SENATE FINANCE COMMITTEE
January 29, 2014
9:05 a.m.

9:05:28 AM

CALL TO ORDER

Co-Chair Kelly called the Senate Finance Committee meeting to order at 9:05 a.m.

MEMBERS PRESENT

Senator Pete Kelly, Co-Chair
Senator Kevin Meyer, Co-Chair
Senator Anna Fairclough, Vice-Chair
Senator Click Bishop
Senator Mike Dunleavy
Senator Lyman Hoffman
Senator Donny Olson

MEMBERS ABSENT

None

ALSO PRESENT

James Armstrong, Staff, Senator Pete Kelly; Mike McKinnon, Owner and Manager, McKinnon and Associates; Mike Hoffman, Executive Vice President, Association of Village Council Presidents; Christine Klein, Chief Operating Officer, Calista Corporation.

SUMMARY

PRESENTATION: RURAL TRANSPORTATION INFRASTRUCTURE DEVELOPMENT - INNOVATIVE SOLUTIONS TO LOCAL TRANSPORT NEEDS

9:05:38 AM

Co-Chair Kelly discussed the agenda for the day.

JAMES ARMSTRONG, STAFF, SENATOR PETE KELLY, introduced a video as a joke.

Co-Chair Kelly highlighted the topic for the meeting. He noted that it could be difficult to locate an infrastructure project that took care of multiple issues.

9:08:54 AM

^PRESENTATION: RURAL TRANSPORTATION INFRASTRUCTURE DEVELOPMENT - INNOVATIVE SOLUTIONS TO LOCAL TRANSPORT NEEDS

9:09:27 AM

MIKE MCKINNON, OWNER AND MANAGER, MCKINNON AND ASSOCIATES, introduced his colleagues. He communicated the intent of the presentation. He provided detail about the role the Department of Transportation and Public Facilities (DOT) played in transportation infrastructure in the state. He read opening remarks titled "Rural Transportation Project Development" (copy on file):

> We are here to present on recent developments in local and regional transportation project delivery by request of the committee. We would like to make a short introduction and then turn to a series of slides to talk about projects.
>
> First, though a few words about the role DOT&PF plays in rural Alaska transportation infrastructure. DOT&PF has developed transportation projects in just about every rural community, especially with regard to the aviation system. The runways that they have built over the last 30 years, especially the upgrades in the last 10 years, have created an exceptional runway network.
>
> This is not only a vital community service, the runway upgrades have also allowed rural air carriers to invest in new aircraft and navigation systems that are growing their businesses and significantly improving safety and service levels.
>
> The project teams in the regional offices who work on these projects have also brought their expertise to local and regional level road projects. Projects over the last 15 years include reconstructing the state-owned main roads in most rural hub communities, and road projects that came to the department through its project selection processes and through directed

appropriations under the 2005 SAFETEA-LU highway reauthorization act and other legislation.

DOT&PF has also built many small community roads in the last 20 years, focusing on high-value health-related roads serving landfill, water source and sewer system developments. And, the department works with coastal communities on port and harbor projects, and has a continuous effort underway to improve and maintain Alaska Marine Highway System shoreside facilities. The role of DOT&PF in rural Alaska is far-reaching and their teams are expert in their tasks.

Yet, with a primary mission of major infrastructure development and repair, DOT&PF will not be able to address community road needs in the near future.

In 2005, partly in response to local needs, SAFETEA-LU included new funding for rural Alaska communities through the Tribal Transportation Program, and the Denali Commission. More recently new highway bills provided additional funding through, economic recovery and stimulus programs. The state has participated in most of these programs through matching fund appropriations and direct grants to communities and tribal organizations. Collectively, these funding sources have provided rural communities with an opportunity to improve local transport systems.

Over the last 8 years, rural roads and waterfront development projects across the state have totaled in the range of $50,000,000 a year. While a significant portion of this funding has gone to communities along the road system and coastal communities served by the Alaska Marine Highway System, about half has gone to communities off the road network in western and arctic Alaska.

Some larger communities quickly developed the ability to manage local road projects, but in most cases, boroughs and regional tribal non-profit organizations have taken the lead in project development.

They developed transportation departments, and through training and hiring, now have a solid record of successful local and regional road projects. The regional tribal non-profits, including ICAS, which

works with the North Slope Borough; Kawerak, based in Nome and AVCP, based in Bethel; have developed good working relationships with the Federal Highway Administration (FHWA) who provides technical support and most coordinate their work with DOT&PF, DCCED and other state agencies who provide funding and technical support. In addition, Regional Native Corporations have contributed to success of these relatively new programs through technical support and in some cases, local road building materials supply.

9:15:19 AM

Mr. McKinnon finished providing prepared remarks:

> Most important, in remote areas where shipping in gravel and other road building material can cost 40% of overall project costs, communities and transportation departments have come up with some very cost-effective solutions to standard road improvements, which we will review this morning.

