



**Alaska Industrial Development and Export Authority
BOARD MEETING MINUTES
Tuesday, November 19, 2013
Anchorage, Alaska**

1. CALL TO ORDER

Chair Pruhs called the meeting of the Alaska Industrial Development and Export Authority to order on November 19, 2013 at 10:05 a.m. A quorum was established.

2. ROLL CALL: BOARD MEMBERS

Members present in Anchorage: Chair Dana Pruhs (Public Member); Vice-Chair Russell Dick (Public Member); Susan Bell (Commissioner, Department of Commerce, Community, and Economic Development); Wilson Hughes (Public Member); Crystal Nygard (Public Member); Michael Pawlowski (Department of Revenue); and Gary Wilken (Public Member).

3. ROLL CALL: STAFF, PUBLIC

AIDEA Staff present: Ted Leonard (Executive Director); Mark Davis (Deputy Director-Infrastructure Development); Michael E. Lamb (Deputy Director-Finance and Operations); Jenifer Haldane (Human Resources Manager); Matt Narus (Project Manager-Project Development and Asset Management); Karsten Rodvik (External Communications Officer); Nick Szymoniak (Energy Infrastructure Development Officer); Catherine Bliss (Administrative Assistant); Krin Kempainen (Administrative Assistant); and Sherrie Siverson (Executive Assistant).

AEA Staff present: Sara Fisher-Goad (Executive Director) and Gene Therriault (Deputy Director-Energy Policy Development).

AIDEA Counsel and Consultants present: Bill Bittner and Kathy Black (Birch Horton Bittner & Cherot); Chris Clark and Katriina Timm (HDR Alaska); Dave Domansky (Bracewell Giuliani); Mark Gardiner (Western Financial Group); Joy Huntington (Huntington Associates); Jerry Juday (State of Alaska Department of Law); and Steve Klein (First Infrastructure).

Public present: Rick Adcock, Chris Brown, and Jim Kuiken (MWH Global); Tim Bradner (Alaska Journal of Commerce); Dan Britton and Hendrik Vroege (Pentex-Fairbanks Natural Gas); Rick Cathriner (Norgasco); John Davies and Kathryn Dodge (Fairbanks North Star Borough Assembly); Kendall Gee and Stewart Osgood, (Dowl HKM); Keith Hand and Ray Latchem (Spectrum LNG); Joseph Henri and Jeff Logan (Public); Mayor Luke Hopkins (Fairbanks North Star Borough); Representative Doug Isaacson (State of Alaska); Richard Peterson (Alaska Natural Gas to Liquids); Bob Shefchik (Interior Gas Utility); Bob Stinson (Conam Construction); Sunny Morrison and Miranda Studstill (Accu-Type Depositions).

Public participating via teleconference: Cory Borgeson (Golden Valley Electric Association); Dermott Cole (Fairbanks Daily News Miner); Tim Gallagher (HDR Alaska); Shannon Latchem (Spectrum LNG); Rynnieva Moss (Senator John Coghill's Office); Robert Seebom and Alan Sheppard (MEI); Doug Smith

(Haskell Corporation); Jomo Stewart (Fairbanks Economic Development Corporation); and Representative Tammie Wilson (State of Alaska).

4. AGENDA APPROVAL

The agenda was approved as presented.

5. PRIOR MINUTES - October 1, 2013

The minutes of October 1, 2013 Board meeting were adopted as presented.

6. NEW BUSINESS
Overview

Mr. Leonard, Mr. Davis, and Mr. Gardiner provided a review of the process and gave an overview of the Interior Energy Project (IEP).

Mr. Davis said the IEP process today will focus on the single component of the development and construction of a Liquefied Natural Gas (LNG) plant on the North Slope. The plant would provide LNG that would be trucked to the Interior for use by utilities and other industrial users. Mr. Davis noted his presentation will review the development of the LNG plant within the design of Senate Bill 23 (SB 23). SB 23 is composed of three items: a Sustainable Energy Transmission Supply (SETS) loan in the amount of \$125 million of Legislature appropriation; an appropriation that was taken from the current SETS funding and transferred to AIDEA's revolving fund in the amount of \$57.5 million; and an authorization from the Legislature and SB 23 of \$150 million of bonds that could be issued for the project. The Potential Participant Presentations on the agenda will be in the order of Pentex Alaska Natural Gas Company, LLC, Spectrum LNG, LLC, and lastly, MWH.

Mr. Gardiner said his presentation will follow the outline provided to the Board under the Overview tab. He gave a detailed description of the process, which began in January of 2013, when responses were received and evaluated regarding letters of interest. The legislation that presented the policy basis for the activities went on through April of 2013. The technical review was occurring simultaneously. Mr. Gardiner noted SB 23 was signed by the Governor on May 29, 2013. In June 2013, requests for proposals were issued based on the technical review and using the financial tools that were made available by SB 23. The responses were received in July 2013, and since that time, there has been ongoing analysis of proposals and parallel negotiations with those sponsors.

Mr. Gardiner said SB 23 objectives are to get natural gas to Fairbanks North Star Borough (FNSB) space heating customers at burner tip prices that are substantially below fuel oil costs, provide a long-term assured supply for preferred customers of LNG for Interior Alaska electric utilities and industrial uses, and propane for rural areas.

