

ALASKA ENERGY AUTHORITY

AEA PROGRESS UPDATE

Curtis W. Thayer
Executive Director

House Energy Committee
January 23, 2025



AEA History

AEA is an independent and public corporation of the State of Alaska created by the state legislature in 1976.

1976

Created to promote, finance, and construct power projects

AS 44.83.070: "The purpose of the Authority is to promote, develop, and advance the general prosperity and economic welfare of the people of the state by providing a means of financing and operating power projects and facilities that recover and use waste energy and by carrying out the powers and duties assigned to it under AS 42.45."

Sec. 44.83.080 Powers of the Authority



In furtherance of its corporate purposes, the authority has the following powers in addition to its other powers:

- ...to issue bonds to carry out any of its corporate purposes...
- ...to enter into contracts with the United States or any person... ...for the construction, financing, operation, and maintenance of all or any part of a power project or bulk fuel, waste energy, energy conservation, energy efficiency, or alternative energy facilities or equipment...
- ...to acquire, construct, maintain, and operate power projects in accordance with the licenses or permits,
- ...to promote energy conservation, energy efficiency, and alternative energy through training and public education;
- ...to acquire a Susitna River power project,...
- ...to perform feasibility studies and engineering and design with respect to power projects.
- Battery Energy Storage Systems

AEA Board of Directors



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Chair
Utility – Not Interconnected



Duff Mitchell

Vice Chair
Financial Expertise in Large
Power Generation



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Commissioner, Alaska
Department
of Revenue



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Rural Energy Development



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Community, and Economic
Development



Robert Sideman

Board Member
Municipal Utility – Off Road
System

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 — increasing resiliency, reliability, 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 (PCE)

- \$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
-

Railbelt Transmission Organization (RTO)

House Bill 307: Integrated Transmission Systems

House Bill 307 is one of the most important pieces of legislation affecting energy policy for the Railbelt since Alaska statehood.

- The bill also **incentivizes new energy development** by extending tax-exempt statutes to independent power producers.
- This law also fundamentally **changes how AEA operates**:
 - **Established its own distinct board of directors** — better positioning the state's energy office to address Alaska's unique energy challenges and opportunities.
 - Authorized AEA to have its own **direct-hire employees**.
 - Created the **Railbelt Transmission Organization**, as a division of AEA, to establish and administer a non-discriminatory open access transmission tariff that provides for recovery of transmission costs and ancillary services and replaces wholesale charges assessed by each utility with a new mechanism that fairly recovers the costs of operating the backbone transmission system.
- Offers **reduced interest rates for Power Project Fund loans** that are \$5 million or more.

House Bill 307 Non-AEA Components

Regulatory Commission of Alaska (RCA) Impacts:

- Raises RCA Commissioner salaries and updates nomination qualifications.
- Broadens criteria for determining just and reasonable rates to include consideration for supply diversity, load growth, and enhance energy reliability/security.
- Increases the Regulatory Cost Charges for utilities, telecoms, and pipeline carries.
- Requires RCA approval for Wholesale Power Sales Agreements between a utility and IPP and transparency in state or local tax exemptions.

Electric Reliability Organizations (ERO) Impacts:

- Aligns the RRC's tariff with RTO duties by removing open access transmission and transmission system cost recovery.
- Exempts utilities with under three million megawatt hours annual energy sales from ERO participation.
- Mandates EROs to prioritize reliability, stability, and customer cost.

