ALASKA STATE LEGISLATURE
JOINT MEETING
SENATE RESOURCES STANDING COMMITTEE
HOUSE RESOURCES STANDING COMMITTEE
September 29, 2014
1:02 p.m.

MEMBERS PRESENT

SENATE RESOURCES

Senator Cathy Giessel, Chair
Senator Fred Dyson, Vice Chair
Senator Click Bishop - via teleconference
Senator Peter Micciche

HOUSE RESOURCES

Representative Eric Feige, Co-Chair
Representative Dan Saddler, Co-Chair
Representative Peggy Wilson, Vice Chair
Representative Mike Hawker
Representative Craig Johnson
Representative Kurt Olson
Representative Paul Seaton
Representative Geran Tarr
Representative Scott Kawasaki - via teleconference

MEMBERS ABSENT

SENATE RESOURCES

Senator Lesil McGuire
Senator Anna Fairclough
Senator Hollis French

HOUSE RESOURCES

All members present

OTHER LEGISLATORS PRESENT

Senator Charlie Huggins
Representative Sam Kito III
Representative Andy Josephson
Representative Chris Tuck

COMMITTEE CALENDAR

INTRODUCTION BY JOE BALASH - COMMISSIONER~ ALASKA DEPARTMENT OF NATURAL RESOURCES (DNR).

- HEARD

ALASKA LNG PROJECT UPDATE BY STEVE BUTT - PROJECT MANAGER.

- HEARD

PROGRESS FROM THE STATE'S PERSPECTIVE - COMMISSIONER BALASH & COMMISSIONER RODELL.

- HEARD

REPORT OF MONEY OBLIGATED TO A THIRD PARTY: COMMISSIONER BALASH.

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

JOE BALASH, Commissioner
Alaska Department of Natural Resources
Juneau, Alaska
POSITION STATEMENT: Provided an update for the Alaska LNG Project.

STEVE BUTT, Project Manager
Alaska LNG Project
Anchorage, Alaska
POSITION STATEMENT: Provided an update for the Alaska LNG Project.

JACK BEATTIE, Pipeline Manager
Alaska LNG Project
Anchorage, Alaska
POSITION STATEMENT: Addressed construction questions for the Alaska LNG Project.

ANGELA RODELL, Commissioner

Alaska Department of Revenue
Juneau, Alaska
POSITION STATEMENT: Addressed financing and revenue questions for the Alaska LNG Project.

ACTION NARRATIVE

1:02:54 PM
CHAIR SENATOR GIESSEL called the joint meeting of the Senate and House Resources Standing Committees to order at 1:02 p.m. Senators present at the call to order were Vice-Chair Dyson and Chair Giessel; Representatives present at the call to order were Representatives Seaton, P. Wilson, Olson, Johnson, Tarr, Hawker, Co-Chair Saddler, and Co-Chair Feige. Senator Micciche joined the meeting as it was in progress. Senator Bishop and Representative Kawasaki joined the meeting via teleconference as it was in progress.

CHAIR GIESSEL recognized other legislators in attendance were Senator Huggins, Representative Kito, and Representative Josephson. She noted that Janak Mayer & Nikos Tsafos from Enalytica were in attendance.

Introduction by Joe Balash, Commissioner, Alaska Department of Natural Resources (DNR)

1:03:04 PM
CHAIR GIESSEL announced that the first item on the agenda would be an introduction from Joe Balash, Commissioner of the Department of Natural Resources.

JOE BALASH, Commissioner, Department of Natural Resources (DNR), Anchorage, Alaska, explained that a provision in SB 138 requires that a public presentation and update on the Alaska Liquefied Natural Gas Project (Alaska LNG Project) be held three times a year. He noted that the signing of SB 138 in May dictated that the first presentation be held in September.

COMMISSIONER BALASH called attention to the sharing of information with the Legislature. He explained that SB 138 set out the broad terms of an arrangement where the details need to be filled in. He noted that DNR and the Department of Revenue (DOR) were given authority to enter into confidential discussions and certain types of agreements. He said that DNR has developed an agreement between the agencies and the other project sponsors that has involved confidential information

access protocols and personnel training for the executive branch. He informed the committees that DNR is developing similar confidentiality agreements between the agencies and the legislative branch.

1:05:56 PM
COMMISSIONER BALASH noted that a draft confidentiality agreement had been sent the previous week to the Division of Legal and Research Services for review. This confidentiality agreement will allow information access for individual legislators and their agents that would not be presented at a public meeting. He pointed out that as an equity participant in the Alaska LNG Project, the dollars and cents involved has everything to do with expenditures and costs pertaining to dealing with contractor bidding. He asserted that the intent should be not to put the Alaska LNG Project at a negotiating disadvantage with contractors and engineering firms.

He added that the other side of the equation pertains to buyers. He pointed out that buyers are going to take every opportunity to drive sales prices lower. He stated that discussions will occur in executive session to protect Alaskan's resource interest, royalty value, production tax, and ultimately the treasury.

1:07:59 PM
CO-CHAIR FEIGE asked what the timeline is for confidentiality agreements and training.

COMMISSIONER BALASH replied that he would not try to predict the timeline. He explained that DNR and DOR spent a couple of months going back and forth with the Department of Law and the other project parties, and now the confidentiality agreement is just a matter of getting the legislative and state attorneys on the same page.

CHAIR GIESSEL recognized that Representative Tuck joined the meeting via teleconference.

Alaska LNG Project Update by Steve Butt, Project Manager

1:09:42 PM
STEVE BUTT, Project Manager, Alaska LNG Project, Anchorage, Alaska, shared his work experience as follows:

- 30 years of experience with oil and gas projects.
- Worked in South America building a few projects.

- Worked in West Africa for 8 years.
- Worked most recently in Qatar on the world's largest LNG facilities as well as the world's largest gas treatment plant.

He explained that the opportunity presented itself for the companies to come together and work on the Alaska LNG Project. He stated that it was a privilege to have this opportunity because Alaska has been worked and looked at for a long time.

1:12:02 PM
MR. BUTT noted that one of the key questions everyone asks is what makes this effort different. He explained that he was representing the parties that signed the Joint Venture Agreement (JVA) at the end of June. This was a landmark agreement to create a Pre-Front-End Engineering Design (Pre-FEED) organization to progress the design and regulatory work required to build and understand what would be required to build the Alaska LNG Project.

He said in 2012 the phrases "unprecedented challenges" and "unprecedented opportunities" were used to characterize the Alaska LNG Project because by any metric, it is one of the largest projects in the world. He pointed out that the term "mega project" has been used to define projects between $1 billion to $5 billion. He said the Alaska LNG Project has been forecast to range from $45 billion to $65 billion. It encompasses five mega-projects and the term "giga project" has been used to describe it. He set forth that the Alaska LNG Project is the first true giga-project. It is one of the largest projects ever executed and the largest project in U.S. history.

He added that bigger LNG plants, pipelines, and gas treatment plants have been built, but there has never been a standalone project built with all three at once. He said his presentation would provide a progress report for an unprecedented project, challenge, and opportunity.

1:14:14 PM
MR. BUTT stated that what separates the Alaska LNG Project from others is the amount of public engagement a higher level of transparency without compromising project competitiveness. He asserted that "transparency" and "competitiveness" are the core elements.

He summarized the update agenda as follows:

- Safety overview-executive summary:
  A key principal is to ensure a safe environment where everybody goes home safely and nobody gets hurt.

- Schedule status:
  The schedule is the one that's been talked about in public forums so as to give everybody a sense of the progress that's been made and some of the steps ahead.

- Project components-recent progress:
  Specifics about the design and construction characteristics.

- Team status-build-up:
  The Pre-FEED leadership team and the Pre-FEED project management team are actually executing this work.

- Regulatory status-LNG export permit application:
  This was submitted to Department of Energy (DOE) and posted to the Federal Register, which is the way DOE accepts and opens public comment. Public comment is open through November.

- Regulatory status-National Environmental Policy Act (NEPA) pre-file accepted:
  NEPA is the enabling legislation behind the U.S. Environmental Protection Agency (EPA) on the Environmental Impact Statement (EIS). The first step in the process is called the pre-file and this document has been submitted. It notifies the federal government about the project need for help in obtaining a permit, which is necessary before any work can be executed. It's the law. A project cannot undertake work or disturb the environment without a document from the federal government or an EIS that indicates that the project has done the work required to mitigate any potential environmental damage and that any environmental damage it the least possible. This is called LEDPA. It's critical to have this document and permits in hand before moving forward.

- Cooperation framework with the Alaska Gasline Development Corporation (AGDC):
  This is to ensure alignment to be as efficient as possible.

- 2014 Summer Field Season:
  Included are pictures of the 2014 summer field work to provide some background on some of the things that have been found and some of the work that was done. He noted that he had had the privilege of hosting some committee members at the site.

- Website:
  One of the key messages is to promote discussion with the broader public in Alaska. The website provides a way for corporations to register, express interest in working with the project, ask questions, and find out about community engagement sessions.

1:18:18 PM
MR. BUTT asserted that the ideas presented on page 3 are the philosophical underpinnings that will differentiate a successful project from a project that can't move forward.

He stated that there have been no health or environmental incidents to date. Over the course of three years, 210,000 to 220,000 person hours of field work and 50,000 to 80,000 person hours of work of office has been executed. The total is in excess of 300,000 person hours of work. He revealed that was one minor medical treatment incident during the 2014 summer field season. A field worker removed his safety glasses to better read the tablet where he enters data for the permit and his eye was scratched by an alder branch. This required some medication, but he was able to return to work within a matter of hours. This incident captured the importance of "personal protective equipment" (PPE) and has been used subsequently as a teaching tool.

1:20:53 PM
SENATOR MICCICHE joined the meeting.

MR. BUTT reviewed the Executive Summary. He explained that the Pre-FEED team consists of 27 key leadership positions that were staffed from all the project owners. This team has in excess of 800 years of experience. In addition, about 102 more team members were added and there are plans to add about 7 more. This brings the total to 130 to 135 people working fulltime. The project is moving from the concept stage to what is called pre-phase-FEED stage. The core team will be responsible for working with a wide range of contractors involving several thousand people to ensure the broader work gets done to progress

regulatory filings and design work required to de-risk the project and make sure it's viable.