Mr. Gardiner explained the IEP program elements include the gas supply source, the LNG plant, trucking, storage, and regasification in the Fairbanks North Star Borough, heating distribution utilities, electric utilities and industrial customers in the Interior. The hierarchy of preferred customers is first, FNSB, space heating gas utilities, FNSB electric utilities, regulated utilities outside the FNSB, and lastly, industrial customers in and out of the FNSB.

Mr. Gardiner said the technical team has spent a lot of time working on the minimum plant requirements to balance the LNG plant, trucking, storage and regasification and ensure there is a commitment to the distribution system build-out with an all requirements agreement. He noted transparency is an important

criterion that has been used in evaluating the business structures of proposals. He reported return limits and pricing restrictions have been written into the business structures to meet the burner tip pricing objectives. Private equity is characterized by a requirement of a minimum of \$20 million as the equity coming from the private project sponsor and build-out commitments are required from the utilities. The goal is to build a prudent and effective business structure with project financing characteristics that manage technical and construction risks.

Mr. Gardiner said the challenges include an unproven natural gas market in the FNSB, pricing and customer priority policy objectives which are not commercial, and the potential of an alternative gas supply in the form of one or the other of the pipelines or gas from a different location, which makes pure project financing not possible. He explained in order to achieve SB 23 objectives, the team started with what looks like a project financing, but then use the State's and AIDEA's financial and business support to cover those risks that are not typically part of a pure project financing.

Mr. Gardiner said the Pentex and MWH plant proposals and designs are essentially the same type of plant and designing configuration of electrically driven, nitrogen refrigerant processes. The Spectrum plant proposal is a direct, drive-mixed refrigerant process, which does not use electrical power to move the refrigerant, but instead uses turbines that are gas fed. The technical team's analysis favors the nitrogen refrigerant over the mixed refrigerant process, but it is not a determinant factor because either process could meet the AIDEA and AEA system requirements. He noted the plant proposal sites are very close and have very similar characteristics.

Mr. Wilken requested a clarification of the word "transparency" as used on page three of Mr. Gardiner's presentation, including the important project components needed to provide the goal of transparency. Mr. Gardiner said transparency covers a number of areas. This is a public project with almost \$300 million of public funds used. There is a mandate that there be a level of transparency that would not occur with a purely private project. This includes full information on project capital costs, operating budgets, structure, nature and hierarchy of returns, and the cash flow of the project. He explained on the project financing side, transparency is needed for the sources of funding, the timing and nature of how those funds are going to come in from the private side, due diligence on other participants to a pretty deep level of understanding of who the parties.

Mr. Wilken asked how the issue of transparency flows through after first gas. Mr. Gardiner said the standards and policies require transparency regarding the costs of the system and how those flow through to the burner tip price. This will ensure the lowest price is being received for the priority preferred customers. Mr. Leonard said the price transparency will let the customers know how the price is built, including the rate of return of the price of the gas coming out of the plant.

Mr. Dick asked what the basis is for the technical team favoring the nitrogen process versus the mixed refrigerant process. Mr. Gardiner said it relates to the ability to match the operations of the plant to the seasonal swings of LNG demand. Mr. Clark said the technical team felt some of the risks associated with the different refrigerant process included being slightly more operations intensive and having a different turn-down efficiency for the overall plant.

Chair Pruhs asked if both operating systems are widely used throughout the LNG world, is one more advantageous for northern latitude operations and Arctic environment. Mr. Clark said both systems are widely used throughout the industry. He noted there are limited northern plants, with two being in this region and a few in Norway. The Arctic environment has a neutral effect on the operations of either system. Mr. Leonard said several of the plants use both types of technologies in the north. Chair Pruhs

asked if there was a differential in the Arctic environment between the operating systems. Mr. Clark said both operating systems will work in the Arctic environment.

Mr. Gardiner said Spectrum's business structure is oriented to distributing LNG beyond the FNSB with AIDEA securing the lower cost gas supply and the committed demand in the FNSB.

Chair Pruhs requested an explanation of the phrase "committed demand." Mr. Gardiner said Spectrum's proposal contemplates that AIDEA would take the demand risk. Spectrum would have the option between years five and 10 to off-load one of the LNG trains to AIDEA, which reduces Spectrum's debt owed on the SETS loan by \$72 million.

Mr. Gardiner said MWH's business structure is a financial investor oriented proposal with the added element of having MWH as the owner, engineer and project manager. The terms are closer to a pure project financing with phased construction to meet demand.

Chair Pruhs asked if Golden Valley Electric Association (GVEA) has indicated a pricing threshold that needs to be attained in order to commit. Mr. Gardiner said GVEA has not put a pricing threshold on paper. He noted the prices being discussed are attractive as an alternative source to generate.

Mr. Gardiner said Pentex's business structure is oriented to the FNSB gas heating market with a plan sideline for transportation fuel. Pentex would be the sponsor, investor, builder and operator of the North Slope LNG and included in the term sheet are commitments to build out the distribution system for the sale of gas for the space heating market in the FNSB and to purchase gas with what is called an "all requirements." This is a commitment to use the LNG from this plant to serve all requirements for gas and take a minimum amount of that gas from the plant. The proposal to build out the distribution system includes a commitment by AIDEA to help finance the system.

Mr. Hughes asked who takes the risk on the operation of the plant, the availability and reliability of the plant. Mr. Gardiner said the assumption is the project sponsor would take that responsibility because they have each proposed to operate the plant. The vendors of the equipment have varying levels of warranty on the actual equipment and the project structure could include a wrap-around component to ensure the plant is operated appropriately and efficiently. The development agreements will incorporate these required provisions and provide remedies if these provisions are not met.

