

ALASKA ENERGY AUTHORITY

ALASKA ENERGY PRIORITIES AND DOE PARTNERSHIP

Josi Hartley
Director of Federal Programs

U.S. Secretary of Energy Chris Wright
U.S. Senator Dan Sullivan
August 28, 2026



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



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



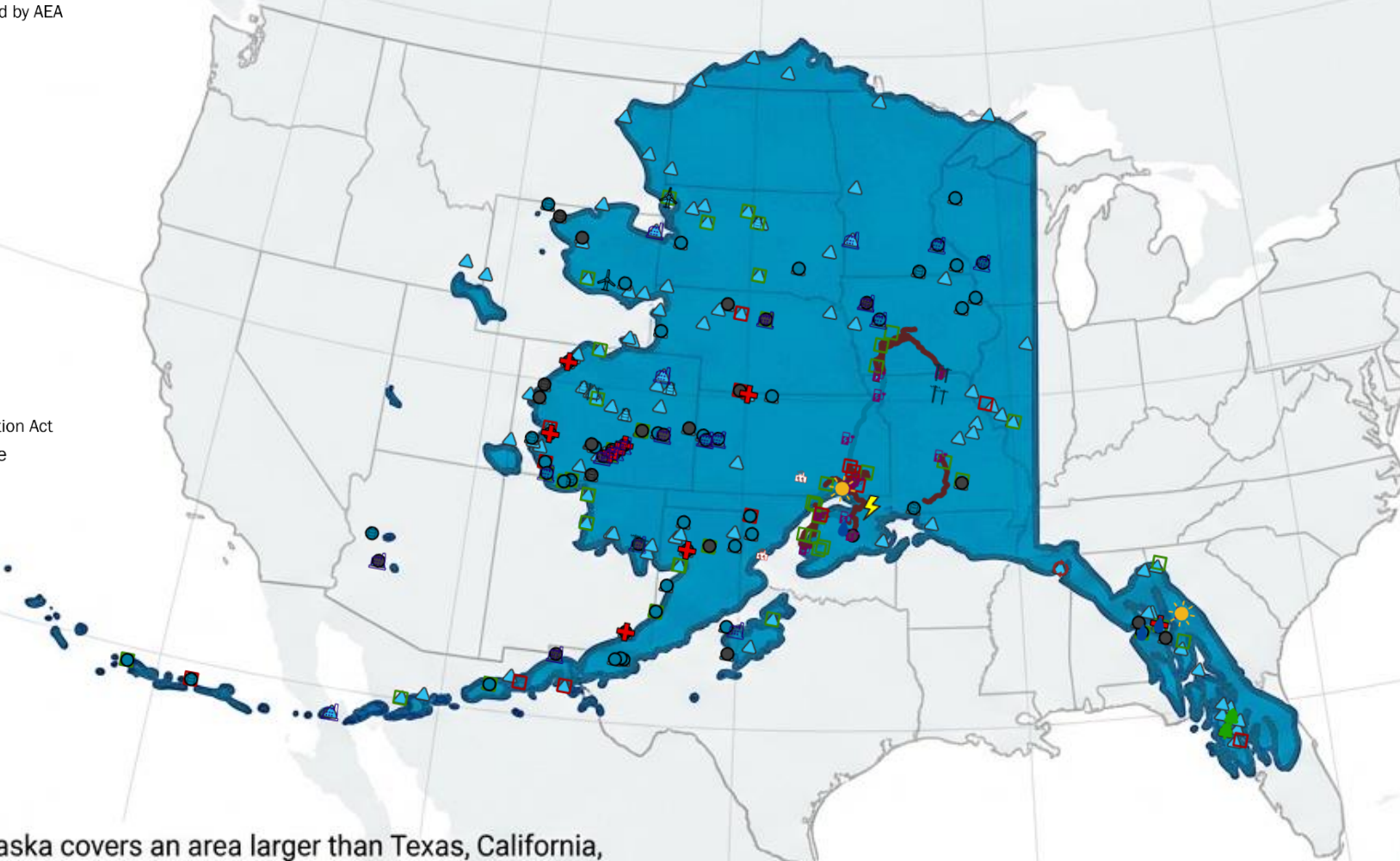
Railbelt Transmission Organization

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

