ALASKA ENERGY AUTHORITY

ASSET MANAGEMENT

Tim Sandstrom
Director, Rural Programs

Alaska Municipal League 71st Annual
Local Government Conference
November 15, 2021

ALASKA
ENERGY
AUTHORITY

About the Alaska Energy Authority

Our Mission

Reduce the cost of energy in Alaska.

Created in 1976 by the Alaska Legislature, the Alaska Energy Authority (AEA) is a public corporation of the State of Alaska governed by a board of directors with the mission to “reduce the cost of energy in Alaska.” AEA is the state's energy office and lead agency for statewide energy policy and program development.

AEA Programs and Services

AEA works to diversify Alaska's energy portfolio, engages on energy planning and policy, invests in Alaska's energy infrastructure, and provides rural Alaska with technical and community assistance.

Railbelt Energy – AEA owns the Bradley Lake Hydroelectric Project and the Alaska Intertie. These assets benefit Railbelt consumers by reducing the cost of power.

Renewable Energy – AEA provides renewable energy and energy efficiency grants, analysis, and expertise to benefit Alaskans. These include hydro, biomass, wind, solar, and others.

Power Cost Equalization – The Power Cost Equalization Program reduces the cost of electricity in rural Alaska for residential customers and community facilities.

Grants and Loans – AEA provides loans to local utilities, local governments, and independent power producers for the construction or upgrade of power generation and other energy facilities.

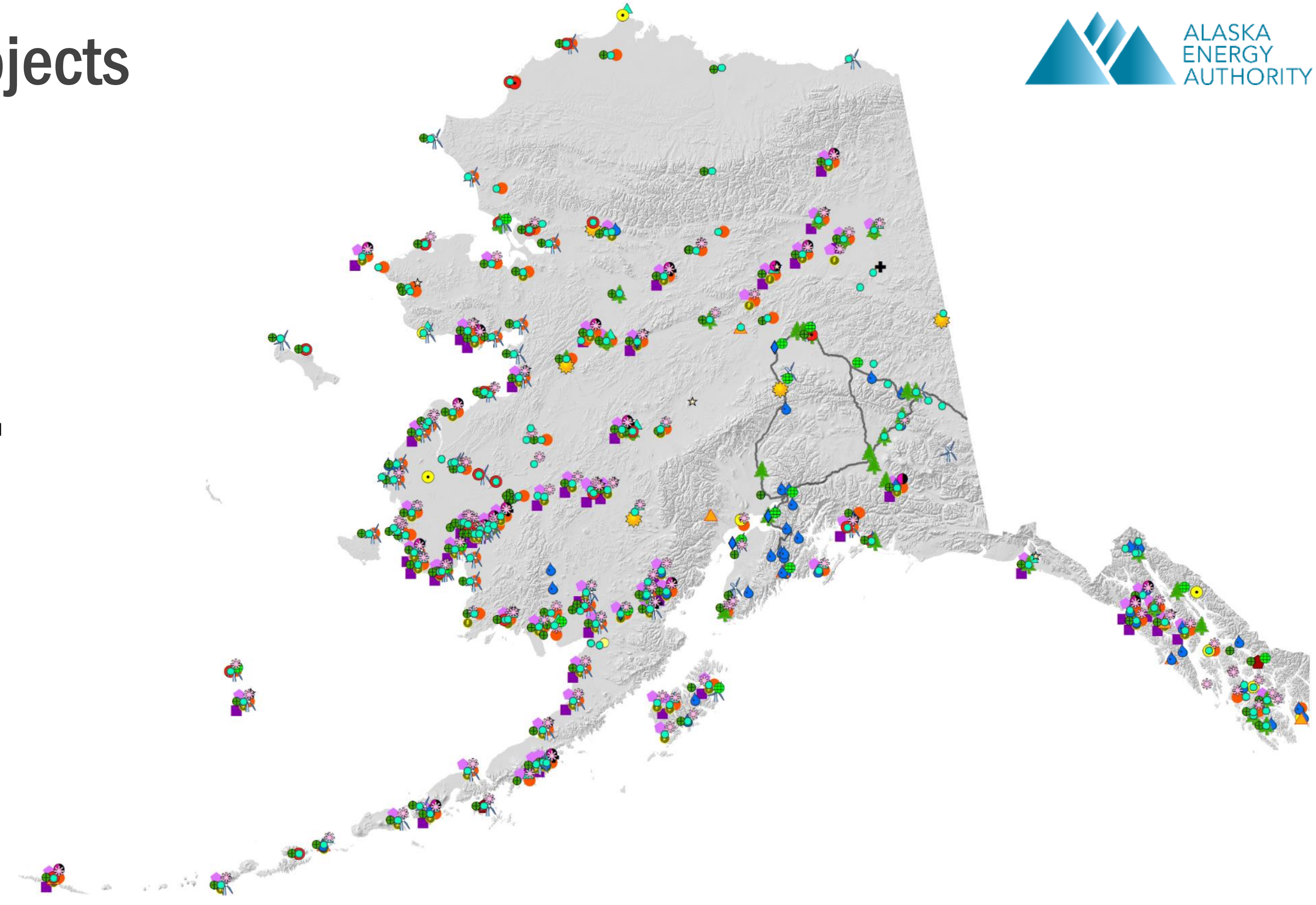
Rural Energy – AEA constructs bulk fuel tank farms, diesel powerhouses, and electrical distribution grids in rural villages. AEA supports the operation of these facilities through circuit rider and emergency response programs.

