SENATE FINANCE COMMITTEE
March 26, 2025
9:01 a.m.

9:01:26 AM

CALL TO ORDER

Co-Chair Hoffman called the Senate Finance Committee meeting to order at 9:01 a.m.

MEMBERS PRESENT

Senator Lyman Hoffman, Co-Chair
Senator Donny Olson, Co-Chair
Senator Bert Stedman, Co-Chair
Senator Mike Cronk
Senator James Kaufman
Senator Jesse Kiehl
Senator Kelly Merrick

MEMBERS ABSENT

None

ALSO PRESENT

Curtis Thayer, Executive Director, Alaska Energy Authority; Tim Sandstrom, Chief Operating Officer, Alaska Energy Authority, Juneau; Senator Cathy Giessel.

SUMMARY

^ALASKA ENERGY AUTHORITY

9:02:26 AM

CURTIS THAYER, EXECUTIVE DIRECTOR, ALASKA ENERGY AUTHORITY, (AEA) discussed, "AEA Progress" (copy on file). He looked at slide 2, "AEA Board of Directors." He pointed to slide 3, "About AEA":

> AEA's mission is to reduce the cost of energy in Alaska. To achieve this mission, AEA strives to diversify Alaska's energy portfolio enhancing reliability, resiliency, and redundancy.

Railbelt Energy (Owned Assets)
- Bradley Lake Hydroelectric Project
- Alaska Intertie
- Sterling to Quartz Creek Transmission Line
- High Voltage Direct Current Transmission Line

Power Cost Equalization
- $48 Million Program
- 192 Rural Communities
- 91 Electric Utilities
- 80,000+ Alaskans

Rural Energy
- Bulk Fuel Upgrades
- Rural Power System Upgrades
- Circuit Rider Program
- Electrical Emergency Assistance

Renewable Energy and Energy Efficiency
- Renewable projects: biomass, electric vehicles, hydroelectric, solar, and wind
- Federal programs: NEVI, Solar for All, and Home Energy and High Efficiency Rebate Allocations

Grants and Loans
- Renewable Energy Fund
- Power Project Fund

Energy Planning
- Alaska Energy Security Task Force
- State Energy Security Profile
- Electronic Library
- Energy Data Resources
- 40101(d) Grid Resilience Program

9:07:51 AM

Mr. Thayer looked at slide 5, "Bradley Lake Hydroelectric Project":

- Energized in 1991, the Bradley Lake Hydroelectric Project is Alaska's largest renewable energy source. It is located 27 air miles northeast of
- The 120 MW facility provides low cost energy to 550,000+ people on the Railbelt.
- Bradley Lake's annual energy production is ~10 percent of Railbelt electricity at

4.5 cents/kWh (or 54,400 homes/year) and over $20 million in savings per year for
Railbelt utilities from Bradley Lake versus natural gas.
 The AEA, in partnership with Railbelt utilities, is studying the Dixon Diversion Project, which would increase the annual energy production of Bradley Lake by 50 percent (the equivalent of up to 30,000 Bradley Lake Hydroelectric Project)

Co-Chair Stedman assumed that the 4.5 cents/kWh at Bradley Lake was the delivery rate, and not the rate to the meter. He stressed that there should be a comparison with the rate at the meter and its equivalency.

9:10:44 AM

Mr. Thayer pointed to slide 6, "Dixon Diversion Project":

$342 Million
The AEA is studying the Dixon Diversion Project to optimize the Bradley Lake Hydroelectric Project's energy potential. Like the West Fork Upper Battle Creek Diversion Project, the Dixon Diversion Project would divert water from Dixon Glacier to increase Bradley Lake's annual energy production by 50 percent.

 Located five miles from Bradley Lake and would utilize existing powerhouse at Bradley Lake.
 Estimated annual energy 100,000 200,000 MWh (the equivalent of up to 30,000
 Estimated to offset 1.5 billion cubic feet of natural gas per year in Railbelt power generation (equal to 7.5 percent of Alaska's unmet natural gas demand projected for 2030).
 Estimated completion is 2030.