AEA Active Projects and Services

Grants and Loans

- Power Project Fund
- Renewable Energy Fund

Owned Assets

- Other Transmission Lines
- Transmission
- Transmission Lines Owned by AEA

Power Cost Equalization

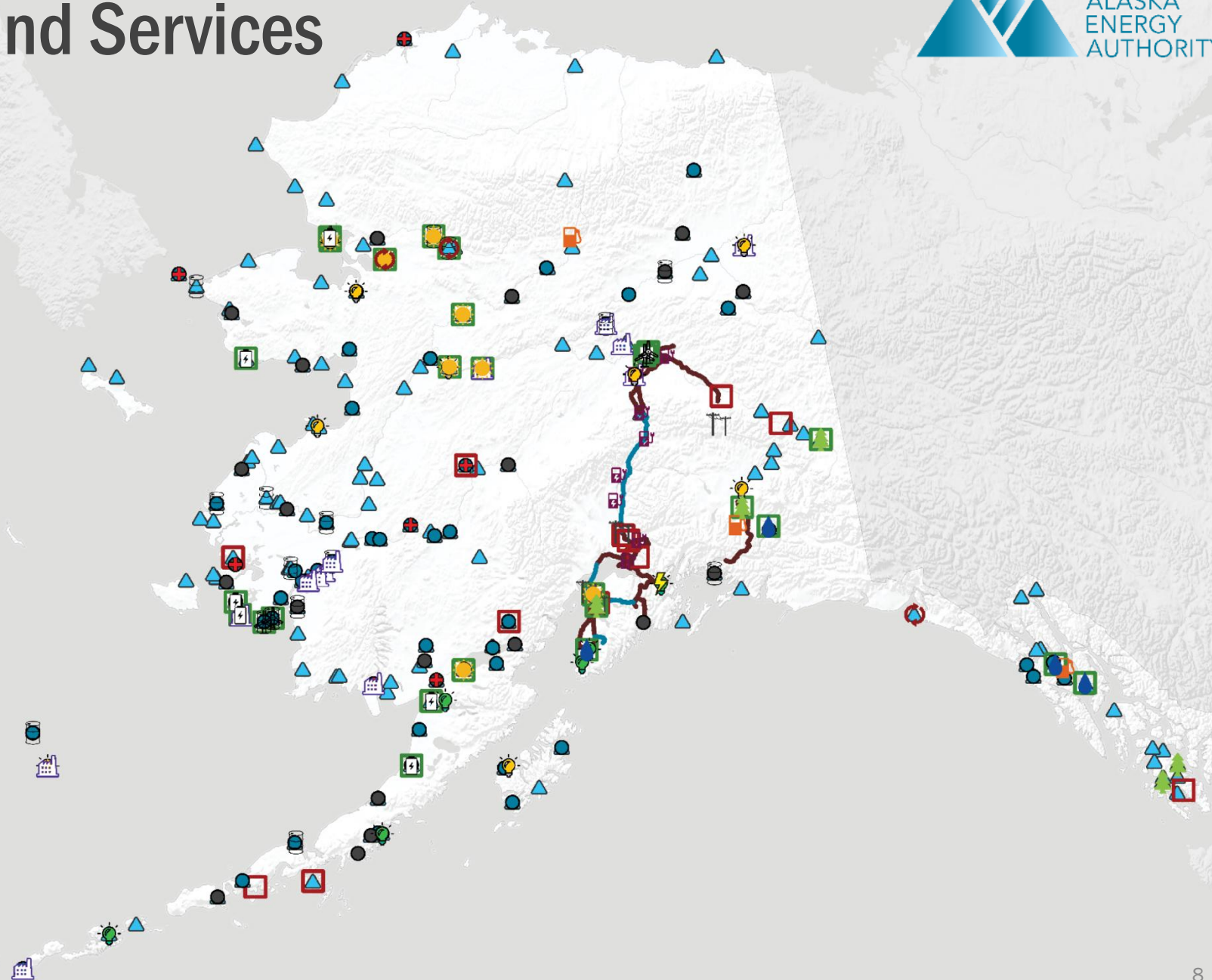
- PCE Communities

Renewable Energy

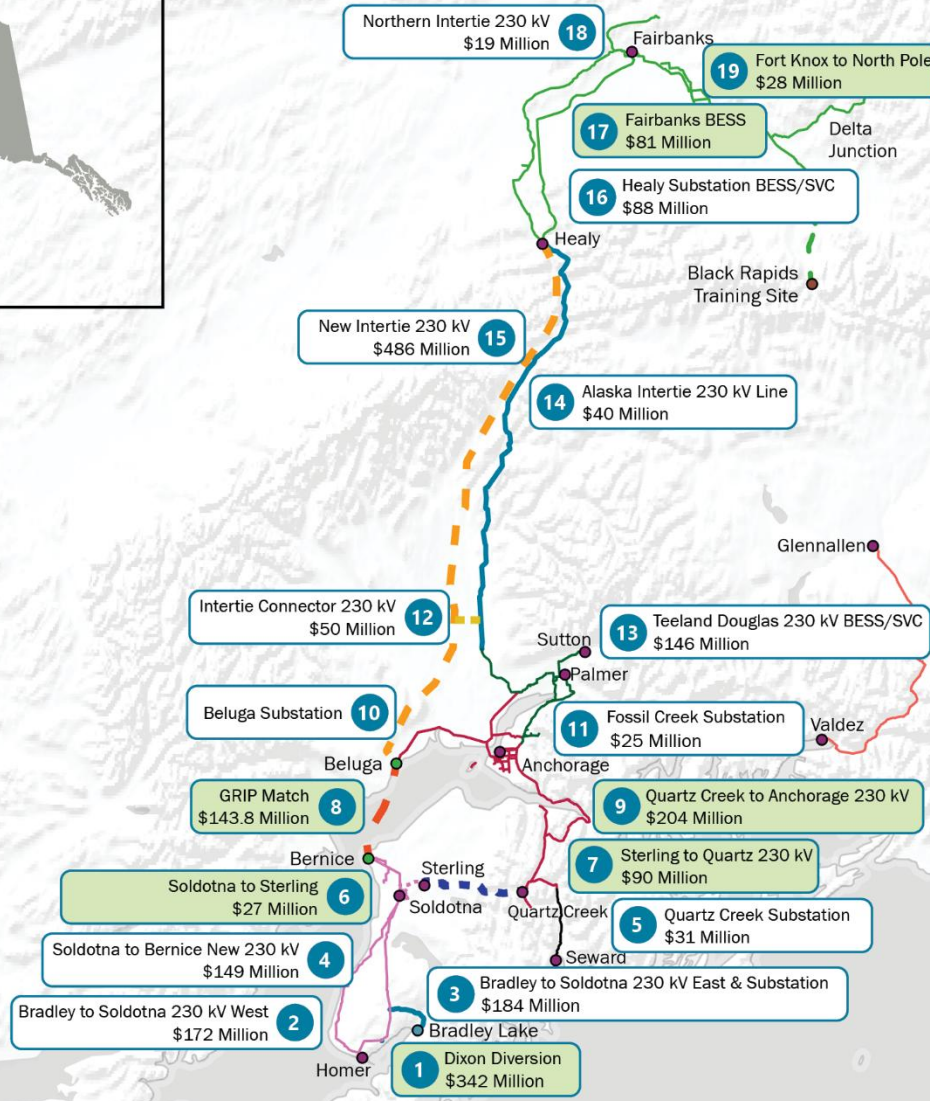
- Biomass
- Electric Vehicles
- Port Electrification
- Heat Recovery
- Hydroelectric
- Solar
- Storage
- Wind

Rural Energy

- Bulk Fuel
- Diesel Emissions Reduction Act
- Circuit Rider Assistance
- Emergency Assistance
- Utility Training



OWNED ASSETS



Railbelt Projects

1. Dixon Diversion: AEA-unfunded (**studies underway**)*
2. Bradley-Soldotna West: HEA-unfunded**
3. Bradley-Soldotna East & Substation: AEA-HEA-unfunded*
4. Soldotna-Bernice: AEA-unfunded**
5. Quartz Creek Substation XMFR: CEA-unfunded*
6. Soldotna-Sterling: AEA-**partially funded***
7. Sterling-Quartz Creek: AEA-**funded, target 2028***
8. GRIP Match: AEA-**partially funded, target 2032****
9. Quartz Creek-Anchorage: CEA-**ongoing, target 2032***
10. Beluga Substation XMFR (2nd line): AEA-unfunded**
11. Fossil Creek Substation XMFR: CEA-MEA-unfunded*
12. Intertie Connector: AEA-unfunded**
13. Teeland-Douglas: MEA-unfunded*
14. Alaska Intertie: AEA-unfunded*
15. New Intertie Beluga-Healy: AEA-unfunded**
16. Healy Substation: AEA-unfunded*
17. Fairbanks BESS: GVEA-**partially funded, target 2027****
18. Northern Intertie: GVEA-unfunded*
19. Fort Knox-North Pole Loop: GVEA-**funded, target 2031***

*Expansion or upgrade
**New project

Acronyms

BESS: Battery Energy Storage System
SVC: Static Var Compensator
XMFR: Transformer

Legend

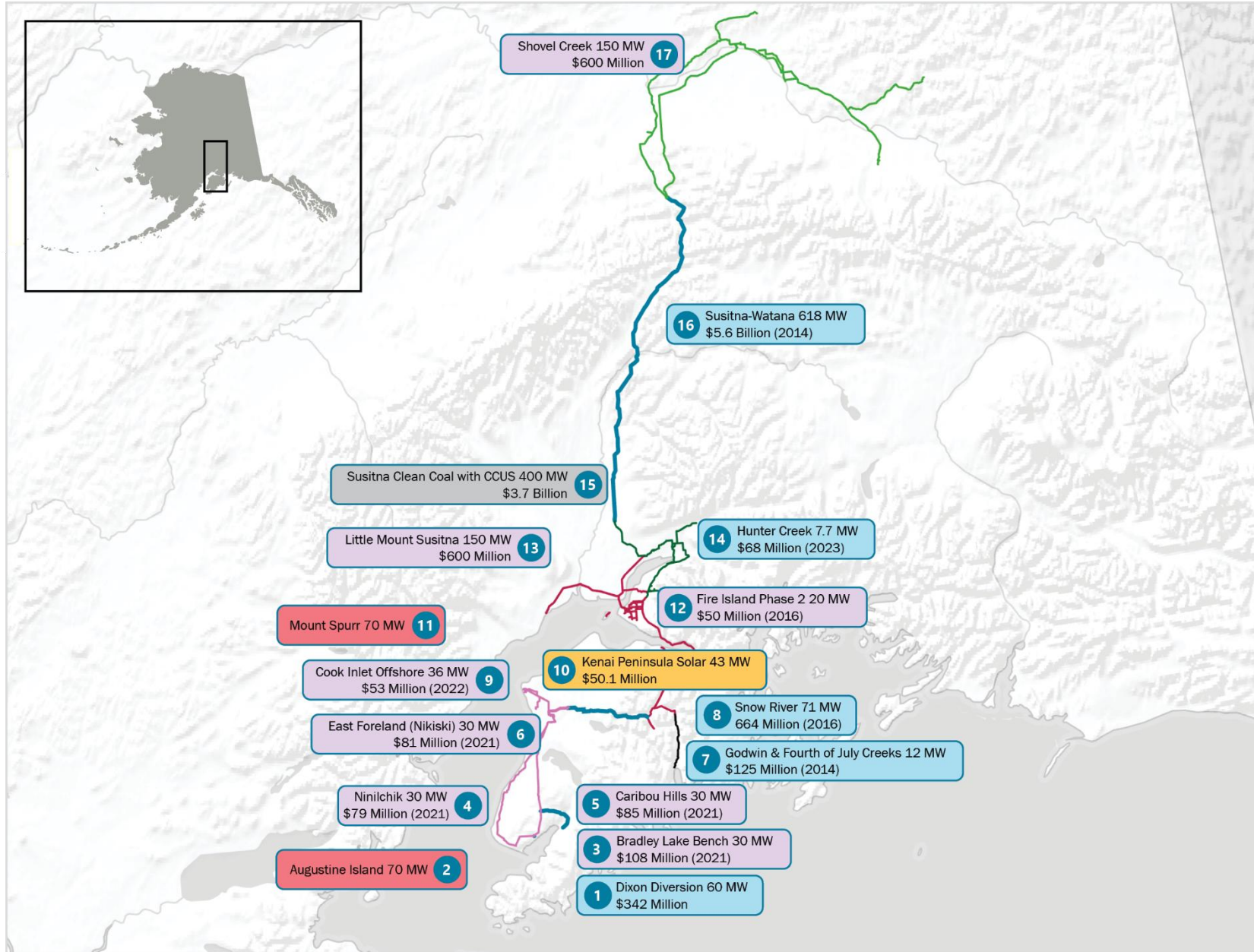
- Alaska Energy Authority
- Chugach Electric Association
- Copper Valley Electric Association
- Golden Valley Electric Association
- Homer Electric Association
- Matanuska Electric Association
- Seward Electric System
- In Progress

