

**ALASKA STATE LEGISLATURE
HOUSE RESOURCES STANDING COMMITTEE**

February 6, 2015

1:00 p.m.

MEMBERS PRESENT

Representative Benjamin Nageak, Co-Chair
Representative David Talerico, Co-Chair
Representative Mike Hawker, Vice Chair
Representative Bob Herron
Representative Craig Johnson
Representative Kurt Olson
Representative Paul Seaton
Representative Andy Josephson
Representative Geran Tarr

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

UPDATE: ALASKA GASLINE DEVELOPMENT CORPORATION

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

BRUCE TANGEMAN, Vice President
Finance and Administration
Alaska Gasline Development Corporation (AGDC)
Anchorage, Alaska

POSITION STATEMENT: Assisted in providing a PowerPoint update regarding the Alaska Gasline Development Corporation.

DAN FAUSKE, President
Alaska Gasline Development Corporation (AGDC)
Anchorage, Alaska

POSITION STATEMENT: Assisted in providing a PowerPoint update regarding the Alaska Gasline Development Corporation.

FRANK RICHARDS, P.E., Vice President

Engineering and Program Management
Alaska Gasline Development Corporation (AGDC)
Anchorage, Alaska

POSITION STATEMENT: Assisted in providing a PowerPoint update regarding the Alaska Gasline Development Corporation.

JOE DUBLER, Vice President
Commercial Operations
Alaska Gasline Development Corporation (AGDC)
Anchorage, Alaska

POSITION STATEMENT: Assisted in providing a PowerPoint update regarding the Alaska Gasline Development Corporation.

FRITZ KRUSEN, Vice President
Alaska LNG
Alaska Gasline Development Corporation (AGDC)
Anchorage, Alaska

POSITION STATEMENT: Assisted in providing a PowerPoint update regarding the Alaska Gasline Development Corporation.

ACTION NARRATIVE

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CO-CHAIR BENJAMIN NAGEAK called the House Resources Standing Committee meeting to order at 1:00 p.m. Representatives Seaton, Olson, Josephson, Herron, Hawker, Talerico, and Nageak were present at the call to order. Representatives Johnson and Tarr arrived as the meeting was in progress.

UPDATE: Alaska Gasline Development Corporation

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CO-CHAIR NAGEAK announced that the only order of business is an update on the Alaska Gasline Development Corporation (AGDC).

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BRUCE TANGEMAN, Vice President, Finance and Administration, Alaska Gasline Development Corporation (AGDC), highlighted the topics that he and his colleagues will be covering in their update [slide 2]: introduction to AGDC, corporate initiatives, accumulated corporate assets, update on the Alaska Liquefied Natural Gas (LNG) Project, overview of the Alaska Stand Alone

Pipeline (ASAP) Project, near-term corporate focus, and project funding status.

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DAN FAUSKE, Alaska Gasline Development Corporation (AGDC), introduced the Alaska Gasline Development Corporation (slide 3). He said that under AS 31.25.010, AGDC is a public corporation of the State of Alaska, with a legal existence separate and independent of the state. The corporation is to do the following: develop natural gas pipelines, an Alaska LNG project, and other natural gas transportation projects in-state for the maximum benefit of Alaskans; finance, construct, and potentially operate natural gas and other non-oil energy transportation systems; provide economic benefits and revenue to the state; assist the Department of Natural Resources (DNR) and the Department of Revenue (DOR) in maximizing the value of the state's royalty and tax gas; hold the state's equity interest in the liquefaction component of the Alaska LNG project; and advance an in-state pipeline capable of delivering North Slope natural gas to Fairbanks, Southcentral, and other communities within the state at the lowest possible cost.

MR. FAUSKE explained that AGDC represents the state's interest on the 25 percent share in the liquefaction and/or the downstream [of the Alaska LNG Project], with the downstream including the proposed large LNG project at Nikiski. The ASAP Project is also under AGDC's jurisdiction. Both projects are being managed very well, with AGDC coordinating with the Alaska LNG Project and making sure that work is not duplicated. The size of AGDC is being kept small so as not to create a bureaucracy that has to be fed. Expert consultants are being used on a project basis, so once that project's work is done the consultant's work is done. He said AGDC has been working very well with the Alaska LNG Project. Much work has been done and AGDC has developed a huge dollar amount of assets that are being utilized on both projects, which is one of AGDC's goals. Negotiations are now underway by AGDC as to those things developed under ASAP - engineering data, borehole data, a variety of permits and rights-of-way, and a large variety of other things that must occur on either project and are transferrable to the other project, which is a great benefit to the state.

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MR. FAUSKE added that when House Bill 4 was passed [in 2013 by the 28th Alaska State Legislature], a provision was included to

ensure that AGDC would consider propane. So, the gas mixture that AGDC is currently dealing with on the ASAP side is a 1.5 percent propane component, which equates to about 4,000 barrels of propane a day under the current volume floor. An idea is being explored of propane going down the Yukon [River] and/or the Richardson [Highway] to support communities.

MR. FAUSKE outlined AGDC's objectives (slide 4): commercialize Alaska's North Slope gas resource; secure a stable, affordable, long-term energy supply for Alaskans; generate revenue, jobs, and economic growth, facilitate further oil and gas development; and maximize overall benefit to Alaskans.

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FRANK RICHARDS, P.E., Vice President, Engineering and Program Management, Alaska Gasline Development Corporation (AGDC), reviewed AGDC's corporate initiatives (slide 5). He said two main initiatives consume all of AGDC's efforts - the Alaska LNG Project (AK LNG) and the Alaska Stand Alone Pipeline (ASAP) Project. He said AGDC is a sponsor in both projects, but a main differentiation is that for the ASAP Project AGDC represents 100 percent of the ownership for the State of Alaska, while in the Alaska LNG Project AGDC represents the state in 25 percent ownership of the liquefaction plant. The Alaska LNG Project has three main focuses: the LNG plant, the pipeline, and the gas treatment facility. The state is being represented by TransCanada in the [pipeline and gas treatment facility].