Co-Chair Kelly relayed that there were two parts to the project. He detailed that one related to the Kalskag Road, which had implications for energy costs for rural Alaska, Fairbanks, and a large portion of the state. He asked the Mr. McKinnon about information related to "hubbing."

Mr. McKinnon replied that the topic was related to three things. The first item was about cost-effective solutions to local transportation needs. The second item related to connecting roads between communities. The third item focused on the Yukon-Kuskokwim energy and freight corridor project, which was the effort by western Alaska to focus on infrastructure towards the Railbelt and the Fairbanks transportation hub.

Mr. McKinnon provided a PowerPoint presentation titled "Rural Transportation Infrastructure Development: Local Roads, Community Connectors, Regional Fuel and Freight Transport: Goal-Vehicle Fleet Appropriate Solutions" (copy on file). He turned to slide 1 showing a dirt road in Akiak. He relayed that since the 1980s all-terrain vehicles (ATVs) had become the vehicle fleet of villages in western, southwestern, and Arctic Alaska. Trails and pedestrian facilities had gradually become wider and were currently ATV roads. The image showed the typical mid to up-river

country where fine materials (usually sands) created an environment where no drainage existed; the roads were health and safety hazards.

9:17:50 AM

Mr. McKinnon moved to slide 2 showing a picture of a road in Emmonak, Alaska, located in the delta downriver country. In general the soils were very fine, but rain was considerably more prevalent. The ATV and truck roads had serious drainage problems especially in communities that had water/sewer haul systems, which could equate to considerable health hazards.

9:18:26 AM

Mr. McKinnon turned to slide 3. He pointed to the upper left image showing a road in Koyuk, Alaska. He discussed that local roads tended to get some elevation, drainage put in place, a good compacted base, and a dust palliative on the surfacing. He communicated that paving was too expensive and chip seal and other inexpensive surfacing materials broke down too quickly; gravel roads with a dust palliative (calcium chloride) were the most cost-effective in rural Alaska. The challenge was that roads like the one shown on slide 3 cost around $3 million to $4 million per mile; the cost was prohibitive in many cases. However, due to light traffic, the roads would last in good condition for 10 to 12 years before needing to be rebuilt; it was possible to get 15 to 20 years out of a road, but the startup costs were expensive.

9:19:46 AM

Mr. McKinnon turned to slide 4 titled "Board Roads." He explained that in lower delta country it was too challenging to put a gravel road in place. As the ATV fleet emerged the first effort had been to build small-scale board roads primarily used for hauling water and sewer and as pedestrian connectors. The roads had quickly broken down and over the past five to eight years AVCP [Association of Village Council Presidents] had been a leading organization in the engineering of longer lasting ATV roads in tundra country. He discussed that the new roads were constructed with local labor and were made with materials that could be maintained in a cost-effective way (slide 5 showed road construction in Tuntutuliak, Alaska); the roads cost

approximately $1.5 million per mile. Training that went into the building of roads helped with housing and other construction.

9:21:19 AM

Mr. McKinnon pointed to slide 6 that showed a completed project in Selawik, Alaska. The road technique was widely used in coastal and tundra regions of Alaska and represented one of the ways that local communities worked with engineering groups and regional tribal organizations to develop a cost-effective way to address transportation needs.

9:21:55 AM

Mr. McKinnon addressed how to bring communities together on slide 7 titled "ATV Roads." He relayed that the Alaska villages of Tununak and Toksook had discussed building a 7-mile road to connect the two communities on Nelson Island. The road would have cost $24 million and was not feasible. However, ATV roads cost approximately $300,000 per mile and the road between Tununak and Toksook had been completed recently for $2.1 million.

Co-Chair Kelly asked for a comment on how the side-by-side ATVs impacted transportation in rural Alaska [shown on slide 7]. Mr. McKinnon replied that ATV roads were safer, reduced driver fatigue, reduced wear and tear on vehicles, and significantly reduced fuel use. The farthest practical distance for an ATV driver was between 10 and 12 miles. The ATVs shown on slide 7 were slightly heavier, but they could be enclosed; the distance between communities could be up to 20 miles and could be cost-effective and comfortable for drivers.

Co-Chair Kelly asked for verification that the cost could be reduced from $3 million per mile to $300,000 per mile to accommodate ATVs traveling short distances. Mr. McKinnon replied in the affirmative. He added that the solution was appropriate to the current vehicle fleet.

Co-Chair Kelly observed that many communities in rural Alaska did not need roads that could accommodate pickup trucks; roads could be engineered for the existing ATV fleet. Mr. McKinnon answered that a family in one of the villages probably had a snow machine, skiff, and an ATV,

which was a very appropriate way to respond to the conditions. He stated that the ATV road program had been successful in accommodating needs in rural areas.