Clean Energy Projects

1. Dixon Diversion Hydroelectric
2. Augustine Island Geothermal
3. Bradley Lake Bench Wind Farm
4. Ninilchik Wind Farm
5. Caribou Hills Wind Farm
6. East Foreland (Nikiski) Wind Farm
7. Godwin & Fourth of July Creeks Hydroelectric
8. Snow River Hydroelectric
9. Cook Inlet Offshore Wind
10. Kenai Peninsula Solar
11. Mount Spurr Geothermal
12. Fire Island Wind Phase 2
13. Little Mount Susitna Wind
14. Hunter Creek Hydroelectric
15. Susitna Clean Coal with Carbon Capture, Utilization & Storage
16. Susitna-Watana Hydroelectric
17. Shovel Creek Wind

Legend

- Geothermal
- Hydroelectric
- Storage
- Solar
- Wind
- Clean Coal
- Alaska Energy Authority
- Chugach Electric Association
- Copper Valley Electric Association
- Golden Valley Electric Association
- Homer Electric Association
- Matanuska Electric Association
- Seward Electric System



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 Homer.
- The 120-megawatt facility provides **low-cost energy to over 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.
- 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 homes).



\$342 Million (AEA bonds anticipated)
FY2026 Request - \$6.5 million

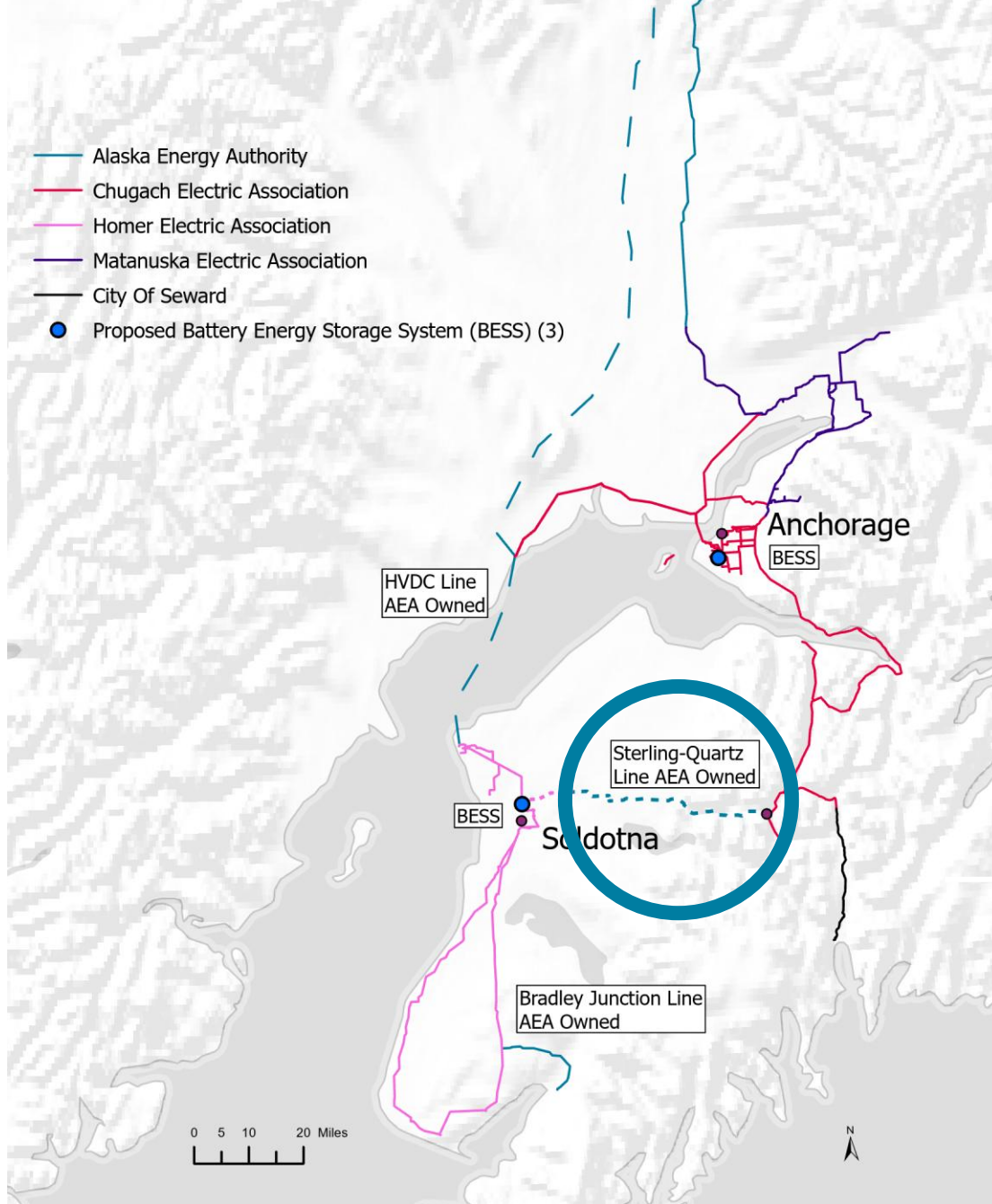


Dixon Diversion Project

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 homes)
- 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





\$90 Million (Under Construction; AEA Bonds Existing)

Sterling to Quartz (SSQ) and Soldotna to Sterling Transmission Lines

In 2020, AEA acquired the SSQ Transmission Line, 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** – 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 first section.
- **Cost** – Estimated cost to upgrade line is \$90 million for the SSQ transmission line and Sterling to Soldotna transmission line.

\$413 Million (Match of \$62.7 Million Secured; \$143.8 Million Future Need)
FY2026 Request - \$1.5 Million

Grid Resilience and Innovation Partnerships (GRIP): HVDC Line

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.

The project addresses several challenges facing Alaska's Railbelt regions:

