

**ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE**

February 26, 2007

3:34 p.m.

MEMBERS PRESENT

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

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

Presentation: Agrium Gasification Project

PREVIOUS COMMITTEE ACTION

No Action to report.

WITNESS REGISTER

TIM JOHNSON, Project Manager
Agrium Blue Sky Gasification Project
Kenai, Alaska

POSITION STATEMENT: Presented a coal gasification plan.

PAT GAMBLE, President
Alaska Railroad Corporation
Anchorage, Alaska

POSITION STATEMENT: Discussed the Alaska Railroad's role in the gasification project.

DONNA BOLTZ, Deputy Director
Port of Anchorage
Anchorage, Alaska

POSITION STATEMENT: Stated that the port is responding to Agrium's needs.

DAN GRAHAM, Consultant

Usibelli Coal Mine
Anchorage, Alaska

POSITION STATEMENT: Presented information on the coal source for Agrium.

BILL O'LEARY, Chief Financial Officer
Alaska Railroad Corporation
Anchorage, Alaska

POSITION STATEMENT: Presented information on financing the Agrium project.

BILL POPP
Kenai Peninsula Borough
Kenai, Alaska

POSITION STATEMENT: Spoke in favor of the Agrium project.

ACTION NARRATIVE

CHAIR CHARLIE HUGGINS called the Senate Resources Standing Committee meeting to order at [3:34:22 PM](#). Senators Green, Stevens, Wielechowski, Wagoner, Stedman, and Huggins were present at the call to order.

Overview: Agrium; gasification of coal

[3:35:10 PM](#)

TIM JOHNSON, Project Manager, Agrium Blue Sky Gasification, said his goal today is to explain Agrium's operation in Kenai and the situation that started Agrium looking at coal gasification. The plant in Kenai is a fertilizer production facility that has been operating almost 40 years. It is the second largest nitrogen fertilizer facility in North America and produces ammonia and urea fertilizer that is exported around the world. It was built on stranded gas, he said. It is now facing a crisis in gas supply--from an industrial-user standpoint. There is a declining supply of large reserves, and the pricing structure is tied to a "NYMEX-type" structure, and the overall supply of gas is forcing industry out of business, he stated. There is increasing demand for residential users and a large amount of export of liquefied gas to Japan.

MR. JOHNSON said Agrium purchased the facility from Unocal in 2000, believing there was a long-term supply of gas in place. Then gas supplies began to decline. "We were in discussions with Unocal and eventually settled...and that settlement resulted in our supplies under that Unocal contract being depleted in 2005."

He thanked the State of Alaska for its support of Agrium, including HB 57 and support for this Kenai Blue Sky project.

[3:38:46 PM](#)

MR. JOHNSON said the standard picture for Alaska's Kenai nitrogen operations is consuming about 53 billion cubic feet of gas-year in and year out-and producing over 1.2 million tons of fertilizer for export. The business started to suffer in 2001 when gas supplies started to decline. In 2004 Agrium announced there would only be gas through 2005, and it shut down the first urea production facility in October, 2004. In 2005 it shut down another ammonia plant. A total of 80 jobs have been cut since then. In 2006 only two plants were operating, and those were shut down in October. The company hopes to start up by the end of the first quarter of 2007 and has gas contracts through the end of 2007, he said. There are no other contracts, but getting one is a key part of Agrium's long-term operations.

[3:40:04 PM](#)

MR. JOHNSON said the operation is built on having a long-term supply of low-cost gas, and it will pursue gasification because of the severe decline in Cook Inlet gas. The facility is large, and without a gas supply past October, 2007, it will no longer be able to operate. If it shuts down, over 400 jobs will be lost and there will be a loss of a substantial tax base for the Kenai Peninsula Borough.

[3:41:02 PM](#)

CHAIR HUGGINS asked the export volume in dollars.

