

**ALASKA STATE LEGISLATURE  
SENATE RESOURCES STANDING COMMITTEE**

February 7, 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

**OTHER LEGISLATORS PRESENT**

Senator Johnny Ellis  
Senator Joe Thomas  
Senator Fred Dyson

**COMMITTEE CALENDAR**

Alaska Natural Gas Development Authority (ANGDA) Overview -  
Harold Heinze, CEO

**PREVIOUS COMMITTEE ACTION**

No previous action to consider

**WITNESS REGISTER**

HAROLD HEINZE, CEO  
Alaska Natural Gas Development Authority (ANGDA)  
Anchorage AK

**POSITION STATEMENT:** Presented ANGDA overview.

LORI BACKES  
Alaska Gasline Port Authority (AGPA)  
Anchorage AK

**POSITION STATEMENT:** Commented briefly on AGPA.

PAUL FUHS

Alaska Gasline Port Authority (AGPA)  
Anchorage AK  
**POSITION STATEMENT:** Commented on AGPA's MOU.

**ACTION NARRATIVE**

**CHAIR CHARLIE HUGGINS** called the Senate Resources Standing Committee meeting to order at [3:34:45 PM](#). Present at the call to order were Senators Wielechowski, Stevens, Green, McGuire and Huggins.

**Alaska Natural Gas Development Authority Presentation**

[3:36:53 PM](#)

SENATOR WAGONER joined the committee.

CHAIR HUGGINS announced the presentation from the Alaska Natural Gas Development Authority.

HAROLD HEINZE, CEO, Alaska Natural Gas Development Authority (ANGDA), said his purpose today was to cover the outline of ANGDA's proposal and highlight some of its high points. He said the Alaska Gas Market System (AGMS) is a proposal ANGDA put together in response to a meeting with Governor Palin in which she reminded him of what ANGDA's purpose was. His board reflected on what it had and had not done for the last three years and today's presentation is a result of that. It is consistent with Governor Palin's stated principles for the Alaska Gasline Inducement Act (AGIA), which she will introduce in the legislature this year.

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MR. HEINZE said this proposal is a starting point and is intended to draw participants into a study without commitments in a transparent process; he said it would be adjusted once the Governor's proposal is on the table.

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SENATOR STEDMAN joined the committee.

MR. HEINZE referenced the previous proposal that clearly provided for a pipeline transiting Canada and said it is also clear that the MacKenzie Delta pipeline is in trouble. He suggested that maybe the three companies need greater flexibility in expressing what they want to do.

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It also addresses Alaska's energy needs in a timely fashion. Going to his slide of the proposed Alaska Gasline Market System, he noted that the pipeline splits in Glennallen and goes to both the Cook Inlet and Valdez areas. The starting point was actually in Cook Inlet because that, along with Fairbanks and the Yukon River, represent the Alaska citizens' gas needs and amounts to around 200 to 250 mmcf/day (or .25 mmcf/day) - less than the 4.5 bcf/day that many people talk about. ANGDA wants to make sure these gas needs are taken care of. If the state chose to take it's one-eighth share of the known reserves at Prudhoe Bay, which would amount to 3 tcf, and divide that by .25 bcf/day, which works out to about a 30-year supply.

Unfortunately, Mr. Heinze said, .25 bcf/day is not a lot when looking at the distances and the challenges involved here. It is costly to come from the North Slope of Alaska to tidewater. On spreading that cost over a small market, he said, "I'm not going to tell you it can't be done; on the other hand, it is a challenged decision."

MR. HEINZE said that ANGDA looked at how to make the project work while taking the burden off the Alaskan consumers and still meeting their energy needs. Thus they came up with the leg that goes 110 south of Glennallen and delivers 1 bcf/day to Valdez for the manufacture of LNG and the transport of that across to different destinations.

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CHAIR HUGGINS asked why not just use a larger pipe and one line to Valdez and not from Cook Inlet.

