ALASKA ENERGY AUTHORITY

BUILDING A FUTURE-READY RAILBELT

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Alaska Forum
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ALASKA ENERGY AUTHORITY
50 YEARS OF SERVICE

AEA Programs and Services Overview

Owned Assets
- Bradley Lake Hydroelectric Project
- Alaska Intertie
- Sterling to Quartz Creek Transmission Line
- Cook Inlet PowerLink

Power Cost Equalization
- $48 Million Program
- 193 Rural Communities
- 82 Electric Utilities
- Benefits 82,000+ Alaskans

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

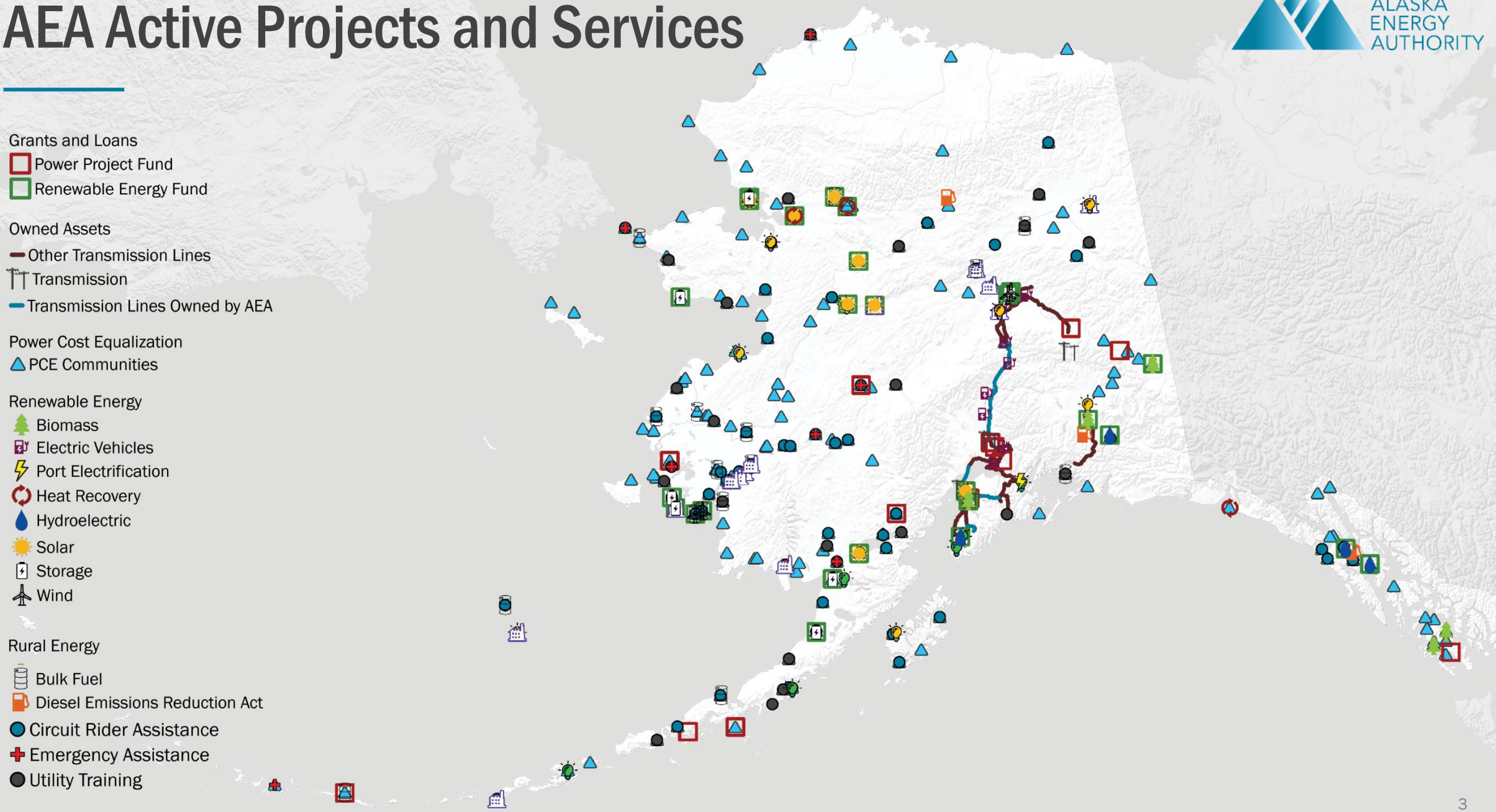
Renewable Energy and Energy Efficiency
- Renewable projects; biomass, electric vehicles, hydroelectric, solar, and wind
- Federal programs: NEVI and Home Energy and High Efficiency Rebate Allocation