9:25:02 AM

Senator Dunleavy discussed the costliness of the new ATVs and surmised that rural residents may ship pickup trucks that were less costly out to villages. He noted that the roads were not constructed for heavier trucks. He wondered how to prevent the potential problem.

Mr. McKinnon answered that it was not practical to drive trucks on the ATV roads because the roads would break apart. He noted that the vehicle fleet evolution would create the need for various types of infrastructure in the future; however, in the current environment the solution provided a good balance between access and cost.

9:26:32 AM

Mr. McKinnon moved to slide 8 showing images of geo-grid roads in Kwigillingok, Alaska, which cost approximately $300,000 per mile. Materials for the roads could be shipped in and assembled and maintained by locals. He stated that the issue of capacity was addressed by the technology itself; manufacturers worked with rural communities to ensure that projects were successful. Kwigillingok had a board-road system and ATV roads, which were used for three purposes including local streets, skiff launching area access, and roads between communities.

9:27:40 AM

Mr. McKinnon addressed slide 9 showing four images of bridges. He discussed the challenge of getting over water courses. The upper photos showed a bridge outside of Kobuk, Alaska; previously residents had driven through the creek to access jobs in the Ambler mining district. Driving over the creek particularly in the spring and winter presented a safety hazard. The new bridge had been flown to the community and constructed for $250,000. He communicated that the bridge had changed the nature of transportation between jobs and the community. The lower images showed a road development between Tununak and Toksook Bay. The image on the lower left showed the old way of crossing water courses and the lower right image showed new bridges that

had been constructed. He added that the $2.1 million for the 7-mile road included the cost of the bridge structures.

9:28:47 AM

Mr. McKinnon directed attention to slide 10 showing a subsistence access road out of Hooper Bay. He explained that the road stabilization came from regrowth of tundra into the grid material. The road shown on slide 10 was three years old and was heavily used. He shared that once traffic became significant a second lane of the product could be added; a safety zone could be created in areas where traffic increased. There road material provided a real solution to connecting communities and accessing subsistence-use areas.

9:29:47 AM

Mr. McKinnon moved to slide 11 that showed an image of a forested hillside road in Southeast Alaska. The road was eight feet wide, had a drainage system, and could accommodate ATVs passing one another and a pedestrian. He turned to slide 12 titled "Community Connector Roads." The slide included a list of road projects throughout Alaska. He mentioned the Noatak to Red Dog Mine road. Road construction from Stevens Village to Dalton Highway had not moved forward because building on the river bottom would have cost approximately $7 million per mile. He pointed to the Atmautluak-Kasigluk-Nunapitchuk ATV road connectors in Yukon-Kuskokwim region. He noted that the Calista Corporation had worked on community clustering and community connection. He relayed that the first generation connections would lay the base for future development.

9:31:15 AM

Mr. McKinnon pointed to slide 13. He discussed the Noatak to the Red Dog Mine route and shared that DOT had developed a good alternative. He stated that the idea was a good future project that would cost approximately $100 million. He detailed that the mine received inexpensive fuel by ship; 300,000 gallons of fuel per year would be available for Noatak. A serious look had been taken at snow-cat operations for winter-haul; he believed winter-haul deserved more attention until roads became more cost-effective or appropriate.

9:32:12 AM

Mr. McKinnon directed attention to an image of Hooper Bay on slide 14. The image showed a basin that was only available at high tide. He detailed that the Alaska Village Electric Cooperative had worked with AVCP and the Denali Commission to dredge the basin for materials that were used in a tank farm in the village. The basin was primarily used for commercial Halibut fishing vessels.

Senator Olson thought the image on slide 14 was of Nunavik, Alaska. Mr. McKinnon corrected that the picture was of Mekoryuk, Alaska.

9:33:03 AM

Mr. McKinnon addressed slide 15 showing a tram project built by the Bureau of Land Management (BLM) in the 1950s between a lake and a slough providing access to an inlet.

MIKE HOFFMAN, EXECUTIVE VICE PRESIDENT, ASSOCIATION OF VILLAGE COUNCIL PRESIDENTS, interjected to speak to slide 15. He referred to safety and the reduction of energy costs. The project had been brought to AVCP by the villages. Slide 15 showed a tram that had been built in the 1960s, which had become dangerous over the years. Subsequently the villages had asked for the project to be included in the Denali Commission; the project had been completed the past summer. The new tramway was 400 feet and allowed for the crossing to Chevak and the Yukon River into the prime subsistence area. He shared that people were happy with the change. He relayed that AVCP worked to find projects that would help as many communities as possible.

9:35:18 AM

Co-Chair Kelly asked how long the tram was. Mr. Hoffman replied that the tram was 400 feet long. Co-Chair Kelly asked where the tram was located. Mr. Hoffman answered that the tram was located outside a village near Baird Inlet.

Senator Hoffman remarked that there was no road map in the area.