MR. RICHARDS explained that the ASAP Project was originally presented to AGDC to develop and push forward for energy relief for Alaskans. At a volume of 500 million cubic feet a day of natural gas, AGDC was to look to meet the in-state needs of Interior Alaska and communities along the pipeline route, and then be able to provide a long-term stable supply of gas for Southcentral Alaska. The Alaska LNG Project was about the commercialization of those North Slope resources. The ASAP Project has just now completed the front-end engineering and design (FEED). The engineering and environmental process have been advanced, the cultural resources have been looked at, and cost estimating has been done on the major components to come up with a new Class 3 estimate. A Class 3 estimate reflects that the engineering has been advanced to approximately 30 percent with a finer definition so that now right-of-way bid level estimates are coming in from major contractors within the state and vendor quotes are coming in from process manufacturers and from fabrication yards in Asia in terms of what it would take to

build the modules necessary for gas (indisc. - throat clearing). The Alaska LNG Project is now in pre-front-end engineering and design (Pre-FEED). Thus, there is a differentiation between the two projects in the level of work that has been done. For the State of Alaska the ASAP Project has essentially developed a tremendous amount of resource to advance a pipeline project, including the right-of-way.

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MR. RICHARDS noted that one key differentiator between the two projects is the volume throughput - ASAP was originally limited to 500 million cubic feet a day, while the Alaska LNG Project was designed with the premise of 3.3 billion cubic feet a day at the gas treatment plant in Prudhoe Bay. With passage of Senate Bill 138 in 2014, the legislature instituted the policy call for AGDC that the Alaska LNG Project was a primary project and therefore the work efforts undertaken by the ASAP Project needed to look to align a schedule with the Alaska LNG Project. So, [the ASAP Project] completion date has been delayed to align to the Alaska LNG Project schedule. The Alaska LNG Project is now moving through the Pre-FEED process and a determination on whether to enter into FEED will be made in first quarter 2016. This doesn't mean AGDC is stopping work, but rather is now focusing on work that will be durable for any pipeline project and that will be an asset to either project to move it forward. The Class 3 estimate for the total installed cost of [the ASAP Project] is approximately \$10 billion, plus or minus 20 percent. Over the last few years the estimate level was at approximately \$7.7 billion, plus or minus 30 percent. With advancement of the engineering and the refinement of the process, AGDC has been able to bring that cost estimate into a finer definition and now has good confidence on that number. The \$10 billion for ASAP is as opposed to \$45-\$65 billion for the Alaska LNG Project.

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REPRESENTATIVE SEATON inquired whether, as 100 percent owner of ASAP, the state is paying 100 percent of the cost for further engineering and other work. He further inquired whether that is freely available to the Alaska LNG Project and whether the state is being reimbursed from the other owners of the Alaska LNG Project for any of the ASAP work that is shared.

MR. RICHARDS replied that AGDC will talk about its spending plan on slide 15, but the simple answer is that the work products completed to date have been at 100 percent of ASAP expenditures.

Proceeding forward, AGDC has signed cooperation agreements with the Alaska LNG Project and there are joint work programs.

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REPRESENTATIVE TARR inquired whether pipe or steel has already been purchased for the ASAP Project.

MR. RICHARDS responded by drawing attention to the accumulated assets for the ASAP Project listed on slide [7]. He explained that the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) is concerned that any pipeline that crosses discontinuous permafrost is strong enough to handle the frost heave and thaw settlement and the strain accumulation that results from that ground movement. So, AGDC procured specialized pipe for testing to verify that AGDC's design parameters could be met by the mills producing the pipe. Only three mills could produce the specialized metallurgy necessary to meet the strength demands for this pipe in discontinuous permafrost - one in Germany, one in Japan, and one in India. There are no mills in the U.S. or North America that are able to produce the quality of steel plate to meet those specified metallurgy requirements. Twelve pipe segments were purchased from each mill for a total of thirty-six 40-foot lengths of pipe. These samples were brought to the U.S. and are being welded together, cut apart, and broken to verify that the materials meet the design quality specifications - and they are. The small-scale testing was just completed and testing has now advanced into the medium scale, or crude wide plate, testing where pieces are welded together and then pulled apart in different axial directions to determine whether the pipe will be able to handle the anticipated strains in discontinuous permafrost zones.

MR. FAUSKE added that if the ASAP Project is moved forward, the vast majority of the pipe would be under the current design of 36-inch X70 pipe, which is available in the U.S. The desire is that it would be manufactured, produced, and purchased [in the U.S.] He clarified that Mr. Richards was talking about a distance of about 100 miles that must meet these stringent requirements for pipe under PHMSA.

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MR. RICHARDS reviewed the accumulated corporate assets (slide 6) that AGDC has developed and is holding for the State of Alaska. With the passage of House Bill 369 [26th Alaska State

Legislature] and House Bill 4 [28th Alaska State Legislature], the legislature directed DNR to grant AGDC state right-of-way. An unconditional and transferable right-of-way, it is a major asset that is being held by AGDC for the state to be able to advance a pipeline project. A final environmental impact statement (FEIS) was completed by AGDC [in October 2012]. This process is required under the National Environmental Policy Act (NEPA) of 1969 for assessing impacts to wetlands, flora, and fauna. A supplemental environmental impact statement (SEIS) was initiated [in August 2014]. The SEIS is due to a design change from the original premise of a 24-inch, high-pressure, 2500 pounds per square inch (PSI) pipeline to a 36-inch diameter, 1480 PSI pipeline. This new design is a more cost-effective pipeline size to meet the legislative intent of lowest cost to Alaskans. Under the SEIS, AGDC has: prepared and produced a new plan of development (POD), which is a requirement of state and federal agencies; written the environmental evaluation document (EED), which is essentially the draft of the EIS; and conducted public scoping meetings in 16 communities along the pipeline route as well as off the pipeline route to explain how the project has changed and how communities would be impacted. The outcome of those meetings was very positive. There was great local support from the public as well as federal agencies that saw the benefit of potentially having natural gas available to them, such as the Denali National Park and Preserve.

MR. FAUSKE added that AGDC also received praise from the Alaska LNG Project on the [project execution plan (PEP)]. He reported that the Alaska LNG Project has said the [PEP] would also work for the LNG project from an engineering perspective and a plan going forward as to how to construct that mega-project. Thus, AGDC believes the state owns an asset that will serve a dual function in the very near future.