MR. JOHNSON said it is \$163 million. The gasification project seeks to capitalize on the long-term supply of abundant coal. There is demand for low-cost power in Southcentral Alaska, and there are 13 oil fields that are declining in Cook Inlet. He said that studies by the Department of Energy indicate that up to 300 million barrels of additional oil could be recovered by supplying CO2 for enhanced oil recovery, which will be made available through the gasification project. There are additional opportunities for other byproducts. He showed a photo of the plant, including the Kenai nitrogen operations, the Tesoro refinery, the ConocoPhillips liquid natural gas production facility, and an open field where the new gasification and power production complex would be.

[3:42:48 PM](#)

MR. JOHNSON said the plan is to bring coal by rail from Healy or elsewhere to Anchorage, and then a barge will ship it from

there. There will be a new dock to receive the coal. The CO2 would be shipped to the oil fields in the area, excess power would be sold to the grid, and the fertilizer would be exported and supplied to Alaska. The new gasifier would convert coal and air into the building blocks that are needed for fertilizer production. The gasifier will supply hydrogen, nitrogen, and CO2 to the fertilizer plant. A large power plant will be built and supply at least 100 megawatts of power to the process and excess power would go to the power grid.

[3:45:24 PM](#)

MR. JOHNSON said the gasification process works by combining coal or any carbon source with pure oxygen. That reaction provides the building blocks needed for fertilizer. It expects to need 3 million metric tons of coal for gasification and power production. It will produce almost 1.5 million tons of urea and 100,000 tons of ammonia, and it will provide 70 megawatts of power to the grid. The process is highly integrated, he said, so the facilities must be located near each other. He said a phase-one feasibility study is done. The company is working toward design and permitting.

[3:47:13 PM](#)

CHAIR HUGGINS asked about the timeframe.

MR. JOHNSON said phase-two will be completed in the summer of 2008, construction will begin in the summer of 2009, and startup should occur in late 2011. Phase one was a joint effort with Usibelli Coal, and Agrium has invested about \$3 million, looking at many sites, feedstock, and locations. It looked at design variations trying to maximize the existing plants and taking advantage of economies of scale. It determined it was feasible, with the best design trying to maximize the urea production, which makes more tons of fertilizer per ton of coal. At the same time the Department of Energy conducted a gasification study with similar results that gasification could be economical.

[3:49:07 PM](#)

MR. JOHNSON said Agrium is now in partnership with Homer Electric, which has the lead role in the power block development, so they will go out and seek partners for a power production facility. Agrium is doing due diligence on the feedstock supply and is looking for a partner to finance the gasification island. It needs to continue to find and secure natural gas for the existing plant to maintain its personnel and presence in Alaska.

[3:50:49 PM](#)

MR. JOHNSON said it is a viable project with many benefits to Alaska and no environmental obstacles. The company is finalizing its design and verifying the availability of feedstock. Agrium will be screening the gasification partners who will come in and invest in the gasifier block itself.

[3:51:48 PM](#)

SENATOR WIELECHOWSKI spoke of the limitation on mercury release by coal plants under the Clean Air Act, and Alaska has been allocated about 10 pounds per year.

MR. JOHNSON said the mercury rule is new, and there is a minor allocation for Alaska. There is litigation pending to challenge that allocation, and there is also a provision in the rule for a trading program. Agrium will try to minimize mercury emissions by engineering and is currently assessing the best mercury scrubbing technologies. It is part of the evaluations, he said, and the worst case would be the trade program.

SENATOR WIELECHOWSKI asked if current transmission lines are sufficient for shipping Agrium's excess power.

[3:53:44 PM](#)

MR. JOHNSON said transmission on the Kenai is limited to about 70 megawatts of export power, and so that is the amount that Agrium is considering. It will see if it can be commercialized and will be working with Homer Electric.

SENATOR WAGONER asked about the size of the power plant and how much power will be used on site.