- 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

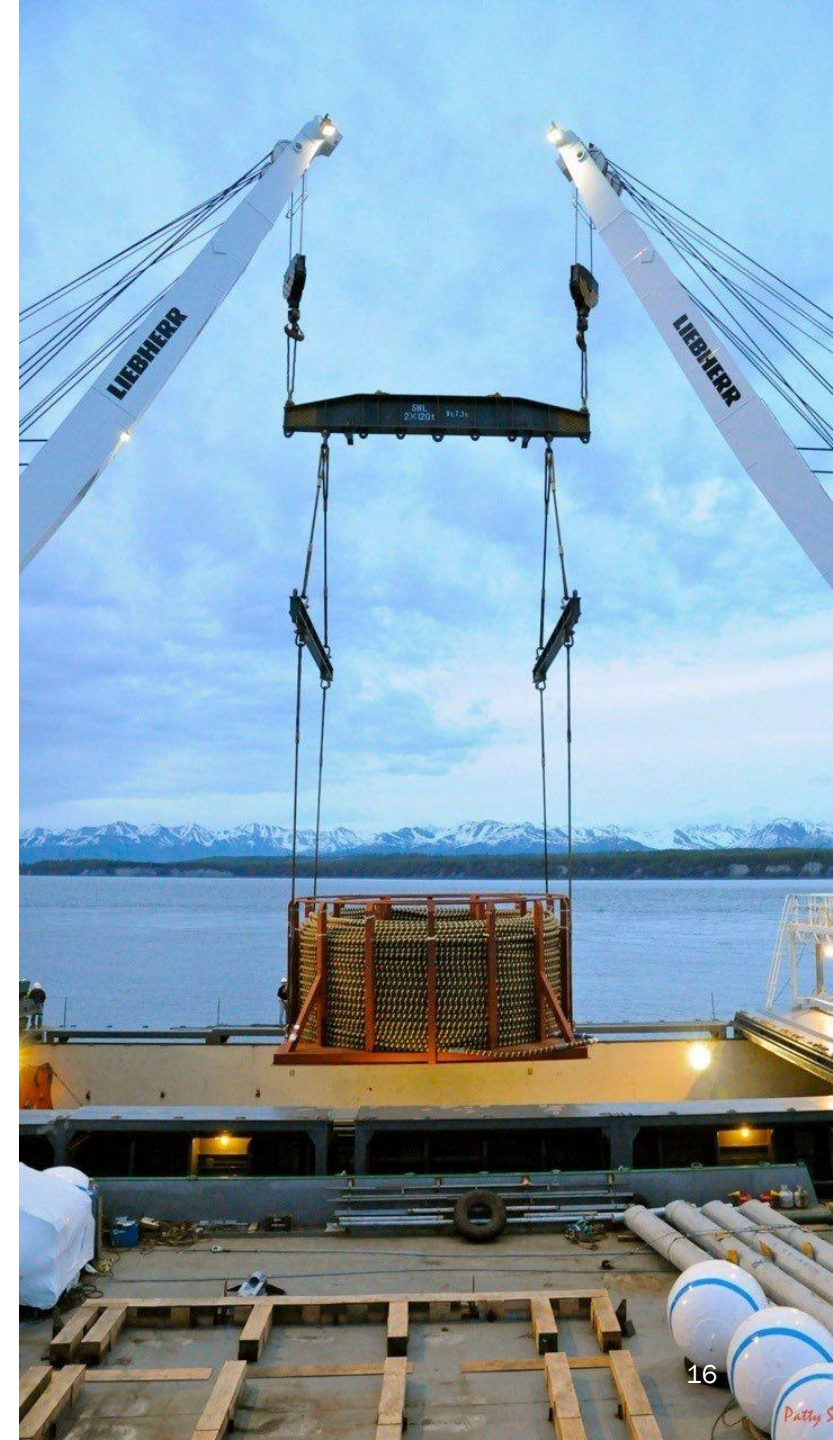
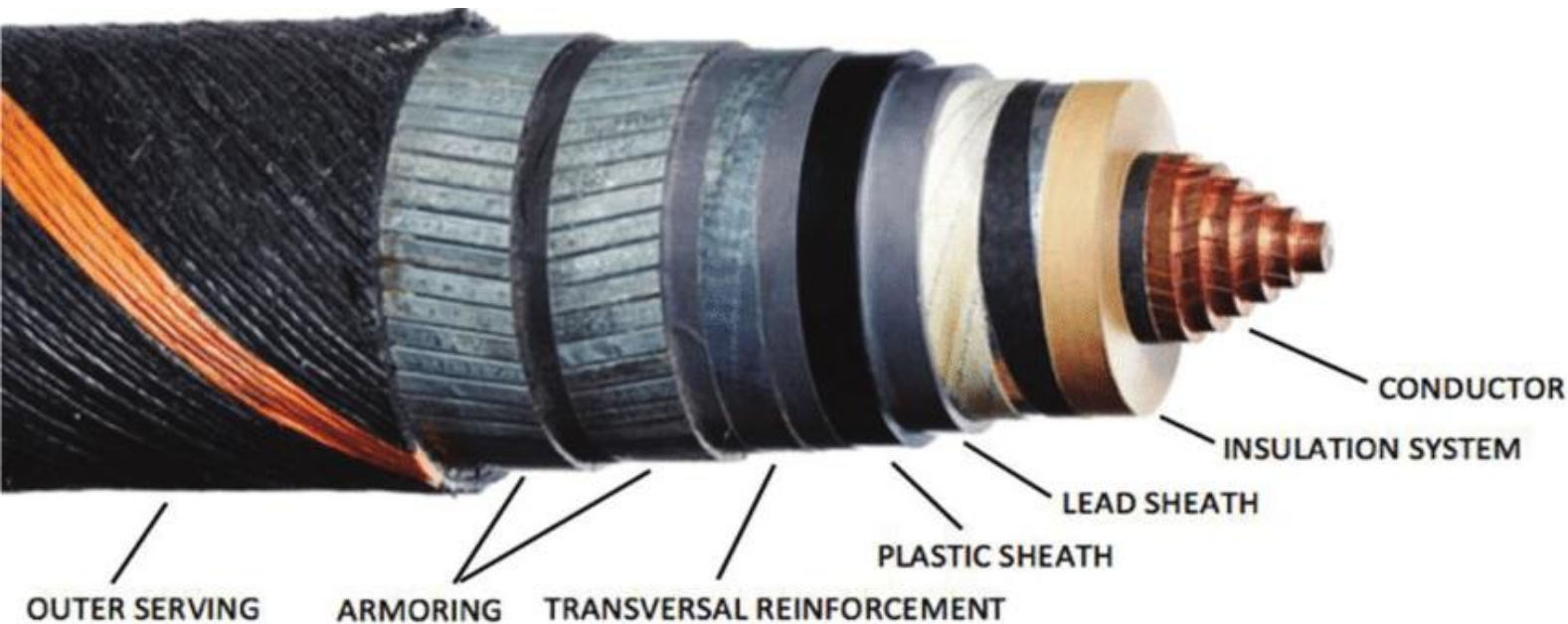


HIGH-VOLTAGE DIRECT CURRENT (HVDC)
SUBMARINE CABLE TRANSMISSION LINE PROJECT

Submarine Power Cable's Attributes

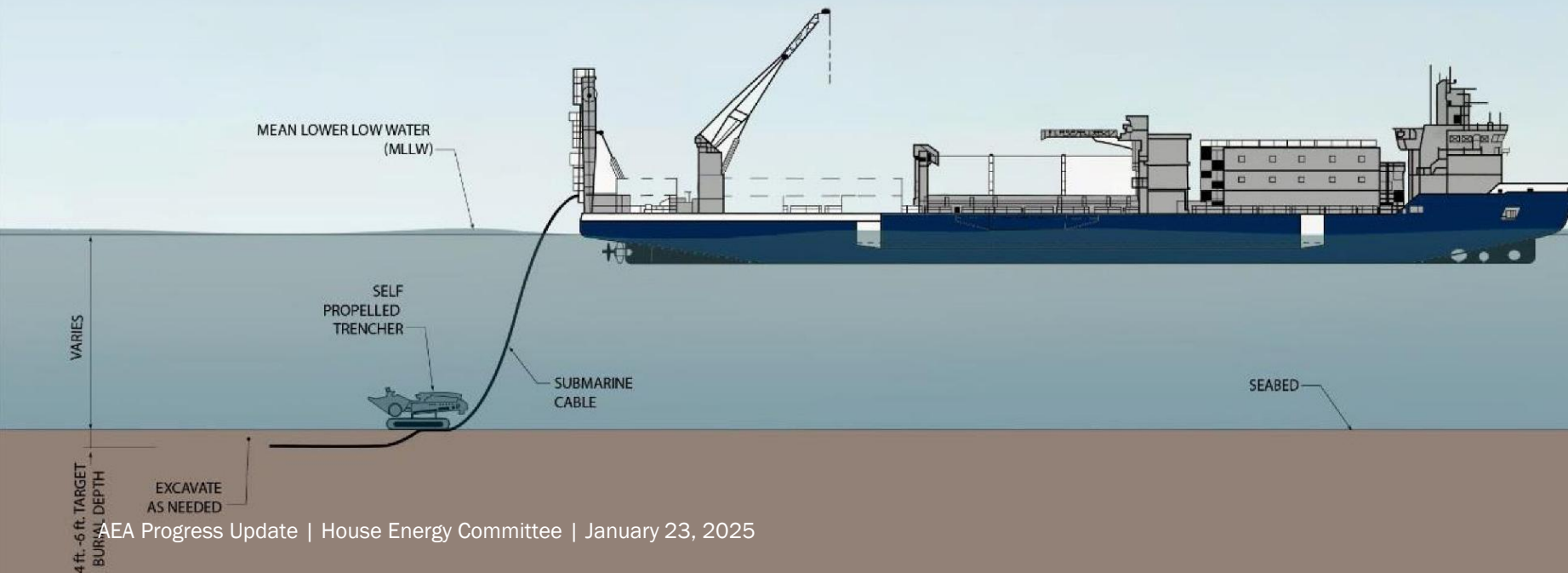
Submarine power cables are designed for the transport of electric energy under the sea.