MR. HEINZE replied this is intended as a minimalist project. Nobody has ever suggested smaller numbers; everyone has always suggested bigger numbers. But he thought that is the way to start this kind of a process. Second, he explained that while Cook Inlet has several important ingredients, a fertilizer manufacturing plant and an LNG manufacturing plant, nether one of them is interested in being part of a project to bring gas there. So he stuck with the electric and gas utilities. However, if at some point in this process, one of the industrial users came forward wanting to be part of the project, he would welcome them.

The other issue, he said, is that Cook Inlet has an existing LNG facility that was built there because that's where the gas was. It has been operating for a long time in a marine environment

that is much more challenged than Valdez. There is also a limit to how big a ship can be brought in because of water depth and the presence of ice, which makes navigation in the Inlet more difficult. People in the energy transport business want a place like Valdez for a port because it is deep and has a large enough space to accommodate the biggest of the big ships. This project does not rely on the Cook Inlet LNG plant being in the game.

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SENATOR WIELECHOWSKI asked if there is a pipeline system in place that would get the gas to Kenai. He also asked what the export market looks like going to Asia - keeping the Nikiski plant in mind.

MR. HEINZE replied that the proposal target is to bring a pipeline into the Cook Inlet area and terminate it at the Beluga power plant. The virtue of bringing the pipeline to that area is that whatever gas isn't used can be put back into the ground and to recharge the reservoir.

He said that Enstar owns a pipeline system to Kenai and he envisions a tie-in to that, although he didn't know exactly how that would work. He said that some pipelines cut from the north side of Cook Inlet to the south where the Kenai LNG plant is, but they aren't available now for that kind of a service. One could look at either some sort of adapting those lines or laying a whole new line.

Third, Mr. Heinze said the LNG plant in Kenai was built 35 years ago and is extremely small. Current technology for such a plant would be six or seven times bigger. The dock and storage facilities might be used, but it can't be placed in the same category as the type of facility he is talking about. A 1 bcf/day LNG plant is 7 million tons per annum and the Kenai LNG plant runs at about 1 million tons per annum.

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SENATOR STEDMAN asked him to elaborate on the state's eighth share of gas as a supply.

MR. HEINZE replied that this project represents about 40 percent of the known Prudhoe Bay reserves (about 24 tcf of gas). His design is based on 1.25 bcf/day. If you do that for 20 years, that's 10 tcf of gas. The biggest project being discussed is 50 tcf, twice the known developed reserves.

He emphasized that this project is based upon 10 tcf, a very modest reserve number. He said one way to get that volume is to take the state's one-eighth share of along with another 7 tcf from the three major producers at Prudhoe Bay in any combination. Another way would be to take the state's 3 tcf and the Pt. Thomson reserves, 6 tcf - 9 tcf. It's his belief that a number of explorers who hold acreage and have defined prospects will almost immediately drill as soon as some project really starts to move forward. If they were to find something, this project could be adjusted to use it. Mr. Heinze stated:

We visualize that at the LNG end that people who are in the LNG business would actually build and operate that plant, that this system would only get the gas to Valdez and from there on, others would basically take the responsibility in terms of a firm commitment financially to move the gas. Having been said that way, what this means is, somebody would have to sign with them some sort of a sales contract. And it would not be an unusual contract, but it would be a sales contract and that would then allow them to have the contractual equivalent of owning the reserves in the ground. That would probably be very acceptable to some of the bigger LNG companies - whether it be the BG Group, Mitsubishi, Semptra - as a basis for them to make very large financial commitments - because they have the markets, they have other vessels to move it and so on. It's their business.

Again, at this scale all the feedback we've gotten is that that is a very plausible thing and again it certainly is our intent in the study process moving this forward that those participants will be very key to understanding the LNG part of this. And how they see it will determine whether you do that or not, frankly.

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MR. HEINZE said he envisioned that more than a number of people - producers, pipeline companies, LNG plant owners, shippers, and experienced energy project investors - would be more than willing to contribute some sort of in-kind expertise in a joint study effort to move from a conceptual phase to enough information that people could start deciding on a very simple open season process. There is a lot of interest in this kind of an energy project.