Grants and Loans
- Renewable Energy Fund
- Power Project Fund
- Federal Grants

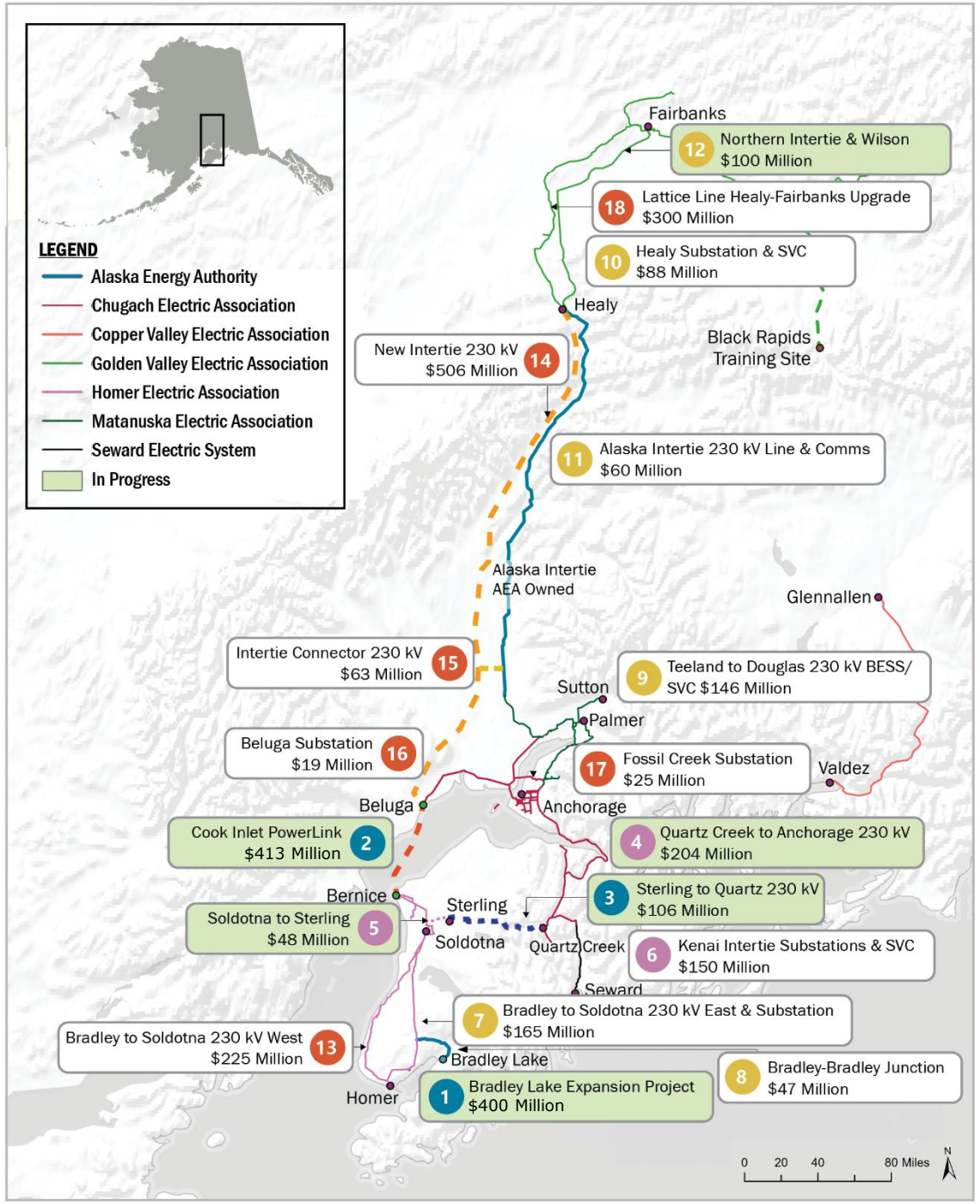
Energy Planning
- Alaska Energy Security Task Force
- State Energy Security Profile
- Electronic Library
- Energy Data Resources
- 40101(d) Grid Resilience