He continued to explain that, to date, the project spending exceeds $100M on concept, regulatory work, and the Pre-FEED commitment is about five times this amount. The $100 million includes gathering regulatory data in the field over the last two summers, the preliminary design work to finish the NEPA pre-file, and the DOE export permit application. He noted that the export permit application is 200 pages.

The Pre-FEED contracting is progressing with good support from primary contractors that have demonstrated success in similar projects. He acknowledged that while a lot of work has been done on Pre-FEED contracting, the presentation is a little light on this because the project team is currently in the middle of awarding the contracts. He asked for latitude to provide more information on contracting at the next update, but that he did have information on what it means for Alaska hire. Once the key contractors have been identified they would hold open-houses to make sure Alaskan corporations know how to plug into the project. Now some of these contractors are Alaskan corporations and some are not. Given the scope and complexity of the project, most of the contracting arrangements will be with multiple companies to make sure that they can handle the complexity of the project. If one company has strength in one area and weaknesses in another, the idea is to find a complementary company that can offset the weaknesses and augment the strengths.

CO-CHAIR SADDLER asked if it was possible to provide information on how many contractors were Alaska based.

MR. BUTT answered that the Alaska LNG Project has had a lot of success with companies that are Alaska based, but he would rather not identify the specific contractors. He noted that with every single contractor contact, there is a technical evaluation process to identify a contract group's strengths. One of the key areas of the evaluation process includes: the amount of Alaska hire, how the contractor leverages local resources, and how the contractor works within communities.

1:26:41 PM
MR. BUTT continued to discuss the Executive Summary. He reported that the NEPA, pre-file request was approved by the Federal Energy Regulatory Commission (FERC) on September 12, 2014 and that triggers the EIS process. This is a fundamental document

that allows the project to engage FERC and work with its third-party consultant, Natural Resource Group (NRG) to coordinate all federal regulatory agents. This very important milestone triggers a community engagement process, which is posted on the website. He noted there have been about 50 community meetings and more will occur over the next six months. FERC attends and is involved in those meetings, clarifying that this community and stakeholder engagement process is done under the umbrella and auspices of FERC.

MR. BUTT advised that DoE posted export application to Federal Register on September 17, 2014 - process to secure right to export LNG. This is the process to secure the right to export LNG and the fact that the application has been accepted and posted it to the Federal Register in a very timely manner indicates that this project is moving along and that very thorough and bonafide work has been done.

1:29:26 PM
REPRESENTATIVE KAWASAKI and SENATOR BISHOP joined the meeting via teleconference.

MR. BUTT turned to the Key Messages in Recent Meetings. He reported that there have been 50 community meetings that have been very well attended; 300 people came to talk to the project team at Dena'ina Center. One of the most important messages the team tries to share at these meetings is that the Alaska LNG Project participants are the owners of 99 percent of the gas on the North Slope. This is the State of Alaska plus the producers who purchased the right to produce the oil and gas from the North Slope leases in the 1960s and 1970s, it's not any one group. He emphasized that the state has a seat at the table as an equity participant; the state is an owner of gas.

MR. BUTT opined that as owners of the gas, it is important to ask “What is the best thing to do?” From that framework, he suggested committee members speak on behalf of all Alaskans, because it shapes the discussions with buyers. He noted that Commissioner Balash alluded to this. Buyers have a different view than sellers on how to structure the deal owners probably view thing more like a seller than a buyer. He said that paradigm is critical and it helps to get to what he calls the first leg of the "arc-of-success," which is alignment.

Mr. Butt explained that ARC is a quick acronym for the three touchstones to answer questions about the project. How does

something influence alignment, how does something influence risk, and how does something influence cost?

Alignment - Mr. Butts said it may be simplistic to say that anything that increases alignment is good and anything that undermines alignment is bad, but almost all questions come back to this point.

Risk reduction - He described Pre-FEED as all about identifying and mitigating uncertainty. Some of the things that might get in the way of the project are labor challenges, weather construction challenges, and challenges to get 250,000 tons of steel to the North Slope over four sealifts 8,000 tons at a time. These are technical issues and Pre-FEED is about ensuring that all of these risks are understood beforehand and mitigating steps taken before something goes wrong. He highlighted the importance of acquiring a sufficient number of the right barges to move safely all materials, crews and equipment. These things are risks and uncertainties that are identified during Pre-FEED so there is confidence that the project will work in an aligned manner, if the owners choose to put up all the money to build the project. The investment decision isn't whether the project will work if the owners put up the money. The question is whether all the risks have been considered and mitigated sufficiently so the owners can be told "Yes, if we put up the resources required to do this work, we will be able to generate revenues and the benefits we have all forecast from this work."

1:36:33 PM
Cost reduction - Mr. Butts explained that gas is a commodity and Alaska must be careful to ensure that it is able to sell its gas molecules at a price that is low enough to attract buyers. That means that the project must be designed to minimize what is called the "cost of supply." This is driven by the amount of money that it takes to build the infrastructure such that it can be recovered over time. This project will cost between $45 billion and $65 billion and the owners won't get any money in excess of that until their investment is recovered. It's about being competitive. The only projects that survive are the ones that can continue to deliver energy at a cost below their competition.

He highlighted the structural advantages of the project that help drive down costs and pay for some of the infrastructure that other LNG projects don't need, like a very long pipeline and a very large gas treatment plant. He said these advantages and disadvantages become the background that is used to analyze

the cost of supply, which is the fundamental parameter that defines whether or not a project can be competitive. "If it's not competitive, it can't survive." He summarized that the Alaska LNG Project can be successful if the partners work as owners and they figure out how to stay aligned, how to reduce risk, and how to reduce cost.

MR. BUTT explained that the Alaska LNG Project is more than a pipeline. It is a pipeline plus two large facilities: a gas treatment facility at the top that is required to remove and re-inject CO_2 and other non-hydrocarbon impurities, and a liquefaction facility at the south-end which makes the gas small enough to efficiently sell and ship overseas. The pipeline allows for gas delivery to local markets and its LNG facility allows for gas delivery to the world. He asserted that this project can provide energy to improve standards of living if costs can be driven down through economies of scale. He explained that the Alaska LNG Project provides economy of scale because its large size puts a lot of gas through one pipeline. This drives down costs.

He remarked that he will continue to use words like "ownership," "alignment," "risk reduction," and "cost reduction," because most questions can be answered through these four lenses. "What would an owner do, does it help alignment, does it reduce risk, and does it reduce cost?"

1:41:19 PM
MR. BUTT reviewed the Alaska LNG Project Work Plans/Key Decision Points (October 2012) [page 4]. He explained that he addressed the Legislature in early 2012 to talk about the Alaska LNG Project and wade through the skepticism. He recounted that the first hurdle was to test the concept and make sure it worked. He explained that project viability was examined as follows:

- Technically, is there enough understanding of the project to ensure that it will work?
- Can the project get adequate government support?
- Can the project get the necessary permits that will help provide confidence to move into Pre-FEED?

He reported that the Alaska LNG Project moved into Pre-FEED in June 2014. The $100 million that was spent prior to Pre-FEED will be leveraged up to five times that amount to advance the regulatory and design work required to test whether or not to go to the Front-End Engineering & Design (FEED) stage.

He highlighted the key questions that go into the FEED decision.

- Can we build the Alaska LNG Project?
- Can we make the Alaska LNG Project work?
- Do we have support from the permitters?
- Do we continue to have the kind of support we need from the government, both at a federal level on the export permit and the NEPA process for the EIS?
- Are we confident that we would have the permits required to move into construction?

MR. BUTT drew an analogy between the Pre-FEED process and a hurdle race. He said you never start a hurdle race and quit halfway through; you want to jump all the hurdles. Similarly, it's important to have confidence that the Alaska LNG Project is technically viable, that federal permits can be obtained and that there is support from the state and other owner parties to put money in a frontend investment decision, which is flagged after FEED as money that would be well spent. He advised committee members that they want to be able to look at their constituents and all the other owners and say that this will work, that the structure is durable and predictable and that the owners will derive benefit from their investments. "You put up all the money upfront and you get the benefits over time, so you want to have tremendous confidence up front."

He also drew an analogy between the Pre-FEED process and building a house. He said you don't build a house unless you are confident that it's on a solid foundation, you can get a mortgage at a reasonable interest rate and you know what the structure will look like and that it will be suitable for your family over the next 30 years or so.

MR. BUTT noted the additional project challenges listed on page 4, and asserted that the Alaska LNG Project was so intertwined with the regulatory and state processes that maintaining owner alignment and confidence had to continue.

1:45:35 PM
MR. BUTT reviewed the One Team-World Class Project Management [page 5]. He noted that a conversation was framed with each of the project owners for statements on their approach for safety, values, and project management. He pointed out that all of the companies involved share a very similar view of safety. It is a core principal for all participants. He asserted that the Alaska LNG Project wants to execute in a safe and environmentally

responsible manner. He remarked that additional information has been provided on making sure the project has a successful structure that provides energy to help people have a better standard of living.

He pointed out that all parties, including the Alaska Gasline Development Corporation (AGDC) and TransCanada (TC), have very common language about how to move things forward for the Alaska LNG Project. He shared with the committee that AGDC and TC are working on behalf of the state to represent the state's participating equity in the Alaska LNG Project. He remarked that the Alaska LNG Project parties have some challenges in staying aligned, but the parties have a philosophical commonality and common ground to work from.

MR. BUTT reviewed the Development Concept Summary [page 6].] He stated that the intent of the Alaska LNG Project is to commercialize the North Slope gas resource. He explained that the PTU/PBU gas source has up to 35 trillion cubic feet (TCF) of gas. Within the export permit application and some of the NEPA filings there is supporting information from reservoir consultants, DeGolyer & MacNaughton, that this is thousands of years of gas for state use and hundreds of years of gas for state use if it is done in conjunction with export. It is one of the largest single gas resources in North America and the world. The resource has been under production for decades at Prudhoe Bay and the development is moving forward at Point Thomson.

MR. BUTT explained that gas will be treated at the North Slope Gas Treatment Plant (GTP) near Prudhoe Bay Central Gas Facility (CGF), and carbon dioxide (CO_2) and hydrogen sulfide (H_2S) will be re-injected in the Prudhoe Bay Unit (PBU) to support pressure. There will be 800 miles of 42" pipe that is able to withstand 2075 pounds of force per square inch. Eight compressor stations are required to move the gas north to south. At minimum, there will be 5 domestic gas off-takes along the pipeline route for instate use.