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SENATOR STEVENS asked him to discuss where a propane plant would be located and how complex the project would be.

MR. HEINZE replied that the answer is in the markets, but he wanted to finish his list first of possible participants. Alaska utilities, whether gas or electric, have things to contribute, he said, and the only way for them to make those decisions is to have good information and the way to get good information is to participate in this kind of a process. He also listed the State of Alaska and the U.S. government because they possess lots of valuable expertise and information in doing this type of thing. For instance, the United States Department of Energy is expert in the utilization of CO2 for enhanced oil recovery, a highly specialized area that may become of some importance in terms of gas conditioning on the North Slope.

He said in his mind the first market is the utilities; the second is the propane market. Propane can be trucked up the highway from a variety of spots. People could develop those kinds of trucking businesses. The Mat-Su Valley actually has three people competing to deliver propane.

MR. HEINZE said that the North Slope gas is very rich in ethane, propane and butane (NGLs); just the opposite of Cook Inlet. The propane far exceeds what can be used in Alaska. Once it is brought to tidewater, it can be moved via marine barge or in cargo containers that is received every summer by every village and town in Alaska.

You just slip in a container in there that is actually a propane tank. Maybe slip in two or three if it's a bigger community. And you take the empties back with you and you bring them back next year filled. And it's just like a trade-in thing on your barbeque grill propane tank if you go down to the hardware store.

He said getting propane delivered to the 100 or so communities in Yukon-Kuskokwim River system would be a little more difficult, but he envisioned that a pipeline could have an off-take where it crosses the river and a then the problem would become distributing it up and down the river system. He said that not much information exists about the cost and methods of distributing the propane on the river, so he has proposed a demonstration project for that.

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SENATOR STEVENS asked if taking propane out of gas is a simple process.

MR. HEINZE replied that when each compressor station draws some of the gas off for fuel, it is cooled so the propane drops out. It's a very simple process and every compressor station will have a small propane facility. The more challenging issues are storage and distribution.

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SENATOR WAGONER asked him the difference in the btu value between propane and natural gas.

MR. HEINZE replied that natural gas is methane; it has 1 carbon molecule and 4 hydrogen molecules around it; ethane has 2 carbons, propane has 3 carbons and butane has 4 carbons. Basically one molecule of propane has 2.7 times the energy content of a methane molecule. The more propane molecules, the more energy gets moved down the line. "You move molecules in a pipeline, you don't move btus." Propane is a liquid and very dense at very moderate temperatures and pressures. So it doesn't require super chilling or high pressures. Other energies are more volatile in terms of making them a liquid.

Inherent in the project is the ability to start shipping gas from Prudhoe Bay without the conditioning plant being on line and to Cook Inlet without the LNG facility in Valdez - as long as they know it is coming. The Prudhoe Bay gas is so rich that even with 12-percent CO2 content, it will still burn great in stoves and turbines. He also envisioned making maximum use of the TAPS right-of-way.

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He emphasized the importance of the joint-study process saying:

It's our feeling that while the project here is important, the study process may be actually the more important thing at this point. I should emphasize to you that we're not looking for support of the project at this point. Ultimately, that will flow out of the people who want to build it, who want to be the participants in it. What we are looking for is support of the idea of moving forward with a number of people in a sort of voluntary sort way - no commitments, no exclusivity - other than that they will work in and contribute towards the project definition, understanding the project, defining it on an in-kind

basis. We've proposed here that the state put up the \$5 million of cash to fund what we think are the studies. We suspect that the in-kind effort that this could attract is [indisc.] probably valued in the range of \$5 million - \$10 million if you could even go out and buy the kind of expertise from these companies we would be looking for.