[3:55:01 PM](#)

MR. JOHNSON said the power plant is sized to be about 200 megawatts of electrical power, and roughly 120 megawatts would be used to supply the air-separation unit, the gasifier, and the existing fertilizer plant. There is also 85 megawatts of thermal energy as steam, so a total of about 300 megawatts is produced and consumed by the process, and 70 megawatts would be exported.

SENATOR WAGONER asked how much gas is produced and put in storage and not made available for Agrium.

[3:56:10 PM](#)

MR. JOHNSON said there is gas going into storage, but he doesn't know how much.

SENATOR WAGONER asked about other byproducts besides CO2.

MR. JOHNSON said the gasifier will produce slag or molten ash, which is inert and can be used for road base or cinder block.

[3:57:12 PM](#)

CHAIR HUGGINS asked about using Beluga coal.

MR. JOHNSON said Agrium looked at Beluga coal but found that the Healy mine was a good fit. Healy is an existing mine in operation with a rail link. Beluga is a large resource, but not in production. Both are options, but Healy is being used for the feasibility studies.

CHAIR HUGGINS asked if it may be more economical to move coal from the Beluga mine in the distant future.

[3:58:49 PM](#)

MR. JOHNSON said Beluga coal is closer, but it has to overcome the capital of starting up a new mine. It could become the most economical, but that is difficult to project.

CHAIR HUGGINS said his impression is that the cost of natural gas is the biggest challenge for Agrium, instead of supply.

MR. JOHNSON said the biggest challenge is supply. "We lost supply early in October." There will eventually be a price concern; the supply is the problem now.

CHAIR HUGGINS said, "So at present market value in Cook Inlet, if there was supply available, it would it work you?"

MR. JOHNSON said yes.

SENATOR WIELECHOWSKI said if the Federal Energy Regulatory Commission (FERC) denied the LNG permit that is up in the coming year, he asked what the impact would be on Agrium's natural gas supply. He asked him to compare the costs of natural gas with shipping the coal.

[4:00:38 PM](#)

MR. JOHNSON said Agrium is still in negotiations with all of the producers and trying to obtain gas. The supply of gas from the North Slope will be out of sync with the company's timeline, because it wants to be operating by 2011, and the gas line is projected for 2015 at the earliest. The economies could be compared then.

SENATOR WAGONER asked which has the least price volatility.

4:02:07 PM

MR. JOHNSON said coal is much more stable, so if the capital hurdle can be overcome for the gasification unit, there will be a stable cost of feedstock. Natural gas is more volatile because it is indexed to NYMEX, he stated.

CHAIR HUGGINS asked about clean coal and environmental considerations.

MR. JOHNSON said gasification is a very high energy process and captures a lot of the impurities, like sulphur and mercury. Gasifying produces a clean feedstock for the fertilizer plant. Agrium is trying to determine the ultimate source of firing for the coal-fired power plant. The current coal-fired boiler would be updated to be environmentally friendly. Alaska coal has low sulphur so both gasification and power would be clean.

4:04:10 PM

SENATOR WIELECHOWSKI noted a report of mercury in some of Alaska's fish, and he asked for assurance that the use of the coal will not increase mercury in fish or wildlife.

MR. JOHNSON said, "Our initial evaluation was a detailed environmental screening on the air quality emissions from the project. The air quality emissions will be very high standard of controls. In addition to the air quality, the bigger concern for fish would be on the water side. And on the water side from the gasification plant, anywhere coal is touching the process, we'll use a zero liquid discharge process to collect any wastewater and treat it, so that there will not be a liquid discharge from the coal gasification process and facilities. And that will greatly eliminate any chance or risk of mercury contamination in the water."

SENATOR WIELECHOWSKI asked if mercury is released in the air and brought down by rain.

MR. JOHNSON said that is possible and that is why the company will minimize air emissions. One of the proposals for financing the project includes the Alaska railroad's bonding ability.