1:47:48 PM
The development concept calls for an LNG plant in East Cook Inlet in the Nikiski area. Three LNG trains will have the capability of 20 million tons per annum (MTA) to accommodate peaks during cold weather, although the average will be closer to 17-18 MTA. Also included in the development concept are 3 165,000 cubic meter storage tanks and a single jetty with 2 berths for LNG and support vessels. Having 2 berths will allow

loading every 36-48 hours; while one ship is being loaded, another will be moving out.

MR. BUTT reviewed the strengths of the development concept [page 6]. He related that there is high resource confidence in Prudhoe Bay and Point Thomson. The gas at Prudhoe Bay has been reinjected three times, so it's a known entity. This is a critical differentiator because with other projects in the world that are trying to find the gas to underpin the liquefaction. This is a key factor in risk reduction. "Here in Alaska that resource risk is pretty minimal, and that is good news."

1:49:42 PM
Another development strength is the opportunity to integrate with Prudhoe Bay. Because it has been operating for approximately 40 years, a lot of the frontend compression has already been built. He noted that the Prudhoe Bay operator has done an excellent job of maintaining and operating those machines and they can probably provide feed-gas to this project for another 50 years. This is a great cost reduction and it goes back to the ARC of Success. "We don't have to pay for that compression on the frontend, it already exists. It allows us to kind of piggyback on the oil business, so that healthy oil business is really important to us."

He said that yet another resource strength is the potential to deliver domestic gas through the rail corridor for Alaskans. This is where most of the population resides, but a good thing about LNG is that when it is liquefied, it can be put on a boat and delivered to any port city. The other characteristic of resource strength, he said, is the potential to provide LNG to the world. Alaska is closer to Asian markets than the Gulf Coast and does not require transit through the Panama Canal, which is very expensive. The distance from the Middle East to the Far East is farther, and to move gas from the Middle East to Europe is extremely expensive because it has to go through the Suez Canal so market proximity is very important. Finally, the ambient temperature increases relative thermal efficiency.

1:52:12 PM
MR. BUTT set forth that the development concept strengths underpin the project, but the strengths are offset by some significant development concept challenges. One challenge is having to build in the harsh, tough environment on the North Slope. A tremendous amount of fuel and equipment will move in and out of that environment, and it has to be moved on water, which creates another risk. Another challenge will be to manage

uncertainty and cost while securing the required permits. He recapped that spending to date is about $100 million, and about another $500 million has been committed. This is $600 million Pre-FEED. He noted that a quote to the governor in a 2012 letter was that a number of parties had invested somewhere on the order of $700 million prior to that, so the real number prior to getting to FEED is $1.3 billion so the spending will probably be north of $2.5 billion the final investment decision in Alaska. He emphasized that this is a tremendous investment risk so it's important to get things right from the onset.

He also stressed the importance of addressing commercial and fiscal uncertainties. He said LNG is a tough business and buyers all want to pay as little as possible. It is therefore important to think as an owner and work to develop a predictable and durable fiscal environment.

1:54:20 PM
MR. BUTT advised that there are some issues in the process design and execution of an 800 mile pipeline across three different terrains. The pipeline and treatment facilities will require 2.2 tons of steel so putting all the pieces together is a challenge. "They don't come together like a kit; you've got to weld all the pipe together, you've got to bolt all the flanges together, you've got to make sure that they all come together just right." He explained that the underpinning challenge is to ensure that once the project is built that the cost of supply is globally competitive. "We've got to be able to deliver LNG from Alaska at a price that can compete with anybody in the world."

MR. BUTT offered his perspective that the strengths give the project "a really good shot" which is why the owners elected to increase the investment in the project and move the concept into Pre-FEED. Moving forward, the talk will center on feelings about FEED, global competitiveness, cost of supply, and alignment among owners.

1:56:00 PM
He explained the [page 7] LNG plant and storage facility, which will be built by 3,500-5,000 people, is modularized and will have a 20 metric ton capacity. This translates to about 2.4 billion cubic feet of gas a day or 10 times the amount currently used for export and domestic use by Alaskans. He highlighted that the 35 trillion cubic feet at the top of the system can supply the needs for decades to come and that this is underpinned by DeGolyer & MacNaughton. He reminded the members that gas is liquefied

“to make it small” and thus easier to transport. The ratio is 600 to 1. “If you don't liquefy the gas, you have to move 600 boats to get a certain amount of gas to a buyer. If you liquefy the gas, you only have to move one [boat] and that's why we build these facilities.”

1:58:10 PM
MR. BUTT explained the two berth LNG Marine Facility (LNGMF) [page 8] accommodates LNG motor vessels (LNGMV) that are very different from crude oil carriers. He outlined the following:

- An LNGMV is a 300 foot "thermos bottle," built with a lot of good technology and capacity.
- The walls are 4 feet thick of foam, balsa wood and insulating materials.
- The idea is to keep the LNG in the tank cold.
- The Alaska LNG Project needs 15 to 18 LNGMVs.
- The Alaska LNG Project believes that the LNGMVs will be in the 160,000 cubic meter range.
- A 160,000 cubic meter LNGMV is called a conventional

He noted that the 160,000 cubic meter LNGMV is called a conventional LNG carrier with a capacity ranging in size from 80,000 to 265,000 cubic meters. He specified that the very large 265,000 cubic meter carriers are for places in the Middle East where huge volumes are going long distances. He explained that when one designs LNG carriers in marine routing, what is actually being done is inventory management. He detailed that the objective in managing inventory is keeping the amount of inventory down. Inventory does not make money and using the giant LNG carriers places large amounts of LNG in inventory until delivery. He explained that inventory management entails a balancing of cost between carrying LNG as inventory versus the cost of delivering the LNG. He pointed out that Alaska is very close to market and there is no need to build the large, limited-market LNG carriers. He asserted that the Alaska LNG Project needs more conventional, smaller vessels because the distances are much smaller. He explained that the "conventional" 160,000 cubic meter LNG carrier is considered a sweet-spot that allows for a larger range of ports of call.

He reviewed the following support required for the LNGMVs:

- Tug boats will be required to manage the LNGMVs.
- Work has been done on how LNGMVs will be handled in the East Cook Inlet.

- Ice modeling has been done by the Alaska LNG Project marine team in Gothenburg, Sweden, which has the world's most advanced ice modeling vessel systems.
- Work has been done with the Alaskan Pilots Association to make sure they can move the LNGMVs using Alaskan pilot characteristics and successfully navigate in a range of ice, current, and wind conditions.

MR. BUTT advised that LNGMVs are subject to wind due to a shallow, forty foot draft versus crude carriers with a 90 to 95 foot draft. The port requirements are also very different. He explained that testing and modeling has shown that the east coast of Cook Inlet can work having had 40 years of success with LNG. This LNG plant has successfully delivered every scheduled LNG cargo load, which is a very important data point. Additionally, the flat land in East Cook Inlet will make land support less expensive. Finally, the 90-inch average annual snow load in East Cook Inlet is much lower than the averages in other parts of Alaska, some of which exceed 300 inches. “Operating an LNG plant is demanding on a daily basis and almost impossible to operate in heavy snow conditions.”

He said the Alaska LNG Project is still working with the local community to make the lead site happen. He noted that two or three alternate sites have also been identified in the event the lead site does not work. He remarked that the Alaska LNG Project feels good about moving forward with its design work if the site requires a little moving around. He explained that the NEPA process is the trigger on site adjustments. He reminded the members that this is the process that brings in the federal regulator and increases community engagement. He asserted that the Alaska LNG Project feels good about where it is in the site process and is moving forward.

MR. BUTT explained that the 800 mile pipe will be 42 inches in diameter and carry an average of 3.3 billion cubic feet per day (BCFD) [page 9]. He said the reason for a 3.7 BCFD permit application is to cover Alaska's added cold day demands during the winter. He specified that the Alaska LNG Project design allows for 400 to 450 million cubic feet of added gas for Alaskans when it is cold.

Additional pipeline details include that it will be built between Point Thomson and the North Slope Gas Treatment Plant (GTP), 8 compressor stations will be required and the pipeline will have the capacity to heat the gas during freezing

temperatures. He summarized that a lot of work centers on cost, schedules, and supporting the federal regulatory work.

2:04:54 PM
MR. BUTT reiterated that the purpose of the Gas Treatment Plant (GTP) [page 10] is to remove impurities. He explained that all non-hydrocarbons must be removed before the gas can enter the pipeline and Prudhoe Bay has a very high, 11 percent, CO_2 content. In the past two years, the Alaska LNG Project has focused on making the gas treatment plant more efficient and better able to remove impurities because industry has historically stayed away from large CO_2 resources due to expense. The effort has been focused on ways to reduce the plant size and making the trains more efficient. GTP vessels were made more efficient by changing interior packings and how the gas touches the liquids that remove the impurities. He noted that the vessel change has decreased cost estimates by hundreds of millions of dollars. He pointed out that GTP reactor-tower is 128 feet tall and the thickness is 12 to 14 inches thick. He added that the reactor-tower will be fabricated from a 12 to 14 inch thick piece of steel that is 30 feet by 128 feet. He explained that the piece of steel will be folded to make a vessel that is basically a tube with a shell at the top and bottom to handle the pressures.

MR. BUTT reported that the Alaska LNG Project has done a lot of work with the PBU-interface focusing on power systems and the CO_2 systems integration. He related that the Prudhoe Bay operator has done a great job of trying to understand how to take the gas out and move it so that the gas can be produced in a manner that does not compromise oil.

2:08:03 PM
He explained that interface work will be staged during turnarounds to avoid adversely impacting Prudhoe Bay productivity. He detailed that over the next five years, compressors will be modified during maintenance to move gas from Prudhoe Bay to the project at the right pressure and the right temperature.

MR. BUTT informed the members that the Point Thomson (PT) operator and the PT working interest owners have invested in excess of $2 billion building the PTU central pad and ensuring readiness to export condensate in early 2016. He pointed out that PTU is a $2 billion facility that will require more than $1.5 billion to finish the wells and compression. He revealed that when the current PT team is finished with the initial

production system, the project team will work with the PT operator to expand the facilities to provide gas exportation capabilities. He noted that the current facilities at PT can only export oil so a gas pipeline and compression facility is needed to move gas. The Alaska LNG Project has been working with the PT operator and the PT working interest owners in an integrated manner so that PT accommodates the design characteristics of the plant. He pointed out the importance in maintaining gas temperature delivery parameters for better recovery across the system. He summarized that the project design decisions are predicated on looking on an integrated basis and trying to make sure that any design honors the principles of alignment, risk, and cost. "Molecules are moved all over the system and the Alaska LNG Project wants to understand what happens to the molecules."