AEA Active Projects and Services

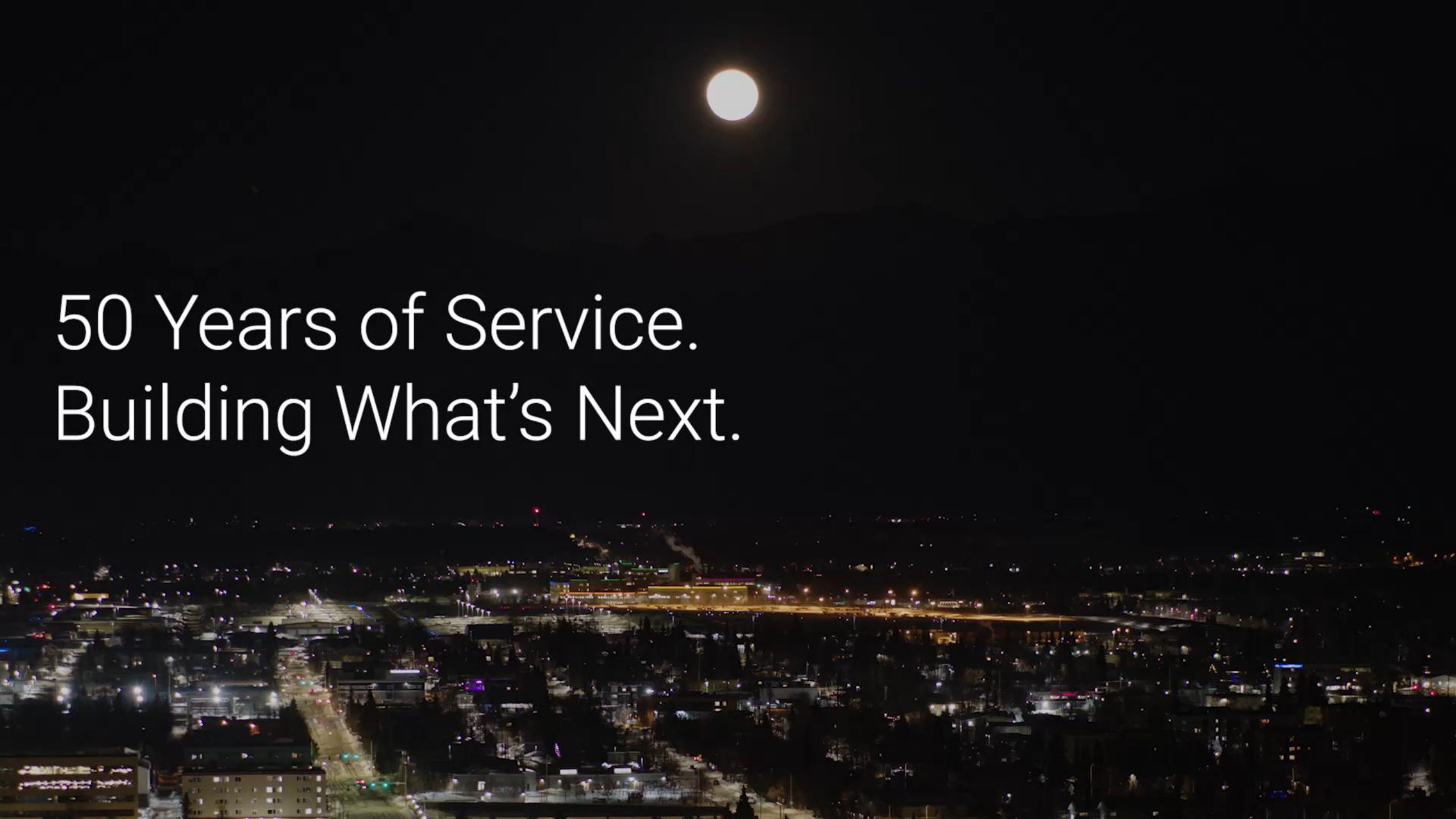


- Grants and Loans
 - Power Project Fund
 - Renewable Energy Fund
- Owned Assets
 - Other Transmission Lines
 - Transmission
 - Transmission Lines Owned by AEA
- Power Cost Equalization
 - PCE Communities
- Renewable Energy
 - Biomass
 - Electric Vehicles
 - Port Electrification
 - Heat Recovery
 - Hydroelectric
 - 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.



