

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

March 13, 2025

1:03 p.m.

**MEMBERS PRESENT**

Representative Ky Holland, Co-Chair  
Representative Donna Mears, Co-Chair  
Representative Bryce Edgmon  
Representative Chuck Kopp  
Representative Cathy Tilton  
Representative George Rauscher  
Representative Mia Costello

**MEMBERS ABSENT**

All members present

**COMMITTEE CALENDAR**

PRESENTATION(S): POTENTIAL RENEWABLE ENERGY PROJECTS

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

ROBERT SIEDMAN, Chief Executive Officer  
Southeast Alaska Power Agency  
Ketchikan, Alaska

**POSITION STATEMENT:** Co-presented the Potential Renewable Energy Project presentation.

JOHN BAALKE, Village Administrator  
Pedro Bay Village Council  
Pedro Bay, Alaska

**POSITION STATEMENT:** Co-presented the Potential Renewable Energy Project presentation.

BILL STAMM, President, CEO  
Alaska Village Electric Cooperative  
Anchorage, Alaska

**POSITION STATEMENT:** Co-presented the Potential Renewable Energy Project presentation.

**ACTION NARRATIVE**

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**CO-CHAIR DONNA MEARS** called the House Special Committee on Energy meeting to order at 1:03 p.m. Representatives Costello, Edgmon, Rauscher, Kopp, Holland, and Mears were present at the call to order. Representative Tilton arrived as the meeting was in progress.

**PRESENTATION(S) Potential Renewable Energy Projects**

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CO-CHAIR MEARS announced that the only order of business would be the Potential Renewable Energy Project presentation.

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ROBERT SIEDMAN, Chief Executive Officer, Southeast Alaska Power Agency (SEAPA), gave a PowerPoint presentation, titled "Southeast Alaska Grid Resiliency Project (SEAGR)" [hard copy included in the committee packet]. He began on slides 2 and 3 by sharing facts about SEAPA and photos of Tyee and Swan Lake where its two hydro plants are located. Slide 4 featured an energy trend analysis with a year in the life of SEAPA's megawatt-hour outputs in 2022. Slide 5 showed a capacity trend analysis with a year in the life of SEAPA's PEAK megawatt outputs in 2022. Side 6 addressed load growth, which has been driven by heat pump conversions, and is forecasted to grow 2.52 percent year over year. Slide 7 explained that the increase in load growth in Southeast Alaska comes down to the cost of energy and conversions from diesel heat to electric. Slide 8 highlighted a trend analysis for diesel heat in Petersburg, Wrangell, and Ketchikan. In 2022, the three communities combined burned about 2.7 million gallons of diesel to heat residential homes at a cost of \$18 million to residents. He noted that converting to heat pumps would save these residents over \$11.5 million per year. The \$38 million EPA heat pump grant will accelerate the load growth.

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MR. SIEDMAN, in response to a question from Co-Chair Holland, said raising rates to fund the Renewable Energy Fund (REF) as a cost savings would punish folks who have not converted from diesel and the population would probably continue to decline due to increasing base energy costs. He resumed the presentation on slide 9 and explained that if all oil-based heating systems were to be converted to heats pumps, it would equate to 36gWh, which is right about where the spill occurred in 2022. Slide 10 detailed the new generator at Tye in Skeleton Bay, which would increase Tye capacity by 50 percent, increase SEAPA total capacity by 25 percent, and increase total contingency and resiliency. He added that it's the cheapest alternative to building new hydro. Slides 12-14 took a "30,000-foot view" of the proposed project with corresponding images. Slide 15 shared the permitting progress, which read as follows [original punctuation provided]:

Nov 2024: SEAPA was designated as FERC's non-federal representative for consultation with stakeholders such as SHPO, USFS, USFWS, NOAA and others.

Dec 2024: Stakeholder consultation resulted in 100% support of the project, recognizing no environment impact.

Jan 2025: With written endorsements from stakeholders, SEAPA received a waiver of second stage consultation from FERC.