2:11:10 PM
He related that the Alaska LNG Project team consists of 27 leadership roles with over 800 combined years of experience and, on average, over 30 years of experience individually. He noted that the phrase best-players-play was used to describe the way the project team was assembled. The Joint Venture Agreement (JVA) calls for each company to select people with the experience necessary to do all of the work and be successful. For example the Alaska LNG Project plant manager built the Qatargas (3) trains and his engineering manager built the RL (2) trains, the RL (3) trains, the Qatargas (2) trains, the PNG (2) trains, and personally designed multiple LNG plants. This very competent manager and his team provide a lot of confidence that the LNG plant will be designed right. He asserted that this same level of capability was found in every one of the Alaska LNG Project teams. He pointed out that most individuals have global experience and many are Alaska alumni.

2:13:51 PM
He detailed that the Alaska LNG Project teams are co-located, which means workers are placed where the contractors and work is. He said the Alaska LNG Project has doubled its office space in Anchorage with 30 individuals, and it has a new building in Houston where all the parties can get together and work in a single project office. The Houston office accommodates work on really difficult problems in real-time. He noted that the Alaska LNG Project also has an office in Calgary. Jack Beattie runs that office this is where all of the pipeline people are located. He pointed out that taking work to the people is important due to the many contractors involved in the project. He related that each team is purposefully integrated with people

from every company to ensure that all views and design philosophies are represented. He noted that the Alaska LNG Project is nearly finished with hiring and the current focus is on contracting.

MR. BUTT reported that the LNG export application was submitted to the Department of Energy (DOE) on July 16, 2014, with key requests [page 14]. He explained that this is important because it underpins the economy of scale that drives down costs. For this reason, they have worked very hard with DOE over the last 9 to 12 months so all the parties understand and agree what is needed to make the project successful. "I got this 200-plus page book [of] the fundamental characteristics that the DOE wants to understand." DOE wants to understand is does the project represent the owners of the gas?" DOE wants to know if the applicant has the experience to build and execute a project like this and if the experience of the team and the resources are sufficient to build it.

He advised that the DOE just changed the rules for an export permit application so that applicants are now required to get the EIS and show that they are working with the FERS before submitting their application. The idea is to weed out the speculators. He related that the DOE Secretary Moniz and his team has been very helpful.

2:18:39 PM
MR. BUTT related that the Alaska LNG Project has asked for some very unique permit applications. First, have asked for the right to export 20 million tons per year (MTA) of LNG for 30 years. Most export applications are for 15 to 20 years and they asked for 30 years to have confidence that longer exports would generate the kind of returns to underpin the investment. He pointed out that it gets back to mitigating risk and cost. The federal government has been incredibly supportive and said the Alaska challenges are great enough and the project is important enough that they would handle it a little bit differently.

MR. BUTT related that the project also asked for a 12 year period between receipt of the permit and commencement of operations, rather that the regular, short construction cycle of 7 to 10 years. This provides more flexibility which is risk mitigation. "The federal government has been very supportive of this"

He said the third and most important difference between Alaska projects and others is confirmation of a 1988 Presidential

Finding that characterized Alaskan gas as stranded and available for export. They are waiting for confirmation that this finding is valid, but both DOE and the administration have been very supportive. In fact, the president's energy advisor characterized the administration's support for the project as enthusiastic. “So we're pushing these three issues and we think that that gives us the right to export the gas.”

He stated that one other thing that DOE has offered to the project is a conditional approval before the FEED decision is made. This was requested because the costs are so great and DOE agreed. “We felt that was very supportive and to date we've had a good relationship with them and we're very hopeful that we can continue to preserve that goodwill.”

2:22:17 PM
MR. BUTT discussed the NEPA Pre-File request that was approved by FERC September 12, 2014, noting that it triggers ongoing community consultation and near term activities. He noted that this first step in getting the EIS went smoothly because of the work that was already done with the FERC and NEPA.

> We really appreciate that they have been proactive and helpful in guiding us to make sure that we get the right EIS because that is the most important document required to get the permits to construct and they have been very helpful on it, trying to help us make sure we get the right third party agent, making sure we get the right stakeholders and interested parties engaged so that we start doing what's called Resource Reports.

He explained that these reports summarize the work that’s been done to demonstrate that there will be no adverse impact on cultural resources, soils, land use, air and noise quality as well as how that particular site compares to all the others sites. “Which means you have to have looked at all others.” This reduces risk moving toward the EIS and then the final report is due during FEED. “[This] is an even more detailed process to make sure that the risks of securing these documents has been mitigated.” Mr. Butt then recapped that FERC coordinates federal oversight and the interactions with all federal agencies. He cited the U.S. Army Corps of Engineers as an example.

2:25:10 PM
MR BUTT reported that the Alaska LNG Project has worked extensively with the Alaska Gasline Development Corporation (AGDC) to ensure there is alignment with the Alaska Stand Alone

Pipeline (ASAP). The effort is focused on using a common and making sure that when one project gathers data it's available to the other project. “We all understand that there's two pipelines in the same corridor.” He continued to say the following:

> We are eminently trading data between Livengood and Prudhoe Bay which some of the parties own through Trans Alaska Pipeline System (TAPS), Alaska Pipeline Project (APP), and the Alaska Gas Pipeline (Denali) with other parties who need that data for their design work. ASAP in turn is providing data south of Livengood that they have worked over the last three years so that as we look at the route south of Livengood, we're only working on the data once.

MR. BUTT said they worked to have the right framework and the right confidentiality agreements in place and he would suggest it's important to put that statement in a competitive context. “We want to be able to manage the work so that we share it with the state and the state's agencies, but we don't share it too broadly.” He agreed with Commissioner Balash that the idea is to be as transparent as possible, while understanding the importance of confidentiality. This is how risk is managed and costs driven down.

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2:27:42 PM

MR. BUTT reviewed the summer field season [page 16]. He advised that the route between Livengood and Wasilla was surveyed. He directed attention to a list of the fieldwork that was accomplished, including the approximately 10,000 acres that were tested looking for remnants of early human activity. He noted that most of the anthropological models suggest that early humans came across the Bering Strait and across this route to populate North America. He explained the measured process when the archeologists find something of interest and the steps that are taken to ensure that the route goes nowhere near anything of significance. The intent is to catalog and preserve sites that are of cultural significance and demonstrate in the EIS that cultural resources or any of the other things listed in the resource reports are not impacted. “You can see a list of all the sites that we've worked and all of the different waterways and lakes and streams.”

2:30:45 PM

MR. BUTT discussed the importance of field crew safety [page 17]. He stated that the project is proud of its safety performance and the cultural caring that the team has built. He

noted that the team has worked in excess of 140,000 hours and driven 300,000 miles, always with an eye on safe execution. He highlighted that these crews receive extensive survival and learn-to-return training because they travel to and work in very remote areas, sometimes under harsh weather conditions. He related that another thing that was done this year is something called "escalation potential." It's a different way of looking at safety. The idea is to look not only at what did happen but what could have happened. He cited the example of finding a helicopter with a bad tail bushing after careful hazard hunts and maintenance procedures and fixing the problem before it was put back in service. He continued to explain that the project has begun to hold "Safety Stand Ups" as a way of recognizing safe performance. This is opposed to the "Safety Stand Downs" that take place after someone is hurt and work stops so the incident can be discussed. Safety Stand Ups are a more positive approach and build a cultural framework of safety.

MR. BUTTS displayed the list [page 18] of Alaskan business that are involved in the Alaska LNG Project. He noted that the spending to date is close to $35 million and will probably rise to $40 million by the end of the season. Work is expected to continue until October because it is concentrated farther south. He noted that the total contractor workforce is 255 about 80 percent of which are Alaskans. Mr. Butt displayed photos of various workers from the summer field season and noted that safety coins are presented to individuals executing work to encourage and promote a positive work environment.

He provided an overview of the Alaska LNG Project's website, explaining that the website's important characteristics include the following:

- Allows people to talk directly to the Alaska LNG Project.
- Provides access for contractors interested in work.
- Provides contractors the ability to submit their capabilities.
- Includes a community session calendar.
- Summarizes the various projects.

MR. BUTT stated that the Alaska LNG Project is at a critical juncture and continuing a successful trajectory will make alignment perseverance with all the owners more important. He remarked that risks and costs must be driven out. He concluded the presentation an alignment metaphor where people are pushing and pulling a whipsaw as a team, working under harsh conditions

and with great challenges. It takes the same type of commitment to work together as a team to build a pipeline.

2:36:25 PM
CHAIR GIESSEL opened the forum to questions.

SENATOR BISHOP asked about using X80 pipe and if there are any mills in North America that can roll it.

MR. BUTT answered that there are several mills with X80 pipe. He noted that Jack Beattie's team is looking at possibly using X70 pipe during the Pre-FEED stage.

He explained that X80 refers to a wall thickness of eight tenths of an inch, (0.814). He stated that the Alaska LNG Project is looking at a wall thickness that makes the most sense on an 800 mile pipeline built 40 feet at a time. He noted that one option is to make the pipe wall thickness a little different and that makes a huge difference. He noted that where the pipe is purchased determines the pipe quality, cost, and difficulty in moving. He said the Alaska LNG Project is working hard during the Pre-FEED process on pipe sourcing with the right specifications. He detailed the specifications as follows:

> To operate at about 2075 pounds per square inch (PSI), which is called American National Standards Institute (ANSI) 900 spec, the reason that's important is ANSI-900 is a very common pipe spec, there's a lot of different flanges and different valves and equipment that is readily available. If you go to a higher pressure, it's a much more specialized piece of equipment, it requires much heavier walls, it's much more complex, and even if you can manage the cost elements you increase the risk.

SENATOR DYSON asked if they anticipate that CO_2 from the GTP will have a monetary value in utilized reservoir pressure lifting heavy oil.

2:39:14 PM
MR. BUTT answered that enhanced oil recovery benefits from CO_2 reinjection will not be seen in Prudhoe Bay. There will be pressure benefits, but oil viscosity will not be reduced.