- Outside diameter – 4.5"
- Weight per foot – 20 lbs. with standard armor (may spec for Cook Inlet)
- Length is about 35 miles under water
- Estimated lifespan is 50 years

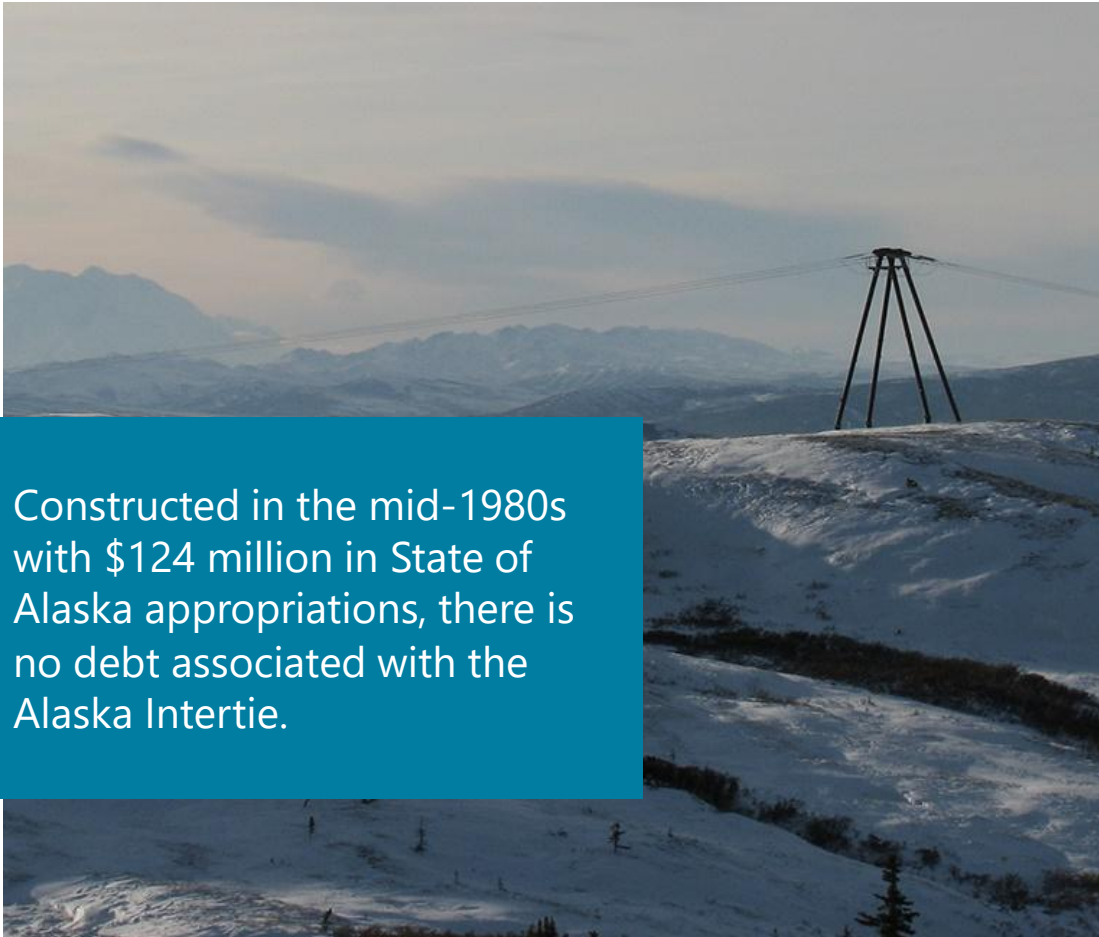


Schedule

- The statutory period for the project is eight (8) years and the construction schedule below is based on a design-bid-build process — a traditional project delivery method that consists of three distinct phases in sequence:
 - **September 2024** – Award
 - **First Quarter 2025** – Preliminary Engineering & Schedule
 - **Second Quarter 2026** – Commence Full Design and Permitting
 - **July 2027** – Complete National Environmental Policy Act (NEPA) Process
 - **January 2028 to December 2029** – Long Lead Items
 - **January 2030 to December 2031** – Construction



Alaska Intertie



Constructed in the mid-1980s with \$124 million in State of Alaska appropriations, there is no debt associated with the Alaska Intertie.

- AEA owns the **170-mile Alaska Intertie transmission line that runs between Willow and Healy**. The line operates at 138 kV (it was designed to operate at 345 kV) and includes 850 structures.
- A **vital section of the Railbelt transmission system**, the Intertie is the only link for transferring power between northern and southern utilities.
- The Intertie transmits power north into the Golden Valley Electric Association (GVEA) system and provides Interior customers with low-cost, reliable power — between 2008 and 2021, the Intertie **saved GVEA customers an average of \$30 million annually**.
- The Intertie provides benefits to Southcentral customers as well through **cost savings and resilience to unexpected events**.



\$28 Million (AEA bonds paid by utilities)

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 systems in the Southern, and Central regions of the grid. The Northern BESS is located at Fairbanks, the Southern BESS is located in Kenai, the Central Region BESS will be located at Anchorage. 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** – Estimated completion date is 2026:
 - Southern (Kenai) – In service
 - Central (Anchorage) – October 2024
 - Northern (Fairbanks) – To be determined
- **Budget** – \$28 million in services to dampen oscillation

The background of the slide is a photograph of a vast, snow-covered mountain range under a hazy, overcast sky. A single transmission tower is visible on the right side of the frame, with power lines stretching across the landscape. The overall tone is cool and atmospheric.

RAILBELT TRANSMISSION ORGANIZATION



Owing to recommendations from the governor's Alaska Energy Security Task Force concerning the elimination of transmission wheeling charges and the establishment of a RTO, the Legislature passed House Bill 307, which was signed into law on July 31, 2024. Under the law, the RTO is a division of AEA.

Railbelt Transmission Organization (RTO)

- The RTO operates through its governance committee comprised of a representatives from AEA, each Railbelt utility, and the Railbelt Reliability Council (as an ex officio non-voting member).
- Since the signing of House Bill 307, the RTO has held five public meetings, established a charter, and adopted bylaws modeled after the Bradley Lake Project Management Committee.
- The RTO submitted an application for a certificate of public convenience and necessity (CPCN) and a petition for waivers with the Regulatory Commission of Alaska (RCA) on December 20th, in advance of the January 1st statutory deadline. The RCA will rule on the petition for waivers and determine whether the application is complete by February 18th.
- By July 1, 2025, the RTO shall file with the RCA a nondiscriminatory open access transmission tariff that provides for the recovery of Railbelt backbone transmission costs and related ancillary services, and replaces wheeling charges with a new mechanism that fairly recovers and equitably allocates the costs of operating the backbone system.

