

ALASKA STATE LEGISLATURE
SENATE COMMUNITY AND REGIONAL AFFAIRS STANDING COMMITTEE

February 11, 2020

3:39 p.m.

MEMBERS PRESENT

Senator Click Bishop, Chair
Senator Peter Micciche, Vice Chair
Senator Lyman Hoffman
Senator Mike Shower

MEMBERS ABSENT

Senator Elvi Gray-Jackson

COMMITTEE CALENDAR

PRESENTATION: SUSITNA-WATANA PROJECT

- HEARD

PRESENTATION: AMBLER MINING DISTRICT INDUSTRIAL ACCESS PROJECT

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

CURTIS W. THAYER, Executive Director
Alaska Energy Authority
Anchorage, Alaska

POSITION STATEMENT: Participated in the overview of the Susitna-Watana Hydroelectric Project.

BRYAN CAREY, Group Manager
Owned Assets/Hydro
Alaska Energy Authority
Anchorage, Alaska

POSITION STATEMENT: Participated in the overview of the Susitna-Watana Hydroelectric Project.

TOM BOUTIN, Executive Director
Alaska Industrial Development and Export Authority
Anchorage, Alaska

POSITION STATEMENT: Provided an overview of the Amber Mining District Industrial Access Project.

ACTION NARRATIVE

[3:39:08 PM](#)

CHAIR CLICK BISHOP called the Senate Community and Regional Affairs Standing Committee meeting to order at 3:39 p.m. Present at the call to order was Senator Hoffman and Chair Bishop. Senators Micciche and Shower arrived soon thereafter.

PRESENTATION: Susitna-Watana Hydroelectric Project

[3:40:21 PM](#)

CHAIR BISHOP announced the presentation on the Susitna-Watana Hydroelectric Project.

[3:40:32 PM](#)

SENATOR SHOWER joined the committee meeting.

[3:40:56 PM](#)

CURTIS W. THAYER, Executive Director, Alaska Energy Authority, Anchorage, Alaska, explained that the presentation looks at the Susitna-Watana Hydroelectric Project, which has been in abeyance since 2015. No state money has been used to further the project since then.

MR. THAYER stated that Susitna-Watana hydro would provide clean and reliable energy for the next 100 years. He paraphrased the current status of the project as it appears on slide 3:

- In 2014, Administrative Order (AO) 271 placed the Susitna-Watana Hydroelectric Project into abeyance
- In 2019, AO 306 rescinded AO 271
- No state funds were spent in Fiscal Year 2019

MR. THAYER read the State Energy Policy as it appears on slide 4:

- In 2010, House Bill 306 was passed and set an aspirational goal to generate 50 percent of the state's electricity from renewable and alternative energy by 2025

[3:42:07 PM](#)

MR. THAYER turned to slide 5 that asks, "Why Large Hydro?" He reported that in 2011, 21 percent of Alaska had hydro power and that increased to 27 percent by 2019. He acknowledged that this is clearly not the 50/50 goal that the legislature established in 2010.

MR. THAYER paraphrased the powers of the Alaska Energy Authority (AEA) under AS 44.83.080:

- (18) to acquire a Susitna River power project, whether by construction, purchase, gift, or lease, including the acquisition of property rights and interests by eminent domain under AS 09;
- (19) to perform feasibility studies and engineering and design with respect to power projects.

He noted that AEA serves as the energy office for the state.

[3:42:42 PM](#)

SENATOR MICCICHE joined the committee meeting.

MR. THAYER deferred to Mr. Carey to continue the presentation.

[3:43:08 PM](#)

BRYAN CAREY, Group Manager, Owned Assets/Hydro, Alaska Energy Authority, Anchorage, Alaska, began by providing an historical context. He related that in 2010, AEA was tasked with evaluating Susitna-Watana, Chakachamna, and Glacier Fork hydroelectric projects. Glacier Fork was dropped from consideration due to its small size and not having water storage during the winter. AEA went forward with the preliminary decision document for the Susitna-Watana site because it was more likely than Chakachamna to significantly contribute towards 50 percent of Railbelt electrical demand. It had greater winter storage capacity and fewer engineering and licensing challenges, and it appeared to be the better project to operate for 100 years.