Mr. McKinnon discussed that the project was an example of local communities working with the regional tribal organization and with other tribal organizations and

boroughs to come up with vehicle fleet appropriate solutions for transportation. Slide 16 showed the winter construction of a launch ramp in Wainright, Alaska. The ramp had been designed to provide search and rescue access at all stages of the tide. He detailed that skiffs and other vessels had not been able to access the water at all tides. The project was an example of evolving cost-effective projects.

Mr. McKinnon pointed to four images of barges on slide 17. He detailed that barges were the primary source of freight for rural communities including fuel, construction materials, and containers. The lower right image showed the Bethel barge landing. He relayed that the tug companies were tremendous experts at their line of work; the work was challenging and expensive. He explained that tugs kept their power on and held the barge into shore the entire time. Shoaling occurred in the area and presented a navigation hazard in rivers and sloughs. He pointed to other worker safety and transfer issues.

9:38:09 AM

Mr. McKinnon communicated that subsequently local communities had expressed the need for mooring points (slide 19). He had worked with the engineering and construction firm STG Incorporated to develop a mooring point system. He described the system as a 30-foot piling cut off below ground with a large chain attached; the barges could tie onto the chain. The design was developed to prevent snow machines from accidentally striking above ground objects. The mooring points had been installed in approximately 30 to 45 communities. The barge companies were happy with the installations that had improved worker safety and had reduced environmental impacts and shoaling.

9:39:18 AM

Co-Chair Kelly pointed to slide 21 titled "Yukon-Kuskokwim Freight and Energy Corridor" and remarked that an easier name for the project was needed. Mr. McKinnon replied that one consideration was Portage Mountains Corridor.

Mr. McKinnon looked at slide 21 and relayed that the corridor was a major regional project that sought to combine the Yukon and Kuskokwim River fuel and freight markets and to direct the markets back to a transportation

system that was centered in the Fairbanks transportation hub.

Senator Bishop asked about permit requirements for the boardwalk and/or mats. Mr. McKinnon replied that it had become clear that communities were not interested in a drawn out environmental process where "difficulties rule the day." The communities were interested in finding a solution to the transportation problems. He stated that there seemed to be a fairly straight forward environmental process. He continued that ATVs in particular could cause environmental damage if they did not have a grid structure built to drive on. He communicated that environmental agencies, the Fish and Wildlife Service, the National Park Service, and others had been cooperative and productive in the building of elevated board and ATV roads that reduced environmental impact.

Senator Bishop expressed his desire to learn more about issue further at a later time.

9:42:03 AM

Vice-Chair Fairclough pointed to the image of a bridge outside of Kobuk. She referred to Mr. McKinnon's testimony that the bridge provided jobs to Ambler and cost $250,000. She wondered if the bridge met DOT standards and if ATV roads had been adopted under the those standards.

Mr. McKinnon replied in the negative. He explained that the standards that applied to the structures were drawn from national park and recreation uses. He used Perseverance Trail in Juneau as an example where a similar bridge may be found. The standards applied to trails and not roads. He did not know if DOT had adopted or developed similar standards. He added that the project (outside of Kobuk) had been done with the Northwest Arctic Borough and the Denali Commission.

Vice-Chair Fairclough observed that the old boardwalk standard was horizontal and had changed to vertical. She asked if the change was an evolution of design. Mr. McKinnon replied that the change occurred in response to heavier vehicles and increased traffic. He explained that the boardwalks needed to be large enough to accommodate pedestrians and two vehicles passing each other. The boardwalks were larger and were developed with a piling

system with an adjustable cap that would enable issues such as permafrost to be dealt with in the future.

Vice-Chair Fairclough asked if the grid was rubber-based. Mr. McKinnon replied that the grid was made of nylon. Vice-Chair Fairclough wondered if the material was pliable. Mr. McKinnon answered that the material was rigid but it was flexible over the length of the eight-foot sections. He explained that the material may be doubled up in boggy areas. The grid would flex with a vehicle, but clampings on each end reinforced the structure to make it sound.

Vice-Chair Fairclough asked where the material was manufactured. Mr. McKinnon replied that the material was made in the U.S. He did not know the specific location.

Vice-Chair Fairclough wondered if the material could be manufactured in Alaska. She thought that extra tires could be used in the structures if the material was made of rubber.

Senator Bishop noted that there was a supplier and manufacturer in Fairbanks.

9:46:14 AM

Senator Olson asked about impacts the materials had on permafrost. Mr. McKinnon answered that there were no adverse impacts on permafrost. He detailed that the structures had been used extensively in Barrow and there had been no negative impacts there or in tundra areas.

Senator Olson discussed dealing with tides in the barge industry. He wondered how barges were dealing with the issue. Mr. Hoffman answered that the structures were used for rivers and ocean locations; they were more effective on the rivers. He used the Kwethluk River as an example where barges had to deal with the tide and the river activity. Barges held with their engines. There had been a number of villagers tossed from their boats in the night as a result of hitting shoals. The issue was one of the primary reasons for working to put the mooring points in. The mooring points worked out in Tununak, Hooper Bay, Nunavik Island as well. He discussed that barges wanted to get in and out on the tides; everyone was cognizant of the timing of the tides. He added that the mooring points did help with the tides.