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MR. RICHARDS continued his review of AGDC's assets, noting that AGDC has had people in the field walking the route, looking at the cultural resources, fisheries, wetlands impact, and impact to wildlife. Thus, AGDC now has stream and river crossings and designs along its pipeline. Two-dimensional (2-D) terrain unit models have been developed, which are very good indicators of the ground conditions. Since completing wetlands delineation, AGDC has received a jurisdictional determination from the U.S. Army Corps of Engineers in regard to those wetlands along that route. Moving to slide 7, he stated that AGDC has drilled [over 400] geotechnical boreholes along the centerline of the

pipeline. Also, AGDC is looking for new material sources because a challenge is that the material sources in Alaska are either played out or at their limits and new material sources need to be identified for the pipeline project as well as for the Department of Transportation & Public Facilities, other resource developers, and/or another pipeline project. Air quality sampling has been completed along the North Slope at the gas conditioning facility; this is the exact location of the gas treatment plant for the Alaska LNG Project. So, AGDC is accumulating assets and data along the route as well as at specific locations that have value and benefit to AGDC and both projects. As mentioned earlier, AGDC has purchased strain based design (SBD) pipe. Specifications for the line-pipe are done; line-pipe is the more than 600 miles of pipe that will not require the specialized metallurgy. The environmental work has been completed with a [final] biologic assessment and a [final] essential fish habitat. Along with the Class 3 estimate, AGDC completed its project execution plan (PEP) in December 2014, which is a very detailed document that represents how the project will go through final design, how the project could be constructed, and ultimately how the project would be operated into the future. Mr. Richards said the aforementioned are just a small example of the assets had by AGDC. Detailed alignment sheets are coming out of AGDC's design, as well as "march charts", which are the process and the movement of materials, goods, and equipment on how to construct this project. A very robust [geographical] information system has been completed, as well as a 30-percent design, Class 3 estimate, which gives AGDC much more definition of the total cost to build this project.

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MR. RICHARDS outlined the approximate pipeline land ownership (slide 8), pointing out that most of the right-of-way for the ASAP Project would be across government land. The 55 percent of state land has already been granted to AGDC. The 30 percent of federal land will be an outcome of the SEIS when the U.S. Department of Interior, through the Bureau of Land Management (BLM), would grant AGDC a federal right-of-way as a record of decision of that environmental process. When that effort concludes, probably the third quarter of 2015, AGDC will have about 85 percent of the right-of-way granted to it for a pipeline project. Leases with municipal, borough, or private parcels have not yet been initiated because AGDC is not at the point where it knows it has received project sanction.

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REPRESENTATIVE HERRON related that the chief executive officers of Alaska Native Claims Settlement Act (ANCSA) [corporations] were recently in Juneau. He said they expressed concern that right-of-way discussions with the four Native corporations whose land the right-of-way would go through, was "just checking off a box". He requested AGDC to explain its discussions with these four Native corporations in acquiring these leases.

MR. RICHARDS replied that AGDC has been working with the regional Native corporations to acquire access rights to be able to do some of the aforementioned development work. He said AGDC was granted those access rights and has paid the necessary fees to be able to do the development work. More detailed discussions have been had with one of the larger corporations about specifically the 30-plus miles of pipeline route that will be crossing their land, and it is an ongoing discussion.

MR. FAUSKE added that some of the confusion might come from differentiation between discussions that are being held with the ASAP parties versus the Alaska LNG Project parties. While AGDC represents both, it is not the lead on the Alaska LNG Project debates with the ANCSA chief executive officers. He said he has met with all of the officers and they know him and his team, and so he will encourage the Alaska LNG Project to have a more thorough discussion. He allowed he has heard the same concerns and assured the committee that AGDC will work hard on this issue with its partners on the Alaska LNG Project.

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REPRESENTATIVE TARR inquired whether the public is clear about the difference between the ASAP and Alaska LNG projects and that they are two separate projects, given that 16 public hearings have been held for the ASAP Project and more than 30 have been held for the Alaska LNG Project.

MR. FAUSKE said Representative Tarr is raising a very good point and AGDC is dealing with the issue of messaging. There is some confusion and AGDC will do its level best to improve in making that message clearer. One way AGDC has explained it to people is that it is working on two projects with the idea that they will be aligned, hopefully, and that the larger project, if it shows continued success and development, would be the one that would go forward. He said AGDC has been in every community numerous times for both the ASAP Project and the Alaska LNG Project and it is something that AGDC needs to keep doing

because it is so important and it is AGDC's job to ensure that the message is clear and people are not confused.

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REPRESENTATIVE JOSEPHSON, referring to slide 8, asked whether the 29.7 percent of federal land is mostly BLM with the exception of Denali National Park and Preserve.

MR. RICHARDS responded that the federal lands are essentially those administered by the Department of Interior through BLM. The route of the ASAP Project, as well as the Alaska LNG Project, are outside of Denali National Park and Preserve.

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MR. TANGEMAN requested Mr. Richards to explain how the alignment has come together, such that there is one right-of-way for whichever pipeline is eventually built.

MR. RICHARDS explained that through cooperation between the two projects, and because both projects led from essentially a common point in Prudhoe Bay down to Southcentral Alaska, AGDC saw that the centerlines of the individual pipeline projects were in many instances right on top of each other. However, in some instances, because of geologic conditions and/or the crossing of the Trans-Alaska Pipeline System (TAPS) or the highway systems, the centerlines were slightly different. Over the last three months AGDC has worked with the construction, the right-of-way, and the lands teams of both projects to land on a common centerline for the projects. This means that the work developed and conducted on the ASAP Project in the past, and the future work plans that AGDC will be doing jointly with the Alaska LNG Project, will be available and valuable to both projects. This major milestone allows AGDC to work more cooperatively and collaboratively between the two projects.

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JOE DUBLER, Vice President, Commercial Operations, Alaska Gasline Development Corporation (AGDC), drew attention to the graphic representation on slide 9 of the ownership of the Alaska LNG Project. The state owns 100 percent of the ASAP Project and all the assets that it has acquired, he noted, while in the Alaska LNG Project the state owns 25 percent of the entire project. That 25 percent ownership interest would be the result of the state taking royalty in-kind and tax as gas, although the

decision on whether to do that has not yet been made. The state's interest is divided between TransCanada [and AGDC]. TransCanada will represent the state in the gas treatment plant, the gathering lines from Prudhoe Bay and Point Thomson, and the main pipeline to Nikiski, while AGDC will represent the state's interest in the LNG facility to be built at Nikiski.