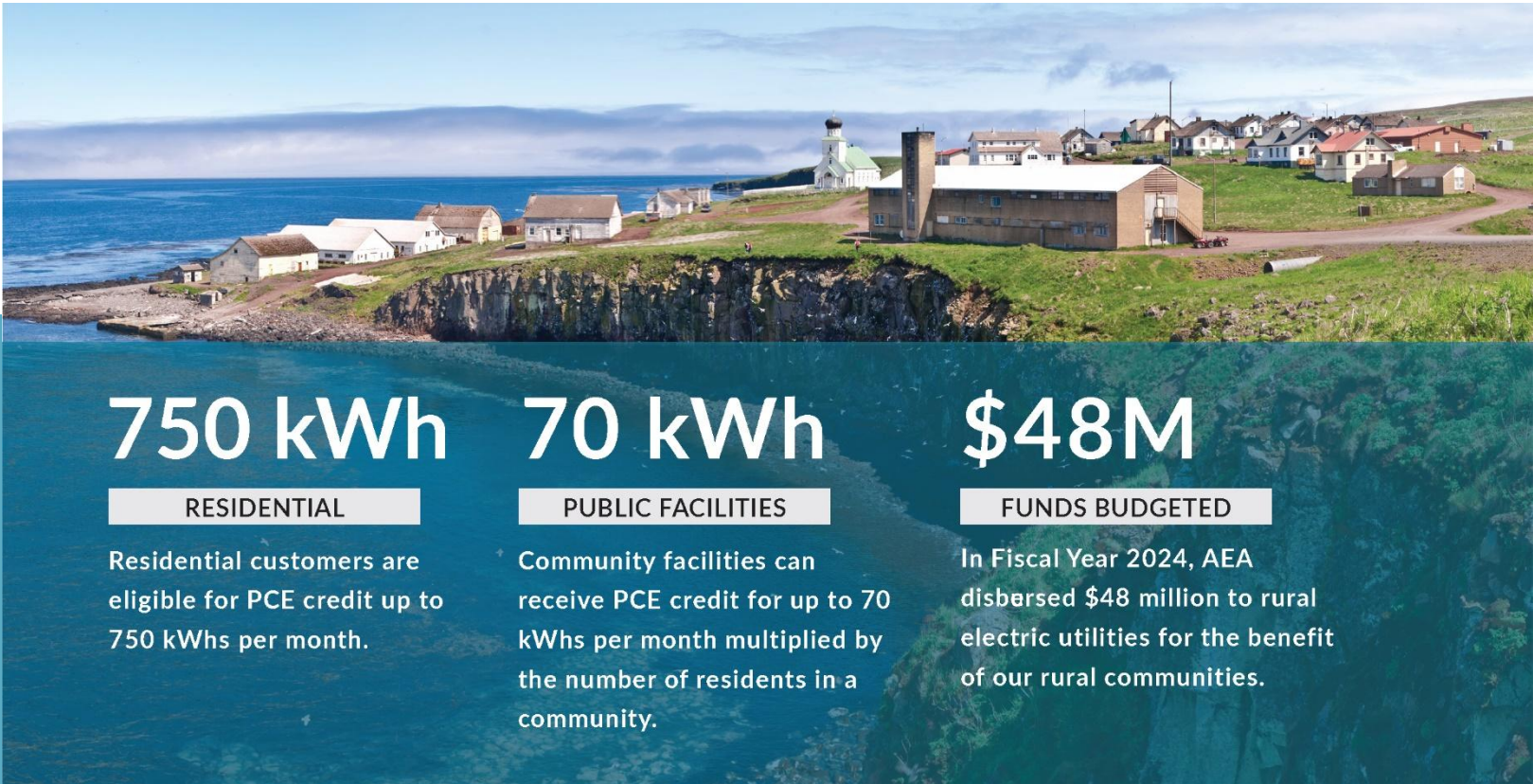
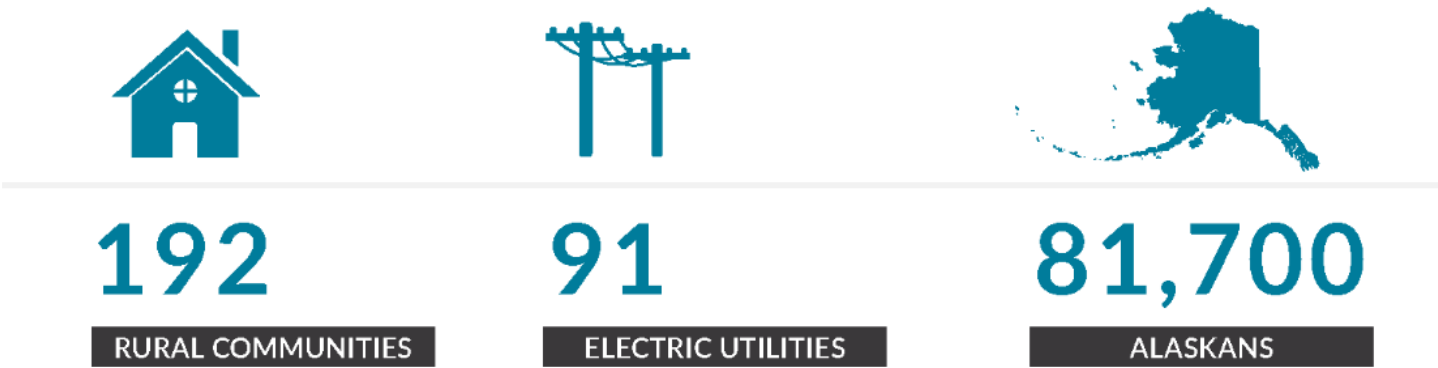
A scenic photograph of a rural landscape. In the foreground, there are green bushes and a small stream. In the middle ground, a village with several houses is visible, including a prominent white church with two green domes. In the background, a large, grassy mountain rises under a blue sky with scattered clouds. The text 'RURAL ENERGY' is overlaid in the center in a large, bold, blue font.

RURAL ENERGY

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. 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.



Who is Eligible to Participate in PCE?

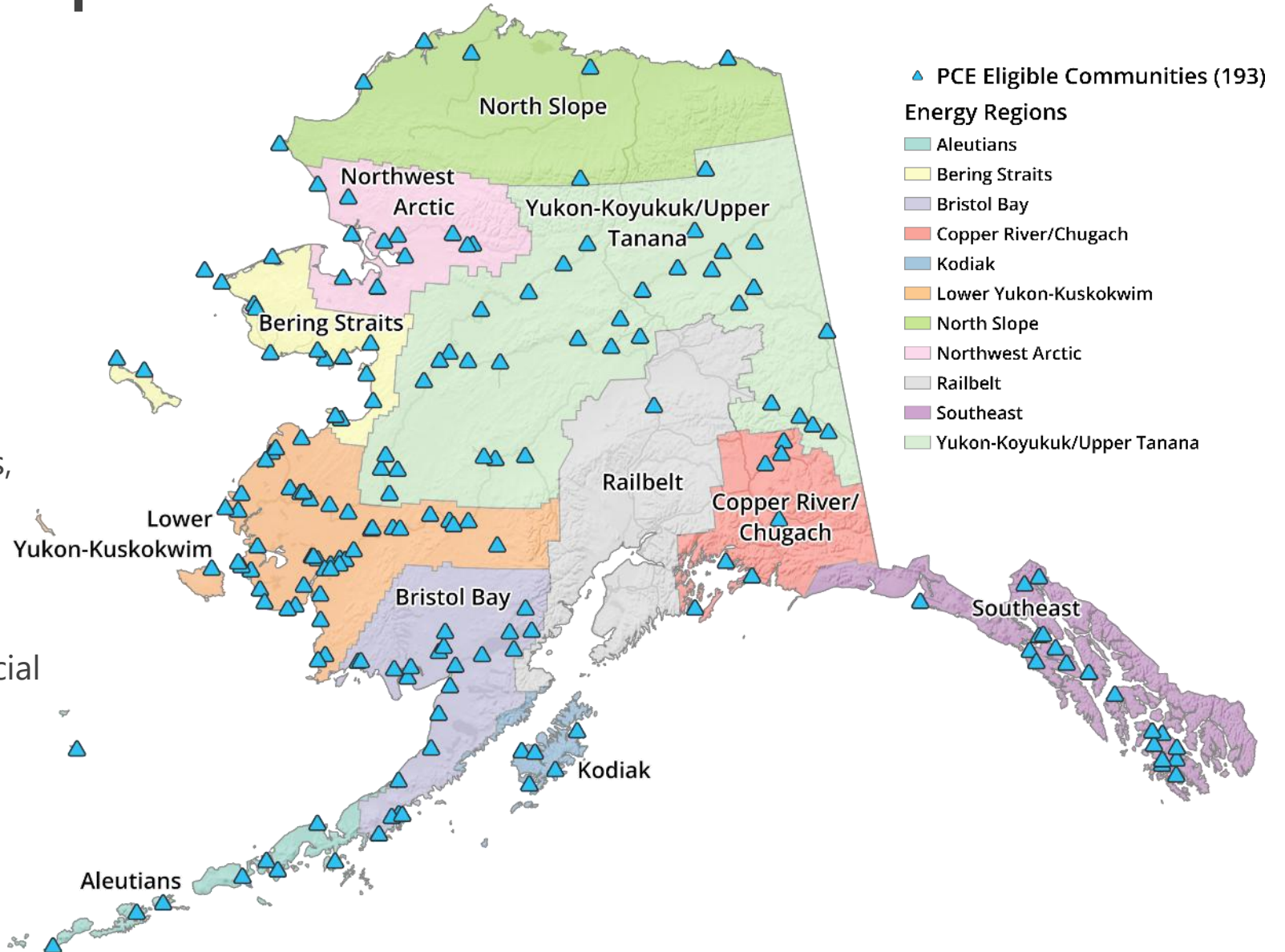
PCE eligibility is determined by the Regulatory Commission of Alaska in accordance with Alaska Statute 42.45.100-170.