[3:44:09 PM](#)

MR. CAREY related that most of Alaska's good hydroelectric sites, including Susitna, were identified in the 1950s. Significant studies, including drilling and fish and wildlife

analysis, were done on the Susitna River in the early 1980s but the project was shut down in the mid-1980s [because of oil prices]. Microfiche documents relating to those studies were retained and used in 2010 to restart the project. This effort continued until the governor suspended the project in 2017.

MR. CAREY displayed the map depicted on slide 9 that shows that the Susitna-Watana project is located approximately 125 miles northeast of Anchorage and 125 miles south of Fairbanks. The site is 187 river miles up from Cook Inlet, above Devils Canyon and Talkeetna. The basin drains approximately 5,000 square miles.

[3:45:51 PM](#)

MR. CAREY said the height of the dam is approximately 705 feet, assuming that bedrock is about 100 feet below the river bottom. The elevation of the dam is 2,065 feet, the length of the reservoir is approximately 42 miles and the width is about 1.25 miles. The installed capacity is 459 megawatts at the average water level with a drawdown of 200 foot. He noted that a drawdown of 100 feet produces less energy per unit of water. Energy production of 619 megawatts is achieved when the reservoir is full. The annual energy production of 2.8 million megawatt hours (MWh) is approximately 60 percent of the Railbelt demand. The cost in 2014 was approximately \$5.6 billion, a 50th percentile measurement.

[3:47:13 PM](#)

MR. CAREY explained that dam size and energy generation depends on the topography and water quantity analysis. Building a higher dam means a thicker dam and added costs, but a lower dam has less storage capacity and generates less energy.

He detailed that the Federal Energy Regulatory Commission (FERC) process required a board of consultants consisting of people that generally have 40 to 50-plus years in their specialty. The consultants reviewed the design and answered questions at critical points to make sure the project was on track. The dam was designed to withstand a probable maximum 10,000-year flood with one spillway gate inoperable, and a maximum credible earthquake within the plate in which it resides.

MR. CAREY showed a video based on engineering drawings for the Susitna-Watana Project. It shows the dam from multiple exterior and interior views. He noted that the dam spillway shoots allow for overflow conditions. He said water will ultimately cover the quarry that will be used to get rock for the dam, and that will

provide additional water storage. Turbines within the dam that provide power will take up several levels and require large quantities of concrete.

[3:51:43 PM](#)

CHAIR BISHOP said he understands that the concrete used for the Hoover Dam is still cooling.

MR. CAREY replied that is probably true.

He detailed that the video shows a boom in front of the dam that prevents debris or boats from getting too close. He noted that the construction camp would be converted into permanent homes for workers and the site would also have an airstrip for workers who commute.

[3:53:32 PM](#)

MR. CAREY explained that in 2015 Northern Economics did an economic analysis of the project, based on the 2014 projected prices of natural gas, coal, and oil. Slide 12 states that the analysis came up with a benefit-cost ratio of 2.39 from energy savings, \$11.2 billion in energy savings over the first 50 years, and \$4.7 billion in capital and O&M costs over the first 50 years, all of which are 2014 dollars.

MR. CAREY reviewed the following employment opportunities that Northern Economics projected.

- Direct jobs:
 - 5,000 preconstruction and non-construction jobs (2010-2028)
 - 12,000 direct overall construction workforce
- Local spending and statewide multiplier effects (2014\$):
 - Spending on licensing, design, and other program costs
 - Local spending: \$814,148,500
 - Multiplier effects:
 - Business sales: \$551,245,700
 - Jobs: 3,870
 - Labor income: \$204,254,400
 - Construction Spending
 - Local spending: \$2,658,465,300
 - Multiplier effects:
 - Business sales: \$1,837,133,150
 - Jobs: 11,305
 - Labor income: \$627,307,200

- o Operations Spending
 - Local spending: \$26,500,000
 - Multiplier effects:
 - Business sales: \$18,494,000
 - Jobs: 105
 - Labor income: \$6,435,000

[3:55:40 PM](#)

MR. CAREY explained that AEA used an integrated licensing process and had completed about two-thirds of the required steps before the project was suspended. There were 58 FERC-approved studies, 19 of which have been completed. Some of the studies, such as the maximum flood or seismic studies, were desktop rather than field studies. There are first-year study results from the incomplete studies and are substantially along the way toward the second year results. Once AEA finishes the FERC studies, the next steps are an impact assessment, draft license, and proposal for mitigation-enhancement measures. These measures will take several years of effort to complete.