9:11:11 AM

A video about the Bradley Lake Project was played for the committee.

Co-Chair Stedman queried the FERT update on the project.

Mr. Thayer replied agreed to provide that information.

9:15:43 AM

Mr. Thayer pointed to slide 7, "Grid Resilience and Innovation Partnerships (GRIP): HVDC Line":

- Provides a redundant pathway between the Southern (Kenai Peninsula) and Central (Anchorage and Mat Su) Regions

- Eliminates the single point of failure inherent in the previous system (the system will still be subject to single point of failure between Willow and Healy)

- Allows for more renewable power to be added to the grid and distributed across the Railbelt

- Increases the ability to share power between the Southern, Central, and Northern Regions of the Railbelt, allowing the most economical power to be used at all times The AEA secured $206.5 million for GRIP Topic Area 3: Grid Innovation through the U.S. Department of Energy's Grid Deployment Office. A cost share of 100 percent, or $206.5 million, is required for a total project amount of $413 million.

The project includes constructing high voltage direct current (HVDC) submarine cables as a parallel transmission route from the Kenai Peninsula to Anchorage.

A video about the Alaska Electric Transmission lines was played for the committee.

9:20:43 AM

Mr. Thayer addressed slide 8, "Sterling to Quartz Creek (SQ) Transmission Lines":

In 2020, AEA acquired the SQ Transmission Lines, as part of the Bradley Lake Hydroelectric Project.

- Location 39.4 miles of 115 kilovolt (kV) transmission and out of use 69 kV transmission from Sterling to Quartz substation (Kenai Lake).
- Benefits

The AEA ownership ensures better cost alignment, reduce line losses, increased reliability, and more timely repairs and upgrades.

- Status 69 kV line decommissioned and removed; engineers are designing and are procuring equipment for the upgrade of the existing 115 kV line to 230 kV. Construction has started on the first section.
- Cost Estimated cost to upgrade line is $90 million for the SQ transmission line and Sterling to Soldotna transmission line.

Mr. Thayer discussed slide 9, "Battery Energy Storage Systems (BESS) for Grid Stabilization":

- Scope
  The BESS projects consist of an upgrade to the existing BESS system in the North, and new BESS in the Southern, and Central regions of the grid. The Northern BESS is located at Fairbanks, the Southern BESS is located at Kenai, and the Central Region BESS will be located at Anchorage. The BESS will be needed to fully realize the benefits of a 230 kV bulk power supply system, regulate energy from various generation, and increase resilience.
- Benefits Increase system resilience, transfer capability, more efficient use of system, and lowers impediments to additional renewable generation development.
- Schedule
  - Southern (Kenai) In service
  - Central (Anchorage) In service
  - Northern (Fairbanks) Engineering and design
- Budget --$28 million in services to dampen oscillation

Senator Kaufman queried the process for funding the ongoing maintenance. He remarked on the unfunded deferred maintenance needs.

Mr. Thayer replied that there was a management committee that oversees that maintenance, and the utilities paid for the maintenance of the assets.

9:27:15 AM

A video about Rural Alaska Infrastructure played for the committee.

Co-Chair Hoffman recalled meeting with individuals from Senator Olson's district that were concerned about their fuel tanks, and the stress of the fines from the utilities.

9:31:37 AM

TIM SANDSTROM, CHIEF OPERATING OFFICER, ALASKA ENERGY AUTHORITY, JUNEAU, replied that there were two projects in that area to repair the tank.

Co-Chair Hoffman wanted to see progress on that issue.

Mr. Thayer highlighted slide 11, "Power Cost Equalization (PCE)":

> The PCE program was established in 1985 as one of the components of a statewide energy plan.
>
> The cost of electricity for Alaska's rural residents is notably higher than for urban residents. The PCE lowers the cost of electric service paid by rural residents. Ultimately ensuring the viability of rural utilities and the availability of reliable, centralized power.

9:34:01 AM

Co-Chair Hoffman wondered whether there was an expansion of the Power Cost Equalization (PCE) program.

Mr. Thayer replied in the negative.