Railbelt Transmission Organization
- AEA, Railbelt Reliability Council, and Utility Governance
- Certificate of Public Convenience and Necessity
- Tarriff Under Regulatory Review

AEA Active Projects and Services



Alaska Railbelt Construction Priorities



1 PHASE 1: AEA PROJECTS UNDERWAY – $590 MILLION

1. Bradly Lake Expansion Project: AEA-unfunded (FERC January 2026)**
2. Cook Inlet PowerLink: AEA-partially funded, Target 2032**
3. Sterling-Quartz Creek: AEA-funded, target 2028*

2 Phase 2: 2nd 230 kV Kenai Intertie – $402 Million

4. Quartz Creek-Anchorage: CEA-Funded, Target 2032*
5. Soldotna-Sterling: HEA/AEA-partially funded*
6. Kenai Intertie Substations & SVC Upgrades: AEA/CEA (funds required)*

3 Phase 3: Complete 230 kV Bradley-Fairbanks – $606 Million

7. Bradley-Soldotna East & Substation: AEA/HEA (funds required)*
8. Bradley-Bradley Junction: AEA-unfunded*
9. Teeland-Douglas & SVC Upgrade: MEA/AEA (funds required)*
10. Healy Substation & SVC Upgrade: AEA/GVEA (funds required)*
11. Alaska Intertie 230 kV & Comms: AEA (funds required)*
12. Northern Intertie & Wilson SVC/BESS: GVEA (partially funded)*

4 Phase 4: 2nd 230 kV Anchorage to Fairbanks – $1138 Million

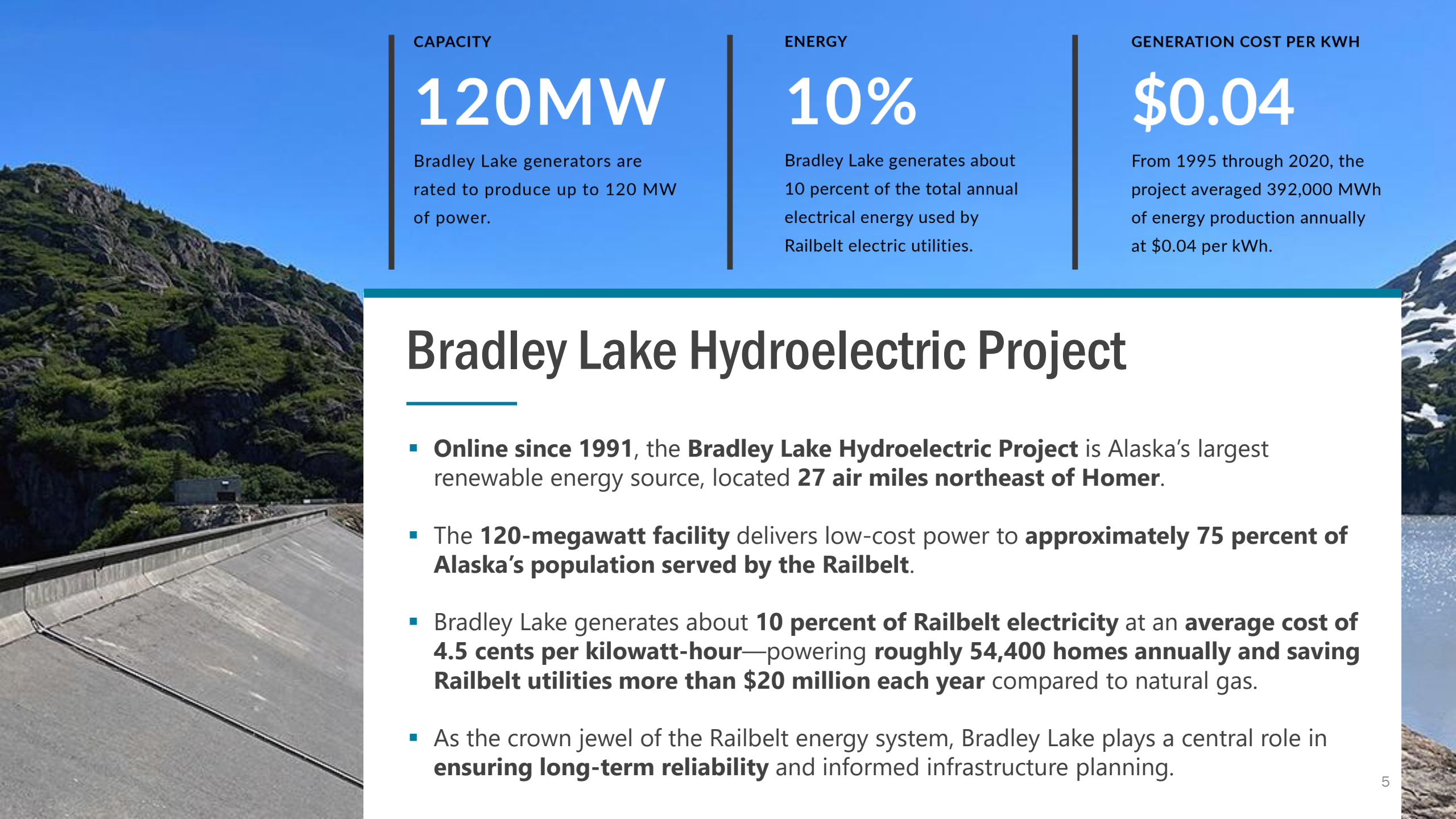
13. Bradley-Soldotna West: HEA (funds required)*
14. New Intertie Beluga-Healy & Substation: AEA (funds required) **
15. Intertie Connector: AEA (funds required)**
16. Beluga Substation: AEA (funds required)**
17. Fossil Creek Substation: CEA/MEA (funds required)*
18. Lattice Line Healy-Fairbanks Upgrade: GVEA (funds required)*