4:06:12 PM

PAT GAMBLE, President, Alaska Railroad Corporation, said Agrium contacted the railroad regarding coal transportation and

financing. The Alaska Railroad has access to tax-free bonding. He has asked Agrium to provide technical information regarding transportation. The Alaska Railroad issued the first segment of up to \$165 million worth of bond already, he stated. It has a financial team to run the models of a project of this size. "We are busy in direct response to Agrium's questions," he said. Agrium has asked the Alaska Railroad to look at options like Port McKenzie, Port of Anchorage, Seward, or building a railroad track down to the site. "We are very much a part of this discussion with [Agrium] at the present time."

4:08:27 PM

SENATOR STEVENS asked about the option of extending the railroad.

MR. GAMBLE said the analysis is not complete, but the extension to Kenai is not practical. The rail is already to the Port of Anchorage and one can analyze the efficiencies--as the port grows--of designing in the coal off-load capability. Another option is extending the line near Willow with a spur to the Port of McKenzie. An off-load area could be designed into the port. He noted that pile management is important. It is a significant investment, but the railroad is also working with the borough. The railroad has "a good teaming effort," he stated.

4:10:21 PM

SENATOR STEVENS stated that an efficient operation could be added to the Seward facility, but a ship would then have to go around the peninsula.

MR. GAMBLE said it is not difficult, but it is a time and distance expense issue.

4:10:50 PM

CHAIR HUGGINS said the corridor to Pt. McKenzie is attractive "to some of us...", but from a state's prospective it appears that--assuming some growth potential of the port--that places like Anchorage will probably, in the future, welcome this, maybe...But when you come to gas pipeline-sort of things, there's at least some potential to be able to haul from a port like that versus through the Port of Anchorage...Would that be feasible, assuming some rail hooking to the port at Pt. McKenzie?"

MR. GAMBLE said Port McKenzie is expensive, but if that can be overcome, there is a real opportunity to move goods to tide water that would be hard to move all the way around to the Port of Anchorage. He said there are a lot of resource products in

the interior that could go to an industrial McKenzie port. The container business would grow and continue to come into the Port of Anchorage. He said, "I think it's well within the bounds to de-conflict those and to optimize those so that you get the advantage of both." The Alaska Railroad has always felt that combining transportation, power, and data transmission the entrepreneurs come out of the woodwork. He mentioned limestone and other resource opportunities that are not feasible now because of transportation issues, and said that this would be a great move for the State of Alaska.

[4:13:59 PM](#)

CHAIR HUGGINS said he thinks the Port of Anchorage sees this as an interim "to make it work for Agrium—being a good neighbor," but it would prefer an alternative location.

MR. GAMBLE said the idea needs a lot of coordination, and almost begs for some sort of an authority so the entities are not in competition for federal state dollars. If "the bridge" is in there, it will be a big player, he said.

[4:15:34 PM](#)

DONNA BOLTZ, Deputy Director, Port of Anchorage, said the port is in the third year of an intermodal extension program, and it has extended the rail line onto port property. The expansion project supports Agrium's construction timeline, she said. Last year the port filled in an additional 21 acres and will continue to work on the north end. It will be completed in 2008. She said it has worked closely with Agrium in fitting its needs into the port's master plan. The facility and timing is very well postured to support Agrium, she added.

CHAIR HUGGINS asked about any concerns from the port.

MS. BOLTZ said it will take very close coordination, but with everything that Agrium has laid out, "we can support this."

[4:17:27 PM](#)

SENATOR GREEN asked about coal dust produced from the exchange from train to barge, and any impact to the local subdivisions.

[4:18:24 PM](#)

DAN GRAHAM, Consultant, Usibelli Coal Mine, said there will be 100 percent coverage and containment for all steps from train off-loading to the ship.

