ALASKA ENERGY AUTHORITY

# POWERING THE FUTURE

Karen Bell Manager of Planning

Alaska Wind Workshop September 8, 2023







## Who We Are





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.

# FINANCING TOOLS



## Power Project Fund (PPF) Loan Program

The PPF loan program qualifies applicants seeking low-interest loans for eligible power projects. PPF provides local utilities, local governments, or independent power producers an avenue to seek funding for the development, expansion, or upgrade of electric power facilities.











## Renewable Energy Fund (REF) Grant Program

Established in 2008, REF provides grant funding (subject to Legislative approval) incentivizing the development of qualifying and competitively selected renewable energy projects. The program is designed to produce cost-effective renewable energy for heat and power to benefit Alaskans statewide.





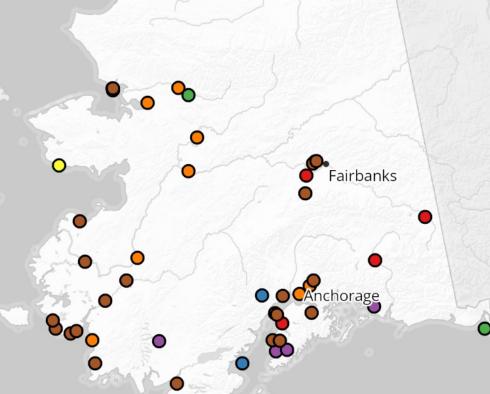




The REF's sunset date provision was repealed with House Bill 62, signed into law by Governor Dunleavy on May 25, 2023.

## **REF Rounds 13, 14, and 15**

- Through recommendation by the Governor and approval by the Legislature, the State of Alaska appropriated nearly \$37 million in support of 56 REF projects from Rounds 13, 14, and 15.
- The appropriation of \$17 million in the fiscal year 2024 for Round 15 was the largest appropriation since the fiscal year 2014.
- State funding has been supplemented with hundreds of millions of dollars from local sources to develop viable renewable energy projects that will reduce reliance on fossil fuels.





### Technology

- Biomass (4)
- Geothermal (2)
- Heat Recovery (2)
- Hydro (10)
- Solar (9)
- O Storage (4)
- Wind (25)

Juneau



## Statewide Grid Resilience and Reliability IIJA Formula Grant Program, 40101(d)



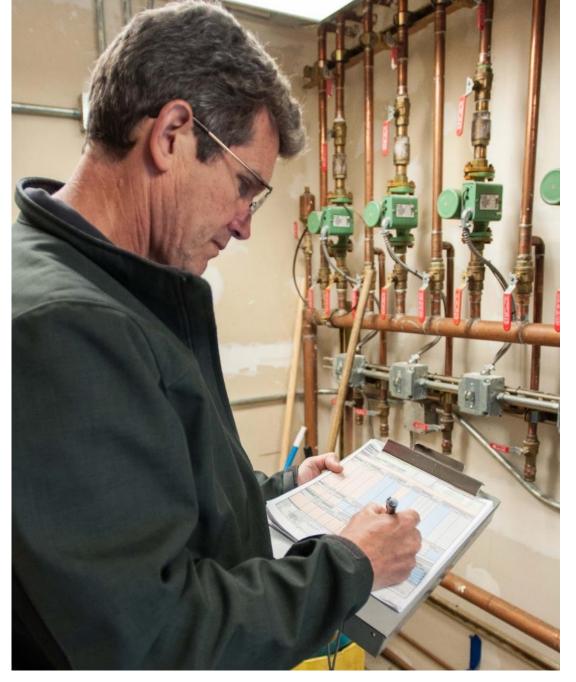


Per IIJA section 40101(a)(1),8 a disruptive event is defined as "an event in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster."

- These federal formula grant funds will provide **\$60 million** to Alaska over five years, including **\$22.2 Million** for the first two years allocation, to catalyze projects that **increase grid resilience against disruptive events**.
- 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% state match and a 33% small utility match.

## **Energy Efficiency Revolving Loan Fund (EERLF)**

- The Infrastructure Investment and Jobs Act provides funding for a new Energy Efficiency Revolving Loan Fund Program (EERLF).
- This funding will be used to establish and capitalize a revolving loan fund, under which the State shall provide loans and grants for residential energy audits, upgrades, and retrofits to increase energy efficiency, physical conform and air quality of existing building infrastructure.
- In collaboration with the Alaska Housing Finance Corporation, AHFC will administer the EERLF loans/grants program for residential customers.
- Alaska's Allocation is \$4,569,780







## **State Energy Program (SEP)**

#### • AEA is developing activities for deployment that include:

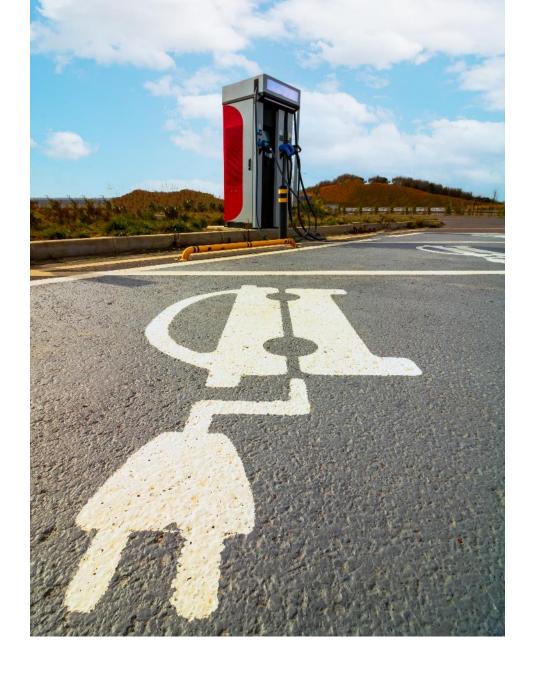
- Statewide Energy Plan
- State Energy Security Plan
- Renewable Energy Fund and Village Energy Efficiency Program construction projects
- IIJA Required Grid Planning
- Training and Workforce Development