[3:57:16 PM](#)

CHAIR BISHOP asked if the existing data could be used towards the FERC license.

MR. CAREY replied all the data is good but FERC could always request more or less data.

CHAIR BISHOP observed that AEA was two-thirds of the way through the licensing process.

MR. CAREY agreed that AEA has completed two-thirds of the initial FERC licensing process.

MR. CAREY turned to slide 15, FERC Study Plan Determination Outcome. He explained that once the first-year studies were complete, FERC conducted a review for adequacy. Several agencies requested modifications to the studies, but FERC rejected most of those requests. The project was suspended soon after that review.

[3:58:54 PM](#)

MR. CAREY displayed slide 16 that depicts the winding road of the project timeline. The slide contains the following data:

- Pre-Application Phase
 - o 2-3 years

- o Preparation, planning, collaboration, engineering, and environmental studies
- Submit FERC Application
- FERC Review and Determination
 - o 2 years
- Project Execution Phase
 - o Financing and power sales agreements
 - o Detailed design
- Construction Phase
 - o 9-11 years
 - o Construction
 - o Testing
 - o Inspections
- Operational Phase
 - o Power generation
 - o Maintenance
 - o Monitoring

MR. CAREY explained that once the FERC application is submitted, AEA could either move towards final design and site investigation or wait for the license. The construction phase is about 9 to 10 years, but power generation should start at 8 years.

MR. THAYER said it is up to the governor and the legislature to determine the next steps for the project. If it is greenlighted, determining the licensing status would be the next step. It would be necessary to update the cost estimates of the license as well as the benefit-cost and economic impact analyses. The data would then be reviewed to assure it reflects the current conditions. There will also be ongoing consultations with FERC, the landowners, and other stakeholders.

[4:00:33 PM](#)

CHAIR BISHOP asked what the estimated price per kilowatt was in 2014.

MR. THAYER answered that it was \$0.0600 to \$0.0650. He noted that Bradley Lake, which is the state's largest hydroelectric project, is about \$0.0400 to \$0.0450 per kilowatt and the cost of natural gas is approximately \$0.0800 to \$0.0850 per kilowatt.

The Susitna-Watana Project fits between the cost of natural gas and current hydro prices on the Railbelt.

SENATOR SHOWER asked if the kilowatt cost takes transmission lines into account.

MR. THAYER answered no; the cost is strictly to produce the power. The average transmission cost on the Railbelt is \$0.2000.

[4:02:09 PM](#)

SENATOR MICCICHE asked if the reservoir would flood private landowners.

MR. CAREY replied approximately 95 percent of the basin is Native corporation land with some federal land; he was not aware of private inholdings.

MR. THAYER added that AEA will provide the committee with a breakdown of land ownership for the proposed project because a lot of the land that would be flooded belongs to the Bureau of Land Management (BLM).

SENATOR MICCICHE noted that the first studies for the project were federal, which was the reason for his interest in land ownership. He asked if AEA was two-thirds of the way through the preapplication phase.

MR. THAYER answered yes.

SENATOR MICCICHE commented that the project is essentially on hold unless the governor and legislature give the greenlight to move forward.

MR. THAYER answered that is correct.

[4:03:53 PM](#)

At ease.

PRESENTATION: Ambler Mining District Industrial Access Project

[4:04:35 PM](#)

CHAIR BISHOP reconvened the meeting and announced that the committee would hear an update on the Ambler Road project from the Alaska Industrial Development and Export Authority (AIDEA).