*Expansion or upgrade
**New project

Acronyms

BESS: Battery Energy Storage System

SVC: Static Var Compensator



CAPACITY

120MW

Bradley Lake generators are rated to produce up to 120 MW of power.

ENERGY

10%

Bradley Lake generates about 10 percent of the total annual electrical energy used by Railbelt electric utilities.

GENERATION COST PER KWH

$0.04

From 1995 through 2020, the project averaged 392,000 MWh of energy production annually at $0.04 per kWh.

Bradley Lake Hydroelectric Project

- **Online since 1991**, the **Bradley Lake Hydroelectric Project** is Alaska's largest renewable energy source, located **27 air miles northeast of Homer**.
- The **120-megawatt facility** delivers low-cost power to **approximately 75 percent of Alaska's population served by the Railbelt**.
- Bradley Lake generates about **10 percent of Railbelt electricity** at an **average cost of 4.5 cents per kilowatt-hour**—powering **roughly 54,400 homes annually and saving Railbelt utilities more than $20 million each year** compared to natural gas.
- As the crown jewel of the Railbelt energy system, Bradley Lake plays a central role in **ensuring long-term reliability** and informed infrastructure planning.

ALASKA ENERGY AUTHORITY

Bradley Lake Expansion Project

AEA is advancing the Bradley Lake Expansion Project, which includes the **Dixon Diversion** and **Bradley Pool Raise** sub-projects. This project will divert water from Dixon Glacier to increase Bradley Lake's annual energy production by **50 percent**.

ESTIMATED ANNUAL OUTPUT
180,000 MWh
≈ 30,000 homes powered

NATURAL GAS OFFSET
1.5 Billion cu ft
7.5% of unmet demand (2030)

