

ALASKA ENERGY AUTHORITY

DELIVERING ENERGY SOLUTIONS THAT POWER ALASKA

Curtis W. Thayer
CEO and Executive Director

Arctic Energy Office
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AEA's Mission & Vision

Our refined mission and vision reflect the direction outlined in AEA's strategic plan and reinforce our commitment to meeting the evolving energy needs of Alaska's communities.

WHO WE ARE, WHAT WE DO

OUR MISSION

Advancing affordable,
reliable energy in Alaska.

WHERE WE'RE HEADED

OUR VISION

A resilient and reliable energy
future for Alaska, enabled by
strong infrastructure, innovation,
and collaboration.

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

- \$46 Million Program
- 188 Rural Communities
- 81 Electric Utilities
- Benefits 81,000+ Alaskans (All figures reflect FY2025)



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



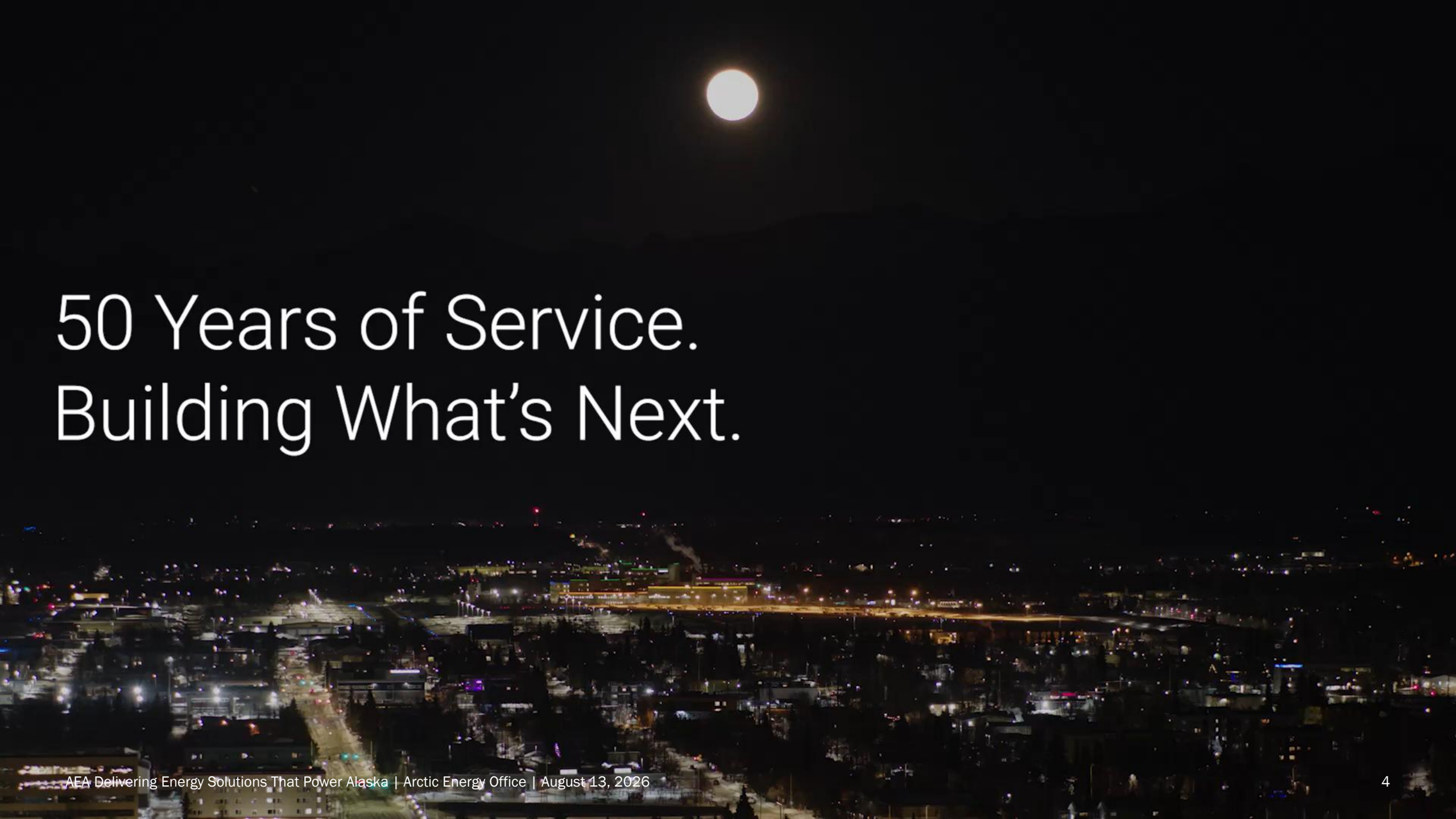
Energy Planning

- 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
- Tariff Under Regulatory Review