A night-time aerial photograph of a city, likely Salt Lake City, with a full moon in the dark sky. The city lights are visible, and the text "50 Years of Service. Building What's Next." is overlaid on the left side of the image.

50 Years of Service.
Building What's Next.

DOE and AEA's Partnership at a Glance

Active DOE investment through AEA and the dollars it leverages across Alaska's energy infrastructure.

Total Awarded DOE Funding

\$348.9M

\$348,896,491 committed through AEA across Alaska projects and communities.

Leveraged Dollars

\$242.7M

\$242,691,346 in state, utility, and other non-federal capital paired with DOE funding.

Total Induced Statewide Investment

\$591.6M

\$591,587,837 in active investment across Alaska energy infrastructure through AEA.

36 communities and projects currently supported.

AEA's DOE Funded Projects

Programs

Cook Inlet PowerLink*

- \$206.5 Million

Grid Resilience Formula Program

- \$38.7 Million Awarded

Home Efficiency Rebates

- \$37.3 Million
- Alaska Housing Finance Corporation Partnership

Home Electrification and Appliance Rebates

- \$37.2 Million
- Alaska Housing Finance Corporation Partnership

Alaska Rural EVSE Deployment Project

- \$1.67 Million

Energy Efficiency Revolving Loan Program

- \$4.8 Million

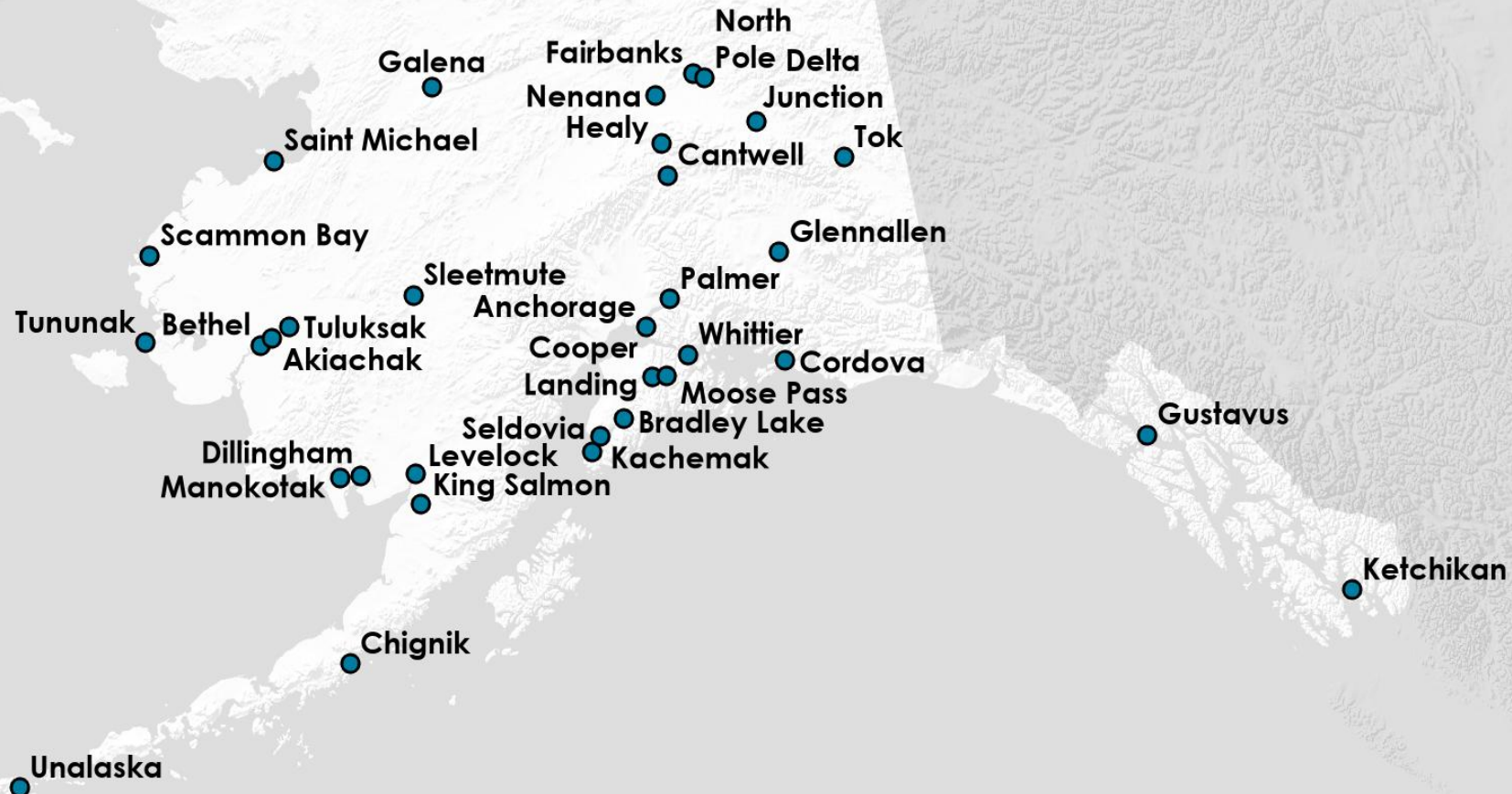
State Energy Program

- \$3.7 Million

Energy Efficiency and Conservation Block Program

- \$1.6 Million

*Grid Resilience and Innovation Partnerships Funding



Railbelt Projects and 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 + Cook Inlet PowerLink

Two mutually reinforcing projects that add firm low-cost energy and the capacity to move it.

Bradley Lake Expansion Project Firm low-cost hydro energy

