEBESKY said the blue line that represents the Department of Revenue prevailing value is very close to the weighted average royalty value that the state receives for its combined royalty proceeds from all the dispositions—both industrial and non-industrial. He said he could compare the proceeds received from industrial and non-industrial dispositions.

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SENATOR WIELECHOWSKI asked about the difference in gas price for consumers and industrial users.

MR. NEBESKY said consumers are paying about $6 per mcf through the Enstar system, and that is pretty close to the Department of Energy estimate of prevailing value. "Those values probably are in the neighborhood of, for example, the royalty value that the state receives for LNG disposition." It varies, but today is "closely matched with the netback value or royalty value estimate for LNG disposition."

SENATOR WIELECHOWSKI said he is asking what ConocoPhillips pays when buying LNG compared to what Enstar consumers pay.

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MR. BANKS rephrased the Senator's question. "What is the wholesale price of natural gas when it's produced by Marathon and by ConocoPhillips that is destined for LNG and eventually sent to Japan?" The answer is difficult because the value Alaska receives for royalty is determined by a royalty settlement agreement that is many years old. It was intended to reflect some measure of the value of gas when sold in Japan, minus the cost of getting it there and transforming it into LNG and netted back to the wellhead. ConocoPhillips' North Cook Inlet gas is valued at about half of the price it receives for gas sold in Japan, minus $0.10. It represents the best indicator for the net back price for the LNG. He said that is about what the wholesale price is for consumers. Agrium is paying less than consumers, on average, and that is the reason that it can exist. It doesn't have a peak demand, he said. The acquisition of gas at an economical price is a problem for Agrium and why it shut down this winter.

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CHAIR HUGGINS asked about methane in Alaska.

MR. BANKS said it represents a very widespread source of gas throughout rural Alaska because coal and coalbed methane can be found in a lot of places. The Red Dog mine has a license to develop it. There is potential in Healy, but it is put on hold. In the Mat-Su Valley, development was attempted in an Alaska version of a residential area. The possibility could have been achieved had the residents been more receptive. There are other areas in the Cook Inlet that may contain sources of coalbed methane, but the most inexpensive sources are near the road system in the Mat-Su Valley, he opined.

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CHAIR HUGGINS said Harold Heinz said a spur line is important. Enstar needs a continuous supply of gas. There is always a spike in known reserves during an LNG application. He asked Mr. Banks what Alaska should do to understand its natural gas destiny.

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MR. BANKS said Alaska needs to move gas from existing field reserves into the "proved-developed-producing category, and we need to find new gas in the Cook Inlet." The marketplace is tightly balanced, but the market will respond to a growth in demand and to rising prices as the supply tightens. Alaska needs to make land and access available when pursuing plans of development and exploration with its lessees and unitize these prospects. He added that Alaska needs good, solid commitments from its lessees to complete the work they say they would like to do. Alaska formed three units last January that will require a jack-up rig, and Mr. Banks hopes "that these lessees will cooperate and bring in the equipment they need to start drilling these prospects and do so very soon." If they fail to do that, "we'll find explorers that will." He said he doesn't know how the PPT will play out. Marathon has responded to the exploration credits, he noted. There are several existing fields that are known deposits of gas that have not yet been developed that received a 5 percent royalty provision several years ago, and some of that is now coming on line as a result of that. He said those incentives work, and "we need to continue exploring the efficacy of those kinds of credits and tax benefits."

4:28:17 PM
SENATOR WAGONER said Marathon was using credits that are different from the PPT credits.

CHAIR HUGGINS asked the life of those credits.

SENATOR WAGONER said another 9 or 10 years.

CHAIR HUGGINS asked for a prediction from 2005 to 2015.

MR. BANKS said he predicts a lot more exploration in response to the higher prices. He said there were about eight or nine wells drilled per year and then less in the past two years. He thinks it will increase. There are new players that are very active and interested in putting together a land position to begin drilling. He noted that Forest [Oil Corporation] has just acquired a unit that was recently approved, but Forest's position as the operator may be in question as it shifts assets.

But if it does sell, "let's hope that they find a customer who's going to be eager to use that land." He said it will have to meet the commitment to develop or explore the unit. Escopeta has a unit that needs a jack-up rig, and once the rig arrives and if it is sized right and others can use it, it may be here for awhile, he said.

4:31:17 PM
CHAIR HUGGINS asked about the status of the beluga whale.

MR. BANKS said some tracts have been deferred because of "those kinds of sensitivities." A listing of the Cook Inlet beluga whale [under the Endangered Species Act] could have a future impact on what areas will be open to oil and gas activities.

SENATOR WIELECHOWSKI asked if there are other uses besides Agrium and LNG that Alaska could put more effort into. Is there another demand or is the gas essentially stranded in Cook Inlet?

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MR. BANKS said being stranded was a more serious problem than it is now. "You don't see R/P ratios of 20 years anymore, and we're down to something more like what you'd expect to see in the lower 48." If someone were to find half a tcf of gas, then something would happen to expand the demand, he said. There is room in the Agrium plant; it is running at half capacity when it is running. There is some potential growth in LNG, but access to the LNG is limited by the owners of the LNG plant. He noted that years ago there was talk of iron ore reduction, but all that demand requires a cheap price for gas. He questioned who would look for the gas if the price is only going to be $2.00. It is a chicken and egg problem, he surmised.

4:34:10 PM
CHAIR HUGGINS asked about bids received and tracts deferred.

MR. BANKS said he thinks tracts were deferred for whales, but only four. In the one area where one could move eastward from the shoreline, along the Sterling Highway, there is a fair amount of activity, which should indicate that there is potential for gas development in the wildlife refuge. The DNR is beginning discussions with the federal government, he said.

4:36:22 PM
SENATOR WAGONER said Swanson River can be used for gas storage, but to get that field opened up for gas storage was a horrendous, several-year process, so it is hard to work with the

Kenai Wildlife Refuge. It was to use existing structures and wells. It is a major problem to get access to anything out there, he stated.

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CHAIR HUGGINS noted that the Regulatory Commission of Alaska said there is a lot of the phone activity to keep gas in the system for Enstar during peak periods. He asked if additional storage areas should be considered.

4:38:25 PM
MR. BANKS said more storage will be needed, or better use should be made of the storage available. The Swanson River field has five times the capacity than is being used. He guessed that a half of a tcf of gas could go in there. There are operational challenges in getting the gas to come back out again. The market and the facilities are at a crucial balance; there are enough transmission lines, interconnects, and storage. In the very near future, three to four years, a lot of that has to change. Enstar will be updating interconnects around Nikiski and Soldotna, there will be more storage on line, and hopefully more deliverability out of the existing fields as a consequence of meeting those requirements.

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CHAIR HUGGINS said in 2005 36 percent of the gas was used for LNG, and during the peak demand periods, that is the reserve that can be kicked in to make Enstar work.

MR. BANKS said he agrees. The gas that would normally be consumed by the plant can be diverted to the Enstar system on cold days--without substantial consequence for the LNG to supply their contracts. It is an important service, he stated.

SENATOR WAGONER suggested hearing from the plant, because he has been told that it has shipped LNG containers below capacity. Every problem that is solved creates another one, he said.

4:41:52 PM
CHAIR HUGGINS said the future of Cook Inlet gas has huge questions since half the population of the state depends on it.

The Senate Resources Standing Committee adjourned at 4:42:51 PM.