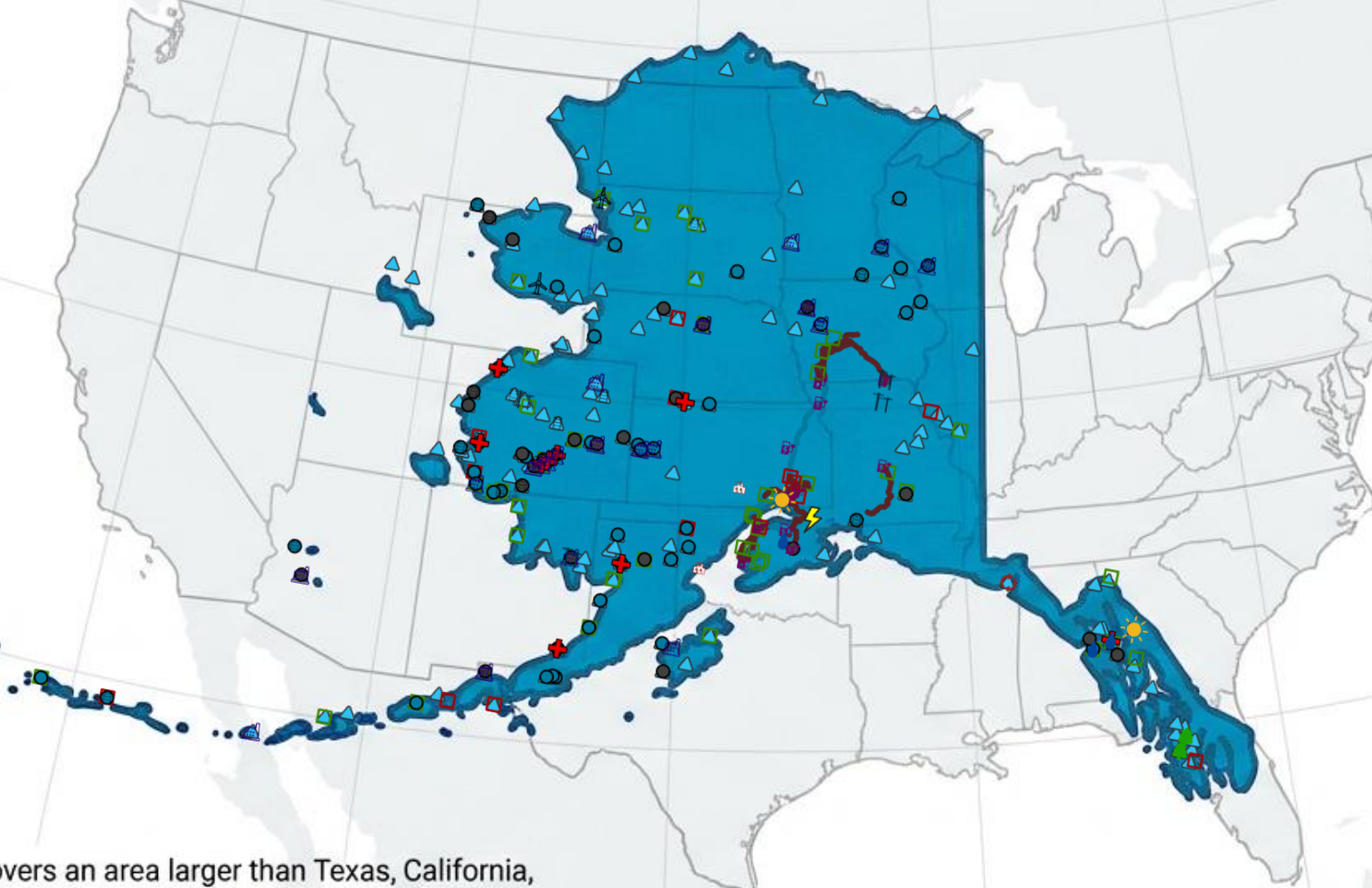
An aerial night photograph of a city, likely Anchorage, Alaska, with a full moon in the dark sky. The city lights are visible, including a large airport terminal and surrounding urban areas.