Energy Planning – In collaboration with local and regional partners, AEA provides critical economic and engineering analysis to plan the development of cost effective energy infrastructure.

ALASKA ENERGY AUTHORITY

AEA Active Projects and Services

- Biomass/Biofuels
- Bulk Fuel Upgrades
- Circuit Rider Assistance
- Diesel Emission Reduction Act
- Electrical Emergency Response
- Emerging Energy Technology Fund
- Heat Pump
- Heat Recovery
- Hydroelectric
- Maintence and Improvement
- Ocean/River
- PCE Community
- PCE Utility Clerk Training
- Rural Power System Upgrade
- Solar
- Storage
- Transmission
- Utility Operator Training
- Utility Technical Assistance
- VEEP (Efficiency)
- Wind




URBAN ENERGY

Bradley Lake Hydroelectric Project

- Benefits 550,000+ members of Chugach Electric Association, City of Seward, Golden Valley Electric Association, Homer Electric Association, and Matanuska Electric Association
- Produces ~10% of Railbelt electricity at 4.5 cents/kWh or ~54,400 homes/year
- Over $20 million in savings per year to Railbelt utilities Bradley Lake versus natural gas

- The project diverts runoff from Battle Creek into Bradley Lake expanding the state's largest hydroelectric facility
- Includes three miles of road, concrete diversion dam, and a five-foot diameter pipeline under the road to carry water from its source to Bradley Lake
- Result is more energy at lower cost can be produced and delivered to ratepayers

West Fork Upper Battle Creek Diversion Project

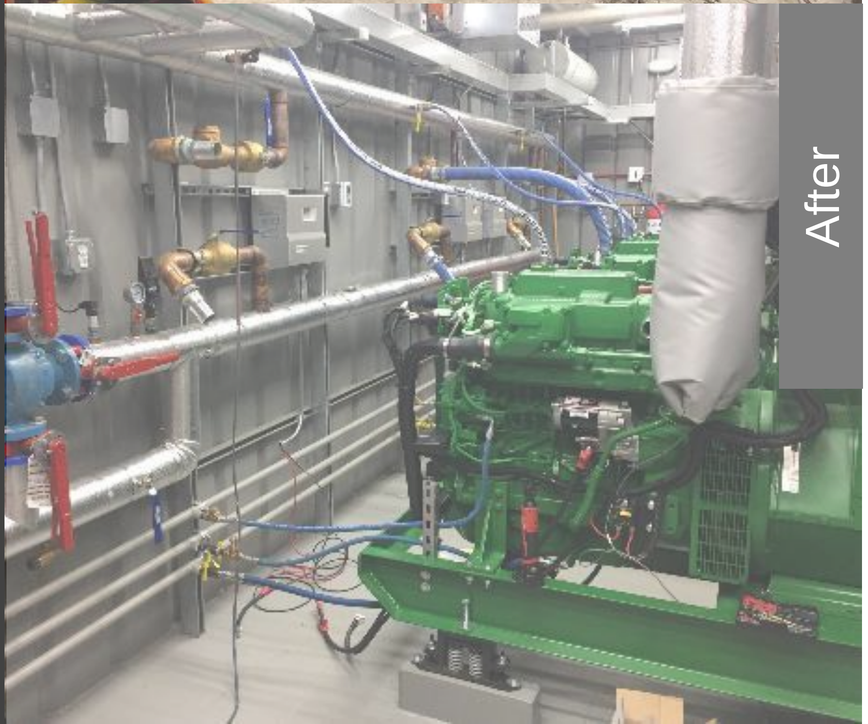
- Project cost $47 million
- Will add ~10% energy or ~5,100 homes in a year
- Completed July 2020