MR. HEINZE explained that at the end of the joint study process all the participants would have enough knowledge that they could make an informed decision whether to go forward and whether they were to foot the bill for the next level, which might be more in the range of \$50 million. He said this is in line with the Governor's proposal. ANGDA would be the facilitator of getting the project started. He thought certain participants would be willing to put some people working on this almost full-time.

That's what it would take to kind of make it happen. A lot of other people would be part time. The reality is that the process would be very public, very transparent and everybody could sort of see what was going on at least on this project.

MR. HEINZE speculated that the Governor's legislation would inspire some proposals, but that others would be needed - in particular ones that focus on the Alaska market, because that is an important ingredient from the state's point of view - regardless. He speculated also that this project was small enough to be doable, and that it would be cheap insurance that something will happen.

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CHAIR HUGGINS said last year the legislature faced the issue that there was no contract start date and asked how his "course of action" would have more certainty.

MR. HEINZE replied:

This isn't a negotiation. This is people working together that are potentially interested participants. It's working together in a circumstance where everybody has a lot to gain and nothing to lose. Again, because there is no exclusivity to it, there may be companies that choose to participate in the study very actively and also undertake their own proposals under whatever the Governor puts in front of

you. So, at worst all we have done is encourage more action and anticipation on it.

Secondly, I think the result of the joint study is going to be to see that this is not the kind of a project where you need one person or one group of people, but where you need a number of people involved. This provides, then, at least a framework to start to identify those people, for them to start to work with each other and understand each other a little better and again, develop some of that background.

Also, because it's highly visible in a public sense - who is there, what's happening. I think it aides whatever other discussions have to take place with whatever other parties under anything else. Our intention is to proceed simultaneously with whatever other efforts there are. We have no intention to interfere with or in any way create problems for the other issues. On the other hand, very frankly, if the moment comes where the state decides that it is faced with significant delay on some other alternative, then it may want to look hard at this and see if it is appropriate to move ahead. Having said that, I will assure you we have analyzed and we've discussed a little bit in the proposal here the sort of 'what ifs.' What if you do this project and then other things happen and none of them seem in our mind to work out bad. They are all possibilities that seem very manageable and, frankly, probably good from the state's point of view. We think that's kind of our take of how we contribute to the process moving forward on it.

CHAIR HUGGINS summarized that his system can be viewed in two major categories - "one that it's complimentary to a larger system that you take gas off of and that given that there isn't that larger system, you could have an autonomous system."

MR. HEINZE replied that the system he has proposed is a "minimal autonomal system" and that there is an inherent frustration in not doing anything.

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SENATOR MCGUIRE said lawmakers keep coming back to the point that any project needs a gas supply and there must be a

willingness on behalf of the people who own the gas to participate. She said that three major producers own the gas supply and asked what would be their incentive to voluntarily participate in this when their goal is to please their shareholders not to help Alaska resolve its energy dilemma. What if they have a competing proposal that would lead to their goal? She has also found in working on homeland security issues that it is difficult for people to work voluntarily because they recognize the risk of giving up proprietary information.

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MR. HEINZE replied, "The visualization here is sort of two-fold" and that companies commonly share information that is in their common interest. People might not want to make things public, but wouldn't mind sharing it with other people because it might lead to a better thing and the other people maybe already know it. Second, part of the reason for the state to be involved is to help guide studies that will generate certain information in the public realm without them having to disclose proprietary information. For instance, the state could hire a contractor that would review their work and incorporate it in a summary way without ever revealing proprietary information. This is a common vehicle. He noted that later he would talk about the Port Authority memorandum - one of the reasons for doing that is so that he can keep a secret.

In response to her other question, he said the decision to market gas has to be made separately by each of the three leaseholders in the Prudhoe Bay unit. Each has to make separate decisions on marketing and to do otherwise strikes to the heart of their responsibilities to the state and to their shareholders and, if done wrong, could represent a prima facie anti-trust violation. They have to find a balance in thinking through their individual perspectives. It was clear in the last session that the three producers worked with the legislature, but other producers might be interested, as well.