[4:04:43 PM](#)

TOM BOUTIN, Executive Director, Alaska Industrial Development and Export Authority, Anchorage, Alaska, stated that the Ambler Road Project is a 200 mile, 50-foot wide, 50-year right-of-way road. It is one of the large projects that the previous administration halted and Governor Dunleavy restarted. He said this project would bring economic development to a region that has very little.

[4:05:57 PM](#)

MR. BOUTIN related that when he was first on the board, AIDEA financed, and still retains ownership of, the DeLong Mountain Transportation Project (DMTP) road to the Red Dog Mine. He said the Northwest Arctic Borough received \$22 million from the Red Dog in FY 2018 and he believes that the Ambler project has the immediate potential to be equivalent to four Red Dogs and 12 or 13 Red Dogs in later years. He said the financing for Red Dog was public finance for natural resource development and he believes that the Ambler project would benefit from the same model, with the debt service paid with tolls. Hopefully, the current interest rates will persist, but in any event, AIDEA is ready to do the first bond issue.

[4:08:10 PM](#)

MR. BOUTIN displayed a map of the Ambler area and detailed that the project starts at mile 161 of the Dalton Highway and heads west for 211 miles. The road crosses state, federal, and private land. It also crosses a national park which is allowed because of a provision in the Alaska National Interest Lands Conservation Act (ANILCA). He acknowledged that this could be challenged.

CHAIR BISHOP asked about stakeholder engagement with the tribes and if the alternate route is still a viable option.

MR. BOUTIN answered that the Environmental Impact Statement (EIS) is due on March 5, 2020 and the Record of Decision (ROD) will be 30 days later. The ROD will include the U.S. Army Corps of Engineers permit under Section 404 of the Clean Water Act. He added that AIDEA hired the Bureau of Land Management (BLM) to do the EIS and paid for consultant expenses.

MR. BOUTIN detailed that there were 21 stakeholder hearings that ranged from two participants up to 96 participants at the Fairbanks hearing. Each hearing averaged 29 participants. He said public participation at the hearings was like a large state timber sale without rancor or picketing. AIDEA has addressed and will continue to address concerns expressed during the hearings.

Concerns included subsistence values, lifestyle changes, jobs, and cost of living in rural areas. Many participants talked about the Red Dog Mine and the desire to bring similar jobs to the Ambler region.

[4:13:26 PM](#)

SENATOR SHOWER commented that people involved in mining operations like the Red Dog typically fly in and out. He asked if AIDEA has planned for air travel due to the traffic impact generated by the project.

MR. BOUTIN replied there is a provision for a small number of airports, but materials will primarily be moved in and out by road.

SENATOR SHOWER emphasized the importance of developing a plan to handle a significant increase in air traffic.

[4:15:12 PM](#)

SENATOR MICCICHE asked which agencies are evaluating and participating in the EIS process.

MR. BOUTIN answered that state and federal agencies have been involved. Federal agencies include the U.S. Park Service, U.S. Army Corps of Engineers, and BLM. AIDEA has funded work by the Alaska Department of Natural Resources and communicated with the Alaska Department of Fish and Game. The Alaska Department of Transportation and Public Facilities (DOTPF) received the original funding and oversight responsibilities for the project and AIDEA took over the project a few years ago.

SENATOR MICCICHE asked him to share the exhaustive aspects of the National Environmental Policy Act (NEPA) EIS process, specifically the impacts and infrastructure needs associated with Section 404 of the Clean Water Act.

MR. BOUTIN replied the EIS is for a 211-mile road with a 50-foot right-of-way and Section 404 for water quality will be part of the ROD. The EIS does not treat the mining impacts; each mine will require permitting.

[4:17:27 PM](#)

CHAIR BISHOP asked him to provide a chart of all the state and federal agencies that are involved with building the road, which crosses park, state, federal, and shareholder lands. He pointed out that to build a road now, DOTPF has to permit with 60 state

and federal agencies before construction begins and the process takes over six years.

MR. BOUTIN agreed to provide the list.

SENATOR SHOWER asked if DOTPF could provide an assessment of the project. He said he mentioned airport sites earlier because the state may be on the hook for maintaining the airports and he did not see that mentioned.