Chair Pruhs asked if the SETS funds under the Financial Model Analysis tab could be used for the distribution system and LNG storage would also be leveraged at five years and no interest. Mr. Gardiner said there is flexibility for the SETS loan portion of principal and interest. Mr. Leonard said SB 23 and the SETS loan can be used for the North Slope production facility and for the gas distribution system in Interior Alaska. Chair Pruhs asked if trucking was excluded from that use. Mr. Juday said trucking is not described in SB 23 and another program would have to be utilized for trucking.

Mr. Gardiner reported the operating costs are different for each of the proposals. Pentex is \$6.5 million. Spectrum is \$9 million. MWH is about \$9 million. They each have different requirements for fuel gas and each have different proposed rates of returns.

Mr. Leonard made a correction to Table I on page two to AIDEA's \$35 million in "equity contribution," which removes the word "equity," so the table reads "contribution," because it does not have to be only equity contribution. Mr. Leonard said these tables are based on this analysis and if demand and conversions lead to expansion of the plant, there is a requirement in the proposal that the plant be expandable to add more trains when needed.

Chair Pruhs asked who is the assumed different industrial user noted on Table Two. Mr. Gardiner said there is not an assumption of who that is. Chair Pruhs asked if that could be University of Alaska Fairbanks. Mr. Gardiner said that is not the assumption for purpose of this analysis, but it is users outside the space heating market.

Mr. Wilken asked if the plant is 9 BcF, does only 6.6 BcF come out of it and where does the other 2.4 go. Mr. Szymoniak said the assumptions are based on the analysis of AIDEA's technical team. The most cost effective way of providing for the seasonal swing of winter capacity for LNG is not with building out storage or running the plant at full capacity, but rather to size the plant up and use liquefaction capacity to meet the seasonal swing. He noted the extra plant capacity is leveraged during the winter months and is unused during the warmer months. Mr. Wilken asked if 9 BCF could be reached if it was needed. Mr. Szymoniak agreed. Mr. Leonard said there could be some future advantages if that excess capacity could be sold to additional markets, which would lower the cost for everyone. Mr. Gardiner said the assumption is to only sell 6.6 or 6.3 BcF.

Mr. Hughes noted nothing that has been shown so far is driven by the length of the time the plant would be in service. He asked if the numbers being presented would change depending on the time of service being one month, one year, or 20 years. Mr. Gardiner said the shortest time period would be five years, because the project will level over five years. Mr. Hughes asked beyond that, the work done is not time dependent. Mr. Gardiner said the work is not time dependent.

Mr. Wilken commented he called his fuel distributor this morning and asked what the price of fuel is today and was quoted a below ground tank was 384.

Potential Participant 1 Presentation and Board Questions & Answers

Mr. Dan Britton, President of Pentex Alaska Natural Gas Company, LLC, introduced Mr. Hendrik Vroege with EBF & Associates. Mr. Britton gave a detailed PowerPoint presentation entitled Pentex Alaska Natural Gas Company, LLC, and AIDEA Presentation.

Commissioner Bell thanked Mr. Britton for his presentation. She requested more detail to information provided in Exhibit B and Exhibit C discussing the minimum take-out schedule and build-out schedule, particularly to the initial gas commitment, demand and the plant size. Mr. Britton said Exhibit B shows the minimum taker-pay commitments. He noted the year one numbers are low to provide flexibility for delays because the project is anticipated to come online late in the year. Mr. Britton believes the base level commitment shown in years two, three, four, five, and so on will be exceeded in market demand. He noted this base level of commitment provides predictability, but does not overly burden the customers.

Commissioner Bell asked for further explanation of how these commitments relate to the existing patterns. Mr. Britton said their existing plant provides a very valuable service to the project over time, possibly providing a back-up supply. The current commitments are for volumes above and beyond the capacities coming out of the existing facility. Mr. Britton believes the LNG delivered to consumers could be coming from potentially both locations to create the level of redundancy, back-up supply and achieve the goals through the lower cost of the North Slope. Mr. Britton noted the distribution and build-out schedule well exceeds the commitments. Pentex is willing to make a substantial commitment for build-out in the existing service area to grow that market quickly to get gas available to those consumers. The following years are primarily targeted to the growth of the new service territory to ensure the product is brought to as many people as possible.

Mr. Wilken thanked Mr. Britton and Mr. Vroege for being here. He asked if the \$160 million provided by Pentex is their current best estimate of what the plant will cost. Mr. Wilken noted the \$160 million figure has a date of December 10, 2012 and requested clarification on how current the best estimate is. Mr. Britton said the estimate is a result of a substantial amount of engineering work Pentex has completed. Much of the numbers that have been used are from direct quotes from vendors and contractors. Mr. Britton commented the last revision date was December 10, 2012. He reported Pentex has recently contacted the major vendors and suppliers to ask them if there have been any major price escalations. The responses have been that there have not been significant changes. There could be slight inflation on some components. Mr. Britton said there is a contingency of \$20 million within the \$160 million estimate.

Mr. Dick asked if AIDEA partners with someone other than Pentex to build out the plant on the North Slope, would Pentex still be willing to purchase gas from the supplier. And, if Pentex would be willing to build out the distribution system within the Fairbanks area, should funding be available. Mr. Britton said Pentex has plans to build out the distribution system based on availability of supply at an economic rate. If there was another proponent that could do a better job than Pentex and provide a lower cost, Pentex is actively looking to buy LNG today. Mr. Britton commented Pentex would support the entity that gets the service area build out.