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SENATOR WAGONER asked if a percentage of the gas is lost by storing it or compressing it.

MR. HEINZE answered very small percentages are lost and the state's bank account might be appreciating faster than the vault that is leaking. However, the state might want to examine its role in terms of interest rates and suggested it might absorb the extra charges through the pipeline tariff. One of the biggest objections to most projects that he has heard is the

long ramp up period they require. "This is just simply to say not the case here."

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SENATOR WAGONER asked him how letting the gas liquids go out of state would impact the state.

MR. HEINZE replied in a pipeline of the size he envisions they would look at ethane numbers in tens of thousands of barrels a day, propane numbers would be in the range of 5,000 to 10,000 barrels a day. Larger projects are huge numbers - approaching 100,000 barrels a day of ethane and 50,000 barrels a day of propane. A petrochemical facility can be built on the basis of 50,000 barrels a day. So, this volume is two major petrochemical facilities.

He said that NGLs are a large resource on the North Slope; it has no place to go but into the gas pipeline. Because the molecules are so valuable in a recovery conservation sense, some emphasis has to be placed on finding a market for them. Once they get outside a pipeline that gets a little trickier especially with ethane. So you tend to build the plant that uses the ethane right at the end of the pipeline.

Markets in the Mideast are tightly controlled and it's hard to get in to them - places like Iran, Indonesia and Sakhalin. The Russians confiscated half of Sakhalin's interest just recently. "If you're faced with those choices, Alaska becomes a very attractive place, frankly, and you're going to work really hard to see if you can make something pencil out here."

SENATOR WIELECHOWSKI asked him to compare his project with the one last year in terms of cost, revenues to the state and Alaska jobs. Second, if a larger gas line is agreed to, he asked what ability his project had to be upgraded to accommodate it.

MR. HEINZE replied this is a smaller project, but if you choose to make the LNG portion of this project bigger, that would lead to three years of good jobs. You size the pipe because of the people who made the commitments on the other end of it.

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SENATOR WIELECHOWSKI asked in terms of interchangeability, if the state goes with a smaller line and then goes with a major export line, how easy it is to upgrade.

MR. HEINZE replied:

If you had installed this system and you wanted to bring a much larger reserve to market, you would build a separate line and go all the way to Chicago. And this line would continue to operate; it would still be a very good line. It would be very cost effective. It would be meeting Alaska's needs and you'd ship all the NGLs down of it and we could enjoy the benefits of a petrochemical industry.

He said if the big gasline goes through, he would put his hand over his drawing of the pipeline north of Delta Junction "and all of a sudden we've got a wonderful workable project that goes south from that point and ties off the big pipeline." He also perceived that the Governor's AGIA legislation would place a lot of weight on instate gas use.

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CHAIR HUGGINS asked if his plan depends on whether the gas is stranded or not.

MR. HEINZE replied no; nothing in his proposal depends on legislation. It is a business-like approach. Organizations like ANGDA, like the Wyoming Natural Gas Development Authority (WNGDA), have been very effective in providing lines of credit and other types of credit guarantees, aggregating supply, and those kind of steps. He mentioned that he could use ANGDA's bonding authority to do something like that.

CHAIR HUGGINS asked him how WNGDA was effective.

MR. HEINZE gave one example where Wyoming provided a \$300 million line of credit, they de-bottlenecked their pipeline system, got wells drilled and pipelines built - "They woke up a few years later and the state of Wyoming was realizing a \$.5 billion more revenue every year."

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MR. HEINZE said that recently the boards of the Alaska Gas Line Port Authority (Port Authority) and ANGDA approved a memorandum of understanding (MOU) between them. The intent is in no way to restrict what gets done, but it provides for a degree of cooperation that was not possible before the MOU. As two public agencies, one their biggest problems is they can't keep a secret. The MOU basically acknowledges that there will be times when both authorities need to talk to each other and ask that it be kept confidential.