- +167,000 MWh per year of additional generation.
- Over a 40 percent increase in Bradley energy.
- Approximately 1.5 Bcf per year gas displacement.
- **Final license amendment application submitted to FERC, with strong and constructive engagement from Commission staff throughout the licensing process.**

Construction cost

~\$400M

Added energy

+167 GWh/yr

Cook Inlet PowerLink (CIPLink) New transmission path across Cook Inlet

- DOE GRIP project.
- 100 MW High-Voltage Direct Current 40-mile submarine cable with associated overhead transmission.
- Deconstrains the Railbelt transmission system.
- Increases Railbelt redundancy and reliability.
- Improves access to lower-cost generation and delivery to load.

DOE contribution

\$206.5M

Total project cost

\$413M

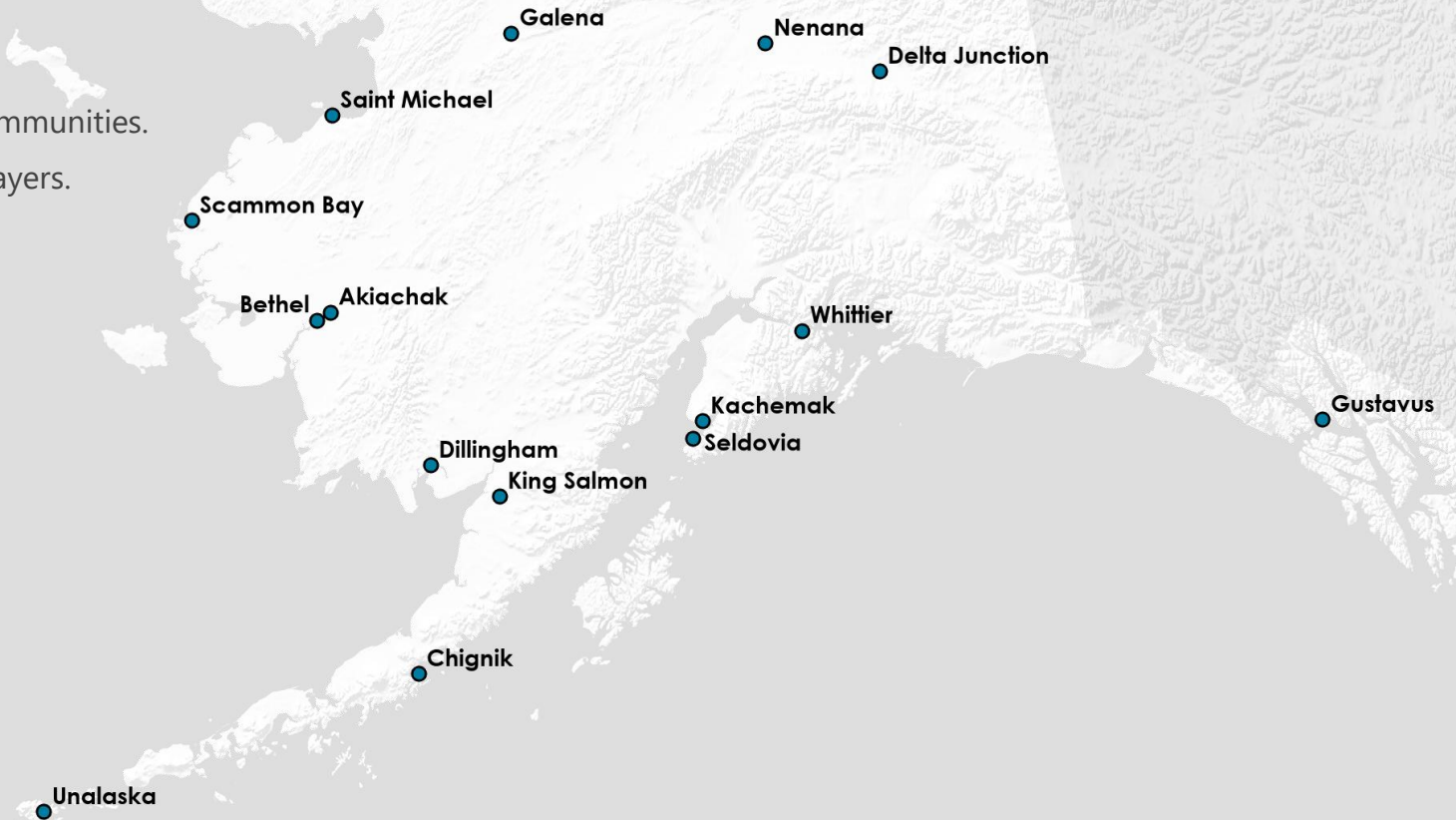
Project Nexus · Bradley Lake Expansion Project adds the energy. CIPLink moves it.