TARGET COMPLETION
2031
Shovel-ready status

ESTIMATED COST
$400 Million
Class IV Estimate

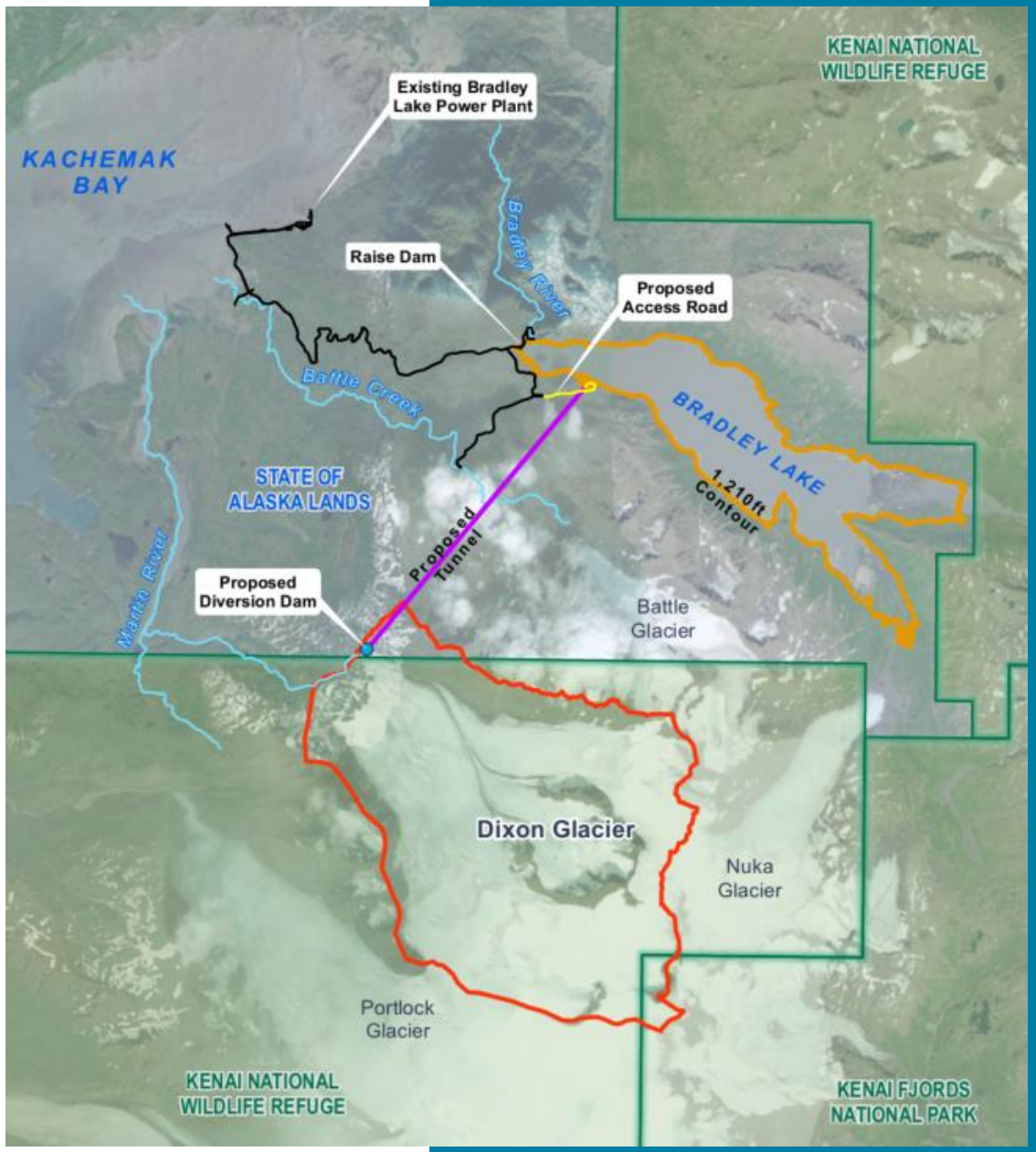

BRADLEY LAKE
EXPANSION PROJECT

Dixon Diversion

The **Dixon Diversion** represents Alaska's largest new renewable energy development since the Bradley Lake Hydroelectric Project was completed in 1991.

Major Infrastructure Elements:

- Diversion dam at the toe of Dixon Glacier
- 4.7 mile tunnel (~14-foot diameter) conveying water to Bradley Lake
- Bradley Pool Raise up to 16'
- Approximately one mile of new access road



Cook Inlet PowerLink (CIPLink)

CIPLink is a high-voltage direct current (HVDC) transmission system connecting Southern and Central Railbelt regions. It features a **38-mile subsea cable** and overland routes to deliver **up to 200 MW** of bidirectional power flow.