Eligible customers include:

- Residential and community facilities (water, sewer, public lighting, and clinics, etc.)

Non-eligible customers include:

- State and federal facilities and commercial customers
- Any community with rates lower than the urban average (the PCE floor)





RURAL ENERGY INFRASTRUCTURE

Rural Power System Upgrades



- 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 aren't upgraded timely**, and communities are left with aging systems at risk of failure.
- AEA evaluates **several factors** when prioritizing projects for funding — at this time, **deferred maintenance is estimated at \$300 million**.

Rural Power System Upgrade Prioritization List

Of the more than **170 communities** eligible for the power system program, AEA has upgraded more than **one-third** of them over the years. The list of communities below is **limited to 25**, as AEA only has the financial and technical resources to manage a half dozen new projects each year. AEA estimates each power system upgrade to cost between **\$5-7 million**. To complete all 25 on the list below, the total is estimated to be **\$175 million**.

- | | | |
|------------------|--------------------|-----------------|
| 1. Nelson Lagoon | 10. Kokhanok | 19. Mertarvik |
| 2. Akiak | 11. Newtok | 20. Chuathbaluk |
| 3. Chalkyitsik | 12. Saint Paul | 21. Elfin Cove |
| 4. False Pass | 13. Chignik Bay | 22. Karluk |
| 5. Manokotak | 14. Levelock | 23. Pedro Bay |
| 6. Tuluksak | 15. Galena | 24. Diomede |
| 7. Atka | 16. Saint George | 25. Nunam Iqua |
| 8. Birch Creek | 17. Chignik Lagoon | |
| 9. Hughes | 18. Akhiok | |

- 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.
- AEA maintains an inventory and assessment priority need-based list — so far **deferred maintenance is estimated at \$1 billion**.

Before



After



FY26 Budget Request – \$4 Million

Bulk Fuel Upgrades

Bulk Fuel Upgrade Prioritization List

Of the state's **400 bulk fuel facilities**, **60 percent** have been assessed by AEA. Initial data collection to establish a baseline will be completed by December 2024. This active list can be re-ranked according to specific area of concern, e.g. **environmental, dispenser, and tank health**. As AEA gathers additional data, the list is re-ranked accordingly. AEA estimates each bulk fuel upgrade to cost between **\$10-12 million**. To complete all 25 on the list below, the total is estimated to be **\$300 million**.

- | | | |
|---------------|------------------|-------------------|
| 1. Shageluk* | 10. Wales* | 19. Goodnews Bay |
| 2. Newtok | 11. Allakaket* | 20. Shungnak* |
| 3. Eek* | 12. Kasaan* | 21. Kwigillingok* |
| 4. Kivalina | 13. Coffman Cove | 22. Tuluksak* |
| 5. Kobuk | 14. Naukati Bay | 23. Teller |
| 6. Chefornak* | 15. Nulato | 24. Galena |
| 7. Metlakatla | 16. Huslia | 25. Kongiganak |
| 8. Whale Pass | 17. Ambler* | |
| 9. Noatak | 18. Manokotak | |

*AEA active projects or projects in development. Several of these projects were identified in previous inventories and assessments.

Circuit Rider Program

FY26 Budget Request – \$710,000

Electrical Emergency Assistance

- Akiak
- Chignik

Circuit Rider and Bulk Fuel Itinerant Onsite

Number after entity indicates more than one occurrence. 45 Total Onsite Visits

- | | | | | | |
|--------------------|--------------------|---------------|-----------------|-------------------|-------------------|
| ▪ Akhiok | ▪ Chignik Lagoon | ▪ Galena | ▪ Manokotak | ▪ Pedro Bay (2) | ▪ Russian Mission |
| ▪ Akiak (2) | ▪ Chignik Lake (2) | ▪ Golovin (2) | ▪ Mertarvik | ▪ Perryville (2) | ▪ Scammon Bay (2) |
| ▪ Beaver (2) | ▪ Chitna (2) | ▪ Hughes | ▪ Napaskiak (4) | ▪ Pilot Point (2) | ▪ Teller |
| ▪ AVTEC Seward (5) | ▪ Circle (2) | ▪ Igiugig | ▪ New Stuyahok | ▪ Pilot Station | ▪ Tenakee Springs |
| ▪ Chalkyitsik | ▪ Cold Bay | ▪ Kipnuk (4) | ▪ Nikolai | ▪ Port Heiden | ▪ Tuluksak (2) |
| ▪ Chignik Bay (2) | ▪ False Pass | ▪ Levelock | ▪ Nunam Iqua | ▪ Rampart (2) | ▪ Venetie (2) |

Circuit Rider Real-Time Remote Assistance

Number after entity indicates more than one occurrence. 311 Total Responses

- | | | | | | | |
|----------------------|----------------------|------------------|--------------------|---------------------|-----------------------|---------------|
| ▪ Akhiok (5) | ▪ Chignik Bay (6) | ▪ Elfin Cove (8) | ▪ Kongiganak (2) | ▪ Nelson Lagoon (3) | ▪ Red Devil | ▪ Venetie (9) |
| ▪ Akiachak (8) | ▪ Chignik Lagoon (3) | ▪ False Pass (2) | ▪ Koyuk (2) | ▪ Newhalen | ▪ Ruby (2) | ▪ Wainwright |
| ▪ Akiak (8) | ▪ Chignik Lake (2) | ▪ Fort Yukon | ▪ Koyukuk (5) | ▪ Nikolai (7) | ▪ Saint George | |
| ▪ Aniak | ▪ Chitina (7) | ▪ Galena | ▪ Kwethluk (9) | ▪ Nikolski | ▪ Sleetmute (2) | |
| ▪ Arctic Village (3) | ▪ Chuathbaluk | ▪ Hoonah (2) | ▪ Kwigillingok (4) | ▪ Nunam Iqua (14) | ▪ Stevens Village | |
| ▪ Atka | ▪ Circle (7) | ▪ Hughes (3) | ▪ Levelock (8) | ▪ Ouzinkie (4) | ▪ Stony River | |
| ▪ Atmautluak | ▪ Clarks Point | ▪ Igiugig | ▪ Manokotak | ▪ Pedro Bay (3) | ▪ Takotna | |
| ▪ Beaver (2) | ▪ Cold Bay | ▪ Karluk (4) | ▪ McGrath | ▪ Pelican | ▪ Tatitlek (5) | |
| ▪ Buckland (2) | ▪ Crooked Creek | ▪ Kipnuk (11) | ▪ Mertarvik (6) | ▪ Perryville (2) | ▪ Tenakee Springs (4) | |
| ▪ Central | ▪ Diomedea (5) | ▪ Kokhanok (3) | ▪ Napaskiak | ▪ Pilot Point (4) | ▪ Tuluksak (5) | |
| ▪ Chalkyitsik (2) | ▪ Egegik (4) | ▪ Koliganek | ▪ Napaskiak (6) | ▪ Port Heiden (14) | ▪ Unalakleet | |

The background of the slide features a close-up, low-angle shot of solar panels. The panels are dark blue with a grid of silver lines. They are tilted upwards towards the right. In the upper right corner, a bright blue sky with scattered white clouds is visible. The overall image conveys a sense of clean, renewable energy.

