

**ALASKA STATE LEGISLATURE  
HOUSE SPECIAL COMMITTEE ON ENERGY**

April 8, 2021  
10:00 a.m.

**MEMBERS PRESENT**

Representative Calvin Schrage, Chair  
Representative Chris Tuck  
Representative Matt Claman  
Representative Tiffany Zulkosky  
Representative Zack Fields  
Representative George Rauscher  
Representative James Kaufman

**MEMBERS ABSENT**

All members present

**COMMITTEE CALENDAR**

PRESENTATION: ALASKA ENERGY AUTHORITY

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

CURTIS THAYER, Executive Director  
Alaska Energy Authority  
Department of Commerce, Community & Economic Development  
Anchorage, Alaska

**POSITION STATEMENT:** Gave a presentation on the Alaska Energy Authority.

KIRK WARREN, Director  
Engineering and Energy Development  
Alaska Energy Authority  
Anchorage, Alaska

**POSITION STATEMENT:** Answered questions during the presentation on the Alaska Energy Authority.

**ACTION NARRATIVE**

[10:00:55 AM](#)

**CHAIR CALVIN SCHRAGE** called the House Special Committee on Energy meeting to order at 10:00 a.m. Representatives Claman and Schrage were present at the call to order. Representatives Rauscher, Fields, Zulkosky, Tuck, and Kaufman arrived as the meeting was in progress.

**PRESENTATION: Alaska Energy Authority**

[10:01:45 AM](#)

CHAIR SCHRAGE announced that the only order of business would be a presentation on the Alaska Energy Authority.

[10:01:48 AM](#)

CURTIS THAYER, Executive Director, Alaska Energy Authority, Department of Commerce, Community & Economic Development, began his presentation by explaining that the Alaska Energy Authority (AEA) was started by the Alaska State Legislature in 1976. He explained that the mission of AEA is to "reduce the cost of energy in Alaska." He explained the programs AEA oversees, including the Alaska Intertie, the Bradley Lake hydro project, power-cost equalization (PCE), and multiple projects in rural Alaska.

[10:04:06 AM](#)

MR. THAYER continued with slide 3 explaining the energy planning AEA does with local and regional partners across the state for economic and energy analysis. He moved to slide 4, outlining the current projects. He explained basic energy units and gave examples of how many homes can be powered by each unit. He compared the rates of renewable energy in Alaska and the Lower 48, stating that Alaska was "ahead of the game." He said that Alaska uses half the coal that the Lower 48 does and 5 percent less gas and oil. He noted that the Lower 48 has nuclear energy, and Alaska does not.

[10:07:22 AM](#)

REPRESENTATIVE SCHRAGE asked about the energy breakdown on slide 8. He then mentioned the map of Alaska on slide 4 and asked Mr. Thayer to speak about the differences in energy dependance of the regions.

MR. THAYER responded that most of the hydropower comes from Southeast Alaska; Kodiak has wind and hydro; Anchorage receives approximately 10 percent. He spoke to the challenges of wind power in rural Alaska and the use of biomass in the Interior. He explained that AEA has funded the largest wind farm and solar panel farm in Alaska. Mr. Thayer noted that if the Susitna-Wattana project was built, it would take Alaska from 49 percent renewable energy to over 60 percent.

[10:10:31 AM](#)

REPRESENTATIVE FIELDS asked about the modeling of costs for the Susitna-Wattana project versus other projects in the Railbelt to expand pump storage options for hydropower.

[10:11:19 AM](#)

MR. THAYER explained that AEA is looking at all projects, with consideration of the potential to expand the Bradley Lake project. He explained that AEA has done a cursory look at Eklutna, but the multiple ownership poses additional challenges. He further explained that the Susitna-Wattana would be six to ten times the size of any current project but would come at a high cost.

[10:14:05 AM](#)

MR. THAYER proceeded with slide 9, "Urban Energy." He explained that the slide addresses Homer to Fairbanks. He noted that Bradley Lake is the largest hydro project in Alaska and is owned by AEA. He moved to slide 11 showing the Bradley Lake project at capacity. He noted that Bradley Lake provides 10 percent of the Railbelt's power. He pointed out that 500 thousand people depend on the power from Bradley Lake. He compared the price of natural gas to hydro and explained that hydro tends to be cheaper. He moved to slide 13 showing a recent purchase made by AEA, and he explained that the line was destroyed by a fire and has been the subject of numerous lawsuits. He said AEA negotiated for almost a year over the upgrade. He explained that Bradley Lake is a one-hundred-megawatt plant; the lines that support it are 75 megawatt and predate Bradley Lake. He explained that the most recent purchase is a necessary step towards upgrading the plant. He moved to slide 14 showing the length of the new line. He noted that past state investments into infrastructure on the Railbelt were through an endowment to PCE.