CAPACITY

200 MW

Bidirectional Flow

CONNECTIVITY

Railbelt Link

Connects South & Central Regions

TARGET COMPLETION

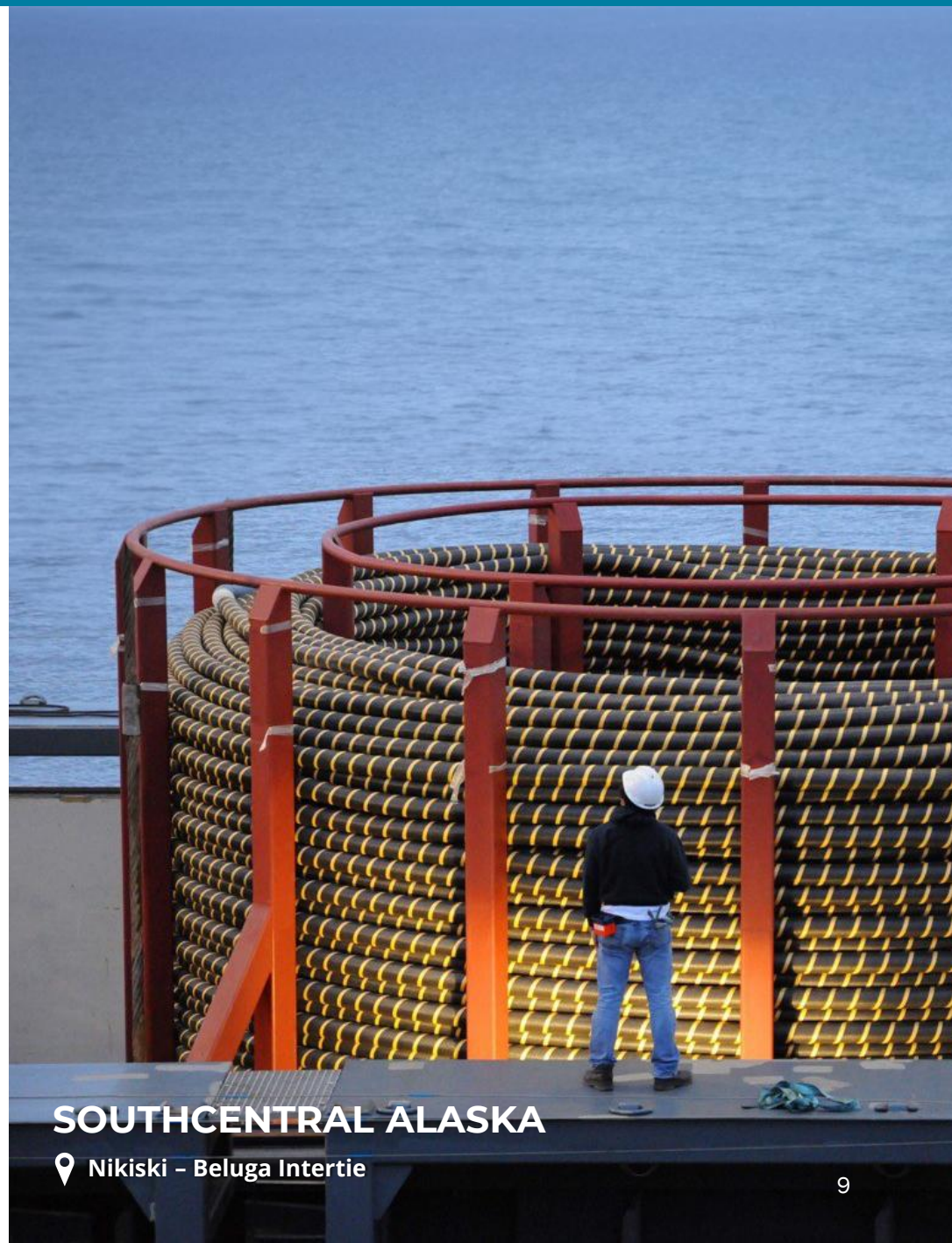
2032

Shovel-ready status

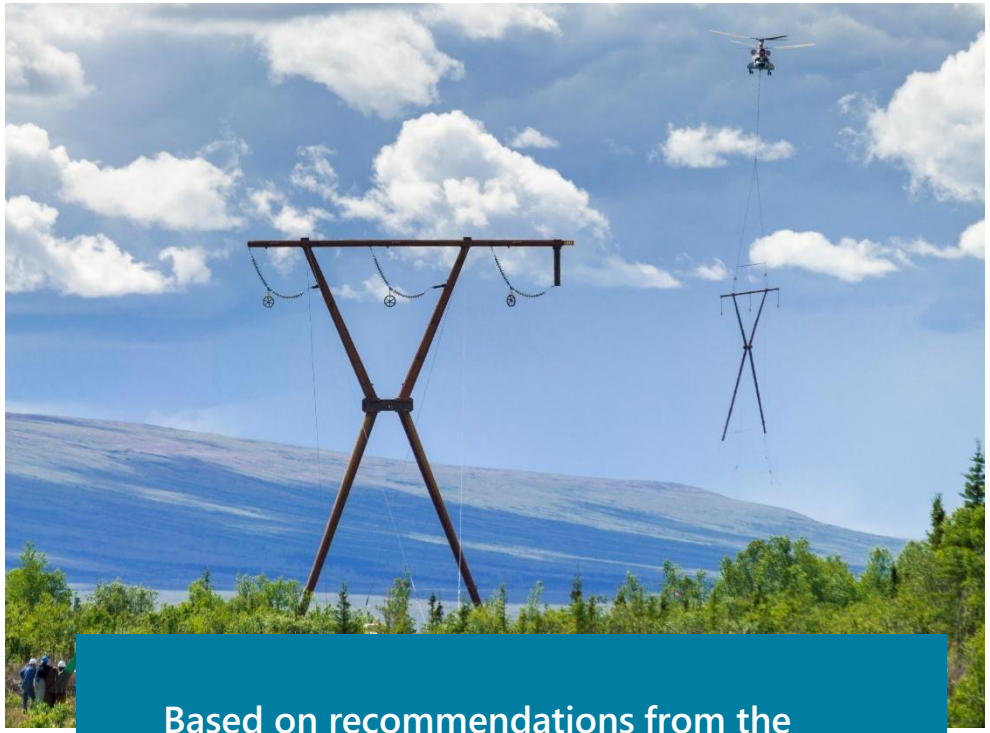
ESTIMATED COST

$413 Million

Preliminary Engineering Done




COOK INLET POWERLINK



Based on recommendations from the Governor's Alaska Energy Security Task Force—including eliminating transmission wheeling charges and establishing an RTO—the Legislature passed House Bill 307, signed into law on July 31, 2024. Under this new law, the RTO is established as a division of AEA.

Railbelt Transmission Organization (RTO)

- The RTO operates a **division of AEA** for administrative purposes.
- Governance includes representatives from **AEA, Chugach Electric Association, Golden Valley Electric Association, Homer Electric Association, Matanuska Electric Association, the City of Seward**, and the Railbelt Reliability Council (ex-officio, nonvoting member).
- The RTO received its **certificate to operate** from the Regulatory Commission of Alaska (RCA) on **May 6**.
- On **July 1**, the RTO filed a proposed **Open Access Transmission Tariff (OATT)** with the RCA, meeting its statutory deadline.
- The proposed OATT outlines terms for **network integration transmission service** and introduces a **formulaic tariff-based revenue mechanism** for recovering the costs to own and operate the backbone transmission system.

Renewable Energy Fund (REF)

REF Round 17 funded the **six top-ranked projects** recommended by **AEA**, with legislative approval and the Governor's concurrence, for a **FY2026 appropriation of $6.3 million**. For **Round 18, AEA** has received **35 applications** and is reviewing them now, with recommended projects to be submitted to the Legislature in **early January** for **FY2027 funding**.