2:40:37 PM
SENATOR DYSON asked if there are existing wells that can be modified for reinjection.

MR. BUTT answered correct. He explained that Prudhoe Bay has used what's called the Miscible Injection System (MIS) for the past 25 plus years to handle the higher end products called lighter hydrocarbon products (LHP); they cannot be put into the Trans-Alaska Pipeline System (TAPS).

REPRESENTATIVE P. WILSON noted the need to maintain gas temperatures in the pipeline and asked if they have taken the impact from climate change into consideration.

2:42:05 PM
MR. BUTT answered that ambient temperature models indicate that climate change is very slow. He explained that the intention is not to contribute or adversely impact climate change. He noted that another reason for CO_2 reinjection is not to release the gas into the atmosphere.

2:43:29 PM
CO-CHAIR SADDLER expressed appreciation for the presentation and remarked that he is glad to see a lot of work is being done. He asked Mr. Butt how he would address advocates who ask to stop wasting time with studying and start building the project.

MR. BUTT said he understands and respects the sense of impatience and skepticism and he understands the desire of the folks in Fairbanks to see affordable energy. However, the federal government has specific construction regulations for when a project can begin. He emphasized that any sort of construction activity prior to receiving the right permits is illegal, and that the Alaska LNG Project was going through the required process to generate successful export and EIS applications. He reiterated his previous statements about making sure that every archaeological site is found and not adversely impacted and asserted that doing things right has to be respected, too.

2:45:54 PM
CO-CHAIR SADDLER noted that skeptics have said that the Alaska LNG Project is moot if the Alaska Oil and Gas Conservation Commission (AOGCC) does not give off-take permission.

2:46:10 PM
MR. BUTT answered that the Alaska LNG Project has had some good meetings with AOGCC. He explained that AOGCC has a mandate to understand how the state's oil recovery will be maximized. He noted that AOGCC works on behalf of the Legislature. He said the

Alaska LNG Project has tried to make AOGCC understand why the project, design, and offtakes make sense. He added that the Alaska LNG Project will be working with AOGCC's senior staff over the next several months to address their technical questions; the Prudhoe Bay operator and the Point Thomson operator are leading that work because they own the upstream data and they have relationships with AOGCC. He said the Alaska LNG Project hopes in the first half of 2015 to be able to have the right hearings with the commissioners to address their concerns and demonstrate why producing 30 to 35 trillion cubic feet of gas over the life of the project makes sense and why the Alaska LNG Project can do it in the right way to minimize any adverse impacts on hydrocarbon recovery.

REPRESENTATIVE TARR asked Mr. Butt to address the Pt. Thomson development. She inquired what part of the remaining work will be paid by the Alaska LNG Project versus the operator.

MR. BUTT advised that all work at Pt. Thomson is paid for by the Pt. Thomson working interest owners. He explained that Pt. Thomson is a unit operation and everything that Pt. Thomson does to deliver gas to the Alaska LNG Project is through the Pt. Thomson working interest owners. He added that the Prudhoe Bay CO_2 system will be done by the Prudhoe Bay operator and paid for through the unit. He said the Alaska LNG Project design work is done in conjunction so that it works in an integrated and seamless manner because the working interest owners at Prudhoe Bay and Pt. Thomson are in the Alaska LNG Project. He continued to explain the work being done at Pt. Thomson operations as follows:

> The work that the current Pt. Thomson team is doing to move condensate to the Badami oil field has been designed with the expectation that, at some time in the future, gas export will begin. They have built the system large enough that in the event they begin to produce more condensate, the pipeline they have built is properly sized. The wells they are drilling are properly positioned and designed for both condensate production and gas production. What's missing is a couple extra wells to increase gas production and the compression facilities to move the gas and a pipeline to move the gas from Pt. Thomson. So everything the Pt. Thomson working interest owners are doing through the unit operator, right now, will be used in the event the Alaska LNG Project goes forward.

REPRESENTATIVE TARR asked if the Alaska LNG Project will bear the pipeline cost from Pt. Thomson to Prudhoe Bay.

MR. BUTT answered yes.

2:50:22 PM
REPRESENTATIVE KAWASAKI asked if information that was developed under the Denali Line, TC, and AGDC is being shared so that the work isn't redundant.

MR. BUTT answered yes. He then directed attention to page 15 shows data exists from the previous TAPS, APP, Denali and ASAP pipeline projects and the framework that's been developed for sharing data and coordinating work efforts going forward.

CO-CHAIR FEIGE addressed pipe thickness and noted that Mr. Butt talked about using different schedule pipe. He asked if the Alaska LNG Project was looking at different pipe thicknesses at different points in the line, depending on pressures in the pipe.

MR. BUTT deferred the question to Jack Beattie.

2:53:27 PM
JACK BEATTIE, Pipeline Manager, Alaska LNG Project, Anchorage, Alaska, explained that pipeline thickness is generally the same except in areas with population density, at valve stations and at compressor stations.

MR. BUTT added that the intent is to always keep the gas temperature and pressure relatively constant.

CO-CHAIR FEIGE noted that future pipeline expansion has always been one of the state's long term interest in the project. He asked if going to Schedule-70 pipe will affect the ability for pipeline expansion.

MR. BEATTIE replied that pipeline expansion is in the project's long term interest as well. He explained that he did not know that the schedule of pipe would particularly affect expanding the pipeline. He pointed out that going with 42 inch pipe makes it more likely to obtain pipe in North America.

MR. BUTT added that the system has been very carefully designed and balanced with expansion firmly in mind. He asserted that the Alaska LNG Project understands the importance of expansion to the owners as follows:

I'm going to come back to owners, alignment, cost, and risk. We understand owner issues around expansion. The Heads of Agreement (HOA) that was signed in December has some very good language in there on expansion and how each owner, individually, has the right to manage expansion as long as it doesn't adversely impact other owners; that's a very important characteristic of a successful agreement where we have preserved alignment to honor owner issues and mitigate risk and mitigate cost. The current design is pretty well balanced there because if I could suggest, on average, we handle about 3.3 BCF at the top, through 3 gas treatment plants, we put about 3 BCF into the pipeline to deliver about 2.4 BCF to the LNG plant, where 3 LNG-trains process it. The pipeline as its design with 8 compression stations can be expanded 20 to 30 percent, which is somewhere between 800 million and 1 BCF which is very nicely one more (GDTP) and one more LNG-train. So as it stands, it's designed with that in mind, and with all due respect, it's not an accident.

2:56:46 PM
REPRESENTATIVE HAWKER stated that he looks forward to the project actually reaching the anticipated FEED decision. He asked what the major obstacles are for the Alaska LNG Project in reaching the FEED decision. He asked what the legislators should be mindful of in order to anticipate and aid the project moving forward towards FEED.

MR. BUTT replied that he worries about the inherent skepticism amongst all the parties on whether all the parties are willing to do the work and pull the "whipsaw" when it is their turn. He asserted that legislators in both the Senate and House Resource Committees are the "pointy end of the spear" on how the state ownership is worked. He said there are some things that the legislators can do to help in terms of addressing commercial and fiscal uncertainty as follows:

I know that sometimes when we talk about fiscal and commercial uncertainty it sounds like one party trying to get something out of the other party, I would respectively suggest that is not the case at all. I would suggest that all of the owners need some durable and predictable terms so that when they talk to their constituents or their stakeholders or whatever they are accountable to, they understand that if they

invest the type of resources required to execute a project of this magnitude, it will generate the kind of benefits that will really help them in their future.

Now I see Enalytica behind us and I know that publically in previous hearings they suggested this project can generate $3 billion to $4 billion per year for the state, it generates some real benefits for the other parties as well. I hope that what we can do as owners is preserve alignment so that we can create an environment where all the owners can reduce risk and reduce cost and create a successful project.

If we get into situations where we have unilateral behaviors or drivers and we can't find common ground; that creates huge risk that ripples through the buyers and the investors, because the buyers and investors are looking very closely at the Alaska LNG Project. The buyers saw what happened with the DOE export permit application, they saw the ALASKA LNG PROJECT get posted in a very timely manner, they saw Secretary Moniz make very favorable comments, they saw the EIS be accepted, the NEPA pre-file and the FERC agencies, they saw that and that says to the buyers, 'This is a place where maybe I can underpin my economy in the future. Do I have enough certainty that that environment is durable and predictable, that I'm going to put my economy at risk and buy LNG from them?' If I'm an investor, am I going to take the kind of money required to invest my share of a $45 billion to $65 billion project and have confidence in the long haul?

The esteemed group here is probably the most important group of all in creating that right framework so that all of the owners can work together and create that right alignment and there's lots of specific ways, Commissioner Balash is probably going to talk about some in his presentation up next.

REPRESENTATIVE HAWKER replied as follows:

I heard some pretty strong words there, but one of the words used there was 'unilateralism.' What I really hear is the need for all of the players to continue to work together towards a common goal, a common good to achieve the desired common outcome, it's fairly

simple, but it's a big deal. You have put together big projects in your life, some at this table put together big industrial projects; we understand that. I've also sat on this side of this table since 2003 in at least one committee or another. I've watched not just you the commercial parties having unilateral self-interest issues, but also the State of Alaska. We've kind of had, in my view, kind of had a habit of about every two to four years changing horses and changing directions. I worry personally about the political risk of the state one more time trying to change directions again and basically changing our own philosophy and saying we want to a bigger piece of this pie, we want more unilateral control over the outcomes. I am just wondering, what have you as the commercial parties involved done to insulate yourself from the possibility that the state steps up again where one more time there's different people sitting in these tables and in fact there is a significant change in the political environment in which you are working? Frankly, in my opinion, our common objective is gas to Alaskans, gas to the world, and political change is inevitable. What are you all doing as business people in this to mitigate that risk?

MR. BUTT answered as follows:

If I chose words that were too strong, that wasn't my intent. I wasn't pointing the finger at any one party when I said that. All these parties as owners have concerns and issues that are unique to them and the challenges to find ways for them to be aligned. The question that I think hear is 'What are the producer entities doing in the event the state entity somehow changes tact and that the alignment that is inscribed in the Heads of Agreement and very carefully defined in the joint venture agreement is somehow compromised?'

REPRESENTATIVE HAWKER replied that Mr. Butt's assessment was a very fair characterization of his question.