Ms. Nygard asked how many miles of pipe are estimated to be installed in 2014/2015. Mr. Britton said that based on the term sheet, there are 30 miles of pipe anticipated in the existing service territory in 2014 and 75 miles of pipe anticipated in 2015.

Mr. Hughes asked for clarification on Exhibit C regarding the expanded service area of 350 miles and is that driven by what the Regulatory Commission of Alaska (RCA) grants. Mr. Britton said yes, the only way Pentex would be allowed to install pipe in the expanded service area is if the RCA grants the service area extension.

Ms. Nygard asked what is Pentex's analysis of the difference in operating cost between diesel and natural gas regarding transportation costs. Mr. Britton said the potential savings is at a minimum of about a dollar a gallon between diesel and natural gas. He noted that savings is heightened when North Slope diesel is compared to natural gas, for as much as two dollars-plus on an incremental fuel cost savings. Mr. Britton said the LNG trucks have a higher capital component. The two trucks purchased by Pentex had approximately an \$80,000 per unit premium in comparison to the comparable diesel. He commented the pay-back is between two to three years and then there will be a reduction in the overall life cycle transportation costs to consumers.

Chair Pruhs asked if Pentex has selected an engineer for their project budget. Mr. Britton said Pentex has been working with CHI Engineering since the start the project. Chair Pruhs asked where the pad is included in the project budget. Mr. Britton said the pad lease would be included in the Deadhorse installation work. Chair Pruhs requested further information on the lease of the pad. Mr. Britton said the lease components to date are incorporated in the \$5 million expended funds to date. The lease is in addition to the \$160 million. Chair Pruhs asked if the capital cost to put the pad in is in the \$5 million and if the \$140,000 a year is leased back to Department of Natural Resources (DNR). Mr. Britton said the \$140,000 is lease payments to DNR.

Mr. Wilken asked if Pentex understands that AIDEA will require the ability to recruit sale contracts for gas. Mr. Britton said yes. Mr. Wilken asked how will the plant handle the swing of demand for heating through winter and summer. Mr. Britton said it will be a combination of how Pentex is currently operating, through excess LNG production capacity, through storage and by having interruptible

customers like the school districts, the hospital, and the university generally maintain an alternative energy source. These customers are interrupted during the peak and maintain the supply and storage for firm customers, which gives a higher utilization throughout the year on all of the assets. The interruptible customer gets a price break as a benefit. Mr. Britton noted Pentex is also working through the component of how to lessen the seasonal swing.

Chair Pruhs asked what is currently used as a backup for the Wasilla facility. Mr. Britton said the Wasilla facility does not have a great deal of backup that can be discussed publically today. Pentex has brought some LNG out of the Lower 48, which can take as much as three or four days, but there is available capacity. Chair Pruhs asked if that is why there is a five-day storage in Fairbanks. Mr. Britton said the five-day storage was the agreed upon storage capacity with the RCA when the utility was first created in 1997.

Chair Pruhs asked if the Wasilla plant will continue to operate and provide product to the Interior if Pentex is involved with the LNG facility on the North Slope. Mr. Britton said yes Pentex is anticipating it would be beneficial for the plant to continue. He noted the Wasilla plant could also move LNG to other opportunities or it could be integrated to the overall IEP.

Mr. Wilken asked if the pipe build-out for 2014 conditioned on Pentex building the North Slope LNG plant. Mr. Britton said that this commitment is to AIDEA to build out a system in relationship to an overall project. Pentex would probably not make this commitment to AIDEA if Pentex were not the builder of the North Slope plant, but some commitment could become a condition on distribution financing. Pentex has the desire to build out the distribution system in Fairbanks pending more LNG supply.

Mr. Pawlowski asked if Pentex has a contractor or a construction company they are working with. Mr. Britton said they work with Haskell, who have completed many construction projects in Alaska. Alaska Anvil, Inc. is performing the engineering work with Haskell. Mr. Pawlowski asked if Pentex is planning on completing the module fabrication in-state as much as possible. Mr. Britton said the plan is to have the module fabrication completed in Bellingham, WA. Pentex is open to an evaluation of that issue, but previously, the local firms wanted too much money up front from Pentex.

Mr. Wilken asked how potential LNG sales fit into supplying LNG to utilities and Interior industrial users first. Mr. Britton said the preferential customers would have priority to the LNG, provided they make some reasonable commitments for that LNG. To the extent there is excess capacity that could potentially be sold as LNG fuel to the transportation industry. The LNG used to fuel the LNG trucks that are bringing energy to the consumers would be fully transparent and at the preferential pricing treatment. Mr. Britton noted Pentex has also agreed that any sales to non-preferential consumers or higher margin level consumers would not necessarily be at the subsidized pricing. Those sales would have a sharing mechanism between Pentex, as the equity partner, and the utility customers. The higher margins would be used to offset some costs to the utility customers.

Potential Participant 2 Presentation and Board Questions & Answers

Mr. Ray Latchem of Spectrum LNG introduced Mr. Bob Stinson of Spectrum LNC and Mr. Keith Hand from Conam Construction. Spectrum LNG gave a detailed PowerPoint presentation entitled Spectrum Alaska's Prudhoe Bay LNG Plant Development.