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: 6 Projects – $6.3M
Round 18: TBD


Kongiganak, Alaska

Since its inception, the State has invested **$333 million** in the REF;

110+ projects are operational, and **56** more in **development**;

REF projects have displaced **120 million gallons of diesel to date** and offset **1.15 billion cubic feet of natural gas each year**.

Power Project Fund (PPF) Loan Program

AEA's Power Project Fund (PPF) offers flexible, low-cost financing for eligible electric power projects. The program supports electric utilities, local governments, regional and village corporations, and independent power producers in developing, expanding, or upgrading power facilities. A wide range of project types qualify.

Outstanding Loans
$28.9 Million
15 Loans

Uncommitted Cash Balance
$12.1 Million as of January 2026

Competitive Rates
Current PPF Interest Rate
5.57% as of January 2026

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

Project Cost: $26 Million

Whittier Cruise Ship Terminal Port Electrification

Port electrification is a critical investment for Alaska's cruise ship docks—enabling vessels to connect to **shore power** while at berth instead of running onboard diesel generators —reducing carbon emissions, improving local air quality, and supporting cleaner port operations.

Funding and Partners:

- Funded through the s**tate cruise ship head tax** with **private-sector matching contributions**
- **Partners:** Holland America, Chugach Electric Association

Thank You!

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