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REPRESENTATIVE SEATON inquired whether the division of ownership representation with TransCanada and the State of Alaska is that the tax gas with TransCanada is represented in the gas treatment plant and the pipeline, and the royalty in-kind interest is represented by the LNG facility.

MR. DUBLER answered no, the tax as gas is roughly 12 or 12.5 percent and the royalty on most of the fields is also about 12.5 percent. So, the total of 25 percent is the state's interest in the entire project, and of that entire project TransCanada would hold the state's interest in the midstream portion, which is the pipe and the gas treatment plant (GTP), and AGDC would own the 25 percent at the LNG facility.

REPRESENTATIVE SEATON asked how those break out as far as value of royalty and tax gas as far as the ownership split between those two.

MR. DUBLER replied the royalty share is about 12.5 percent. The tax as gas is subject to negotiation, he said, and his understanding is that the DOR commissioner has the ability to set that. The tax as gas is estimated to be somewhere in the range of 10-15 percent.

REPRESENTATIVE SEATON inquired whether some of the value from the state's royalty gas is going to be TransCanada's portion of the ownership of the project, so that the state is actually transferring royalty gas to TransCanada as well as tax gas.

MR. DUBLER responded no, the actual ownership of the gas will not change hands to TransCanada; TransCanada is just the pipeline company that transports the gas. For example, a railroad does not necessarily own the goods that it transports, it owns the train and the tracks and someone pays the railroad to transport their goods. It would be the exact same case with the pipeline and the gas - TransCanada would own the state's portion of the pipeline and the state would ship its gas through the pipeline, but the state would retain ownership. The same

would hold true with the LNG facility - AGDC would not take ownership of the gas.

REPRESENTATIVE HAWKER said Mr. Dubler's answer is on point.

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FRITZ KRUSEN, Vice President, Alaska LNG, Alaska Gasline Development Corporation (AGDC), turned to slide 10 to discuss some of the technical things that the Alaska LNG Project team has been doing since the joint venture [agreement] was signed at the end of June 2014. He said the AGDC board approved an Alaska LNG budget of \$39.8 million for calendar year 2015. This budget, in turn, is set on the work plan and budget that the Alaska LNG Project team has put together. The AGDC Alaska LNG is working very hard with the Alaska LNG Project to find some of the common points mentioned by Mr. Richards to save money by only spending the money one time for both projects. While the Alaska LNG Project is far away from its current target date of 2019 for the actual sanction/final investment decision (FID), that doesn't mean AGDC Alaska LNG is not out doing things. For example, during the summer 2014 field season AGDC had over 250 people drilling boreholes up and down the pipeline right-of-way, doing geotechnical investigations at the future [LNG] plant site in Nikiski, and sailing in the Cook Inlet looking at how to do the pipeline crossing of Cook Inlet. Of those 250 people, 80 percent were Alaskans, indicating that both the AGDC team and the Alaska LNG Project team take Alaska hire very seriously. The Alaska LNG Project's web site includes places for contractors to register their interest in serving the project.

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MR. KRUSEN noted the Alaska LNG Project is in Pre-FEED and is therefore one step behind the ASAP Project. Pre-FEED is where the big engineering firms are brought in and enough engineering is done to describe and optimize the concept that has been selected. The gas treatment plant is being handled by URS of Denver, Colorado, with a subcontractor called CBI and Alaska knowledge being provided by Alaska Slope Regional Corporation's Energy Services (AES). The pipeline is being done by Worley Parson of Calgary. The LNG plant is being led by CBI, which has teamed up with the Japanese company, and Alaska knowledge is being provided by AES. Chiyoda has built many huge LNG plants around the world. The marine facilities are being designed by CH2M Hill with Alaska input being provided by CH2M Hill Anchorage. It is a big engineering project as well as a huge

regulatory/permitting-type project. The Department of Energy has authorized [the Alaska LNG Project] to export up to 20 million tons of LNG per year to free trade agreement countries. He offered his believe that this amount is 16 times bigger than the Kenai LNG plant. The lead agency is the Federal Energy Regulatory Commission (FERC), he said. Sixty public meetings have been conducted across Alaska for people along the right-of-way and for interest groups. Eventually an environmental impact statement will be filed, but the Alaska LNG Project is currently in the pre-file phase. Twelve resource reports describing the impacts to the air, water, and so forth, will be submitted to FERC, with the first draft of those to be submitted next week. Soon after submission the resource reports will be available to the public via the FERC web site.

MR. FAUSKE noted that CBI is Chicago Bridge & Iron, a firm that has been doing business in Alaska for many years.

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MR. RICHARDS moved to slide 11, addressing AGDC's role in both projects and seriously taking the legislative mandate for AGDC to not duplicate work and to utilize the state's funding to advance the projects. A tremendous amount of information has been gathered in the past by previous pipeline projects trying to get the North Slope gas to commercial markets, but, he pointed out, that development data is held by the companies. When AGDC started with the ASAP Project it was known that that data was available, and AGDC has been trying to acquire that data and not have to drill holes right next to previously drilled holes. So, AGDC worked a cooperation agreement between the two projects and data from thousands of boreholes has been exchanged, therefore saving tens of millions of dollars in unnecessary work effort. This effort is being continued by AGDC to avoid duplication in terms of advancing the projects for what is now a common pipeline route. Collaborative work is underway for hydrologic work, waterways work looking at stream crossings, and civil designs for a pipeline work pad, as well as access roads and access to material sites or sites for common pipe lay-down yards or camp facilities. Additionally, the metallurgy and materials testing completed by AGDC for the X70 pipe is now of keen interest to the Alaska LNG Project as that project lands on the specific pipe grade that it wants to proceed with in its design efforts. Looking to the future, AGDC has cooperation agreements for field work as well as engineering that AGDC is conducting and will be conducting for the Alaska LNG Project. For instance, AGDC is out drilling boreholes again in the

Prudhoe Bay area and will then be looking at material sites up and down the pipeline. That work will be done by AGDC but will be on a cost sharing basis between the two projects.