Mr. Wilken requested an explanation of Spectrum's merchant plant. Mr. Latchem said Spectrum categorizes LNG plants as being built for either the merchant functions, which is sold by truck and it

could be going to pipelines or truck fuel or the plant could be situated next to a pretty large tank for peak shaving applications.

Mr. Dick said he is a big proponent of AIDEA's role in this project, but is concerned about AIDEA unnecessarily assuming all of the market demand risk illustrated by the provision in the term sheet which allows Spectrum to off-load the second train to AIDEA for a \$72 million credit in the SETS loan. He asked what AIDEA would do with the second train in this project. Mr. Latchem said Spectrum favors a phased-in approach of placing one train in at a time. He noted there are other options and other locations like Galbraith, Nenana or Point McKenzie for the train to be relocated. Mr. Latchem said it is not known whether in two years the Cook Inlet prices will come back down to be more competitive with Prudhoe. The pipeline going to Pump Station Four has excess capacity and is 130 miles closer to Fairbanks. Mr. Latchem believes the third train is going to be built in Prudhoe. Spectrum will build two trains, but they are not sure the second train is going to be useful and may become non-competitive with other supply plants. Spectrum is concerned about building the second train and believes they are being pushed into building it because that is what AIDEA and the state want. He believes AIDEA and the state should take the associated risk. Spectrum can defend the \$72 million number, but it can be negotiated.

Mr. Wilken asked if Spectrum understands that AIDEA will require the ability to approve sales contracts for gas. Mr. Latchem said yes. Mr. Wilken noted the Spectrum price in regard to the plant is substantially lower and asked if Spectrum is willing to guarantee that price. Mr. Latchem said yes, Spectrum is willing to guarantee the price. Mr. Wilken asked if Spectrum intends to utilize any used or reconditioned equipment in the plant. Mr. Latchem said Spectrum does not intend to utilize any used or reconditioned equipment in the plant.

Mr. Wilken requested an update on Spectrum's propane plan. Mr. Latchem noted propane has been included in the budget. Mr. Wilken asked if the propane was at 3% of the LNG capacity. Mr. Latchem said he does not know if the term sheet caught up with the budget. He noted the term sheet argues to address propane after the LNG sales get to where they need to be. The propane market is currently flooded in the Lower 48 and North American market. He believes it may be cheaper to deliver propane from Canada than it is to make it in Prudhoe and haul it south.

Mr. Wilken asked what the environmental and safety issues are with mixed refrigerant, where does it comes from, and how does it gets to the Slope. Mr. Latchem said everyone has their secret recipe of mixed refrigerants. Spectrum has a five component mix, primarily of nitrogen and methane, propane, isopentane and butane. The Isopentane comes in a bottle that looks like propane cylinders. He noted Spectrum's design does not have a flare stack. It has a mixed refrigerant skid that has a storage bottle on it and a compressor. When the unit is shut down, the refrigerant is evacuated out and put into the bottle.

Mr. Wilken asked if the mixed refrigerant comes to the Slope in a thermos of some sort. Mr. Latchem said the propane will be routinely bulk delivered. The other components will come in regular bottle. Mr. Wilken asked if the mixed refrigerant is combined at the plant. Mr. Latchem said the plant will have real-time continuous monitoring of the mixture of refrigerant composition. Mr. Wilken noted on Slide 37, Mr. Latchem made the offhand comment, "Boy, are we going to handle a lot of CO₂." he asked for clarification on that comment and for more information regarding the air permit and this project. Is there a significant amount of CO₂ that will create a problem? Mr. Latchem said he does not remember the number of tons of CO₂; the actual issue with the air permit is Spectrum is currently at 41 tons and they need to get it to 40. This is a Title V permit. The CO₂ is becoming more of an issue. He believes the solution is in Prudhoe, since they are right next to the injection site. Political and commercial issues need to be overcome with the Prudhoe Bay unit to be able to return the CO₂ and put it in the ground. Mr.

Latchem advised this is not currently on the table and he is not proposing this now, but believes it makes a lot of sense and will happen eventually.

Mr. Wilken asked what percent of CO₂ is in the North Slope gas nominally. Mr. Latchem said the number is 12% to 13%. Mr. Wilken asked how that number compares to Cook Inlet gas. Mr. Latchem said the North Slope percent is a whole lot more than Cook Inlet gas. Beluga River has no CO₂ in it and Point McKenzie did not have any CO₂ to remove initially, but then one field was found to have a little bit of CO₂.

Mr. Wilken commented he was thinking about the oil permit and the current administration in Washington with the CO₂ issues and sequestering. Mr. Wilken wonders if CO₂ will be an issue for whoever receives the project. Mr. Latchem said there are a lot more green points to be concerned with, rather than the CO₂ emission issue. He noted when the benefits of the displaced diesel are looked at, there is enough LNG. It is a big net gain, but there is an easy gain for environmentalist to pick up the CO₂ and say, "let's put it in the ground." There are a lot of regulations with injection wells that have to be addressed.

Ms. Nygard requested explanation of the \$2,500 cost per day for the pad and development of the pad. Mr. Latchem said that amount is for recovering Spectrum's cost of time for working on the project. Ms. Nygard asked if that fee is retroactive to when Spectrum starts being engaged in the process. Mr. Latchem said the fee begins today, from this point forward. Chair Pruhs asked if Spectrum put any of that cost into building the plant. Mr. Latchem said the cost is included in building the plant. Mr. Hand noted \$140 million is all inclusive.