[10:21:15 AM](#)

REPRESENTATIVE ZULKOSKY asked Mr. Thayer to expound on PCE.

MR. THAYER responded that the State investment in the intertie saves the people of Fairbanks around \$40 million in cost savings compared to power generation in Fairbanks. He compared this to the endowment fund that the state uses in rural Alaska, which is a nearly \$30 million subsidy for around 82 thousand people.

REPRESENTATIVE ZULKOSKY said she thinks that underscores the importance of the PCE.

[10:22:58 AM](#)

REPRESENTATIVE TUCK asked what the purchase price of the intertie was and who sold it to the state.

MR. THAYER explained that the intertie was built by AEA, and he did not have the cost at hand.

[10:23:20 AM](#)

KIRK WARREN, Director, Engineering and Energy Development, Alaska Energy Authority, explained to Representative Tuck that the intertie cost \$125 million.

[10:23:47 AM](#)

MR. THAYER proceeded to slide 17 looking at maximizing clean energy for the Railbelt. He gave a breakdown of upgrade projects that the state is working on.

[10:25:17 AM](#)

REPRESENTATIVE FIELDS asked whether AEA has analyzed the new infrastructure package introduced by the Biden Administration.

MR. THAYER explained that AEA just finished its analysis of the COVID-19 relief from December, and he said there are opportunities, but it is too early to define them.

[10:26:50 AM](#)

MR. THAYER proceeded to slide 18 that illustrates a possible use of the funding from "the Volkswagen settlement." He explained that AEA is looking at creating an Electric Vehicle charging

corridor, the first phase of which will run from the Kenai Peninsula to Fairbanks. He explained the second phase would expand into Glenallen, along the Parks Highway, and Southeast Alaska. He emphasized that it is federally funded.

[10:27:59 AM](#)

REPRESENTATIVE TUCK asked how much the State of Alaska received from the Volkswagen settlement, and how much is left for the electric vehicle (EV) fast-charging corridor.

MR. THAYER explained that the money was primarily used to pay for new school busses to reduce emissions. He relayed that AEA also provided funding for an electric bus in Juneau, an electric truck in Anchorage, and the rest to the fast-charging corridor.

[10:29:51 AM](#)

REPRESENTATIVE KAUFMAN asked what the state-of-the-art fast-charging time is.

MR. THAYER answered about a half hour to fully charged.

[10:30:30 AM](#)

MR. WARREN responded to Representative Kaufman's question and mentioned "ultra-fast charging stations" that are being developed in the Lower 48 that require power flow larger than anything currently available on the Railbelt.

REPRESENTATIVE KAUFMAN asked about the backwards compatibility of charging stations.

MR. THAYER explained that what AEA has laid out is the most popular configuration currently, but that charging technology is likely to change in the future. He explained that an additional challenge is that only two companies make chargers that work at 40 below.

[10:32:16 AM](#)

REPRESENTATIVE TUCK asked about the payment for the charging stations.

MR. THAYER explained that the charging stations will be card operated by private businesses. He stated that the cost of a charge will be less than a tank of gas.

[10:34:43 AM](#)

MR. THAYER proceeded with his presentation on slide 20, "Power Cost Equalization." He explained that PCEs help provide power to rural Alaskans by paying the difference between rural and urban power cost. He noted that PCE does not cover government buildings. He explained that in the Fiscal Year 2020 (FY 20), the program disbursed close to \$30 million. He said AEA anticipates a similar amount in FY 21. Mr. Thayer explained that the PCE endowment is capitalized at \$1.1 billion. He explained that the earnings of the endowment go into paying for the program. If there are up to \$30 million in additional earnings, then that money is used for community assistance; if the earnings will support it, \$30 million go into the renewable energy fund.

[10:36:46 AM](#)

REPRESENTATIVE ZULKOSKY asked if renewable energy funds are spent on projects statewide.

MR. THAYER responded yes, but primarily in rural Alaska.