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REPRESENTATIVE SEATON asked whether the cost sharing basis is the same cost share as ownership share of the total project.

MR. RICHARDS answered no, it is not based on the ownership model. Rather, it is based on a negotiated rate that AGDC and the Alaska LNG Project have agreed to for fair representation of what the costs would be, as well as the benefit to those projects from those work efforts. Where AGDC is doing work that will solely benefit the Alaska LNG Project, such as pipe centerline boreholes where the pipelines differ in terms of their terminus, then those costs will be borne solely by the Alaska LNG Project.

REPRESENTATIVE SEATON inquired what the cost sharing is for those parts that are shared, such as the shared pipeline route, or welding and specifications, or the discontinuous permafrost.

MR. RICHARDS replied that AGDC is in that commercial negotiation right now and will need to conclude that before it can represent the outcome.

MR. TANGEMAN noted that Mr. Richards is referring to the value of the product that AGDC is producing; Representative Seaton is referring to how that will be reimbursed and that will be based on the different ownership portions that the companies and TransCanada have, which is the 25 percent. So, the dollar that will be reimbursed to [AGDC] will be 25 percent for each of the participants.

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MR. RICHARDS discussed the ASAP Project's Class 3 cost estimate (slide 12). He pointed out that when referring to the ASAP Project, he is identifying a total installed cost - the gas conditioning facility on the North Slope, the approximately 730 miles of pipeline from the North Slope, and tying into the existing ENSTAR Natural Gas Company's system in Southcentral Alaska. In 2012 AGDC originally presented to the legislature an estimate of approximately \$7.7 billion to construct the ASAP Project. That estimate represented a Class 4 level estimate, which is a factored engineered estimate utilizing the best

information had at the time. Inflation over the last two years represents about \$889 million to the original 2012 estimate. The Class 3 estimate represents the work just concluded after AGDC's detailed engineering analysis. This estimate of \$9.968 billion is represented as Class 3, plus or minus 20 percent. That aligns to what is known as the American Association of Cost Estimators' classification of estimates, which is based on the level of detail, the level of work effort, and the granularity that is had in designing a process plant such as the gas conditioning facility.

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MR. RICHARDS explained that the Class 3 estimate also looks at the overall annual operations and [maintenance] cost for an ASAP Project, which is estimated to be \$147 million, as compared to the 2012 factored cost [of \$152 million]. As well, AGDC looked at the end result of the pipeline project because regulators will require AGDC to conduct dismantlement, removal, and restoration (DR&R), which represents \$324 million in future cost. Further, AGDC identified the \$353 million that the State of Alaska provided to AGDC to advance the ASAP Project; this is the money that AGDC has been using to be able to develop this work. The two major cost components of the project are the gas conditioning facility and the pipeline. At \$3.18 billion the gas conditioning facility represents 32 percent of the project, so that facility alone is a megaproject. At \$6.788 billion the nearly 800-mile-long pipeline is a second megaproject. Combined, the project is nearly \$10 billion. This is a very solid number, having been built from the ground up by AGDC bringing onboard major heavy civil contractors, pipeline contractors, horizontal directional drilling [contractors], and process vendors and fabrication yards to build up this quote. Therefore, AGDC has a confidence level of approximately 75 percent that this number represents what it would cost to build this project in 2014 dollars.

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REPRESENTATIVE SEATON requested Mr. Richards to expound upon the DR&R cost and whether that becomes a basis for return on equity and whether that amount is actually put into an account up front or is simply an accounting line on the books.

MR. RICHARDS responded that AGDC wanted to identify what the DR&R cost would be so it could be included in AGDC's tariffs and accumulating in that account for that future cost. It literally

would be pennies as represented in the tariff, but AGDC wanted to be able to articulate when looking at the overall cost for Alaskans that it was going to include that future cost to dismantle, remove, and restore to meet those regulatory requirements that will be placed on AGDC in its permits.

REPRESENTATIVE SEATON inquired whether that money would actually be put aside in an account or will just be on the books as money owed in the future. He further inquired whether DR&R is a requirement for the Alaska LNG Project.

MR. RICHARDS answered that for going forward to the Regulatory Commission of Alaska (RCA), AGDC has built its tariff model to identify that DR&R would be a cost factor and it is AGDC's intention to be able to assess those costs to the consumer and build up that fund to be able to meet AGDC's obligations into the future. He deferred to his colleague to answer this question as regards the Alaska LNG Project.

MR. KRUSEN replied he knows that the Alaska LNG Project in its Pre-FEED phase will identify the DR&R cost, as appropriate for that level. However, the commercial side is not far enough along to know just how that will be put into a rate base for a FERC [Class 3] type project. The Alaska LNG Project will come up with the DR&R cost estimate but it will not be as advanced as what the ASAP Project has done for its Class 3 estimate.

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REPRESENTATIVE SEATON stated he wants to ensure that as DR&R is considered and built into the tariff that that money is actually put aside as it is collected from the consumers. If it is just being put on the corporate books and a project is sold at some point in time that money may or may not be there, just like with the Trans-Alaska Pipeline System. If DR&R is going to be in on the tariff side, he wants to ensure it is actually being accumulated for the State of Alaska.

MR. FAUSKE offered his assurance that not only the DR&R, but also the reimbursement to the State of Alaska of the initial seed money to carry [the ASAP Project] forward, would be reimbursed to the state and would be accounted for separately and not just a footnote to the financials. There would be a fund of some sort or an accounting book entry that would see to it that these monies are segregated, and stated, and reserved for the stated purpose that they were intended for.

REPRESENTATIVE SEATON offered his appreciation for Mr. Fauske's answer and said it solves a lot of questions that he often gets asked on projects.