MR. BUTT replied as follows:

In that event, the answer is that the gated process is designed to incrementally increase resource investment into the project as certainty is built. One of those

fundamental certainties is understanding that the state party, as both a regulator and as an owner, is ready to move forward, and that this project is so big and so complex that without the state in lock-step, it's going to be very difficult to move from Pre-FEED to FEED. We'll have done a lot of great work and we'll have moved this project to a place where it has never been before, but we will end up in the same place where it has been before which is stopped. I hope that doesn't happen, I lose a lot of sleep on that one. I think with the folks at this table, we have a chance to try and talk about ways to make the project work for all the parties in a way that makes sense for all of the parties and finding that solution-space where we have an aligned structure that reduces risk and drives down cost.

3:04:28 PM
SENATOR MICCICHE asked Mr. Butt to talk about the total acreage footprint of the proposed facility in his district, the operating versus buffer acreage, the status for acquiring land, and the probability for an eminent domain situation.

3:05:26 PM
MR. BUTT answered that the LNG plant needs somewhere between 400 and 600 acres. The LNG-trains are very efficient and will take up no more than 40 acres, but the storage tanks will take a more space to contain potentially spilled liquid until it returns to a vapor state. Also, 80 to 120 acres will be required for berthing and storage, in addition to room for utilities, warehouses, and offices. He said they want to be a good neighbor and have durable and fair terms with adjacent landowners and a large enough footprint to provide a buffer and be able to operate for 30 to 50 years.

He noted that under the FERC process, the Alaska LNG Project has sent out letters to everybody that might be near the LNG plant. Furthermore, NEPA requires the project to engage every landowner within approximately a half mile from any possible plant site. He said people are part of the stakeholder and community engagement processes.

3:08:16 PM
MR. BUTT stated that the Alaska LNG Project hopes not to use eminent domain, but rather to come up with a fair and durable deal with landowners. "Having to move a little will be another part of the puzzle."

SENATOR MICCICHE stated that his community is thrilled about the potential for the project to be located in the district. He asked Mr. Butt to address the EIS and concerns about the impact from thousands of workers during the construction phase.

MR. BUTT answered that the underpinning of the NEPA process in FERC's engagement is community engagement, making sure that anybody that has any concerns in the community is heard, recognized, and addressed. He asserted that the Alaska LNG Project manages camps and environments so that workers are moved in and out to limit adverse impact on the community. He explained that the work camps are designed in the Pre-FEED and perfected in the FEED to make sure local communities are not adversely impacted. He said as part of the FERC review process, the Alaska LNG Project will share the work camp plans with a local community so that it is comfortable with the plans and concerns are incorporated. He noted that the Alaska LNG Project has an office in Kenai where folks can come in and talk if they have issues. He added that an open house is scheduled for October 9 in Kenai to answer questions.

MR. BUTT stated that one ongoing is to make sure the Alaska LNG Project honors transparency and individual information as much as possible. He noted that people have asked why public information is not posted about how much the Alaska LNG Project has paid for every piece of land that is purchased. This information isn't posted to protect the privacy of individuals that sold the land. Transparency is important but the project guidelines dictate two things: 1. all agreements with landowners have to be fair and durable, 2. the Alaska LNG Project will not talk about other people's land with anybody else. He reiterated that the intent is to be a good neighbor.

3:12:44 PM
REPRESENTATIVE JOHNSON noted the upcoming election and that the composition of the Legislature and these committees might be very different in January. He asked Mr. Butt if he has confidence in AGDC's independence, durability, and its ability to function if one of the partners philosophically changed direction. He noted his concern about alignment and asked what would happen if the four producers and TransCanada were without a partner.

MR. BUTT replied that, to date, AGDC has been an excellent participant in the project. It was a signatory to the JVA and helped structure the HOA, both of which framed the path forward.

If the forward path changes all of the parties are going to have to reexamine it, but the key characteristic is to make sure the HOA and JVA are honored. He continued to say that understands the nature of the political process, but believes that the benefits of the project are great enough and the will of Alaskans strong enough to move the project forward.

REPRESENTATIVE JOHNSON asked if a partner changing direction would adversely affect or jeopardize the project.

MR. BUTT replied that he is carefully avoiding words like "adverse impact" and hesitates to speculate. He continued as follows:

> As long as we act like owners and we preserve the alignment and we look to the HOA and the JVA for the structure to move the path forward, we'll be okay. If we somehow had any party moving away from that, it's going to be a problem for all of the parties.

REPRESENTATIVE JOHNSON commented that maybe the question was the answer.

3:16:07 PM
REPRESENTATIVE SEATON noted the September 25 article in the Wall Street Journal about Australia potentially reserving up to 15 percent of its domestic gas because exporting LNG export would potentially triple the prices for domestic users. He said he was trying to figure out how the project was balancing local costs in Alaska and if they'd be handled by AGDC.

MR. BUTT answered that DNR and DOR are working under the framework of SB 138 to understand the implications on domestic gas. He continued as follows:

> To the broader kind of economic framework of alternative value, which is, 'Do I sell this gas here, or do I sell this gas there?' That is something that you have to get the owners to look at in an aligned manner and make sure that you understand how you reduce the project risk and reduce the project cost so that you are moving as much gas as you can to export buyers, which creates the economy of scale to service Alaskan buyers and then test what is that value. Now, there is a lot of different philosophies on how to do that and there are different ways to look it, but I think it's going to be a critical test of the owners'

ability to come up with an aligned solution that works for everybody, and with that said, there is no answer right now. I kind of feel like I'm evading your question, because there really isn't an answer yet; but that's something maybe we can owe you an answer on either through the executive sessions that Commissioner Balash referenced or through some kind of future public session because you probably are going to want to work that hard in executive session to test it from a lot of different angles and then frame it the right way that it can be communicated in a broader, transparent way at the right time.

REPRESENTATIVE SEATON replied that he was specifically asking the question to make sure that the public understands that that is being analyzed or will be analyzed by the Alaska LNG Project and it's not being ignored.

MR. BUTT agreed that in-state pricing was one of the top issues that the Alaska LNG Project teams were looking at right now, but that all of the owners were not necessarily aligned in this area.

3:21:34 PM
SENATOR BISHOP asked about the working relationship between the project and the regional Native corporations and local village councils along the route.

MR. BUTT replied that to date, the Alaska LNG Project has had over 50 community engagement meetings and discussions with many but not all Native communities, both on and off the route. He noted that there is a plan in FERC to make sure the Alaska LNG Project speaks to every Native Alaskan community that expresses any interest. He maintained that meeting with interested Alaskan communities was part of the process to make sure the Alaska LNG Project speaks with everyone. To date, the engagements with Alaska Native communities has been very positive. They realize that a $45 billion to $65 billion investment in the state has some potential benefits for everyone. He noted that a lot of Native communities have the opportunity to benefit from working on the project and understand the energy benefits for heating homes by moving gas from north to south or by moving LNG through port receivers.

3:23:52 PM
REPRESENTATIVE TARR addressed workforce readiness and noted that Mr. Butt mentioned where the Alaska LNG Project's 27 member

leadership team came from. She asked about the near term need for workforce readiness for individuals that will hopefully work on the project.

MR. BUTT replied that one of the Pre-FEED studies is a labor study to address the following project workforce questions:

- How do you get all of the folks?
- How do you get all of the right skills?
- How do you balance the skills that Alaskan residents have versus those skills that you have to bring in from elsewhere?

He advised that there would be a significant need for folks who can do specialty work on pipeline welding machines, but that wouldn't last very long so it wasn't a good place to build local skills. He said the Alaska LNG Project has a process to look at labor availability and local skill sets. He revealed that the Alaska LNG Project has had many meetings with Alaska training facilities and knows that a significant investment must be made in the facilities to start building capability. He stated that workforce readiness was referenced in the HOA. He explained that coming out of Pre-FEED was the place where workforce skill development was identified. He set forth that the Alaska LNG Project knows a lot of people will be needed. He said the Alaska LNG Project wants to get the long term benefit by getting the right people in the right place. He pointed out that the obvious difference was operators and noted that all of the operators would come from Alaska. He stated that the tougher workforce hiring challenges related to drivers hauling pipe, heavy excavation, and activities where skills are not very transferrable. He acknowledged that balancing the workforce would take a lot more study than was currently not done.

3:26:09 PM
REPRESENTATIVE P. WILSON asked if the project changes the route when it coming across a cultural heritage site.

MR. BUTT replied that they have only found a couple of places that required major reroutes. He explained that the sites that are found are very exciting and the Alaska LNG Project makes sure to work with the State Historical Preservation Office (AHPO) on preservation. He noted that moving the pipeline earlier in the process is a lot easier than moving it later on.

CHAIR GIESSEL thanked Mr. Butt and noted that his presentation was robust. She announced that the third agenda item would be to

hear from Commissioner Balash and Commissioner Rodell on the progress of the project from the state's prospective. She noted that 61 viewers were watching the meeting on AK Legislative TV.

Progress from the State's Perspective - Commissioner Balash & Commissioner Rodell

COMMISSIONER JOE BALASH explained that he wanted Mr. Butt to lead the overview to address the meat-of-the-project and provide specific information. He remarked that his overview would address the following:

- The human resources being devoted by the other project sponsors towards the effort.
- Employee hires and expertise added to the project.
- Project progress to date.
- The provision required by SB 138.
- Touch base on things that were suggested, added, or strongly hinted at.

He provided a brief summary of the Alaska LNG Project as follows:

- Heads of Agreement (HOA) signed in January, 2014.
  -The HOA outlines a roadmap for the parties.
- SB 138 passed and signed by the Governor on May 8, 2014.
- Terms were reached in a bilateral fashion with TransCanada in June, 2014.
  -Agreement terminated the Alaska Gasline Inducement Act (AGIA) license.
  -Demonstrated the parties' ability to get things done in a rapid fashion when motivated.
- Joint Venture Agreement (JVA) was executed the end of June, 2014.
- DOE Export License application was filed in July, 2014.
- Pre-file paperwork was filed in early September.