Feb 2025: Final Application submitted, in expedited review at FERC

Anticipate approval from FERC in Q3, 2025

MR. SIEDMAN continued to Slide 16, which outlined the design/procurement progress, which read as follows [original punctuation provided]:

Nov 2024: 100% procurement design specification complete

Feb 2025: 90% construction specifications and drawings complete

Mar 2025: Bids due for Generator, Transformer and Ancillary Equipment

Jun 2025: Anticipate final construction design to integrate successful bid and solicit RFPs for Construction

MR. SIEDMAN shared SEAPA's financial outlook on slide 18. In response to a series of committee questions, he said SEAPA has received no funds from investment tax credits (ITCs). The "SEAPA CASH," as referenced on slide 18, he said would most likely come from SEAPA reserves from capital investments, whereas the ITCs would replenish the reserves. He said based on the uncertainty surrounding federal funding and the REF, he would be recommending to the board that the project be placed on paused, delaying it about a year, as once the procurement contract is awarded and signed, payments are due. Whether or not the ratepayers shoulder more of the burden would be up to the board of directors. He added that the alternative is that the communities burn diesel, which is ten times the cost of hydroelectric. He estimated that there's a total of around 6,000 ratepayers between Ketchikan, Wrangell, and Petersburg, of which there are a few large commercial users, such as the fisheries, for example.

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MR. SIEDMAN concluded with the importance of the REF on slide 19. In response to a series of committee questions, he explained that the Pacific Ocean is the largest solar panel in the world, and it dumps its energy in Southeast Alaska, so there are a significant amount of projects that could be built. Currently, hydroelectric projects have been built solely on ratepayers paying debt service or partially funded by the state. However, as AI server farms are built and hydrogen technologies advance, building new hydro wouldn't have to solely be for residential homes or industrial services. He added that the technology sectors would be great anchor tenants. Because the cost of energy in Alaska is so high, there is a lack of investment in energy intensive projects, but with the right partnerships, a dedicated portion of projects could go towards paying the debt service and another portion towards lowering the rates for Alaskans. He spoke to "disruptive technologies," and highlighted the coefficient performance (COP) of heat pumps in colder climates. In addition, there is a potential that boilers could be swapped out for heat pump boilers in the near future without changes to registers, like air ducting.

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JOHN BAALKE, Village Administrator, Pedro Bay Village Council, gave a PowerPoint presentation, titled "Knutson Creek Hydro Project" [hard copy included in the committee packet]. He offered an overview of the presentation on slide 2 and listed the Pedro Bay Village priorities on slide 3, which are to protect subsistence resources, build sustainability, improve economic and energy security, and encourage families to live in Pedro Bay. Slide 4 detailed the local energy profile, which is reliant on diesel fire generation, and current logistic challenges and vulnerabilities. Slide 4 read as follows [original punctuation provided]:

EXISTING DIESEL-FIRED GENERATION  
LOGISTIC CHALLENGES - AIR OR SEA?

- State gravel airstrip
  - Sea via Bristol Bay / Kvichak River / Lake Iliamna
  - Sea via Cook Inlet / Williamsport Road / Lake Iliamna
- Low volumes / Few carriers / Primitive infrastructure / Transshipments
- EXPENSIVE!
  - Fuel often flown-in from Kenai Peninsula

VULNERABILITIES

- Fuel supply insecurity (can we even get fuel delivered?)
- High price and price volatility for fuel (economic uncertainty for homes/businesses)
- Risk of spills (environmental, cultural, and economic risks)

MR. BAALKE continued to Slide 5 featured a graph of the local energy profile, noting that the rate for electricity without Power Cost Equalization (PCE) is \$0.91 per kWh. The PCE brings it down to a reasonable range, but there is a use limit for residents, and it doesn't apply to commercial operators. Slide 6 compared local energy solutions, such as solar/wind and hydro. Hydrogen was selected due to its proven track record in rural Alaska - its high diesel displacement and its long life - despite the drawbacks of a long development timeline and high capital cost. Slide 7 gave an overview of the Knutson Hydro project as follows [original punctuation provided]:

LOCAL CLEAN AND SUSTAINABLE ENERGY SOLUTION

- Run-of-River Hydro Operation (no storage)
- Divert up to 11.5 cubic feet per second
- ~6,400 foot long ~24-inch diameter pipeline

- 205 feet of elevation drop (pressure head)
- 125 kW Powerhouse
- ~9,700 feet of underground power and communications
- ~12,500 feet of total roads / trails
- MEETS ~96% ANNUAL UTILITY DEMAND
- SUPPORTS ELECTRIC HEAT / LOAD GROWTH

MR. BAALKE addressed the Knutson Hydro performance on slide 8 and the project layout on slide 9. He detailed the challenges on slide 10, which read as follows [original punctuation provided]:

#### SLOW PERMITTING (Mostly behind us now)

- Fisheries studies over 7 years (just 10s of Sockeye se project area)
- 7 year hydrology study (sparse Alaska hydrology info)
- FERC non jurisdictional (14 months just to affirm that!)
- On going Monitoring Requirements (O&M costs borne by ratepayers)

#### CAPITAL FUNDING

- \$7.982M Capital Cost
- AEA Round 16 REF Application (match for federal funding)
- Pursuing Federal Grants (DOE Tribal Energy, DOE Energy for Rural Areas)
- PTC / ITC other? (depends on what still exists when we build)

MR. BAALKE concluded on slide 11 with the path ahead, which read as follows [original punctuation provided]:

#### UPCOMING MILESTONES

- Secure Capital Funding
- Construction
- Operation

#### RESULTS

- Better economy through local jobs + lower / stabilized electric rates
- Boost to village's sustainability and security
- Protects and enhances local resources
- Completed project is self-sustaining

#### THE TAKEAWAY

- Is it all worth it? Every community with an old hydro says YES!