50 Years of Service. Building What's Next.

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



The state of Alaska covers an area larger than Texas, California, and Montana combined, spanning a distance from east to west that would stretch from coast to coast across the lower 48 states.



Railbelt Infrastructure & Military Installations

Railbelt system serving 75 percent of Alaskans; linking Homer–Kenai–Anchorage–Mat-Su–Denali–Fairbanks–Delta Junction



⚡ Bradley Lake Expansion Project

Expansion of the **120 MW** Bradley Lake Hydroelectric Project that **increases generation capacity by more than 40 percent**. Additional energy is transferred through the Alaska Intertie to utilities serving Interior Alaska—including military installations.

⚡ Cook Inlet PowerLink

Proposed **38-mile** high-voltage direct current subsea transmission cable enabling up to **200 MW** bi-directional flow. Strengthens Southcentral-Interior transfer capacity and provides **critical backup redundancy for Joint Base Elmendorf-Richardson**.

⚡ SSQ Transmission Upgrades

Upgrades to the Sterling-Soldotna-Quartz Creek transmission corridor that increase transmission capacity by **53 percent** through conversion to **230 kV** infrastructure. The project **reduces transmission losses** and **improves voltage performance within the corridor**.

⚡ Susitna-Watana Hydroelectric Project

Proposed **618 MW** hydroelectric project generating up to **2,800 GWh** annually. The project could **offset future Cook Inlet natural gas supply declines** and provide up to **50 percent** of projected Railbelt electricity demand.

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 more than **40 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

SOUTHCENTRAL ALASKA

Bradley Lake Hydroelectric Project
AEA: Powering Alaska's Future That Power Alaska | Arctic Energy Office | August 13, 2026

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



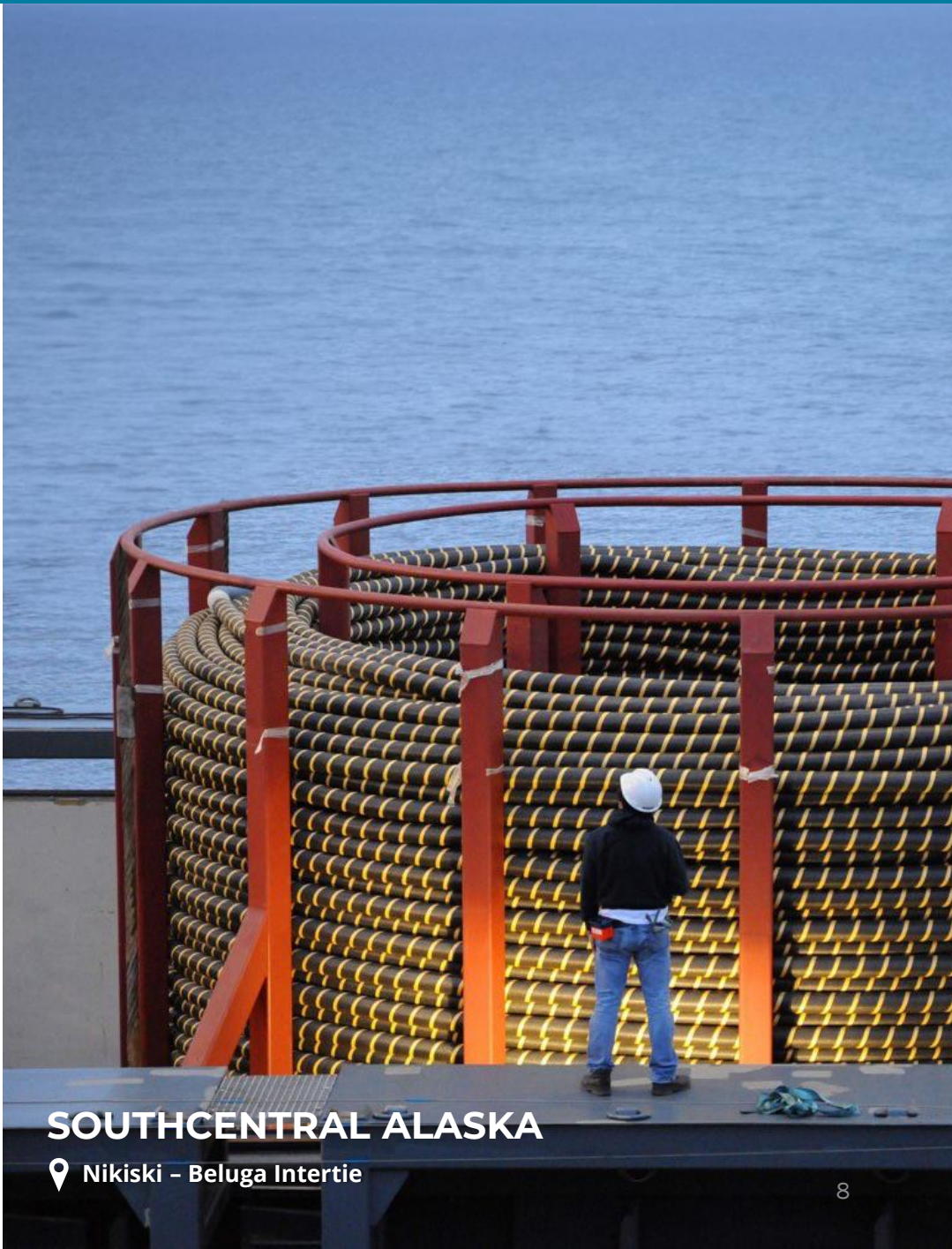
CONNECTIVITY
Railbelt Link
Connects South & Central Regions