Ms. Nygard requested additional clarification regarding the methane issue, the efficiency of two different processes and the environment in Prudhoe Bay. Mr. Latchem explained the nitrogen process gets close in efficiency to a mixed refrigerant process only in cases of a pure methane stream. In Prudhoe Bay, even after the 12% CO₂ is removed, the remainder is not pure methane. The mixed refrigerant has the benefit of having butane, propane and other components and it would work better on that application.

Mr. Wilken noted he learned today about a merchant plant, which is a plant that processes gas for others. Mr. Wilken asked if Spectrum has entered into any agreements with utilities or companies that have gas that would be converted into LNG. Mr. Latchem said Spectrum has not entered any agreements. Spectrum has talked to several companies, but most of them are waiting, pending the outcome of AIDEA's decision. Mr. Wilken asked if any company or companies committed to make use of gas processing services that Spectrum is proposing to offer. Mr. Latchem said no companies have committed.

Mr. Pawlowski requested clarification regarding the management fee on Slide 41 for construction, performance and risk reduction by Spectrum that AIDEA does not close its loan until the plant is operational. He asked where the \$2,500 fee fits into where AIDEA is paying for it ahead of time. Mr. Latchem explained under the plant components, the start-up cost and infrastructure, there is a management fee built into all of those numbers. The total is close to \$9 million, including engineering. Mr. Pawlowski asked if that amount would be covered during the construction phase by the construction financing and then afterwards, the AIDEA loan would come in and take all of those costs. Mr. Latchem said that amount covers Spectrum up until the third closing in the term sheet.

Mr. Leonard asked for clarification of when the third closing takes place. Mr. Latchem said the third closing is after the startup of the plant. Mr. Leonard asked if the first closing is after the initial term sheet is completed. Mr. Latchem said Spectrum's term sheet had three proposed closings. The first closing provided for the exclusive arrangement and an option on the land. The first closing also triggers the

\$2,500 a day management fee. The second closing is proposed for March 7th and will develop all of the definitive agreements. The project is then built. After the plant is running and the trucks have delivered LNG to Fairbanks, the third closing will occur.

Chair Pruhs asked if Spectrum is proposing to do the trucking also. Mr. Latchem said if AIDEA agrees to Spectrum's Virtual Pipeline Service, then Spectrum will handle the trucking as well.

Mr. Pawlowski wanted to make sure he is not hearing something incorrectly. He asked for clarification regarding the comment of AIDEA not paying Spectrum until the gas is delivered into Fairbanks. Is the payment trigger when the plant runs and meets the specifications in the term sheet? Mr. Latchem said yes, in order to run the plant, the product has to be taken somewhere. The product will be hauled during the performance tests. The performance tests will take three or four days and the plant does not have three or four days' of storage capacity. He noted there will be a contract provision and penalty if the plant does not meet its expected numbers.

Mr. Leonard asked if Quanta is willing to create an agreement on the construction financing to agree with Spectrum's third closing parameters. Mr. Latchem and Mr. Stinson said yes.

Mr. Wilken stated this question is for Mr. Szymoniak to be answered at a future time. He asked in regard to Slide 58, what the positive and negative effects are to the stream of cost to the burner tip if the \$45 million is moved and placed under "Funding Utilized." Mr. Leonard said the AIDEA appropriation will be \$35 million into the plant. This appropriation will reduce the total cost of gas coming out of the plant. Mr. Wilken asked if that is shown in Mr. Szymoniak's model. Mr. Leonard said yes, AIDEA has another model that shows what effect the \$35 million has on the cost of gas. Utilizing the SETS fund into the distribution system has a change of about four or five cents. Mr. Leonard noted he can provide models showing the utilization of all SETS funds versus a combination of capital appropriation and SETS funds.

Mr. Wilken said there are some people who do not want that \$45 million to go anywhere, other than into the plant and he is trying to figure out what the tradeoff is for the first dollar or the last dollar to do that. Mr. Leonard said he can provide that modeling. This issue has been discussed with the Legislature regarding the capital appropriation being put directly into the plant, because the savings will benefit all Interior Alaskans who will be using the plant.

Mr. Wilken requested Mr. Latchem comment on this issue. Mr. Latchem said Spectrum would agree if AIDEA wants to substitute grant money for the SETS money. He noted if that much interest is removed from the equation, it is a reduction under the RCA model and a pass through for Spectrum.

Mr. Dick asked if Spectrum has operated mixed refrigerant plants of this proposed size. Mr. Latchem said no, Spectrum does not own a mixed refrigerant plant.

Potential Participant 3 Presentation and Board Questions & Answers

Mr. Rick Adcock of MWH Global introduced Mr. Chris Brown and Mr. Jim Kuiken of MWH Global. MWH Global gave a detailed PowerPoint presentation entitled Northern Gas Supply Plant. Mr. Adcock noted MWH Global collaborated with GVEA in responding to the term sheet and introduced Mr. Borgeson of GVEA, who was on the phone.