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MR. DUBLER addressed slide 13, explaining that the commercial team ran the technical team's cost estimates through AGDC's tariff model, a tariff model that was designed specifically for the ASAP Project. The model has hundreds of assumptions which results in a tariff rate range rather than a single number. The team feels that all of the assumptions were reasonable and some were more conservative than others. The team wanted to present a range of projected tariffs because projecting a tariff of, say, \$6.23, would imply a degree of accuracy that just isn't there with a projection like this. All in all the team feels that these are reasonable tariffs. He directed attention to the 2014 estimate of projected tariff range for Fairbanks, which is \$5.50-\$6.75, with a burner tip cost of \$11.50-\$14.00. Burner tip cost is what end users would pay at their homes, he explained. The difference in burner tip cost between Fairbanks and Anchorage [\$11.50-\$14.50] is due to the local distribution. ENSTAR's local distribution system in Anchorage is a mature system that has a lot lower charge for people in Anchorage than what an [eventual] utility in Fairbanks will be able to charge. This is because the Fairbanks utility will have to build its system out with current dollars, while the ones in Anchorage were built mostly in the 1960s and 1970s and the ones in the Matanuska-Susitna Valley were built in the 1980s. Thus, much of the cost has already been recovered by ENSTAR and its distribution charge reflects that. Continuing, Mr. Dubler said AGDC has estimated the cost of gas at between \$2.00 and \$3.30. When this cost is added to the Fairbanks local distribution cost of \$4.00 it results in a burner tip cost of \$11.50-\$14.00. The Anchorage tariff would be in the range of \$8.00-\$9.75, with a burner tip cost of \$11.50-\$14.50. He pointed out that while hundreds of assumptions were made, the major assumptions were: a 70/30 debt to equity ratio, a 12 percent return on equity, a 5.7 percent construction financing cost, and a 25 year depreciation. The 12 percent return on equity assumes that a third party pipeline company builds, runs, owns, and operates this project for AGDC. It has been said all along that the state doesn't operate gas pipelines for a living, but there are people who do and therefore those experts would be hired to do that. The 5.7 percent construction financing cost is relatively high, as is the 25 year depreciation, but AGDC wanted to be conservative in those assumptions.

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MR. FAUSKE added that two primary benchmarks have always been considered with the ASAP Project going forward. One is whether this project can be done in a time horizon and/or at a cost where the resulting tariff is at or below what it would cost to import LNG. He said AGDC believes it has done that based on the information it currently has. More important, AGDC wanted to see whether it ends up with a tariff that is commercial and this is where it gets a little sticky. (Indisc. - break in audio sound) still designing to and there is currently a great deal of debate about that now with removal of the Alaska Gasline Inducement Act (AGIA) and some other discussions. It is tricky in the sense that AGDC is partners with Alaska LNG Project but AGDC continues to get asked this question. On the worst day of the winter about 250 million cubic feet of gas is used on the Railbelt and where the ASAP Project is designed. The intent is to sell the residual 250-300 million cubic feet of gas a day to help keep the tariff down. Of concern to AGDC is whether that residual 250 million cubic feet attached with a tariff is commercial. He said he is unsure he can answer that in the affirmative if this residual gas was to go to "an Agrium, for instance, or a Donlin Mine" or others that might want to use it. But his response to that is that as the volume is increased, tariffs go down. The ASAP Project is still based on 500 million cubic feet per day, which prior was a statutory requirement and now is an administrative or policy requirement, and AGDC continues to design to that level.

MR. TANGEMAN noted that while the distribution cost for Anchorage is significantly lower because of the maturity of the distribution system, the distance to market between Fairbanks and Anchorage is why there is a difference in the tariff rate.

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MR. RICHARDS reviewed the ASAP Project design capacity, saying that slide 14 provides the history as to why the ASAP Project was designed with the limitation of 500 million standard cubic feet a day. This figure was based on the AGIA license and statutes from the 2008 timeframe, and ultimately AGDC advanced its project with that design premise. Things changed this summer with the passage of Senate Bill 138 and then ultimately the termination of the license with TransCanada and essentially the lifting of that statutory and commercial ceiling on ASAP. Currently the design case is 500 million. It has to meet the

commercial interests, specifically the commercial interest for larger industrial clients. If in the future ASAP is the project that will proceed, AGDC has the option to make changes to the design in terms of adding compression or increasing the pipe strength or treatment capacity, which would vastly improve the project economics and lower the tariff rates for Alaskans.

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MR. RICHARDS outlined ASAP's revised spend plan (slide 15). With passage of Senate Bill 138 and the aligning of the schedules between the two projects, he explained, AGDC saw that with its work effort completing the Class 3 estimate and the project execution plan, that it needed to look at its projected spend rate over the next couple years to keep the project moving forward, maintaining its viability and readiness, but not expending too much of the people's money unnecessarily. He drew attention to the top [red] line on the chart, stating that it is the approved plan budget that was presented to the legislature in AGDC's plan of development originally. Through the appropriation process, AGDC was granted the money which is now residing in the in-state natural gas pipeline fund. The bottom [green] line is AGDC's new 2015/2016 work plan under which AGDC will complete its supplemental environmental impact statement with the NEPA process that will result in a record of decision and the granting of the federal lands to AGDC. Right-of-way work will continue on the pipeline centerline along with expansion and exploration for material sites. Engagement with regulatory partners will continue, specifically the Pipeline and Hazardous Materials Safety Administration (PHMSA) on the pipe metallurgy and design, as well as concluding material testing. Additionally, AGDC will look to refine its construction planning and logistics for how to best construct this megaproject as quickly and as low cost a timeframe as possible. The overall goal is keep ASAP a viable project and for AGDC to work cooperatively and collaboratively with the Alaska LNG Project over the next 15 months until the decision is made on whether to proceed into front-end engineering and design (FEED) for the Alaska LNG Project.

MR. FAUSKE pointed out that the ASAP Project spend plan is a reduction of \$90 million, down to a plan of \$60 million. He said AGDC started on this several months ago because it made no sense for AGDC to get way ahead of the Alaska LNG Project and hold an open season and other things as there would be no participation. This tied in fairly well with Administrative Order 271 in which Governor Walker requested projects to reduce

their spend plan; he offered his belief that the budget which came out yesterday has the [\$60,426,417] dollar amount. This has been ongoing work that extends the schedule but keeps things viable and usable into the future.

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REPRESENTATIVE SEATON asked if calculations have been done on whether doubling the volume to 1 billion cubic feet a day would be commercially viable for selling to mines or for LNG.