MR. BOUTIN said he would provide the information, but the road and any associated airports will be private.

[4:19:23 PM](#)

MR. BOUTIN directed attention to the map of the Ambler mining district on slide 5. He noted that the actual mineral district is about the size of the state of Delaware. He detailed that the solid line on the map shows the area that Trilogy and NANA have agreed to develop. The shaded area is NANA property. The gray area is NANA land that the corporation has options on for royalties and ownership.

He explained that the 4 stars on the map identify the most advanced of the 12 or 13 projects that have been identified. He pointed out that Alaska currently has five operating mines, and the initial Ambler mines would double that number.

MR. BOUTIN directed attention to the chart on slide 6 that shows the potential resource values identified in the Arctic, Bornite, Sun, and Smucker mines. He noted that many of the minerals that have been identified are currently in demand. These are copper, cobalt, zinc, lead, gold, and silver.

[4:21:00 PM](#)

MR. BOUTIN said Trilogy and South 32 made joint venture announcements, starting in December 2019. South 32 is a major mining investment company with \$10 billion in net assets. This project is starting out many magnitudes stronger than the Red Dog Mine when AIDEA provided financing. By contrast, capital is more readily available today and the Ambler district is more mineralized.

SENATOR MICCICHE commented that the Red Dog Mine delivers its product through Norton Sound.

MR. BOUTIN explained that the Red Dog Mine lighters zinc concentrate to transport ships for Asian and Canadian customers.

SENATOR MICCICHE remarked that someone determined that there was no feasible way to move Ambler Mining District product west for a shorter distance to a marine terminal versus east to the Dalton Highway.

MR. BOUTIN said the plan is to ship the ore to Fairbanks for rail transport to the Port of Anchorage.

[4:23:31 PM](#)

MR. BOUTIN turned to slide 8 that shows the number of jobs and income that can be expected from the four mines. He restated that the Red Dog Mine paid \$22 million in taxes to the Northwest Arctic Borough in 2018, and noted that a comparable payment in lieu of taxes (PILT) for the four mines would bring an estimated \$118 million a year.

MR. BOUTIN reviewed the following points of an industrial road as it applies to the Ambler road, which will be private.

- Ambler Access is designed to be a controlled road with limited environmental and wildlife impacts.
- It draws on AIDEA's experience with DMTS, the road and port that support the Red Dog Mine.
- The Ambler Road will use protocols similar to the DMTS with trained drivers, radio communications, and instructions that traffic stops when wildlife are spotted.
- AIDEA plans to establish a Subsistence Advisory Committee similar to that used at Red Dog Mine so that traditional and local knowledge is used during the construction and operation of the road.
- AIDEA also plans to provide other community benefits, comparable to DMTS Village Fuel Transfer program.

[4:26:03 PM](#)

SENATOR HOFFMAN inquired as to the length of the DMTS road.

CHAIR BISHOP answered that it is 57 miles.

MR. BOUTIN displayed slide 10 that shows caribou on the road to the Red Dog Mine and acknowledged that people expressed concern about this. He maintained that the Red Dog Mine is compatible with caribou and that there was no reason to believe that the

Ambler Road would be any different. He pointed out that the draft EIS states that the Ambler Access Project would only affect 0.0050 percent of the Western Arctic caribou herd's natural range.

MR. BOUTIN turned to slide 11, Not the Same as the Dalton, and stated that the Ambler Road crosses the land of six different landowners including the state, the federal government, and two regional corporations.

[4:28:13 PM](#)

CHAIR BISHOP asked if the designation "others to be determined" refers to private in-holders.

MR. BOUTIN answered that there are some private in-holders but the Ambler Road does not cross that land. It does cross major amounts of Native corporation land and AIDEA has been talking with those landowners from the beginning.

MR. BOUTIN highlighted that the enabling statutes for AIDEA talk exclusively about jobs and economic development. They say nothing about return on investment, prudent investor rule, or return on capital. He said revenue bonds are available for the Ambler Road Project and the capital markets would avidly seek the bonds if AIDEA was ready to go to market. The hope is that the capital markets are similarly favorable when the project is ready for financing.