MR. GRAHAM said he works for Technical Field Services. The project looked at Beluga and Healy sources of coal, and they are both very competitive, but Healy has ample reserves, it is already permitted, it is capitalized, and it is only a Monday through Friday operation, "and over half this additional capacity can be picked up just by adding staff and running the equipment longer." He is working with the railroad to get the transportation costs under control, and the delivery from Healy can be relied on for the 2011 time period. Another big advantage is that in 2003 the Alaska Energy Authority did a power study for the rail belt, and one key conclusion was that the rail belt was too dependent on gas-fired power and needed to diversify. "This project, along with the project the [Matanuska Electric Association is] bringing forward, gets about halfway to their recommendation of trying to diversify the power into the rail belt using coal." The lowest cost coal states in the country have rates that are substantially lower than other states, he noted.

[4:22:17 PM](#)

SENATOR WIELECHOWSKI asked what percentage the 70 megawatts of power would be for the total Railbelt energy.

MR. GRAHAM said the total capacity in the rail belt is between 1000 and 1200 megawatts. A small percentage of that is coal.

SENATOR WIELECHOWSKI asked what the cost per megawatt will be by using coal instead of natural gas.

MR. GRAHAM said Matanuska Electric just released a study, and it is about 30-40 percent lower for coal than natural gas.

[4:23:39 PM](#)

SENATOR STEDMAN asked about a break-even price of natural gas where coal becomes more efficient for electrical generation.

MR. GRAHAM said the break-even point was around \$2 or \$2.50 per million BTU, and now Cook Inlet gas is approaching \$6 per million BTU, so the breakeven point has been surpassed.

[4:24:44 PM](#)

SENATOR WAGONER asked how many megawatts the Beluga generation plant puts out.

MR. GRAHAM said about 358 megawatts, and that is one third of the rail belt.

CHAIR HUGGINS asked about coal activity in the lower 48.

MR. GRAHAM said he won't claim any expertise on the lower 48 coal markets.

CHAIR HUGGINS asked if the state should be in hot pursuit of gasification or if it is just a last resort.

MR. GRAHAM said Alaska has a tremendous amount of coal, and if gasification is solely for power generation, it may not be the best option. In this case, where power is generated and the products of gasification are used, it makes sense, he stated.

CHAIR HUGGINS asked about the feasibility of the Agrium Blue Sky project, and if it is feasible only under optimum circumstances.

[4:26:18 PM](#)

MR. GRAHAM said the initial costing of the project attempted to avoid killing the project by having too many safety nets, and "we didn't want to undercut ourselves and build optimization in early in the process. We tried to put it right down the middle of the best estimate that we could come up with..."

MR. JOHNSON said every project will have its challenges and opportunities, but this project has so many positives. There is an existing facility without a feedstock source, and "that is a great anchor." There is a demand for low cost energy that is using a declining source of natural gas. The project provides ability for more oil recovery, and it will be done in an environmentally sensitive way. There are still challenges, "but for a gasification project, this has certainly got to be one of the top projects around because so many things come together that are positive."

CHAIR HUGGINS asked how many jobs the project will create.

[4:28:17 PM](#)

MR. JOHNSON said the plus side is that the 250 current jobs will be retained, and it will create more jobs at the mine, the railroad, and transportation infrastructure. There will also be 1,000 to 1,400 construction jobs.

CHAIR HUGGINS asked about Homer Electric.

MR. JOHNSON said Homer Electric has signed on to be a partner and is eager to find a way to make the project work for its

cooperative. They are responsible for commercializing the power that is sold under the grid. They are active and enthusiastic.

[4:29:36 PM](#)

SENATOR STEVENS asked about bonding the project and the impacts to the Alaska Railroad.

BILL O'LEARY, Chief Financial Officer, Alaska Railroad Corporation, said the railroad has been working with Agrium for a number of months and trying to examine if there is an opportunity for the Alaska Railroad to assist. When the Alaska Railroad was transferred from federal ownership to state ownership there was "a provision that we believe allows the railroad to issue tax-exempt bonds." This is a powerful tool for financing, he said. The financial team believes that it would be allowed, but it has not been tested, so Agrium and the Alaska Railroad could gain clarity on this. He thinks the impacts to the railroad would be positive. Using tax-exempt debt would help the economics if the Agrium project and provide the Alaska Railroad with the transportation piece.