Mr. Thayer displayed slide 12, "Rural Power System Upgrades":

> - The AEA's Rural Power Systems Upgrade program improves power generation in Alaska villages with less than 2,000 people.
> - Approximately 170 communities are eligible for the program, which replaces outdated, inefficient mechanical systems with new electronically controlled generator sets.
> - Due to declining funds, rural power systems are not upgraded timely, and communities are left with aging systems at risk of failure.

- The AEA evaluates several factors when prioritizing projects for funding at this time, deferred maintenance is estimated at $300 million

Co-Chair Stedman asked about the cheap gas to the Rail Belt. He requested an update of the comparison of fuel types and cost at the meter.

Mr. Thayer responded that he would provide an updated comparative cost.

Co-Chair Hoffman asked when the committee could expect that update.

Mr. Thayer replied that an updated comparison could be done by the following week.

Mr. Thayer addressed slide 13, "Bulk Fuel Upgrades":

- The AEA designs and builds modern, code compliant bulk fuel facilities through our Bulk Fuel Upgrade program
- In Alaska, there are over 400 bulk fuel facilities each sized to support the village.
- Most of the facilities are older than 40 years, with many exceeding 50 years , and they average 100,000 gallons in size.
- However, aging infrastructure poses several safety risks for rural communities, e.g., corrosion, erosion, and environmental.
- The AEA maintains an inventory and assessment priority need based list so far, deferred maintenance is estimated at $1 billion

9:40:05 AM

Co-Chair Hoffman wondered where the picture was taken.

Mr. Thayer replied that he would provide that information.

Mr. Thayer pointed to slide 15, "Circuit Rider Program."

Mr. Thayer highlighted slide 17, "Grid Resilience Formula Grant Program IIJA 40101(d)":

- Under 40101(d), AEA anticipates receiving $60 million in federal formula grants to catalyze grid

resilience projects. In August 2023, the first two years of allocations, $22.2 million , were awarded to
 The AEA's competitively solicited applications for the initial federal formula allocation in February 2024. The AEA selected three projects for sub awards, totaling $20.9 million.

In December 2024, DOE issued final approvals for the sub award projects. Due to pauses on funding for IIJA programs, the issuance of sub award agreements have been delayed but are anticipated to be finalized in Q2 2025.

 In August 2024, AEA received $17,627,018 in federal program formula funds for fiscal year 2025, requiring $2.6 million in state matching funds. The AEA is working with DOE to determine next steps.

 Resilience measures include but are not limited to:
- Relocating or reconductoring powerlines
- Improvements to make the grid resistant to extreme weather
- Increasing fire resistant components
- Integrating distributed energy resources like microgrids and energy storage

 Formula based funding requires a 15 percent state match and a 33 percent small utility match

Mr. Thayer pointed to slide 18, "National Electric Vehicle Infrastructure (NEVI) Program":

 The AEA and the Alaska Department of Transportation and Public Facilities (DOT and PF) continue to deploy the State of Alaska NEVI Plan.
 On November 25, 2024, AEA and DOT and PF received approval of the fiscal year 2025 plan. This unlocked $11 million in addition to $30 million available from previous fiscal years.
 In fall 2023, the first round of Alaska NEVI awards were announced.

The AEA and DOT and PF selected projects in nine communities for a total investment of $8 million. Private entities will own and operate the new charging stations.

- Phase 2 will develop charging infrastructure in more than 30 communities along Alaska's Highway System and the Marine Highway System.

National Electric Vehicle Infrastructure

9:44:03 AM

Co-Chair Hoffman wondered whether there was communication at the federal level that would be in jeopardy.

Mr. Thayer replied, "no."

Senator Kiehl recalled that the Volkswagen settlement funds had gone into the early stages of the electric vehicle charging, but wondered if any funds remained to leverage the project.

Mr. Thayer replied that those moneys were expanded, so that was how AEA got into the electrical vehicle business.

Mr. Thayer discussed slide 19, "Solar for All":

- In April 2024, AEA and the Alaska Housing Finance Corporation (AHFC) were selected for a $62.5 million grant from the Environmental Protection Agency's Solar for All program.