9:48:52 AM

Mr. McKinnon communicated that the barge operations were expertly run, but they did contribute significantly to the cost of fuel and freight delivery in western and Arctic Alaska. The communities in the Kuskokwim area had asked AVCP to look at the Portage Mountains route that had been in place for generations; the route was between the Yukon and Kuskokwim Rivers at their narrowest locations. The state had provided a grant for reconnaissance engineering on the project and had subsequently provided a grant for the corridor planning. He explained that the corridor plan was a new step in the Federal Highway Administration's (FHWA) project development process for major projects. The administration had been challenged by the fact that sometimes ideas were taken to the National Environmental Policy Act (NEPA) and NEPA was then used as a way to find a transportation solution. He elaborated that FHWA had promoted and AVCP had adopted an interim step called the Corridor Plan that allowed for the investigation of a practical solution; the solution was then taken into the design and NEPA process.

Mr. McKinnon turned to slide 22 titled "Railbelt-Based Transportation System." The proposal was to use existing barge operations and to connect the Yukon and Tanana Rivers back to the Fairbanks transportation hub.

9:50:54 AM

Mr. McKinnon looked at slide 23 titled "2014 Select Corridor for Design." He communicated that the Portage Mountains connection provided near to corridor material sites along the entire length, which was unique from typical construction in western Alaska; the Portage Mountains represented a unique geologic feature that may be the reason the rivers had remained separate. The last six to seven miles were on the river. He mentioned that material would be brought from the Portage Mountains to address the floodplain zone. He stated that six miles was a reasonable haul distance for material. He noted that along the corridor mountain zone there were two to three miles of typical material haul. The availability of material began to point at the idea that the construction project was practical.

9:52:17 AM

Mr. McKinnon moved to slide 24 related to design criteria. He wanted to build a commercial vehicle road; the route would be seasonal coinciding with the barge operation. The route would not be open to ordinary vehicles because pliability was reduced if commercial freight and fuel operation were the only vehicles on the road; safety was also enhanced significantly. He shared that there were many operational characteristics about a commercial vehicle road that pointed favorably in the project's direction. The barge port in Kalskag was in place and port on Paimiut Slough would require sheet pile supporting and would have upland staging. The project was looking at a barge-to-barge pipeline transfer system. Additionally, there would be a small diameter pipeline buried for the use of fuel transfers.

9:53:23 AM

Mr. McKinnon looked at slide 25 and shared that LiDAR and aerial surveys had been completed the prior year. The surveys created a 3-D digital terrain model of the existing ground. The product was currently available for the entire design process; it allowed for the development of corridors to very specific standards without further expensive survey work. The tool would allow for the development of specific cost estimates and would help deal with environmental, cultural, and engineering issues early on in the process.

9:54:34 AM

Mr. McKinnon moved back to slide 23 titled "2014 Select Corridor for Design" to address different design corridors. The focus had been on Corridors B and C; Corridor D was a component of Corridor C. The challenge with Corridor D was the absence of a port on the Kuskokwim River. Two ports would need to be constructed. Additionally, the terrain was lower and had a larger floodplain. Corridor E was state-selected land originally designed to access a mining district to the northeast. The corridor was still in consideration in the event that land issues or other withdrew Corridors B and C from the running.

Co-Chair Meyer asked about Corridor B that went partly through the Yukon Delta National Wildlife Refuge. He wondered if it was a concern. Mr. McKinnon replied that

originally there had been a Corridor A that had gone through the refuge. He explained that AVCP had worked closely with the U.S. Fish and Wildlife Service and had eliminated the corridor. Very careful decisions to move Corridor B out of the U.S. Fish and Wildlife Service managed area had been made; the corridor had been moved to Calista and Kuskokwim Corporation land.

Mr. Hoffman elaborated that AVCP had worked with the U.S. Fish and Wildlife Service since the project's inception. Fish and Wildlife had relayed that it would not have a significant issue if the corridor moved over five miles (out of the refuge). The organization had partnered with Fish and Wildlife and kept it informed of every step of the project.

9:57:15 AM

Senator Bishop asked if Corridor B or C offered a better cut and fill opportunity that would allow for a less expensive road. Mr. McKinnon replied that Corridor B was on outstanding road-building land. He referred to photos on slide 26; the left photo showed the foothills of Corridor B and the right photo showed foothills in Corridor C.