TARGET COMPLETION
2032
Shovel-ready status



ESTIMATED COST
\$413 Million
Preliminary Engineering Done



SOUTHCENTRAL ALASKA

Nikiski - Beluga Intertie

Soldotna-Sterling-Quartz Creek (SSQ) Transmission Line and Substation Project

Upgrading transmission lines from 115 kV to 230 kV increases Railbelt transfer capacity by 50 percent, significantly improving system reliability and stability.



TRANSFER CAPABILITY

+53%

Potential stability-limited increase



LINE LOSS REDUCTION

-8.4 PTS

Projected full-corridor tie-loss drop



TARGET COMPLETION

2030

Upgrades underway



ESTIMATED COST

\$173.9 Million

Including all costs

KENAI PENINSULA



SSQ Transmission Line and Substation Project

AEA Delivering Energy Solutions That Power Alaska | Arctic Energy Office | August 13, 2026

Power Cost Equalization (PCE)

PCE is a key part of Alaska’s energy policy—helping rural residents access affordable electricity despite isolation and high infrastructure costs, narrowing the gap with urban rates and supporting rural utilities.

Electricity costs for Alaska’s rural residents are significantly higher than in urban areas. The PCE program reduces these costs, ensuring affordable service, reliable centralized power, and the long-term viability of rural utilities.



193

RURAL COMMUNITIES



81

ELECTRIC UTILITIES



81,000

ALASKANS



750 kWh

RESIDENTIAL

Residential customer are eligible for PCE credit up to 70 kWhs per month.

70 kWh

PUBLIC FACILITIES

Community facilitates can Receive PCE credit for up to 70 kWhs per month multiplied by the number of residents in a community.

\$46M

FUNDS DISBURSED

In fiscal year 2025, AEA disbursed \$46 million to rural electric utilities benefiting 81,000 Alaskans.

Petersburg, Alaska

Rural Energy Infrastructure

Improving reliability and safety for Alaska's remote communities.



RURAL ALASKA

 Community Infrastructure

Rural Power System Upgrades

Improves generation in villages with <2,000 people by replacing inefficient mechanical systems with electronic generator sets.

Mitigates risk of aging system failure

ELIGIBLE
170
Communities

DEFERRED MAINT.
\$300 Million
Funding Need

Bulk Fuel Upgrades

Designs and builds modern, code-compliant bulk fuel facilities. Most existing facilities are >40 years old and pose safety risks.

Addresses corrosion and environmental risks

INVENTORY
400+
Facilities

DEFERRED MAINT.
\$1 Billion
Funding Need

Renewable Energy Fund (REF)



ABOUT THE PROGRAM

Established in 2008 to reduce and stabilize the cost of energy across Alaska.

The Renewable Energy Fund (REF) provides competitive grant funding for renewable energy projects in communities across Alaska. REF supports projects that reduce long-term energy costs, decrease diesel dependence, and improve power reliability.

AEA administers a four-stage review process under Alaska Statute 42.45.045: **eligibility and completeness, technical and economic feasibility, project scoring, and regional spreading.**

ROUND 18 · FY2027

\$14.6 million

Capital budget. 9 projects selected by the Governor and Legislature.

CUMULATIVE · SINCE 2008

\$333 million

Total state investment across 18 funding rounds.

PROJECTS IN SERVICE

120 + operational

Plus 58 additional projects in active development.