Village Energy Efficiency Program (VEEP)

VEEP adapts flexible **State Energy Program** DOE funding to Alaska's needs, supporting practical, cost-effective projects that reduce energy costs in rural and Alaska Native communities.

Where the funding goes:

- Energy-efficiency and energy projects in public facilities.
- Other public facilities that serve rural and Alaska Native communities.
- Projects that reduce operating costs quickly for local ratepayers.



Grid Resilience Program—Railbelt and Rural

Reduces outages caused by aging infrastructure, extreme weather, wildfire, and long distances while enabling critical grid upgrades sooner and at lower cost to customers.

Total Leveraged Program Value

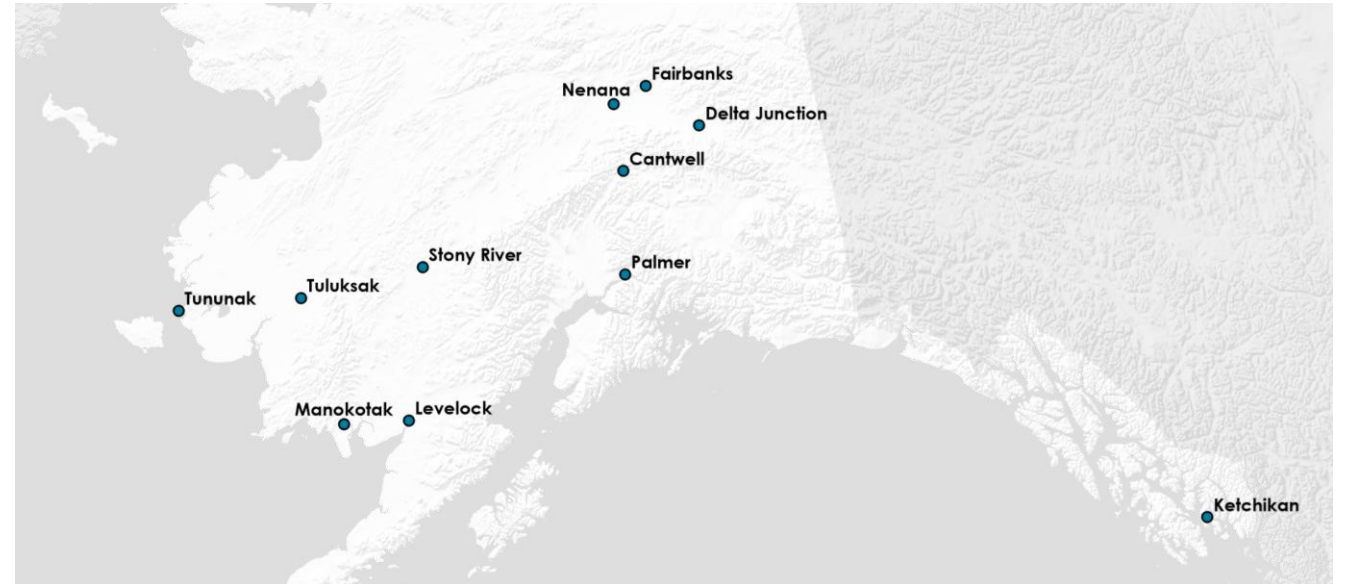
\$97.2M

State and leveraged tribal
40101D funding

Projects Funded

11

Projects currently under
development



AEA Rural Energy Team • In Practice

Works directly with tribes to incorporate 40101(d) funding into the capital stack for Rural Power System Upgrade (RPSU) and Bulk Fuel Upgrade projects.

A typical powerhouse replacement project in rural Alaska can increase system efficiency in the community by more than 10%.

RPSU communities

5

Powerhouse upgrades funded with
40101(d) in the stack.

Additional support

\$1.5M

Generated statewide for rural
energy infrastructure.

DOE Financing to Unlock Major Projects

AEA is engaged with the **DOE Office of Energy Dominance Financing (EDF)** on applications for two Railbelt projects.

AEA Applications Submitted

Bradley Lake Expansion

Additional firm hydro generation for the Railbelt. Approximately \$400M construction cost.

Sterling – Quartz Creek Transmission Improvements

Transmission upgrades supporting Railbelt reliability and delivery of new generation.

AEA has engaged with the DOE EDF office over several months and encourages other project developers to do the same.

Why it matters

Financing cost directly affects rates paid by Alaska customers.

Large capital requirements

Transmission and hydro assets carry substantial upfront cost.

Long-lived infrastructure

Useful lives span decades; financing terms shape lifetime rates.

Small ratepayer base

Costs are recovered from a relatively small number of customers.

Financing cost flows to rates

Future Opportunities

Under Consideration · Transmission

Beluga to Healy Transmission Line

Adds transmission redundancy along the Railbelt corridor and can improve reliability across the interconnected system.

Under Consideration · Hydro

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.

Thank You

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Adding Renewable Energy to the Railbelt

Bradley Lake Expansion Project

Expanding Alaska's Largest Hydroelectric Facility

AEA is advancing the Bradley Lake Expansion Project, which includes the **Dixon Diversion** and **Bradley Pool Raise** subprojects. The project would divert water from Dixon Glacier through a **4.6-mile tunnel**, increasing Bradley Lake's annual energy production by more than **40 percent** and reducing reliance on natural gas.



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 Alaska Energy Priorities and DOE Partnership | U.S. Sec. Wright | August 27, 202

Cook Inlet PowerLink (CIPLink)

Alaska's First High-Voltage Direct Current (HVDC) Transmission Project

CIPLink is Alaska's **first HVDC transmission project**, connecting the Southern and Central Railbelt through a **38-mile subsea cable** and overland transmission system capable of delivering up to **200 MW of bidirectional power** flow, allowing utilities to move electricity where it is needed and share generation resources across the Railbelt.