[4:32:34 PM](#)

MR. GAMBLE added that the IRS determination gets more solid as the link between the railroad and the customer increases, so he is working with Agrium to define that link, "and make it a no-brainer" before taking it to the IRS. He said he is very confident there will be no problem with the IRS. There are two components for bonding, and one is partnering with Agrium on the larger project. Secondly, the Mat-Su Borough is interested in getting the rail extended to Port McKenzie. One option on who pays for what, is the railroad uses its tax-free bonding capability for that as well, he explained.

[4:34:02 PM](#)

SENATOR WIELECHOWSKI asked the bond amount; if it would require legislative approval; and if the state will be liable for a default.

MR. O'LEARY said the amount would be about \$2.5 billion, and the enabling statute requires legislative authorization. The basic tenet of the financing is that it would be non recourse to the Alaska Railroad and all debt issued by the Alaska Railroad is not an obligation of the state. The obligation in a default would be "the project." Agrium or whatever structure it has set up would be on the hook for payment of the bonds.

[4:35:56 PM](#)

CHAIR HUGGINS said he went through the same process last year, and the statute made it clear that the state was not on the hook for the money.

SENATOR STEDMAN said he heard them say that it was a "riskless bond." But if it turns upside down, clearly it will impact the Alaska Railroad and any future expansion obligations.

MR. O'LEARY said it would not reflect well on the Railroad, but the actual obligation would not be to the Alaska Railroad.

[4:37:12 PM](#)

SENATOR STEDMAN said he understands the technical aspect of who ends up holding the bag, but there is impact when looking at over \$2 billion in bonds. The railroad will have other expansion issues to deal with, including a gas line. "So I wouldn't characterize it as riskless to the railroad," he said.

MR. GAMBLE said there is a responsibility and the railroad would be on board to the end of the term. If there is a problem, the Alaska Railroad will be in court with everybody else. He said he is confident that the Alaska Railroad would not be financially liable. The railroad board will carefully examine the risks. The board is waiting for that next step.

[4:39:16 PM](#)

SENATOR STEVENS asked about the IRS and how long it will take.

MR. O'LEARY said it starts with a private-letter ruling request to the IRS to make the bonds marketable. The IRS would issue a determination within six months of a complete application, but the IRS determines the completeness, so it can be a lengthy process. The project must look very real to the IRS because it doesn't rule on hypotheticals, he noted.

[4:40:37 PM](#)

BILL POPP, Kenai Peninsula Borough, said this project is important to the Kenai Peninsula and the state for major new value-added opportunities. There could be tremendous opportunities rippling through the economy, including collateral development like raising the level of expertise in the area. It carries over into other industries. It is a very large project and Agrium has taken up quite a task, but this technology is gaining traction elsewhere, he stated. China has \$70 billion worth of coal gasification facilities. Alaska has the opportunity to be at the forefront of the technology and spin

off other economic opportunities for the southcentral region and the state.

CHAIR HUGGINS asked about port facilities on the Kenai.

MR. POPP said he doesn't know Agrium's final plans, but some opportunities may be improved dock and port facilities in the Nikiski area. Port McKenzie is an addition to the infrastructure base in Cook Inlet, he said. The dock facilities will be multi-purpose and will lead to spin-offs that benefit the economy.

[4:44:17 PM](#)

CHAIR HUGGINS said it is important for the state to leverage additional coal marketing, which has tremendous potential. "We don't use it, and we don't sell much of it," he stated. Coal is the third leg in the energy stool in Alaska. The state can't turn its back on the potential for leveraging new infrastructure to the future. "We don't blindly issue bonds...but if we can tie those three things together and some of the other players, then we're all a winner."

[4:46:18 PM](#)

SENATOR WAGONER asked about the difference in the qualities of Beluga coal and Healy coal.

MR. GRAHAM said they are identical and interchangeable.

The Senate Resources committee adjourned at [4:47:16 PM](#).