Mr. McKinnon noted that the Kuskokwim River communities directly served by the project could grow over time. The communities were moving approximately 17 million gallons of fuel and freight annually; the Yukon was moving about 10 million. The goal was to look at the business model of combining the markets and bringing them to the Railbelt to find a cost-effective way to move fuel down the rivers. He added that there was a 35-mile link between the rivers, which was a very reasonable distance to move fuel and freight (especially by pipeline). The objective was to select one of the corridors by December 2014; there was a series of criteria primarily related to engineering, environmental, local uses, and cost.

9:59:32 AM

Mr. McKinnon finished on slide 27 titled "Yukon-Kuskokwim Freight and Energy Corridor." Once the corridor plan was complete the project would move into the design phase, which was planned for completion in 2019.

Co-Chair Kelly asked how the project would impact the Railbelt. He mentioned an Anacortes route versus an Interior route that would provide fuel to the areas. Mr. McKinnon replied that there were 3,000 miles between Anacortes and Bethel, 2,000 miles between Anchorage and Bethel, and 800 miles between Bethel and Fairbanks. He expounded that transportation security was an emerging issue. Trying to prepare western and Arctic Alaska to participate in the natural gas economy evolving in the state that would be focused on the Railbelt was a project goal. Part of the business plan investigation was to look at the cost-effective opportunities that natural gas could provide to the refineries in the Fairbanks area and to produce gasoline and diesel for instate use.

Co-Chair Kelly pointed out that without gas the plan did not buy the state much due to the higher cost of refining in Fairbanks rather than Anacortes. Mr. McKinnon answered that AVCP and the region recognized that the project would prepare Alaska for the natural gas economy. He added that the caveat was that a generation of opportunity was lost if project design was not ready when construction opportunities presented themselves. The objective was to be as prepared as possible to position the state for changes that may arise resulting from gas arriving in Fairbanks.

Co-Chair Kelly asked for verification that when fuel arrived at the mouth of the Kuskokwim and Yukon Rivers it had to wait for ice to flow out. He wondered if the issue was a problem. Mr. McKinnon answered that it got complicated quickly. He detailed that when a mainline barge was brought into Kuskokwim Bay it had to wait for seasonal ice to move out. He pointed to navigation hazards between the area and Bethel; therefore some of the fuel had to be lighted off to villages along the way. He stated that holding a mainline barge for lightering was cost prohibitive and inefficient. Once the barge reached Bethel it was offloaded and redistributed upriver and downriver throughout the season.

Co-Chair Kelly surmised that the plan would need to anticipate a road or railroad from Nenana to Tanana.

10:03:25 AM

Mr. McKinnon answered that three strategies were currently under consideration. The first was to use the current

Nenana barging system that would require a fuel pipeline or railroad to transport fuel to the location from refineries. The second option was to go to the laydown yard at a bridge on the Yukon River; there were some navigation issues that would need to be looked at between the bridge and Tanana. Third, DOT was currently looking at an option that would involve an extension of the Elliot Highway to a point across the river from Tanana. One strategy would be to truck fuel to the barge landing at the terminus of the extended Elliot Highway.

Co-Chair Kelly observed that the laydown yard option at the Yukon River was attractive because it was in place. He noted that it was a long distance between the yard the next village that would need fuel. Mr. McKinnon responded in the affirmative. Once fuel made it on the barge the transportation was more efficient than highways. He noted that getting the fuel on the barge was the key.

Co-Chair Kelly asked about the amount of fuel. Mr. McKinnon replied that the fuel was 27 million gallons. Co-Chair Kelly asked about truck traffic that would be required to get the fuel from a refinery in Fairbanks to the Yukon. Mr. McKinnon did not currently have the answer; there was currently a team working to determine the information.

Co-Chair Kelly asked if the traffic would be substantial. Mr. McKinnon replied that there would be significant traffic. He detailed that it would be most effective to move fuel by pipeline or rail to the barge terminus.

Co-Chair Kelly asked if a barge could get through the confluence of the Yukon and Tanana Rivers. He thought the area was shallow and difficult. Mr. McKinnon believed there was a four-foot draft.

Senator Bishop interjected that the area was called Squaw Crossing; there was currently a barge company that navigated the area daily with fully loaded fuel barges. He elaborated that it may be necessary to wait several days to find a channel because of changes that occurred on the eight-mile wide delta.

10:06:55 AM

Co-Chair Kelly asked about dredging the area as an option. Mr. McKinnon replied that the option would be looked at as

part of understanding the feasibility of each of the three strategies. He relayed that that the study would look at navigation improvement, hazard elimination on the Yukon near the Dalton Highway, and dredging the Tanana River.

Co-Chair Kelly discussed the different options available to transport the fuel. He asked for verification that all three options listed were currently under consideration. Mr. McKinnon answered that the options were all currently on the table. He pointed out that the system was designed to take advantage of existing methods of transport and existing vehicle fleets to the extent practical. He added that the road in the Portage Mountains would be seasonal like the Klondike Highway out of Skagway used to be. Use of the road seasonally would create cost-efficiencies and reduce environmental impacts.