3:32:05 PM
COMMISSIONER BALASH continued that between the accomplishments previously noted, the Department of Natural Resources (DNR) has focused on developing the confidentiality agreements (CA) necessary for the state to be treated as an equal partner in the Alaska LNG Project. He continued to explain the CA process as follows:

> For the past 40 some odd years, the state's relationship with the leasees has engendered some adversarial moments. The sharing of information was not always in the interests of all parties to accommodate the state's curiosity or otherwise our interest, and that has required a change in the way we think about information moving back and forth between the other parties and the state. It took a fair bit of time this summer to work through how we handle that information so it's not just about getting a CA in place, but also dealing internally within state government on the handling of that information and creating firewalls between those people who will be making regulatory decisions and those who will be acting on and in the state's proprietary interests as owners and managers of the resource. We were able to complete all of that earlier this month and, as I mentioned at the beginning of this hearing, have now turned our attention to getting the legislative branch papered-up and look forward to completing that here.

COMMISSIONER BALASH noted that actions prior to the HOA were taken by the State of Alaska and Governor Parnell in particular to ensure proper communication with the other parties and partners in the project. He pointed out accomplishments made prior to 2014 as follows:

- January 2012 meeting with the three CEOs of ConocoPhillips, BP, and ExxonMobil.
  -Resolved Pt. Thomson litigation.
  -Moved the project forward with something that Alaskans could deal with.

He explained that the steps taken with the partners has been done carefully. He said all parties have grown much more comfortable with the process moving forward. He pointed out that progressing from Pre-FEED to FEED will be a step change in the state's commitment level. He said the state's all-in share for the Pre-FEED was $125 million and the next step into FEED in early 2016 would be 3 to 5 times greater. He pointed out that the state's commitment to FEED will be big and other agreements will be developed and folded in in the near term.

3:36:36 PM
COMMISSIONER BALASH stated that key personnel were recently hired to make sure the state's interests were protected and Alaska's resource values maximized. He noted that contributions

have been made by individuals from DNR, DOR, and the Department of Law. He said the previously noted agencies have continuously provided personnel and expertise that has provided a value to the process that the state was engaged in. He noted that the contractors Black & Veatch and Gaffney-Cline have assisted the state agencies. He added that the outside council, Greenberg-Traurig, has provided commercial expertise to the project. He asserted that he could not imagine accomplishing everything in front of the state's agencies without the broad and deep team that has been assembled.

He pointed out the following key personnel hires:

- Leslie "Fritz" Krusen.
  -SB 138 modified AGDC statutes and its board was empowered to hire an LNG project lead.
  -Reports to AGDC's president-CEO.
  -Starts in September 2014.
  -Has a tremendous background in LNG technology, construction, and operations.
  -AGDC is the state's lead for the liquefaction side of the project and the state will benefit from Mr. Krusen's expertise and knowledge.
  -Formally with ConocoPhillips.

- Steve Wright
  -Worked in Alaska with Chevron.
  -Focuses on the resource side of the project, the "Top of the project."
  -Knows the project's oil and gas fields.
  -Provides a tremendous benefit when addressing gas-balancing and off-take agreements.
  -Makes sure that the State of Alaska has the right kind of field information that will ultimately be used at AOGCC and for the Sales and Purchase Agreements (SPA) for the project's LNG.

He asserted that not having the right foundation up at the top causes other things to get a little bit slippery. He said Mr. Wright has been a fantastic addition to the team.

3:41:11 PM
COMMISSIONER BALASH continued to address personnel hires and noted an individual that focuses on the project's "midstream" planning as follows:

- Dave DeGruyter

-2014 hire for the State Pipeline Coordinator's Office.
-Tremendous breadth of experience in dealing with pipeline projects in other facilities.
-Recently helped complete the facilities for the Keystone XL Pipeline in the Gulf Region.
-Played a leadership role in pipeline construction in other parts of the Americas.

He remarked that Mr. DeGruyter's expertise will benefit the State of Alaska for examining costs that are going to be borne by the infrastructure owners. He pointed out that the infrastructure owners consist of the State of Alaska, represented by AGDC, and TC. He explained that the State of Alaska will pay TC back for the infrastructure costs over time. He said the State of Alaska needs someone with a watchful and experienced eye in the development stage who monitors the infrastructure expenses. Mr. DeGruyter provides information to make decisions to incur certain costs and pursue different design options.

He continued to address personnel hires and pointed out an individual who focuses on the project's "downstream" and marketing side as follows:

- Mr. Audie Setters
  -Formerly worked at Chevron.
  -Helped Chevron grow their LNG business over the past 10 years as one of the top 3 or 4 companies in the world.
  -Experience with assembling SPAs.
  -Has contacts in the LNG markets.
  -Knows what kind of data is required by LNG buyers.
  -Will help assist with maximizing the value for the LNG that gets sold in the marketplace.

3:44:55 PM

- Mr. Steve Swaffield
  -Formerly worked with BG Group-Canada in Vancouver.
  -Experience with LNG project development.
  -Provides an overall broad commercial prospective to make sure that all of the agreements fit together.
  -Will assist the Department of Revenue in keeping track of the state's value throughout the project.

3:46:03 PM

ANGELA RODELL, Commissioner, Alaska Department of Revenue (DOR), Juneau, Alaska, stated that SB 138 called upon DOR to do a couple of things in advance of the 2015 Session. She said SB 138

dictated that DOR work with the Municipal Advisory Gas Project Review Board (MAGPRB). She added that SB 138 dictated that DOR address the state's financing plan for the project.

She explained that SB 138 and an Administrative Order (AO) by Governor Parnell established MAGPRB. She noted that MAGPRB's board members have been appointed and the board has been meeting. She remarked that MAGPRB has provided a good avenue for a number of members to understand where the project is and to understand with the state will need in terms of framework for property tax. She revealed that MAGPRB will report their first recommendations by December 15.

She referenced Mr. Butt's comments on the Alaska LNG Project and the NEPA process and stated the following:

> One of the things we focused early on in this was giving an understanding of the work that Steve talked about in terms the NEPA process and the community outreach, because I think it was important that we not recreate that process but rather build on what was going to be learned and organize a property tax recommendation around all of that. So really focusing in on the fiscal needs as opposed to all of the community needs that might be generated as a result of this project.

She said the other big activity that DOR has started is the financing plan. She revealed that DOR is required in January 2015 to deliver the first step in a financing plan which goes to the details as follows:

- What type of credit the state can utilize.
- How the state can get communities, native corporations, and individuals to participate.
- Look at all of the state's financial resources and what the best avenues are for the state's participation.

3:48:37 PM
She advised that DOR hired Lazard as financial advisor consultants. She noted that First Southwest was also hired by DOR to abide by Independent Registered Municipal Advisor (IRMA) rules by the federal government. She said DOR has been working hand-in-hand with the Department of Natural Resources (DNR) to understand DOR's tax-as-gas responsibility.

3:49:14 PM

COMMISSIONER BALASH reviewed his recent travels to Asia in early September and detailed the following meetings in Japan:

- Japan's Ministry of Economy, Trade, and Industry (METI); signed a Memorandum of Cooperation (MOC).
- Japanese Bank for International Cooperation (JBIC).
- Japan Oil, Gas and Metals National Corporation (JOGMEC).

He noted that MOC was similar to a Memorandum of Understanding (MOU). He explained that a MOU was signed a year ago with JBIC. He pointed out that JBIC is the bank that has financed more LNG projects around the world than any other institution. He said JBIC gets involved in any project that somehow benefits Japan, whether delivering LNG or employing Japanese engineering firms in construction companies. He asserted that having an understanding with JBIC is very important as the state considers options going forward. He explained that METI's role was more internal to Japan and the tariffs that are allowed to be charged by the power companies. He noted that the Japanese were going through a power deregulation that was creating some changes in the way Japan gets business done. He asserted that having METI's insights will prove very valuable so that the state was not guessing and understood Japan's gas versus power companies over the next 18 months.

3:52:18 PM
COMMISSIONER BALASH stated that JOGMEC was an interesting entity that was more likely to be involved in any sort of equity participation by a company that would also be a potential buyer.

He said having met with METI, JBIC, and JOGMEC, has allowed the state to dial in on Japan's "three arms" and will basically effect or enable different Japanese buyers to purchase LNG from the Alaska LNG Project. He informed the members that the delegation from Alaska hosted a forum to introduce the Alaska LNG Project to the Japanese buyers. He noted that hosting the forum allowed for an exchange of information without antitrust implications. He said the forum's attendees were very familiar with Alaska, asked very good questions, and showed tremendous interest. He noted that the Nikkei Asian Review (NAR) did a story on the MOC with METI.

3:55:25 PM
COMMISSIONER BALASH continued to review his recent trip to Asia and summarized his meetings in China as follows:

- Chinese National Offshore Oil Corporation (CNOOC) in Shenzhen, China.

He detailed that the Alaska delegation flew into Hong Kong and drove into Shenzhen were the group was able to tour the receiving terminal that BP co-owns with CNOOC and a handful of other parties. He said what was really interesting was the challenge China faces in some parts in dealing with very dense coastal populations and less dense inland populations. He explained that the Shenzhen re-gas facility has a large drive-thru mechanism for filling up LNG tankers that delivers gas throughout the province. He said close attention will be given to the Shenzhen re-gas facility as the state find ways to deliver gas and energy to Alaskans if the Alaska LNG Project is able to move forward successfully.

COMMISSIONER BALASH noted the final stop his recent trip to Asia and summarized his meetings in South Korea as follows:

- Korea Gas Corporation (KOGAS).
- Korea Ministry of Trade, Industry and Energy (MOTIE).

He said the Alaska delegation flew to Seoul and met with officials of KOGAS and MOTIE. He noted that South Korea is not as big a market as Japan, but South Korea is a concentrated market through KOGAS. He informed the members that KOGAS is the world's largest LNG buyer and the Alaska delegation met with officials from KOGAS to discuss what opportunities there may be going forward. He noted that the Alaska delegation met officials from MOTIE. He detailed that MOTIE is basically the arm of the government that oversees KOGAS. He explained that KOGAS does not buy beyond the forecast demand levels that are set by MOTIE. He noted that MOTIE asked about the MOC that was recently signed with METI. He summarized that the state agencies affiliated with the Alaska LNG Project was looking forward to continuing to have a dialog with MOTIE on opportunities set. He revealed that KOGAS has a very large void in their 2024 portfolio with contracts set to expire with regimes that do not necessarily enjoy the same geo-political stability as the U.S.

He summarized that DNR and DOR have been busy and noted their involved in the upcoming MAGPRB meetings for two days in Anchorage.