The strongest motive he had for pursuing this MOU is that he knows the Port Authority already has good and valuable work done for them by Bechtel. Bechtel wasn't paid for the work, but it owns it and has every right to third-party confidentiality prohibitions. Under the MOU, he could sign a confidentiality agreement, take a look at the work and use it without revealing it, and save the state from having to pay more for it. The most important thing is that both ANGDA and the Port Authority have shared mission goals from the very beginning and they want to continue working together.

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CHAIR HUGGINS asked how he envisioned someone would become an applicant in his system.

MR. HEINZE replied that he didn't know the details of what the Governor will bring forward, but she has described a process that involves the submission of a number of different proposals, an evaluation of them, and then some sort of process that goes to a next step.

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CHAIR HUGGINS asked how the state would get its money out of his project - in-kind or in-value.

MR. HEINZE replied by asking the legislature to fund \$5 million to ANGDA.

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CHAIR HUGGINS asked if a producer would have to break ranks to work with him.

MR. HEINZE supposed each company would have to look at its hole card and decide what to do.

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CHAIR HUGGINS asked Lori Backes and Paul Fuhs, Alaska Gasline Port Authority (AGPA), to comment on the MOU for the committee.

PAUL FUHS, AGPA, reasoned that both authorities are working together at the closest level and there is no sense in duplicating efforts. He said it is the will of the people and they have a responsibility to the people to do what they were asked to do.

He said it's important to just get started. After an open season is held and other people come in is when a decision has to be made. Senator McGuire is correct that an initial gas supply is needed, but no one knows how Pt. Thomson will play out. The royalty gas is there. "If we said to the producers we want our royalty gas because we want to bring that gas to our own people and they said no, how would that make you feel?"

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SENATOR WAGONER asked if the state doesn't have a line going through Canada and:

Would our gas liquids be applicable to Alberta's large demand for pollutants and could we sell them on a competitive basis and kind of export and import them from here to Prince Rupert and then over by pipeline?

MR. HEINZE replied if Canada is still interested in the propane for instance, it could be transportable, but the price would have to be competitive with some other high-value markets - with China for instance. Ethane would be much more difficult logistically, because of its volatility. He said the only way you know you get full value is to have both an alternative and the control to move it between those alternatives. "At that moment you will get the best price for that commodity."

SENATOR WAGONER said as a follow-up on gas liquids, it's estimated that an 80,000 barrel ethane plant would employ between 600 - 900 people. That's a lot more jobs for Alaskans than the operation of a pipeline system. That's why he wants to encourage instate processing of natural gas liquids.

MR. HEINZE added that the point to remember with petro-chemicals is that it's not only the manufacturing industrial complex that just turns out feedstock for all the industries; The next level of manufacturing where a whole string of activities can be set up is where more value comes in.

SENATOR MCGUIRE remembered when about five years ago Netricity came to Alaska interested in warehousing big data processing plants and agreed that innovations like that need to be encourage by having a gas supply.

MR. HEINZE remembered also that Netricity wanted to be on the North Slope because it was cold and more energy is expended cooling electronics than running them. He added that Alaska has very limited plastics manufacturing of extremely high value

products and encouraging that kind of entrepreneurship would be interesting.

SENATOR MCGUIRE remembered that one of the barriers was getting a rate set for the gas.

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SENATOR STEDMAN asked how a company can go about not getting blocked out in an open season when its industry isn't in place yet. He asked if he was still struggling with that one.

MR. HEINZE replied that besides the small size of the Alaskan market, it is an undeveloped market as well. For an example, Fairbanks Natural Gas uses a very minor amount of trucked LNG. Obviously, once gas is coming through their community, the system will expand to maybe 100 times bigger than it is today. Reserving space for them in the future is why he wants consumer participants to be involved. He noted that ANGDA is working with the Alaska Power Association, which includes most of the electric utilities in the state, on an education process on how to participate in an open season.

CHAIR HUGGINS thanked Mr. Heinze for his work. There being no further business to come before the committee, he adjourned the meeting at [5:08:34 PM](#).