Co-Chair Kelly wondered if freight was a significant consideration. Mr. McKinnon believed that annually there were approximately 12,000 tons of construction materials that moved on the Kuskokwim and 7 million to 8 million on the Yukon. He elaborated that moving the material out of Fairbanks by barge could be very practical if the costs of materials located in Fairbanks were absorbed in the cost of getting the entire supply of products going to Fairbanks in place. He added that the freight haul provided some opportunities.

10:10:02 AM

Co-Chair Kelly referred to talk about pipelines in different areas, generating power, and running transmission lines related to the potential opportunity with natural gas. He remarked that the proposal was the first he had seen that would include a major portion of rural Alaska in the benefits of natural gas in relatively quick time. He observed that it would be a shame if the state was not ready to take care of rural Alaska when it had billions of cubic feet of gas coming down the Railbelt. He thought the proposal may work and could lower fuel costs.

Senator Hoffman believed people needed to realize that the AVCP region was very large and was the rough equivalent of the size of Washington State. He added that Bethel served 56 communities in the area. He believed the project could be a significant game changer for the communities on the Kuskokwim and Yukon Rivers. He referred to several energy

studies conducted by Donlin Creek LLC using peat and barging fuel from the up the Kuskokwim, which would require four large barges daily when the river was running. He continued that the organization was looking at building a 24-inch gasline from Cook Inlet to Crooked Creek at the cost of several billion dollars. He believed that it was not unfeasible to look at the project as a potential for the organization. He reiterated that the project would be a great game changer for communities on the Kuskokwim River. He noted that the project could be expanded in the future to transporting building materials, freight, groceries, and other commodities to western Alaska by rail. He communicated that the people of the region were excited about the project.

10:13:13 AM

Senator Bishop communicated that the Instate Energy Committee was focusing in on the intertie delivery of Liquid Natural Gas (LNG). He expressed support for the discussed project. He discussed that the project would provide a contingency in the event of navigation hazards or low water on the Kuskokwim River. He was also looking at the delivery of micro LNG on the state's river systems and to coastal communities.

Vice-Chair Fairclough was interested in cost estimates related to the corridor project. She asked about the number of people that would benefit from the project versus the gallons or weight on the freight under consideration. Mr. McKinnon answered that the reconnaissance cost for the road, pipeline, and ports was in the range of $125 million. He relayed that it was not unreasonable to think about the idea of only building the pipeline in the first generation of work, which would be a winter construction project; it would cost around $60 million. He shared that the port facilities were cost-effective and were probably in the $8 million range. The ports would be constructed with enough piling to support a barge for the duration of a transfer.

Vice-Chair Fairclough asked if $60 million was for the pipes. Mr. McKinnon replied that the figure was for the pipeline. He expounded that the estimate was rough and the company was working on solidifying numbers. There were 25,000 people in the Calista region and about 12,000 in the western Doyon region. The project would serve approximately

12,000 people in the Calista region and over time the project could serve the entire region.

10:16:39 AM

Vice-Chair Fairclough asked whether assumptions included other projects in the area providing alternative energy. She wondered whether Alaska Energy Authority (AEA) projects had been considered. She referenced the 27,000 gallons of fuel discussed by Mr. McKinnon and noted that the state was working to displace the fuel with other renewable projects in the area.

Mr. McKinnon replied that there were two components to Vice-Chair Fairclough's point. First, the Calista region was moving rapidly towards alternative energy connecting through switching devices to upgraded diesel power plants, which would reduce fuel consumption. Additionally, the housing programs were making major improvements to weatherization and fuel use by individual homes. He continued that the Calista region population was growing rapidly; therefore, the projections showed slight increases in the use of fuel over time.

Vice-Chair Fairclough discussed the impact on the private sector barging fuel. She wondered what would happen to private sector businesses when the state began to provide lower costs. She wondered if the private sector would continue to do business and act as a backup. Mr. McKinnon answered that the question was part of the initial development plan. He elaborated that in the initial generation of work it was expected that the coastal barge operations would continue and that the project would focus on the Yukon and Kuskokwim Rivers. The substantial population in the Calista region lay on the coast primarily due to available resources. The AVCP project goal was to create a port authority or a private operation to run the Portage Mountains facility. There had been substantial conversations with the barge operators whose view was that they could continue to provide current services and they looked forward to finding out what could be done with the Portage Mountains corridor. He added that current operators on the Yukon River also worked on the coast.

10:20:21 AM

Vice-Chair Fairclough acknowledged the state's goal in providing low cost energy to rural Alaska. She was interested in the financial return if the project only benefitted 12,000 people. She pointed to migration from rural communities and noted that the state wanted to encourage individuals to live where they wanted. She wondered about the age demographic in the communities and if future generations would continue to benefit.