RENEWABLE ENERGY & ENERGY EFFICIENCY

Renewable Energy and Energy Efficiency Programs

AEA's renewable energy and efficiency programs provide technical and financial support for communities interested in developing renewable energy programs with the aim of growing Alaska's clean economy.

Public Outreach

- Alaska Electric Vehicle Working Group
- Alaska Energy Efficiency Partnership
- Alaska Solar Working Group
- Alaska Wind Working Group
- Alaska Wood Energy Development Task Group

Houston Solar Farm, Houston, AK



BIOMASS



ENERGY EFFICIENCY



ELECTRIC VEHICLES



ENERGY STORAGE



GEOTHERMAL



HEAT RECOVERY



HYDROELECTRIC



NUCLEAR



SOLAR



WIND

Home Energy and High Efficiency Rebate Allocations

AEA is collaborating with Alaska House Finance Corporation (AHFC) to distribute Alaska's allocation of \$74 Million

Home Efficiency Rebates

- Rebates for energy efficiency retrofits range from \$2,000-\$4,000 for individual households and up to \$400,000 for multi-family 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.**
- **AEA received notice of conditional award in January 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 percent to 150 percent. Rebates of 100 percent for incomes below 80 percent of area medium income, with similar tiers for multi-family 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 upgrade.
- Other eligible rebates include electric stoves, clothes dryers, and insulation/air sealing measures.
- **Alaska's allocation: \$37.1 million; no State match required.**
- **AEA received notice of conditional award in January 2025.**

Solar for All

Houston Solar Farm, Houston, Alaska



\$62.5 Million (Shared with AHFC)
FY2026 Request - \$42.45 Million Federal

- **In April 2024, AEA and AHFC were awarded a \$62.5 million grant from the Environmental Protection Agency's Solar for All program.**
 - AEA will develop community solar in disadvantaged communities.
 - AHFC will develop residential rooftop solar for low-income households.
- **Program benefits:**
 - Energy cost savings,
 - Increased resiliency,
 - Equitable access to solar,
 - Asset ownership benefits low income and disadvantaged communities,
 - Workforce development, and
 - Reduction in greenhouse gas emissions.
- **No match required for this competitive grant.**

National Electric Vehicle Infrastructure (NEVI) Program

- AEA and the Alaska Department of Transportation & Public Facilities (DOT&PF) continue to deploy the **State of Alaska NEVI Plan**.
- **On November 25, 2024**, AEA and DOT&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**. AEA and DOT&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**.



Black Rapids Training Site (BRTS) Defense Community Infrastructure Pilot Program

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.

GVEA will use the funds to extend a transmission line 34 miles along the Richardson Highway to BTRS. Currently, BTRS 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.



An aerial photograph of a coastal area, likely Alaska, showing rugged terrain, dense forests, and a large body of water. A large, semi-transparent blue rectangle is overlaid on the center of the image, serving as a background for the title text.

PLANNING

Renewable Energy Fund (REF)

AEA has recommended 18 REF projects to the 34th Legislature for funding consideration in the Fiscal Year 2026 capital budget, at a total funding request of \$21.2 million. Any funding provided in support of recommended REF projects is at the full discretion of the Legislature. The proposed budget allocates \$6.3 million in support of REF projects to fund the top six recommended projects.

REF Highlights

Round 13: 11 Projects – \$4.75M

Round 14: 27 Projects – \$15M

Round 15: 18 Projects – \$17M

Round 16: 5 Projects – \$10.5M

Round 17*: 18 Projects – \$21.2M

*as recommended by the REF Advisory Committee for funding



Kongiganak, Alaska



Since its inception, the State has invested \$327 million in the REF;



Over 110 operational projects, and 57 are under development; and



The REF has offset the consumption of approximately 85 million gallons of diesel fuel, per an independent study.

Power Project Fund (PPF) Loan Program

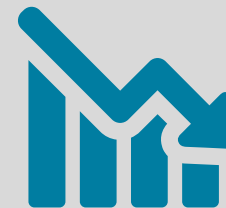
The PPF loan program continues to see an increase in applications due to federal matching fund requirements and other incentives. The Inflation Reduction Act provides tax credits of up to 60 percent for clean energy projects. Capitalization of the fund would allow for additional loans to be issued to support the increased demand.



Outstanding Loans
\$31 Million
15 Loans



Uncommitted Cash Balance
\$9.4 Million as of
November 2024



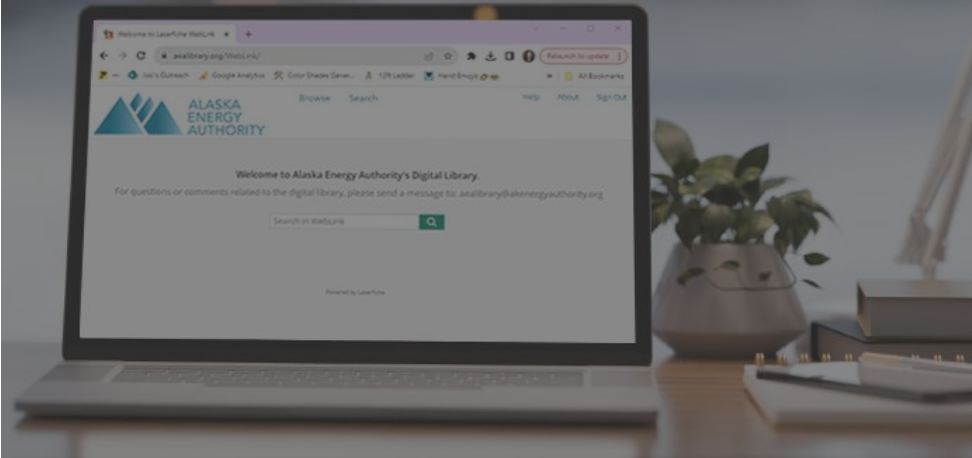
Competitive Rates
Current PPF Interest Rate
5.37% as of January 2025



House Bill 307
Offers Reduced Interest Rate
for Loans \$5 Million or More

AEA Electronic Library (E-Library)

Provides the public with open, transparent access to over 50 years of Alaska energy data.



On December 11, 2023, AEA officially launched its digital e-library, which was funded by a \$100,000 grant from the Denali Commission and \$40,000 from AEA.



Since its launch, the e-library has averaged over 650 unique visitors per month. Site visits to the e-library are reported to be trending positively, with an average 10 percent increase in site visits month over month.



The e-library launched with 7,500 documents, including program publications, technical reports, research and feasibility studies. Currently, over 11,000 documents are searchable.



The e-library is fully accessible to the public via AEA's website via the library tab, or directly via accessing AEA's website at <https://www.akenergyauthority.org/library>



\$60 Million (Over Five Years)

FY2026 Request - \$13.9 million (\$1.8 million match)

Grid Resilience Formula Grant Program IIJA 40101(d)

- Under 40101(d), the AEA is expected to receive **\$60 million in federal formula grants** to catalyze grid resilience projects. As of December 2024, the **first three of five allocations totaling \$39.8 million**, have been awarded to AEA.
- Under AEA's initial federal award of \$22.2 million, comprising the initial two of five federal funding allocations, AEA competitively selected three projects for sub-awards, totaling \$20.9 million. Final federal approvals for these sub-awards were received in December 2024, with sub-award agreements to be issued in January 2025.
- AEA plans to issue its second competitive solicitation for resilience projects in quarter one of 2025.
- In December 2024, the fourth year formula funding allocations were announced, with AEA slated to receive \$16.9 million, requiring \$2.5 million in state matching funds. Applications for funding scheduled to open in February 2025.
- **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**.

Thank You

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