#### In collaboration with Alaska Housing Finance Corporation:

- Update AkWarm Energy Modeling Software to the requirements imposed by the Inflation Reduction Act.
- Modernize Alaska Retrofit Information Systems database to accept the AkWarm modifications.
- Alaska's Allocation is \$3,661,930

## **Energy Efficiency Conservation Block Grant (EECBG)**

- Program designed to assist states, local governments, and tribes in implementing strategies to reduce energy use, to reduce fossil fuel emissions, and to improve energy efficiency.
- Formula Funding:
  - States
  - Local Governments
  - Tribes
- State Application Deadline was July 31, 2023
- Local and Tribal Government Deadline is January 31, 2024
- Alaska's Allocation is \$1,627,450
- No Match Required



## IIJA Competitive: Grid Resilience and Innovation Partnerships (GRIP)

- •To enhance the power system's resilience to extreme weather and climate change, the Grid Deployment Office is administering a
- •\$10.5 billion GRIP program under the Bipartisan Infrastructure Law.



1) Railbelt
Backbone
Reconstruction
Project
\$100 Million\*

\$100 Million\* (Requested of DOE; submitted April 5, 2023)



Storage/HVDC
Coordinated
Control
\$16 Million\*

2) Battery Energy

\$16 Million\*
(Requested of DOE;
submitted March 16, 2023)



3) Railbelt

Innovation
Resiliency
Project)
\$413 Million\*
(Requested of DOE;
submitted May 18, 2023)



3) Rural Alaska
Microgrid
Transformation
\$250 Million\*
(Requested of DOE;
submitted May 18, 2023)



\*All four GRIP programs are in application phase.



## **IRA: Clean Energy Tax Incentives**



- Investment Tax Credit (48/48E) 6% base credit for qualifying renewable energy projects.
- Production Tax Credit (45/45Y) 0.3 cents/kW credit inflation adjusted for energy generated by renewable energy sources.
- Energy Efficient Commercial Buildings Deduction (179D) \$0.50 to \$1.00 per square foot.
- Energy Efficient Home Improvement Credit (25C) up to 30% for improvements in residential homes.
- Residential Clean Energy Credit (25D) credit of up to 30% of cost of clean energy equipment.
- Clean Vehicle Credit (30D/25E/45W) up to \$7,500 for purchasing new qualifying vehicles and up to \$4,000 for used vehicle. Up to 30% credit of the cost of replacing diesel and gas powered commercial vehicles.
- Alternative Fuel Refueling Property Credit (30C) credit for refueling and charging property in low income and rural areas. Eligible for direct pay option for tax exempt agencies.
- **Carbon Oxide Sequestration (45Q)** \$17/metric ton of carbon dioxide captured and sequestered; \$12/metric ton for carbon dioxide that is injected for enhanced oil recovery or utilized.
- Clean Hydrogen Production Credit (45V) \$0.60/kg multiplied by the applicable percentage.
  - For more tax incentives, visit AEA's website at <a href="https://www.akenergyauthority.org/ira">https://www.akenergyauthority.org/ira</a>

## **IRA: Bonus Tax Credits**



### Prevailing Wage and Registered Apprenticeship

- 5 times base credit
- 1MW threshold

#### Domestic Content

- Up to 10 percentage points for ITC and 10 percent for PTC
- Elective pay requirement for projects larger than 1 MW that begin construction in 2024 or later

#### Energy Communities

- Up to 10 percentage points for ITC and 10 percent for PTC
- Updated map released for 2023 energy communities

### Low Income Communities (ITC for Solar and Wind Only)

- 10 percentage points for low income communities or on tribal land
- 20 percentage points for projects that are part of certain federally subsidized housing programs or that offer at least 50 percent of the financial benefits of the electricity produced to low-income households.
- This bonus amount will require an application by the taxpayer, with a cumulative total of 1.8 GW of direct current capacity per year available for allocation.

## **Elective Pay**



#### What is Elective Pay?

Elective pay allows applicable entities that would otherwise be unable to claim these credits because they do not owe federal income tax, to benefit from some clean energy tax credits by treating the amount of the credit as a payment of tax and refunding any resulting overpayment.



#### **Elective Pay Eligibility**

- Exempt Organizations 501(a) and 115
- State or political subdivision
- Territories and agencies
- Tribal governments and subdivisions
- Alaska Native Corporations
- Rural Electric Cooperatives
- Partnerships are excluded

#### **Eligible Tax Credits**

- Energy Credit (48)
- Clean Electricity Investment Credit (48E)
- Renewable Electricity Production Credit (45)
- Clean Electricity Production Credit (45Y)
- Commercial Clean Vehicle Credit (45W)
- Zero-emission Nuclear Power Production (45U)
- Advanced Manufacturing Production (45X)
- Clean Hydrogen Production Credit (45V)
- Clean Fuel Production Credit (45Z)
- Carbon Oxide Sequestration Credit (45Q)
- Vehicle Refueling / Recharging Property (30C)
- Qualifying Advanced Energy Project (48C)





## **Alaska Energy Authority**

813 W Northern Lights Blvd. Anchorage, AK 99503



Main: (907) 771-3000

Fax: (907) 771-3044



info@akenergyauthority.org



akenergyauthority.org



@alaskaenergyauthority



@alaskaenergyauthority In