MR. FAUSKE answered that AGDC is in the process of running those numbers now and has an arrangement with the Department of Revenue to utilize DOR's information on taxes on gas given that there are a lot of different calculations. He commended DOR and the administration for availing these numbers so that AGDC didn't have to waste time and energy developing mathematical models to make this determination. Data has been submitted to DOR and information from DOR should be received by AGDC soon.

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MR. RICHARDS highlighted ASAP's revised schedule (slide 16) that would align the two projects. He said the original timeframe had the ASAP Project moving through a recourse tariff filing with the Regulatory Commission of Alaska with a sanctioning decision to be made in fourth quarter 2016 and completion of the project at the end of 2021. Now the ASAP schedule is deferred to align with the Alaska LNG Project's FEED decision in first quarter 2016. If the Alaska LNG Project proceeds forward, the ASAP Project will not. If the Alaska LNG Project does not proceed forward, then the [ASAP Project's] revised timeline to look at the commercial interest, to look at the redesign, and to go through the tariff filing as well as the execution or construction, puts the first gas at third quarter 2024.

MR. RICHARDS presented AGDC's corporate focus (slide 17) for the next year and a half in advancing the ASAP and Alaska LNG projects. He said AGDC's key focus is developing transferrable and durable work that can be used on either project in order to meet the intent of getting gas to Alaskans as quickly as possible. Also, AGDC was funded to protect the state's 25 percent ownership in the Alaska LNG Project, which AGDC is taking very seriously. Additionally, AGDC wants to be able to use its leverage to continue to build on what it has developed for the ASAP Project and what it can develop for any pipeline project moving forward, and that is keeping the ASAP Project as

a viable alternative. Further, AGDC will be working to keep abreast of all of those Alaska LNG Project components to ensure that AGDC is protecting the state's interest - from the LNG through the pipeline and into the gas conditioning facility.

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REPRESENTATIVE JOSEPHSON, regarding protection of the state's interest, noted the state has the opportunity to make a decision at the end of 2015 on the equity option on the TransCanada partial share. He asked at what point the state would have to invest the \$2 or \$3 billion to exercise that option.

MR. DUBLER replied that the real spend starts in FEED and the projection is about \$1-\$1.5 billion. Assuming TransCanada is still involved the state's 25 percent would be \$400 million if, for purposes of easy math, a figure of \$1.6 billion is used. TransCanada would pay the midstream portion of that and if the split is, say, 50/50, AGDC would need about \$250 million at that point. He said FEED could start as early as second quarter 2016, although that is a very optimistic date.

MR. TANGEMAN clarified that at that point the state will have the option to either buy in for 40 percent or to buy out TransCanada so each goes separate ways. If buying into the project at 40 percent, the state will owe TransCanada 40 percent of the cost to date and then will take over 40 percent of the pipeline and gas treatment plant (GTP) costs going forward. The buying out option would be complete 100 percent reimbursement to TransCanada. Responding further to Representative Josephson, he clarified that in the buy-in option the state would basically be buying 40 percent, TransCanada would be keeping 60 percent, and both parties would proceed as partners.

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MR. RICHARDS moved to slide 18, continuing his discussion of AGDC's corporate focus. An issue for both projects is the quantifying of in-state gas demand, he said, so AGDC is looking to get better granularity in defining what that will be for the larger communities of Fairbanks, Anchorage, and the Matanuska-Susitna Borough, as well as the smaller communities and resource developments that would be occurring along the line. Off-takes must be designed for access to the pipelines and AGDC has defined four sizes - macro, micro, mini, and nano - based on the amount of gas consumption coming from those. To look at where off-takes will be located, AGDC plans to talk to resource

developers and communities. Also, AGDC is coordinating with the other agencies - Alaska Energy Authority, Alaska Industrial Development and Export Authority, and Department of Natural Resources - as directed by the legislature to look at in-state gas access to provide energy for Alaskans.

MR. RICHARDS discussed the project funding status (slide 19), noting the legislature created two different funds for AGDC to use in advancing these two projects. The Alaska liquefied natural gas project fund was funded last year under Senate Bill 138 [AS 31.25.110], giving AGDC about \$69.8 million to cover the expenses of the cash calls that would be coming in for AGDC's representation in the LNG plant. Expenditures will be ongoing through fiscal year 2016, which is the timeframe that represents approximately the FEED decision. The in-state natural gas pipeline fund [AS 31.25.100] was appropriated to advance the ASAP Project. Approximately \$420 million was advanced through AGDC and through previous iterations with DNR and the governor's office for this project. About \$120 million was expended through fiscal year 2014. Under the aforementioned spending plan \$98 million will be expended in fiscal year 2015 and \$51 million will be spent in fiscal year 2015, leaving a projected balance in the fund of approximately \$150 million.

MR. TANGEMAN pointed out that the balance of \$150 million represents the delay, or the realignment of the two projects. It is not money that is left over, it is money that will be required in fiscal year 2016 to react to whatever the option is going forward. So, really, that \$150 million is a small, small portion of the seed money that will take the state to the next step - either the ASAP Project continuing or going into FEED under the Alaska LNG Project.

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REPRESENTATIVE TARR understood AGDC is budgeting on a calendar year and therefore, she concluded, AGDC's fiscal year 2015 is the actual calendar year 2015 rather than the state's fiscal year of July 1-June 30.

MR. TANGEMAN responded that Mr. Dubler spoke to the \$39 million in calendar year 2015. The Alaska LNG Project does budget on a calendar year, so that is where some of the confusion is; while AGDC and the ASAP Project are under a fiscal year.

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REPRESENTATIVE SEATON inquired whether the \$51 million in ASAP Project expenditure [slide 19] represents a \$200 million expenditure that is the state's 25 percent or is the total expenditure that is taking place.

MR. TANGEMAN answered that ASAP is 100 percent funded by the state so there are no other participating interests in the ASAP Project. Thus [the right column on slide 19] is 100 percent of the state funding for ASAP.

REPRESENTATIVE SEATON offered his understanding that as ASAP went forward from this point, money was being expended in a way that would coordinate with and be usable by the Alaska LNG Project. Therefore, if that project was being helped there would be a cost sharing instead of the state being a 100 percent contributor to those things that will be beneficial to or be used by the Alaska LNG Project.