CAPACITY

200 MW

Bidirectional Flow



CONNECTIVITY

Railbelt Link

Connects South & Central Regions



TARGET COMPLETION

2032

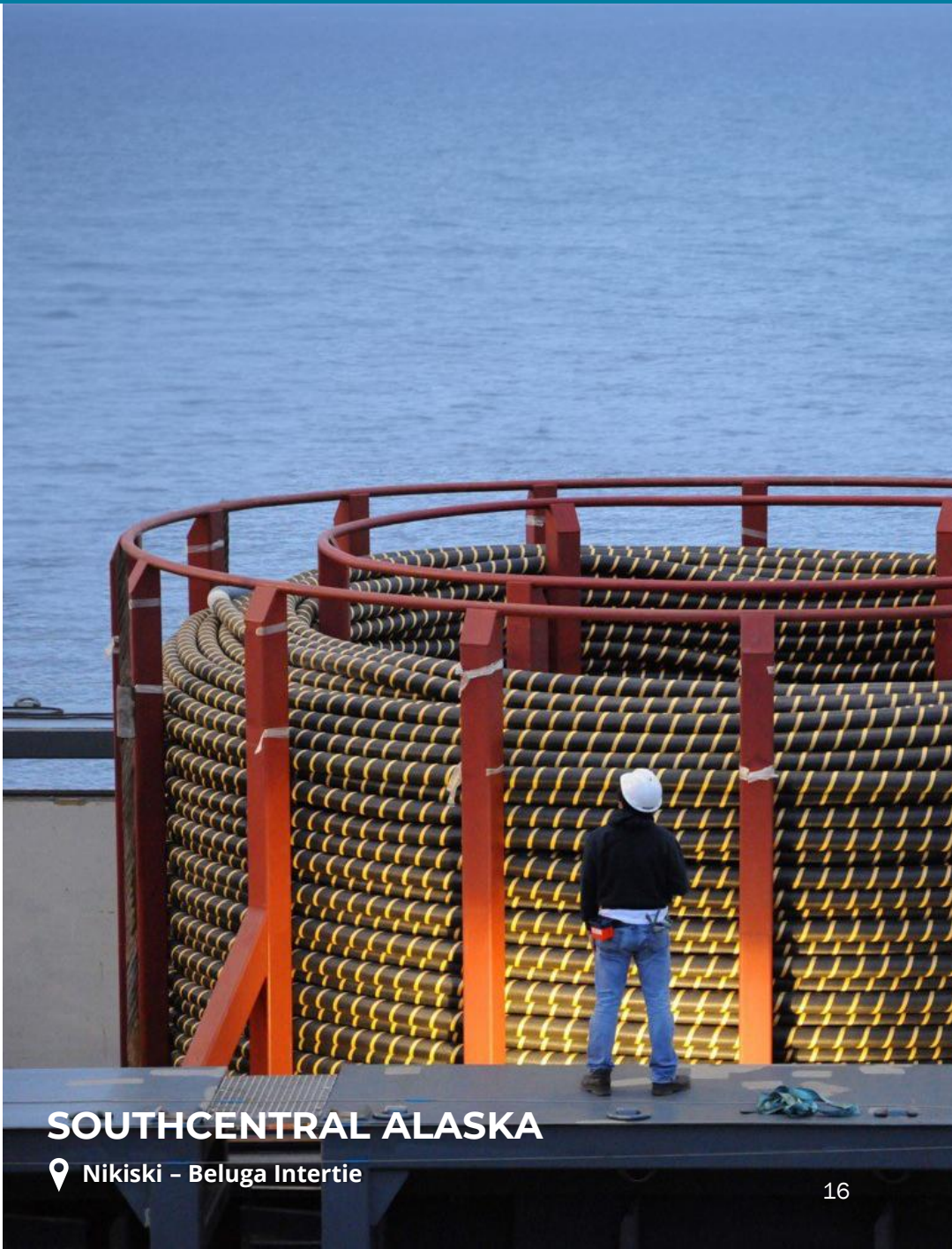
Shovel-ready status



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 about 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

\$178.5 Million

Including all costs

KENAI PENINSULA



SSQ Transmission Line and Substation Project

AEA Alaska Energy Priorities and DOE Partnership | U.S. Sec. Wright | August 27, 202

Today's Energy Landscape

Alaska's geography, market size, and infrastructure shape energy costs and reliability in ways unlike any other state.



Cook Inlet Gas Shortage

Supply constraints affect the fuel underpinning most Railbelt generation.

High-Energy Costs

Diesel in the village of Shungnak was ~\$26/gallon last week, directly driving generation costs.

Small Ratepayer Base

Capital costs are spread across relatively few customers, increasing per-customer rates.

Vast Distances

Isolated grids serve communities separated by hundreds of roadless miles.

Limited Transmission

Few redundant paths mean a single outage can strand generation or load.

Strategic Military Role

Installations along the Railbelt depend on the same grid as surrounding communities.

Federal investment has an outsized impact in Alaska where geography and costs compound infrastructure challenges.