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MR. BAALKE, in response to a series of committee questions, confirmed that the REF funds the reconnaissance study, the feasibility studies, design, and permitting. He reported that [Pedro Bay Village Council] has generated 24,000 gallons of diesel per year. He said all fuel is flown in by aircraft at up to 2,000 gallons per flight when using a larger plane, like a C-46. He noted that that they lost one of their large carriers operated by Alaska Air Fuel to a crash in Fairbanks, which drove up the cost of delivery. He recognized that at least one other Service had brought fuel across Williamsport Pike Bay Road via Cook Inlet, but there were issues with transferring fuel from tanks to a truck at Williamsport, and then having to put the truck on a barge and haul it down the lake. He noted potential environmental concerns, highlighting a spill that occurred several years ago.

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BILL STAMM, President, CEO, Alaska Village Electric Cooperative (AVEC), gave a PowerPoint presentation, "Chevak Battery EnergyStorage System Application to the Renewable Energy Fund" [hard copy included in the committee packet]. He began on slide 3 with an introduction to AVEC, which read as follows [original punctuation provided]:

- Nonprofit 501(c)12 -Electric Cooperative
- 58 Rural Communities, 31,000+ Residents
- 46 Power Plants, 160 Diesel Generators
- 9.5M Gallons of Diesel in 2024 (\$42.3M)
- 525 miles of Distribution Lines
- 13 Wind Sites, 33 Wind Turbines, Serving 22 Communities
- \$77.9M Annual Revenue
- 2024 Total Electricity Sold 125.6 MWh

MR. STAMM continued to slide 4, showing a pie chart of costs per kilowatt-hour sold in 2023. Slide 5 illustrated AVEC's timeline of renewable energy projects from 1999-2023. Slide 6 shared an example of the Battery Energy Storage System (BESS) installed in Shaktoolik in 2024. The BESS modules include batteries, battery monitoring system, inverter, controls/communications, and HVAC. Slide 7 introduced the Chevak BESS with a proposed 720 kW/864

kWh. Slide 8 further detailed Chevak BESS and system improvements, which read as follows [original punctuation provided]:

- Nearly double wind production from 573 MWh to 1,050 MWh per year
- Offsets an additional 29,785 gallons fuel, a savings of about \$138,202/year
- Shift 2,000+ engine runtime hours to smaller engine, improving PP efficiency
- Diesels-off approximately 169 hours per year.
- Modernizes the plant for renewable expansion
- Provides operating reserve and grid stability

MR. STAMM continued to describe the Chevak project on slide 9, which read as follows [original punctuation provided]:

Project Status: Preliminary design and cost estimates completed with potential supplier and contractor input

Permitting: Limited permitting required, all improvements would be installed on AVEC Power Plant Site. Fire Marshall approval required. Similar installations already approved.

Financing: Latest estimated cost for project completion in 2027 is expected to increase 25% over the estimate provided in the 2023 application. AVEC will be seeking additional funding for completion. Fuel savings anticipated to provide a 10-year payback of project expense.

Timeline: Funding Approval, August 2025  
Design and Procurement, Q4 2025- Q1 2026  
Fabrication and Delivery, Q2 2026- Q4 2026  
Installation and Commissioning, Q4 2026-Q2 2027

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MR. STAMM, in response to a series of committee questions, explained that the cost savings would directly benefit consumers in Chevak. The project would reduce their energy cost, as more than half the cost is associated with fuel. In addition, it would greatly benefit the PCE endowment, because they would no longer be paying down the difference in cost. Furthermore, the money invested by the state would return money to the PCE program. He estimated that about 20 percent of AVEC's total



revenue is reimbursed by PCE. He stated that the primary benefit of the Chevak project is the reduction in fuel cost; however, there is also a reduction in operation and maintenance cost for the diesel because those units would be run less. It would also provide improved power quality because the battery remains on the system the whole time and holds a much tighter voltage stabilization.

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**ADJOURNMENT**

There being no further business before the committee, the House Energy Special Committee meeting was adjourned at 2:58 p.m.