He emphasized that the public financing for the Ambler Road Project will not use state money. It will be supported by toll revenues from some form of "take or pay" bonds so the mineral development will entirely support the project. However, AIDEA reserves the option to look at its general obligation, as it often has used in financing, if that type of credit backstop is cost effective. Decisions on financing will be made at a later date and will be viewed in the context of capital markets at that time.

[4:30:28 PM](#)

MR. BOUTIN displayed a chart of the 9 stages of the Ambler Road Project. He said stages 1-2 used funds initially appropriated by the legislature to DOTPF and subsequently to AIDEA. In October 2019, the AIDEA board approved spending \$718,000 of its capital to fund the project through the record of decision (ROD). AIDEA will use its own resources after the ROD to work with private investors for the frontend development, design, and the right-of-way (ROW) acquisition across the parcels of private land.

MR. BOUTIN stated that the AIDEA board has talked extensively with mining companies who will pay 50 percent of the costs through stages 4-6. He said stage 7 assumes a certain design success and at this point is a best guess.

He referenced his background and noted his involvement in designing and building roads through the Tongass National Forest for the Ketchikan Pulp Company. He said construction costs per mile for a road in the Ambler Mining District would be an eightfold increase.

MR. BOUTIN pointed out that natural resources are what the state has and the cost of extracting those natural resources have gone up faster than the rate of inflation. He maintained that natural resource extraction is realistically where the year-round, family-wage jobs are going to be. The cost of extraction is high, but the state provides a stable and reliable environment compared to other countries. When people take a risk on a resource in Alaska, they know the bandwidth of that risk.

[4:35:01 PM](#)

CHAIR BISHOP asked if the mining companies would pay for road operation and maintenance (O&M).

MR. BOUTIN answered yes. He noted that the Red Dog Mine pays for road operation and maintenance.

SENATOR MICCICHE said he supports mining and the concept of the project. However, understanding the structure in the details is imperative for his support. He pointed out that the legislature passed a bill called The Cook Inlet Recovery Act where the state paid more for the credits than the hydrocarbons created by the Act. He said he does not mean to compare the Ambler Road Project to The Cook Inlet Recovery Act, but the people of Alaska should know the risk and reward balance for the project. He said whatever AIDEA can provide the committee on the commercial structure for the project would be very helpful moving forward.

[4:37:21 PM](#)

MR. BOUTIN agreed to provide the requested information. He said it is useful to look at the risk and return to the borough and the state from the Red Dog Mine from inception to today because the Ambler Road Project is similar but much larger.

SENATOR SHOWER asked if there is a plan for the rural villages near the Ambler Road to have access to the road.

MR. BOUTIN replied AIDEA has a table that shows distances for all villages near the Ambler Road Project. He noted that villages near Red Dog are able to have gasoline and other resources dropped off and that has reduced gasoline prices for villages near that road by approximately two-thirds. The Ambler Road Project will have similar usage available as well as access by public safety and emergency vehicles. He said the degree to which access would be available to a community is yet to be determined. The Ambler Road is private, but the stakeholders in the area have every right to have an improvement in jobs and lifestyle if that is what they want.

[4:39:32 PM](#)

SENATOR SHOWER related that he recently attended a briefing that discussed what countries might have resources locked up. China, for example, holds 96 percent of the rare earth metals and it is not necessarily friendly to the U.S. He posited that the U.S. should consider the long-term value of rare earth metals, the lawless nature and tensions around the world, and the ability to move forward on mining projects that provide the critical resources required for everyday living. He said, "If we do not grow it, we mine it, and I think we often are afraid to build anything anymore." He emphasized that responsible mining requires risk mitigation not just for economic impacts but for national security and other things. Mining is the kind of thing that Alaska contributes for the state and the country.

MR. BOUTIN replied Governor Dunleavy is most attuned to natural resource development. He follows mining projects throughout the state and believes that jobs and increasing the gross state product are going to come from mining projects.

[4:41:54 PM](#)

There being no further business to come before the committee, Chair Bishop adjourned the Senate Community and Regional Affairs Standing Committee meeting at 4:41 p.m.