  - The AEA is developing community solar in disadvantaged communities.
  - The AHFC is developing residential rooftop solar for low income households.

- Program benefits:
  - Energy cost savings,
  - Increased resiliency,
  - Distributed solar energy for low income and disadvantaged households,
  - Workforce development, and
  - Reduction in greenhouse gas emissions.

- No match required for this competitive grant.

Mr. Thayer pointed to slide 20, "Home Energy and High Efficiency Rebate Allocations":

Home Efficiency Rebates

- Rebates for energy efficiency retrofits range from $2,000 --$4,000 for individual households and up to $400,000 for multifamily buildings.
- Grants to states to provide rebates for home retrofits.
- Up to $2,000 for retrofits reducing energy use by 20 percent or more, and up to $4,000 for retrofits saving 35 percent or more.
- Maximum rebates amounts are doubled for retrofits of low and moderate income homes.
- Alaska's allocation: $37.4 million; no State match required.
- Funding is estimated to be available between fall/winter 2025.

Home Electrification and Appliance Rebates

- Rebates for low and moderate income households to save energy and money toward energy upgrades made to their primary residence.
- Includes means testing and will provide 50 percent of the project cost to residents with incomes between 80 to 150 percent. Rebates of 100 percent for incomes below 80 percent of area medium income, with similar tiers for multifamily buildings.
- Includes a $14,000 cap per household, with an $8,000 cap for heat pump costs, $1,750 for a heat pump water heater, and $4,000 for electrical panel/service
- Other eligible rebates include electric stoves, clothes dryers, and insulation/air sealing measures.
- Alaska's allocation: $37.1 million; no State match required.
- Funding is estimated to be available between fall/winter 2025.

Mr. Thayer highlighted slide 21, "Black Rapids Training Site (BRTS) Defense Community Infrastructure Pilot Program":

The AEA partnered with Golden Valley Electric Cooperative (GVEA) and was awarded this grant from the Office of Local Defense Community Cooperation under the Defense Community Infrastructure Pilot Program.

Federal Receipt authority of $15.7 million received in fiscal year 2024. No State match is required

The GVEA will use the funds to extend a transmission line 34 miles along the Richardson Highway to BRTS.

Currently, BRTS is powered by three diesel generators that are nearing the end of their useful lives. This extension will improve long term sustainability and reliability for BRTS by tying them into GVEA's power grid.

Mr. Thayer addressed slide 22, "Federal Funding Awards and Pending Applications."

9:50:31 AM

Mr. Thayer discussed slide 24, "Renewable Energy Fund (REF) Grand Program":

Established in 2008, REF provides grant funding (subject to Legislative approval) incentivizing the development of qualifying and competitively selected renewable energy projects. The program is designed to produce cost effective renewable energy for heat and power to benefit Alaskans statewide.

Mr. Thayer spoke to slide 25, "REF Round 17 Recommended Projects to Legislature."

Co-Chair Hoffman asked about the work in Fairbanks on micronuclear power.

9:54:32 AM

Mr. Thayer replied that AEA was supportive of exploring nuclear energy.

Co-Chair Hoffman remarked that people were already investing in nuclear energy.

Mr. Thayer replied that there was not a current investment for nuclear power due to the most immediate need of bulk fuel.

Co-Chair Hoffman wondered whether there could be further examination of the other entities and their investments in the Lower 48 that were utilizing nuclear energy.

Mr. Thayer agreed to provide that information.

Senator Cronk wondered how much of the PCE earnings was available each year.

Mr. Thayer responded that it was managed by the Permanent Fund Corporation. He explained that the first $48 million, and anything after that went to the community assistance at $30 million. He stated that beyond that $78 million, there was a "cascading waterfall" that allowed for additional earnings up to $25 million to be used for bulk fuel loans, powerhouse upgrades, or the Renewable Energy Fund.

Mr. Thayer thanked the committee.

Co-Chair Hoffman discussed committee business.

#
ADJOURNMENT
10:02:17 AM

The meeting was adjourned at 10:02 a.m.