SSQ Transmission Line

- 39.3 miles of 115-kV transmission line delivers Bradley Lake hydroelectric generated power
- AEA's purchase allows for better cost alignment, increased reliability, and future prospect for upgrades to the line, which would decrease line losses and allow for increased power transmission north, and unconstraining Bradley Lake power
- Schedule begins with preliminary design with 6 months, 24 to 36 month estimate to finalize construction


RURAL ENERGY

Rural Power System Upgrades



- ~197 communities eligible for Rural Power System Upgrade
- Goal — improve power system efficiency, safety, and reliability
- Aging infrastructure and Operation and Maintenance
- Deferred maintenance $327 million
- **Inventory & Assessment**

New project priority list in accordance with 3 AAC 108.110

Bulk Fuel Upgrades

- ~400 rural bulk fuel facilities
- Goal — code compliant fuel storage facilities and prevention of spills and contamination
- Aging infrastructure, erosion, and catastrophic failure
- Active projects — 8 full and 18 Maintenance and Improvement; no funding for two years
- Leveraging Coast Guard regulatory efforts to capture BFU assessments to prioritize projects
- Deferred maintenance $800 million

Training and Tech Support

Electrical Emergency Assistance

- Naknek (COVID-19 Field Hospital Gensets)

Circuit Rider & BF Itinerant Onsite

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

- Akiachak(2)
- Akiak
- Atmautluak
- AVTEC Seward(3)
- Central(2)
- Chefornak
- Chitina(2)
- Circle(2)
- Clarks Point(3)
- Elfin Cove(2)
- False Pass(2)
- Fort Yukon(2)
- Iliamna(2)
- King Cove(2)
- Kwethluk
- Larsen Bay
- Napaskiak
- Ouzinkie(2)
- Pedro Bay
- Pelican(2)
- Port Heiden
- Tenakee Springs(2)
- Tuluksak(6)
- Twin Hills

Circuit Rider Real-Time Remote Assistance

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

- ACEP Fairbanks
- Adak
- AKhiok
- Akiachak(6)
- Akiak(13)
- Angoon(5)
- ANTHC(2)
- Arctic Village
- Atmautluak(11)
- Atka(2)
- Beaver(4)
- Birch Creek
- Buckland(4)
- Calista/Y-K region
- Central(4)
- Chenega Bay(4)
- Chignik Bay(7)
- Chignik Lagoon(3)
- Chignik Lake(3)
- Chitina(6)
- Chefornak
- Circle
- Clarks Point(17)
- Crooked Creek
- DCRA
- Deering
- Diomede(8)
- Egegik(6)
- Elfin Cove(5)
- Emmonak
- False Pass(2)
- FEMA Anchorage(2)
- Fort Yukon(2)
- Galena
- Gambell
- Hoonah(3)
- Hughes(3)
- Igiugig(3)
- IPEC (Juneau)
- Kake(7)
- Kipnuk(8)
- Kobuk
- Kokhanok(3)
- Kongiganak(3)
- Koyuk
- Koyukuk
- Kwethluk(14)
- Kwigillingok(7)
- Larsen Bay(4)
- Levelock(5)
- Manokotak
- McGrath(5)
- Mertarvik(8)
- MKEC McGrath
- Napakiak
- Newhalen(3)
- Newtok(2)
- Nikolia(2)
- Nunam Iqua(2)
- Nuvista Fairbanks
- Ouzinkie(13)
- Pedro Bay(2)
- Pelican(13)
- Perryville(2)
- Pilot Point
- Platinum
- Point Hope
- Port Heiden(7)
- Providence Alaska Medical Center
- Ruby(4)
- Saint George
- SEOC Anchorage(2)
- Stevens Village(4)
- Tatitlek(5)
- Tazimina(3)
- TCC Fairbanks
- Tenakee Springs(2)
- Tuluksak(24)
- Tuluksak School
- Tuntutuliak
- Ugashik
- Wales

Power Project Fund

- Available to qualified borrowers
- Critical as grants are eliminated
- Requires review for technical and fiscal viability
- $26.3 million in outstanding loans
- $12.2 million uncommitted cash balance available for lending
- Low interest rates encourage innovative applications

AEA provides **energy solutions** to meet the unique needs and opportunities of Alaska's rural and urban communities.

Alaska Energy Authority

813 W Northern Lights Blvd.
Anchorage, AK 99503

Main: (907) 771-3000
Fax: (907) 771-3044

akenergyauthority.org

@alaskaenergyauthority

@alaskaenergyauthority