Mr. McKinnon replied that the population was young and growing. He relayed that future generations would benefit from the project. He reminded the committee that the number of people served would be the combination of the populations in the Yukon and Kuskokwim River areas; by combining the markets the price per gallon could drop significantly and both rivers would benefit. The Calista AVCP region had a young population with stabilized villages and growth projected in the future.

Co-Chair Kelly remarked that there had been migration in rural Alaska and that Bethel was growing tremendously. He believed the growth would continue. He surmised that the state needed to accommodate migration to rural regions since economics had encouraged it. He believed the migration was a good thing. He acknowledged pitfalls and troubles that occurred as populations adjusted. Additionally, there was a much larger population on the Railbelt that would benefit from the project. He noted that it was unfortunate that the state was allowing much of the region to buy fuel from somewhere else when it was produced in-state; he understood that it was currently too expensive. He wondered if the project could succeed and work under the current system if only a pipeline was built. He detailed that currently there was not natural gas available to produce the refined products in Fairbanks. He discussed that Nenana had been a barge hub for many years. He noted that the population served would also include mines in the area. He believed the population the project would serve was larger than 12,000 to 25,000 people.

10:24:01 AM

Co-Chair Meyer wondered if it was possible to partner with mining companies in the region such as Donlin Creek and others. He noted that there was no sense in building two pipelines in the area. He did not know whether the Denali Commission was involved and wondered about Native

corporation involvement. He believed that with partnerships the project cost could be reduced for the state.

Co-Chair Kelly discussed the financial impact to capital and operating budgets and communities. He believed moving ahead with the next steps of the pipeline was appropriate. He was interested to learn about the next step costs related to the pipeline. He believed the design was $13.9 million. He asked for verification that the money was not in the current capital budget.

Senator Hoffman confirmed that the project design money was not in the current capital budget.

Co-Chair Kelly assumed that the design and money for the next steps of a pipeline would be significantly reduced. He was interested to see the information by the end of the current session in order to help determine a plan B, which could be a pipeline on its own. He believed most of the objectives were served through a pipeline.

Mr. McKinnon agreed. He planned to have the information for the committee by March 2014. He believed the NEPA and associated design could be accomplished for a capital cost of approximately $6 million. The discussion was currently underway with the Fairbanks, Bethel, and Seattle, WA business communities relating to a pipeline versus the full project development. He relayed that project stage development was not unusual.

10:27:18 AM

Senator Dunleavy asked about estimated annual maintenance and operations costs over time. Mr. McKinnon answered that cost estimates were derived from the DOT standard of $10,000 per lane mile; by that estimate the costs would be approximately $800,000 per year. The caveat was that the road would be seasonal; there would be break open costs and costs for three months of operation each year. He believed the number would be much lower than the $800,000, but the information had not yet been determined.

CHRISTINE KLEIN, CHIEF OPERATING OFFICER, CALISTA CORPORATION, was not prepared to talk about specific projects and understood that the purpose of the current conversation was to cover different concepts for rural Alaska; she believed Mr. McKinnon had successfully outlined

the concepts. She remarked that the region was remote and vast and without significant infrastructure. The subject was complicated by land issues; there were approximately 50 communities within a park region, which made solutions difficult. She discussed the importance of looking at site specific solutions; the departments and agencies had not been very successful in the area because they were held to federal standards. She discussed return on investment for Calista shareholders and its support for the project; however, energy came first for the organization. She addressed that Mr. McKinnon and Mr. Hoffman had worked to illustrate that the project looked at the entire region and how it may integrate with other regions of the state in addition to the multi-modal aspect. She relayed that the organization focused primarily on projects that would impact the entire region, had an economic benefit, and would help the people of the region from a business perspective. She encouraged the state to complete existing projects in the queue.

10:30:57 AM

Co-Chair Kelly communicated that his meeting Mr. McKinnon and hearing about the project had come before the committee because of Fetal Alcohol Syndrome (FAS). He detailed that FAS was a statewide problem and was particularly acute in rural Alaska. He was involved in an initiative to reduce FAS; it had become painfully obvious that there were lower level needs that were not met in rural Alaska. He discussed that when taking on an issue such as FAS the first thing that needed to be fixed were lower level issues. He stressed the importance of energy costs. He encouraged the presenters to talk to the committee about "hubbing" and noted that in order to help someone it was necessary to transport them to a medical facility in another location. He acknowledged that transportation could not always occur if it involved flying from village to village to reach Anchorage. He thanked the presenters for the presentation.

Senator Olson looked at proposed corridors and wondered which one Ms. Klein (as a former DOT employee) favored. He pointed out that Aniak was a major hub community with a large airport; therefore he wondered why Corridor E was not the favored option. Ms. Klein replied that unfortunately the feasibility assessment engineering report had not yet been completed; it was necessary to wait for the information before a determination was made.

Co-Chair Kelly discussed the schedule for the following day.

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ADJOURNMENT

10:34:21 AM

The meeting was adjourned at 10:34 a.m.