MR. DUBLER replied that this represents the entire expenditure AGDC is anticipating in those years. According to the attorney general's office, he explained, any reimbursements to AGDC from the Alaska LNG Project for work would be general fund revenues and would come back into the treasury. These figures therefore represent the amount that is spent and anything reimbursed is a revenue back to the state.

MR. FAUSKE added that the reimbursement revenue "could be re-appropriated to the project" depending on the desire of the legislature and the governor at that time. Revenue will be generated through the sale of assets and negotiations and that money will flow back to the state; AGDC is not authorized to expend reimbursements. Those dollar amounts will be reported to the legislature and the legislature will deem what to do with those funds.

REPRESENTATIVE SEATON said that the reporting back will be beneficial to legislators understanding the net values and the net contribution to the state.

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REPRESENTATIVE JOSEPHSON observed that one of the five AGDC objectives listed on slide 4 is to commercialize Alaska's North Slope gas resources. He understood from a meeting yesterday that a new DNR section will be run by [DNR Deputy Commissioner] Rutherford and this section has about eight staff and has the same objective. He presumed that Ms. Rutherford's work is to

represent the sovereign interest and is sort of a political arm of the government and that AGDC is representing the partnership share. He said he wants to be confident that there is a "red phone" in the lines of communication and everyone understands what the other side is doing.

MR. DUBLER replied that, from AGDC's perspective, the objective to commercialize Alaska's North Slope gas resource is to build a pipeline to allow DNR to commercialize the natural gas via gas sales contracts where ever the gas is sold, which AGDC assumes will be Asia or some other country. For DNR to be able to commercialize the North Slope natural gas resource there must be some mechanism to get that gas to market and that is where AGDC comes in. He said AGDC is working closely with DNR and DOR through the state gas team, which has weekly phone calls between himself and the head of the project team for the Alaska LNG Project to ensure coordination on things like testimony in committees and alignment of perspectives at commercial meetings to make certain that AGDC is representing the appropriate position for the entire state.

MR. TANGEMAN added that Deputy Commissioner Rutherford is part of that team and is participating weekly.

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REPRESENTATIVE TARR recalled Mr. Steve Butt's statement that the Alaska LNG Project is progressing and people are working through the areas of disagreement. However, Mr. Butt said he is not the right person to talk about any individual disagreements and the project sponsors need to talk to the committee about that. She inquired whether AGDC has any comment on that since the state has representation on the teams.

MR. FAUSKE answered that he sits at a fairly high level on these negotiations and as a member of the sponsor's team. He said there is always going to be project issues versus ownership issues. A great deal of progress is being made in what he would term as a very honest effort to move forward. There is no secret that there are areas of tension between producers, they are competing companies, but it is a healthy tension and the state is well represented in that it is at the table, has a vote, and can serve in a capacity to help bring about certain longstanding disagreements and remind people moving forward. This is a great effort going forward, he said, and he has testified in the past that he is really anxious about first quarter calendar year 2016 at the completion of FEED. There is

a period that could go as long as a year prior to the FEED decision. This is a major decision by all parties involved, it is a major project. The attempt that is going forward now is worthwhile and things are moving well, and if he thought things were "going south" he would say so. Even in light of declining oil prices, these companies are used to cycles like this and they have 20-year to 50-year plans.

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REPRESENTATIVE JOHNSON noted it has been heard throughout the presentation that [the projects] are working together. However, it is heard from people out there that [the state] cannot afford two pipelines and funding both pipelines is silly. He requested AGDC to outline that [the projects] are working together and will eventually merge such that either the ASAP Project or the Alaska LNG Project moves forward, thereby not wasting the investment being made now [by the state].

MR. FAUSKE replied he believes that not enough is known at this juncture to make an either/or decision. He said he believes [the state] has never been this far down the trail. He further believes that if [the state] gets hasty in its decision that one has to go in deference to the other, people are then ignoring the cooperation that exists between the two projects and the sharing of data. Under AGDC, ASAP has accumulated about \$70 million in assets, the vast majority of which can be used on the other project. If the other project were to cease and desist for any reason, [the state] has not harmed itself. The state would have viable engineering and technical data that could move the project forward. These are tough budgetary times, he allowed, but it "costs far more to do nothing than to find ourselves once again standing at the curb without a project going forward". He recommended staying the course because it is not that much farther down the road and there will be much more data to present and maybe more definitive rationale as to how a project will go forward. The legislature controls ASAP and has created an entity that is doing its job and that has produced valuable assets for the legislature and the people. The legislature is a partner in the other project, but does not have total control. To relinquish control of something in deference to one where [the state is] a partner is risky business at this time until more is known about what the other project is going to do. That is in no way to be a deferential comment towards the other project, he qualified, as there is great work going forward but not enough is known yet.

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REPRESENTATIVE HAWKER thanked Mr. Fauske and the AGDC team and said he recognizes the critical contributions made by DNR and DOR in working with the AGDC team. He said AGDC has truly executed the vision and direction that the legislature demanded of it in House Bill 369 and House Bill 4. Whether the ASAP Project does become viable as a backup project or whether it is continued and moved into alignment with a project of greater scope has always been the mission given AGDC. It has always been about getting it to be the right size project for the future of Alaska. Passing Senate Bill 138 last year was a critical step in moving the larger aligned project forward, but sight must not be lost on the need to ensure that there is a fallback position. Over the past few years legislators have directed a process that has made unprecedented success in getting Alaska's North Slope natural gas to market. More important, the legislature has not lost sight that its responsibility is to get that energy into the hands of Alaskans who need it. He offered his hope that nothing is allowed to happen to this project that turns this incredible success into failure again, concluding that "we are really on the verge of accomplishing our great task".

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REPRESENTATIVE HERRON concurred with Representative Hawker. The bottom line, he added, is that the 29th Alaska State Legislature expects, wants, and will work hard to keep the gasline projects on time and on budget.

REPRESENTATIVE TARR understood the legislature does not have to consider an appropriation this year for any operating expenses because everything was previously funded.

MR. TANGEMAN confirmed AGDC is not requesting any appropriations and does not have any bills before the legislature.

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ADJOURNMENT

There being no further business before the committee, the House Resources Standing Committee meeting was adjourned at 2:40 p.m.