[10:37:37 AM](#)

MR. THAYER moved to slide 21, "Digital Twin (3D Model with Information)," and explained the purpose of the model, which he displayed for the committee. He stated that AEA had taken 3D imaging in the rural powerhouses to understand how the powerhouses are operating. The model shows what operators in both Anchorage and rural Alaska can see. He reported that AEA has completely modeled two-thirds of the powerhouses in rural Alaska.

[10:39:25 AM](#)

REPRESENTATIVE FIELDS asked if remote assistance is going to be used instead of a standard in-person check, or will it be used for more urgent problems.

MR. THAYER answered that remote modeling will probably be used for a little bit of both.

[10:40:34 AM](#)

MR. THAYER proceeded to slide 22, "Rural Power System Upgrades," which shows there are 197 communities that receive the upgrades with the goal of improving the efficiency of the power system. He pointed to a picture in the slide of a new powerhouse. He pointed to another picture of a powerhouse within a community with missing and broken generators and noted that since the picture was taken, AEA has replaced the generators. He advised that AEA is currently working on seven projects, and the deferred maintenance of rural Alaska powerhouses is around \$300 million.

[10:41:45 AM](#)

REPRESENTATIVE FIELDS asked if the governor's proposed capital budget addresses any of the deferred maintenance needs; he requested a list breaking down the maintenance projects.

MR. THAYER responded that slide 23 provides a list of the projects. He explained that the governor is requesting \$5 million in 2022 and that the federal government is expected to provide a \$4.5 million match. He explained the list is in order of a capital request and that the priorities are based on need.

REPRESENTATIVE FIELDS asked whether there would be additional federal dollars available if the legislature added money to the budget.

MR. THAYER replied that those are conversations AEA would have to have with the federal partners. He pointed out that the state has lost \$47 million in federal match monies over the last five years, and he stated his belief that the federal match could be increased.

[10:44:48 AM](#)

REPRESENTATIVE KAUFMAN asked what caused the maintenance to be deferred.

MR. THAYER answered that it was a combination of a lack of funds, project management, and the life span of powerhouses. He spoke about the challenges of maintaining powerhouses in small rural communities.

[10:47:07 AM](#)

REPRESENTATIVE ZULKOSKY asked Mr. Thayer about the technical assistance resources currently available for communities,

tribes, and nonprofits through AEA and how that has changed in the last decade.

MR. THAYER replied that AEA has spent a "great deal of time" increasing the robustness of its training projects. He said this has greatly increased online training and the implementation of 3D modeling.

[10:49:05 AM](#)

MR. THAYER moved to slide 24 illustrating rural fuel storage facilities. He explained that AEA has 8 replacement projects and 18 maintenance projects. He said AEA is working with the U.S. Coast Guard on the projects. He moved to slide 25, showing a request for \$5.5 million in the governor's budget. He noted that the state has not funded the program for five years. Mr. Thayer outlined the grants and loans in the renewable energy fund and the projects funded through it. He explained that AEA is asking the legislature for a reappropriation of \$4.7 million to fund 11 projects. He talked about the "power project fund" (PPF), on slide 28, that has \$31 million in outstanding loans. He explained that the PPF has funded the largest solar and wind projects in the state and currently has \$8.7 million available for lending. He said the current interest rate, set by statute, is 2.83 percent.

[10:53:47 AM](#)

MR. THAYER moved to slide 31, "Susitna-Wattana Hydroelectric Project," with an overview of the proposed project.

[10:55:34 AM](#)

REPRESENTATIVE ZULKOSKY asked if AEA has looked at developing funding models for funding infrastructure projects throughout Alaska.

MR. THAYER responded that that is the purpose behind the PPF. He said he did not have the names of the three pending applications but said he believes AEA provides a lot of capital through the PPF

REPRESENTATIVE ZULKOSKY said she would follow up with Mr. Thayer outside of the meeting to ensure that the PPF is as flexible as it can be.

MR. THAYER pointed out that AEA has a request to the legislature for \$21 million for federal seed authority.

[10:58:40 AM](#)

REPRESENTATIVE KAUFMAN said he will be looking forward to learning more about AEA.

MR. THAYER invited anyone from the committee to make an appointment to come speak to AEA in the Office of Management & Budget.

[10:59:57 AM](#)

**ADJOURNMENT**

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 11:00 a.m.