DIESEL DISPLACED

~120 million gallons

~\$600M avoided at the FY2025 PCE rate (\$4.95/gal).

Federal Program Funds Secured - \$39.8 million
Estimated Final Federal Allocation ~ \$20 Million

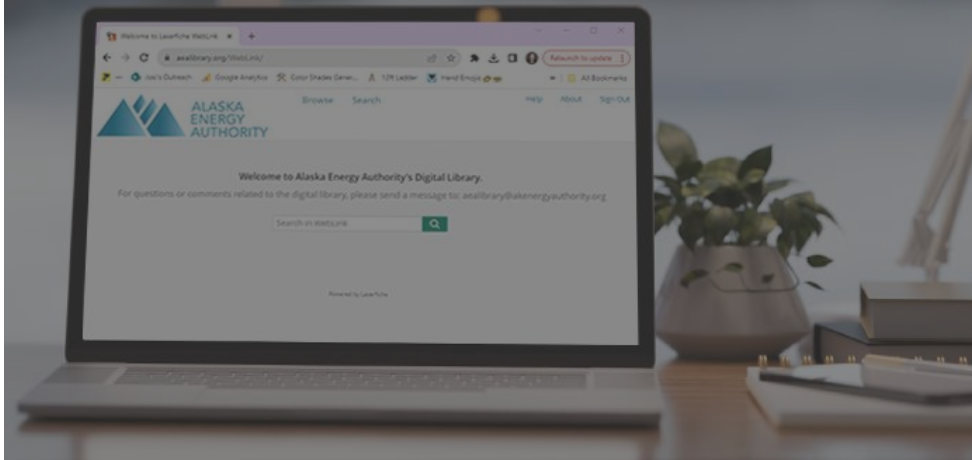
Grid Resilience Formula Grant Program IIJA 40101(d)

Metlakatla, Alaska

- AEA administers Section 40101(d) grid resilience funds through a competitive process. Of the **\$60 million** expected in federal formula grants, **\$39.8 million** has been awarded to date; a final allocation is expected in 2026.
- **Round 2** (second solicitation): **Three projects** were awarded sub-grants totaling **\$17.7 million**—
 - **Two** to strengthen grid resilience across the **Railbelt** and **Southcentral Alaska**, served by **Matanuska Electric Association** and **Golden Valley Electric Association**.
 - **One** to enhance grid resilience in **Southeast Alaska** served by **Southeast Alaska Power Agency**.
- **Round 1** (initial solicitation): **Three projects** were awarded sub-grants totaling **\$20.9 million**—
 - **two** to strengthen the **Railbelt grid** and
 - **one** to support resilience in the **Interior** served by **Golden Valley Electric Association**.
- Eligible resilience measures include:
 - Hardening lines and substations
 - Extreme-weather upgrades
 - Fire-resistant components
 - Microgrids and energy storage
- Funding requires a **15 percent state match** and a **33 percent small-utility match**.

AEA Electronic Library (E-Library)

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



Since its launch, AEA's 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 **13,000 documents** are searchable.



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

Home Energy and High Efficiency Rebate Allocations

AEA is collaborating with AHFC to deliver more than \$74 million in home energy rebates to Alaskans (pending with DOE)

Program Feature	 Home Owner Managing Energy Savings (HOMES)	 High-Efficiency Electric Home Rebates (HEEHR)
Purpose:	Whole-home energy efficiency retrofits	High-efficiency electric equipment and appliances
Who Can Benefit:	All households (higher incentives for low- and moderate-income households)	Low- and moderate-income households
Eligible Improvements:	Insulation, air sealing, windows, doors, and other efficiency measures	Heat pumps, heat pump water heaters, electrical upgrades, insulation, and related measures
Rebate Structure:	Based on modeled or measured energy savings achieved	Based on installation of qualifying equipment
Maximum Incentive:	Typically \$2,000–\$4,000+ for single-family homes; higher for multifamily projects	Up to \$14,000 per household
Alaska Allocation:	\$37.3 Million	\$37.1 Million

Key Difference

-  **HOMES:** Rewards homeowners for reducing overall energy use.
-  **HEEHR:** Helps households purchase and install efficient electric equipment.

Alaska Advantage

-  Eligible costs may include contractor travel, materials, and project expenses.
-  Additional program flexibility approved specifically for Alaska and Hawaii.

Contact Us

Alaska Energy Authority (AEA)

813 W Northern Lights Blvd.

Anchorage, AK 99503

Phone: (907) 771-3001

Fax: (907) 771-3044

akenergyauthority.org