3:58:24 PM
REPRESENTATIVE P WILSON asked exactly who traveled to Asia as part of the Alaska delegation.

COMMISSIONER BALASH replied that the team consisted of himself, Commissioner Rodell, DOR; Dan Fauske, AGDC; Ester Tempel, DNR; Shelly James, Office of International Trade; Janet Weiss, head of BP-Alaska; Doug Rotenberg, BP, marketing professional, San Antonio; and Damin Bilbao, BP-Alaska, commercial and marketing LNG team member.

3:59:32 PM
REPRESENTATIVE TARR recalled that the ability to market Alaska LNG successful was a deficiency pointed out in previous testimony. She commented that the recent personnel staffing has brought on a lot of expertise in addition to DNR and DOR participating in an international trip to start building sales relationships. She asked for an explanation on the state's evolving LNG marketing situation in addition to its ability to take on the marketing responsibilities.

COMMISSIONER BALASH responded that an evaluation was done based on a study conducted by Black & Beech. He explained that in order for the state to feel comfortable, DNR looked at the differences between royalty in value (RIV) and royalty in kind (RIK) in order to sort out how to make an equity position with the state working within the construct of RIV versus RIK. He asserted that there needed to be some assurance that the state would not be left deficient or somehow losing value with RIK. He said one way DNR and DOR got comfortable was in the HOA where the other parties committed to, upon the state's request, working with the state on the disposition of its share of the LNG. He asserted that DNR and DOR have not changed their view on the marketing strategy. He stated that Mr. Setters and the others who were brought on would play an important role during the continued evaluation process over the next 18 months. He maintained that no decisions would be made without first talking to legislators in executive session.

COMMISSIONER BALASH called attention to the recent trip to Asia and noted that BP was making the trip and invited DNR and DOR to go along. He asserted that DNR and DOR had no arrangements made with BP. He pointed out that joining BP on the trip to Asia was another demonstrable item that shows the parties following through on the statements in the HOA. He said the HOA did identify that each of the parties would initiate marketing efforts for Alaska's LNG. He stated that the project's other parties are in the market every day and noted that the recent trip to Asia shows with certainty that at least one

participating partner was out in the market specifically talking to buyers about the Alaska LNG Project.

4:02:58 PM
CO-CHAIR SADDLER referred to the Nikkei Asian Review story and noted that Japan would start importing field gas in 2016. He pointed out that the Lower 48 shale gas killed the Lower 48 pipeline route. He asked Commissioner Balash if his risk assessment was that Lower 48 shale gas or China's shale gas might again change the Alaska market dynamics.

COMMISSIONER BALASH responded that forward pricing curves for natural gas in North America are incredibly volatile. He stated that Asian buyers are looking for stable pricing and noted that buyers during his recent trip wanted to know what sort of pricing might be available for the Alaska LNG Project's gas. He set forth that a number of factors affect the Alaska LNG Project's competitive position.

He addressed the inquiry on field gas and noted that simply reserving capacity did not necessarily guarantee that gas would actually flow through the North American facilities and be available for off take. He remarked that the reference to field gas in some ways is more of a hedge mechanism for future pricing that allows for destination flexibility to either Pacific or Atlantic markets and allows for renegotiations.

Responding to the inquiry about whether shale gas will undermine the Alaska LNG Project, he replied as follows:

> I'm not sure I would say shale gas specifically, I think there's no question that we have to compete, and that competition is one that we can win if we keep a focus on cost and keep our cost of supply as low as possible.

4:06:54 PM
CO-CHAIR SADDLER asked if he had heard that Asian buyers were interested in an equity position in the Alaska LNG Project.

COMMISSIONER BALASH replied that strong interest was expressed in some of the conversations in Asia, but he was not prepared to discuss the exact circumstances under which the state would be willing to take an equity position from a buyer.

4:07:34 PM

COMMISSIONER RODELL added that any benefit from possibly taking advantage of potential equity partnerships will be an important component in preparing the state's financial plan. She noted that Japan, in particular, is under tremendous economic pressure to continually find lower cost of energy. She added that Japan's trade deficit is significant. She agreed with Commissioner Balash that the state must continue to keep the Alaska LNG Project competitive because Japan does want to do business with Alaska. She pointed out that Japan has purchased Alaska LNG for 40 years. She added that Japan takes great comfort in the Alaska LNG Project's transit distance and manageability. She conceded that Japan needs to do something in the interim. She offered that from the state's standpoint, Alaska must see contract diversity as well by not selling all of its gas to the same buyer. She asserted that selling to the same buyer does not serve the Alaska LNG Project well. She summarized that Alaska will be looking to diversify to different sellers and Japan is looking for diversification of supply.

CO-CHAIR SADDLER commented that he is glad to know that DNR and DOR is keeping an open mind about financing opportunities.

4:09:26 PM
REPRESENTATIVE OLSON asked if Japan is willing to pay a premium for the security on both ends on the production end and on the Cook Inlet end. He pointed out that for 40 years Alaska has had a strong relationship between Cook Inlet LNG and Tokyo Electric. He noted that no LNG loads were missed or materially late during that 40 year relationship. He asked if the successful LNG history with Japan might give Alaska a bit of a premium.

COMMSSIONER RODELL replied she did not know but it's reasonable to hope it would bring a premium. She agreed with Mr. Butt that the scale of this project is immense and that necessitates a lot of different buyers.

4:10:34 PM
REPRESENTATIVE SEATON asked if there is any other cost to the state in developing the Alaska LNG Project that is not currently included. He supplemented his inquiry asking the following:

> Other than our RIK and tax portion being taken royalty and tax taken in-kind, do we have further cost of either capital credits or net operating losses that will occur in the development of the project? If you don't have the answer right now, are those portions

being factored into the value to the state or are we only looking at RIK?

4:11:28 PM
COMMISSIONER BALASH replied as follows:

A couple of things. First of all, in terms of an all-in-look, we attempted to do that in our Black and Veatch work last year. As we go forward, we're going to continuously monitor and refine the models associated with all of this, to make sure that we continue to count dollars the right way. In particular, that model was based on an oil-only world and an oil plus gas world. Then subtracting the differences, we're accounting for those differences so that you are keeping track of the lease expenditures incurred under the production tax system and accounting for potential changes in corporate income tax and that sort of thing.

Do I think that the outputs of that model are 100 percent correct today as they will be in the future? No, but that's where the refinements will continue to take place. In terms of other impacts, costs incurred by the project that the state has a share of, those are ones that are currently estimated within a range and those ranges will change and the specifics of those costs will change over time to the extent that any of that is going to hit on our infrastructure side. DOT is going to need to get involved, there could be some steps needed there to address. But, at this point I would say that we are still very comfortable that the estimates made last year and the ranges associated with them are correct.

Report of money obligated to a third party: Commissioner Balash

4:13:21 PM
CHAIR GIESSEL announced that the next agenda item would be a status report on money obligated to a third party.

COMMISSIONER BALASH stated that a clause in SB 138 that requires an update on the project also requires the DNR Commissioner to provide an estimate of any cost incurred under the two year authority granted. He said he has exercised his authority and entered into a precedent agreement with TransCanada for the mid-stream portion of the project's main pipeline, the GTP, and the

transmission lines associated with the project. He advised that he prepared a report in the form of letter that would be distributed today to the presiding officers.

CHAIR GIESSEL confirmed that Commissioner Balash's report was distributed.

4:14:52 PM
CO-CHAIR SADDLER asked if there would be a similar briefing and report before or after the start of Session.

COMMISSIONER BALASH replied that the reports will occur three times a year and the duration between updates could change. He stated that January is the time frame for the next presentation. He noted that the upcoming gubernatorial election will determine whether he or someone else will be coordinating the next presentation. He noted that there certainly could be a meeting well before Session in the month of January or it could be that it makes the most sense to wait until Session starts and everybody is in place. He stated that in the event there is change, he would not speak for his successor.

4:16:14 PM
REPRESENTATIVE TARR addressed financial obligations and referenced SB 138's fiscal note. She asked if the Alaska LNG Project was on track and noted the concern for cost overruns.

COMMISSIONER BALASH replied that the current estimate showed the Alaska LNG Project to be on track. He noted that AGDC could comment more specifically as to whether there has been any cash-calls. He set forth that to his knowledge, there have been no cash-calls and the project was on track in terms of whether additional funding or resources on either end was needed.

He called attention to SB 138's fiscal note regarding agency expenses during the project's current phase. He explained that a handful of positions have been deemed necessary, but hiring a marketing staff was not required. He specified that efforts and resources will be focused on the upstream and downstream experts who can help design an organization based on the choices DNR and DOR will make going forward and that information will be flowing in the right way on the front end. He disclosed that contracts have been done with retired individuals that do not necessarily need to be employees.

He noted that he had failed to mention that Don Perrin has been hired to assist as a bridge between the State Pipeline

Coordinator's Office (SPCO) and the Office of Project Management and Permitting (OPMP). He detailed that Mr. Perrin's contribution will address the big NEPA picture by making sure the state has the right sets of resources in order to pay attention to the advancement process and avoid regulatory or advancement problems. He revealed that DNR has used the position control numbers (PCN) counts and funds differently than what was projected in the fiscal note; Representative Stoltze confirmed that the action was made as a onetime item and will be revisited in the next Session.

4:19:36 PM
REPRESENTATIVE TARR noted that she received an inquiry from a constituent who felt discomfort after reading a newspaper article that talked about the project confidentiality agreement and what would be disclosed to the public. She stated that some individuals feel that more information should be released to the public. She noted that she tried to assure her constituents that the legislature tried to work through the process and included any strong AGIA language into the bill in order to make sure that there were folks advocating on their behalf. She asserted that she did not want any unnecessary hurdles so early and hoped to work through the confidentiality agreement as quickly as possible.

4:20:29 PM
COMMISSIONER BALASH replied that he has recommended that legislators talk to their attorneys.

4:20:46 PM
CO-CHAIR SADDLER commented that he was gratified at the great turnout for the meeting. He noted that he was encouraged by all the team's professionals and the good work that has been done. He stated that the members were excited about the progress and looked forward to the next meeting.

4:21:05 PM
CHAIR GIESSEL thanked the commissioners and expressed appreciation to Mr. Butts for his presentation.

4:21:18 PM
There being nothing further to come before the committees, Chair Giessel adjourned the joint meeting of the Senate and House Resources Standing Committees at 4:21 p.m.