Commissioner Bell expressed her appreciation for the work MWH has done in Alaska and for their team. She asked if MWH believes they will be able to provide first gas with 24 months, by late 2015. Mr. Adcock said if it can be done, MWH can do it. MWH has the tools, the people, and the project management skills. He noted MWH is comfortable with fast-tracking projects. There will be unique

challenges to this project, including seasonal issues. The term sheet states the pending due diligence on meeting that schedule, because MWH cannot give a definitive answer yet. MWH will provide that answer when they are sure they can achieve the schedule. Mr. Adcock stated MWH can move as fast as anyone else, but they are going to ensure that MWH delivers a project that AIDEA can be proud of for the long-term and produce results and meet the goals of the IEP. MWH is committed to working with GVEA, the AIDEA Board, the local community and all the stakeholders in a collaborative way. MWH and their investment partner has more capital to deploy if that becomes an issue and the scope of this project is expanded.

Mr. Wilken thanked MWH for their presentation. He requested Mr. Szymoniak run the model on page eight of nine, using the mid-range and low-range capital expenditure numbers. Mr. Wilken asked MWH for clarification of their proposal, because it sounded to him that MWH's proposal was mainly concerned with plant to burner tip gas and propane. Mr. Adcock asked for the question to be restated. Mr. Wilken asked if MWH's model trucks the gas from the plant to Fairbanks to be distributed. There is no transportation gas and no gas going anywhere else. Mr. Adcock said finding other customers, while still serving the preferred customers first, will improve the economics of the plant performance and help everybody involved in the project. MWH does not have a plan to sell transportation fuels on the North Slope. The intent is to deliver on the policy goals of the IEP.

Mr. Wilken asked Mr. Borgeson why AIDEA would want GVEA's contract with British Petroleum (BP) or whoever the contract is with. Mr. Wilken asked Mr. Davis if AIDEA is stuck with that price of gas if they take the contract. Mr. Borgeson said he has not seen the other contract from Exxon, but knows it is for 15 years. Mr. Borgeson noted GVEA's contract with BP is for 20 years. He believes the BP price is a little bit lower than the Exxon price. Mr. Borgeson commented the contract with BP, since they are the operator on the Slope, provides an advantage on all the decisions, particularly with the timeline of first gas by 2015. He believes that is a very, very optimistic goal at this point.

Mr. Wilken asked if AIDEA could team up with MWH and negotiate their own contract for the feed stock. Mr. Borgeson said he has spoken with AIDEA regarding this issue and it takes a lot of effort to negotiate a gas contract, so it depends on which completion year is desired. He recommends using GVEA's contract. Mr. Wilken said he appreciates the difficulty of dealing with big companies, but asked if AIDEA could team up with MWH and, time notwithstanding, negotiate their own contract. Mr. Borgeson responded if Mr. Wilken is asking him as Cory Borgeson in Fairbanks, Alaska, the answer is yes.

Mr. Davis said Mr. Borgeson outlined the pluses and minuses to the question pretty well. He noted the BP contract is in place and AIDEA has confirmed with BP that they are willing to transfer, which means there is a gas supply contract. Mr. Davis advised it has not been discussed whether certain terms can be renegotiated. There is an Exxon contract and one could assume the prices are fairly similar to the BP contract. He believes a gas supply contract provides insurance to the project. Mr. Davis believes the Spectrum proposal could work as well and thinks this is part of the decision-making process for the Board.

Mr. Wilken asked if the \$3.20 number in the model is the BP contract with GVEA. Mr. Davis said yes and noted it is based on an index price for gas and it fluctuates with certain quotes for Alaska North Slope crude.

Commissioner Bell asked if the plant on the Slope would be owned by MWH, by the investor, or by some other entity. Mr. Adcock said in a typical project finance structure, there is going to be a special purpose project company that owns the asset, which is capitalized by the investor capital and any AIDEA capital.

The investor, which is Canadian Pension Funds, will own the plant and receive the cash flows and dividends off of that over the 30-year life of the project.

Mr. Pawlowski asked if the concept is that special purpose company would hire an operator. Mr. Adcock said yes, the company would be responsible for the execution. It would determine which designer, which constructor and which operator to hire and it would share the risk of project delivery down to those entities. MWH would be serving in the role of the owner's engineer for the investor, helping select and vet those contractors.

Mr. Hughes noted MWH is fairly late to the game and asked if MWH can catch up by the middle of December to provide more definitive answers for their plan. Mr. Adcock said yes.

Chair Pruhs asked if it would be safe to say that Pentex or Spectrum would be a possible plant operator and builder. Mr. Adcock said that is a possibility. Mr. Kuiken noted the investors are going to insist on the best value for plant operator and builder because it drives the returns.

Mr. Wilken asked MWH if they contemplate using any of the \$50 million of capital grant. Mr. Adcock said yes. Mr. Wilken asked if there is room at the table for AIDEA to put in any amount of funding between one dollar and \$50 million into an MWH plant proposal. Mr. Adcock said one of the criteria for MWH's investor was that AIDEA would not be an equity participant in the plant, because of the governmental element to that. If AIDEA provided funding to the plant, that would cause an ownership issue. He suggested finding another way to use the capital in the company to lower the cost to deliver the gas to the residents.

Mr. Davis commented there was a proposal for all the potential participants that contributions to be made by AIDEA out of the \$57.5 million for certain permitting and other work that has been done. He does not believe that type of contribution would trigger the concerns of the investor. Mr. Adcock said that scenario could benefit performance and lower the rates to the consumers. He noted MWH's investor needs to provide a \$20 million equity contribution.

7. PUBLIC COMMENTS

Mr. Bob Shefchik, with the Interior Gas Utility, said this is too much information to comment legitimately on the details. He expressed his appreciation for the Board's time, effort and the quality of their questions. He will provide written comments. The Interior Gas Utility is very interested and vested in the choices the Board will make on this project.

Mr. John Davies, Deputy Presiding Officer of the FNSB Assembly, agreed with Mr. Shefchik that this is too much information to respond to. He understands the next meeting is December 5, 2013 and asked if there is an opportunity to provide written comments of questions beyond these three minutes of public testimony. Chair Pruhs said there is opportunity to provide written comments and advised Mr. Davies to allow plenty of time to disseminate it to the appropriate parties. Mr. Davies agreed.

Ms. Kathryn Dodge, with FNSB Assembly, expressed her appreciation for the information provided today. This meeting has been very informative. Ms. Dodge said conversion is critical to the success of this project, because the goals will not be accomplished if there is no market. She suggested a portion of the \$50 million be used to assist with the big challenge of conversion. The FNSB Assembly has been discussing a revolving loan fund model for conversion. Ms. Dodge believes the Alaska Housing Finance Corporation in their Energy Efficiency Program was not able to get the people who could not afford to

convert to invest even with a grant payback system. She encouraged a considerable effort be made to make the conversion more affordable.

Ms. Dodge recommended the distribution build-out begin as soon as possible in order to have people ready to receive and burn gas in 2015. She requested AIDEA talk with Fairbanks Natural Gas and discuss their 2014/2015 plans to work in North Pole and outside the city of Fairbanks. There are serious health issues regarding the current pollution which need to be kept in mind while working on solutions.

Mr. Wilken posed a question to Mr. Davies and Ms. Dodge regarding the conversion issue and asked if the FNSB is doing anything to effectively contribute and help with the conversion issue. Ms. Dodge said FNSB and their attorney met with Mr. Szymoniak two weeks ago to discuss the conversion issue. She believes FNSB has an effective option to bring to the table, but it requires a match. It would be useful for AIDEA to make a match. Mr. Davies said the option involves current funds that FNSB can temporarily repurpose. Ms. Dodge apologized for the lack of clarity in the description.

Mr. Wilken asked if FNSB would be the banker providing a loan or the grantor providing a grant. Mr. Davies explained current discussions are in progress to see what FNSB funds could be matched to certain AIDEA funds that would allow for a distribution solution without new legislation of funds. Mr. Leonard believes this conversion issue is different than what was discussed with Mr. Davies on Friday regarding the distribution system. Mr. Davies noted he is having current discussions with FNSB's attorney regarding the conversion.

Mr. Wilken said he believes it is important and wants to emphasize to the Board that FNSB has stepped up and would like to help with the conversion issue by utilizing their proposed mechanism. Mr. Wilken requested Mr. Leonard give a timeframe of when comments should be submitted. Mr. Leonard said comments should be received by the end of the business day on the Wednesday before Thanksgiving, November 27, 2013.

Chair Pruhs asked if there is an estimated economic magnitude of the conversion cost. Mr. Davies said the magnitude is \$10 million on FNSB's side. Ms. Dodge said that is what FNSB would be willing to match. There are 35,000 housing units in Fairbanks and there has been an assumed cost of \$3,500 to \$5,000 for each conversion. Mr. Davies commented they do not know the actual number of how many of those units would need conversion assistance. The models are still being developed. Ms. Dodge added the education portion of this project is very important. Mr. Davies said another important component is keeping things simple from the customer's point of view.

MOTION: Mr. Dick mad a motion to go into Executive Session to consult with legal counsel about the LNG plant and the proposals and to give guidance on negotiating to the final resolution, and to discuss the status of the Buccaneer jack-up rig, including confidential financial aspects. Motion seconded by Mr. Wilken. The motion was approved.

8. EXECUTIVE SESSION: 2:41

The Board entered into Executive Session at 2:41 p.m.

The Board reconvened its regular meeting at 4:20 pm. Everything covered in executive session was appropriate to the motion.

9. BOARD COMMENTS

Chair Pruhs expressed his appreciation for the participation today. The Board scheduled a meeting on December 18, 2013 to make a decision to select a LNG plant participant. Staff is directed to prepare a recommendation to the Board at 9:00 a.m. on that date, based on the best and final terms sheets received, testimony heard today from the participants and from the public.

Mr. Leonard thanked Chair Pruhs and commented staff will move forward and provide a recommendation on December 18, 2013.

Mr. Pawlowski requested Mr. Leonard make an effort to provide the Board members with the forthcoming comments to review over the holiday weekend. Mr. Leonard agreed, AIDEA will continue to work with the IEP subcommittee as they go through the process of developing the recommendation for the Board.

Commissioner Bell said she has an unrelated comment regarding evaluations for Mr. Leonard and Ms. Fisher-Goad, which are due on November 22, 2013.

Mr. Wilken asked if the record should reflect there is still going to be a meeting on December 5, 2013 beginning at 9:00 a.m. Chair Pruhs agreed the December 5, 2013 meeting will start at 9:00 a.m. and IEP will not be discussed at that meeting. Mr. Wilken expressed his appreciation for the staff's hard work.

Chair Pruhs thanked the staff for their hard work in setting up this meeting with all of the parties and making it as comfortable as possible. He expressed his gratitude to the proposal participants, who have spent a lot of time, effort and money to present to the Board today.

10. ADJOURNMENT

There being no further business of the Board, the AIDEA meeting adjourned at 4:24 p.m.



Ted Leonard, Executive Director/Secretary
Alaska Industrial Development and Export Authority

