Office of Clean Energy Demonstrations

THE OFFICE OF
CLEAN ENERGY DEMONSTRATIONS

Energy Improvements in Rural or Remote Areas (ERA) Fixed Award Grant Program Alaska Briefing

Office of Clean Energy Demonstrations

U.S. Department of Energy

May 16, 2024

Webinar Logistics

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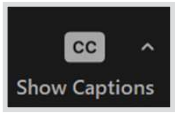

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Is this webinar being recorded?

No, this webinar will not be recorded.

Will the slides be shared?

Yes, a copy of the presentation slides will be shared via email with registrants and on the OCED website within the next week.

Welcome!

Agenda

- Welcome
- Energy Improvements in Rural or Remote Areas (ERA) Fixed Grant Award Program Overview
- Regional Project Overview
  - Decarbonizing the Tongass with Tribally Owned Heat Pumps
  - High Penetration Solar-Battery Project in Ambler, Alaska
  - Kokhanok's Paradigm Shift: Big Battery as our System's Energy Backbone
  - New Stuyahok Solar-Battery
  - Ouzinkie Independent Power Energy Improvement Project
  - Tanacross Solar PV and Tok Battery Energy Storage System
- Feedback Session
- Community Benefits and Engagement
- Next Steps & Resources
- Wrap-up & Close

Introductions

Emmanuel Taylor

Facilitator

Regina Galer
ERA
Program Manager,
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Toniqua Hay
ERA
Stakeholder
Engagement Specialist,
OCED

Energy Improvements in Rural or Remote Areas (ERA) Fixed Award Grant Program

ERA $50M Funding Opportunity

In May 2023, OCED announced a $50 million Grant Funding Opportunity Announcement (FOA) for the Energy Improvements in Rural or Remote Areas (ERA) program for small community-driven projects. This FOA is a direct response from rural communities' feedback.

Reduce Barriers to Federal Funding

- ✓ Simplified application process
- ✓ Removed cost-share requirement
- ✓ Offered technical assistance
- ✓ Reduced financial reporting requirements

Status to Date

ERA GRANT PROJECT SELECTIONS – ALASKA

	High Penetration Solar-Battery Project in Ambler, Alaska
	New Stuyahok Solar-Battery
	Kokhanok's Paradigm Shift: Big Battery as our System's Energy Backbone
	Ouzinkie Independent Power Energy Improvement Project
	Tanacross Solar PV and Tok Battery Energy Storage System
	Decarbonizing the Tongass with Tribally Owned Heat Pumps

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Project Overviews

Decarbonizing the Tongass with Tribally Owned Heat Pumps

Alana Peterson
Executive Director
Spruce Root, Inc.

DECARBONIZING THE TONGASS WITH TRIBALLY OWNED HEAT PUMPS

SPRUCE ROOT, INC.
Project Overview

Spruce Root
COMMUNITY DEVELOPMENT

Technology Snapshot

- Install heat pumps in 240 Tribal buildings on Prince of Wales Island
- Displace CO2, increase utilization of local hydropower resources, and reduce costs in economically distressed communities
- Train and employ Prince of Wales Island residents as heat pump installation technicians

Value and Impacts

- Reduce heating costs by $1700/year/building in economically distressed communities
- Increasing the number of heat pumps increases the number of hydropower ratepayers, decreasing costs for all customers on the Prince of Wales Island microgrid.
- Training and Workforce Development for community residents
- Decarbonizing the Tongass by substituting clean hydropower for fossil fuels

Location(s)

- Prince of Wales Island, Alaska (Klawock, Craig, Hydaburg, Kasaan)
- Tongass National Forest (largest temperate rainforest in the world)

DECARBONIZING THE TONGASS WITH TRIBALLY OWNED HEAT PUMPS

SPRUCE ROOT, INC.
Proposed Community Benefits

Spruce Root
COMMUNITY DEVELOPMENT

Investing in America's Workforce	• The project will fund 2-3 heat pump installation "On the Job Trainings" for local residents to gain workforce skills in maintenance and warranty phase work Installing the heat pumps in homes/buildings will create at least 10 jobs in rural AK
Community & Labor Engagement	• Using locally available hydropower rather than importing fossil fuels supports price stability, local energy independence, and improved access to clean energy technology • Empower residents to support installation and maintenance activities, which benefit this HUBZone region and leverage additional economic development activities/opportunities
DEIA	• Spruce Root is a Native CDFI established by Sealaska Corporation (an AK Native Corporation). The project will be managed by Indigenous Alaskan Women • Our network of Indigenous partners, the Sustainable Southeast Partnership, values collaboration and equity and will ensure regional residents are aware of the project's benefits and training opportunities
Justice40	• Improves overall cost-effectiveness of energy generation • Reduces greenhouse gas emissions from energy generation in rural areas • Develops the Prince of Wales microgrid to include more consumer heating systems • Increases energy efficiency by making use of existing, clean hydropower

DECARBONIZING THE TONGASS WITH TRIBALLY OWNED HEAT PUMPS

SPRUCE ROOT, INC.

Contact Information

Points of Contact

Alana Peterson, Brooke Leslie and Leslie Jackson

Method of Contact

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Photo: Bethany Goodrich, Sitka Conservation Society/Sustainable Southeast Partnership

High Penetration Solar-Battery Project in Ambler, Alaska

Ingemar Mathiasson
NAB Energy Manager
Northwest Arctic Borough and Native Village of Ambler

High Penetration Solar-Battery Project in Ambler, Alaska

Northwest Arctic Borough and Native Village of Ambler

Project Overview

ATAUTCHIKUN

NORTHWEST ARCTIC BOROUGH INCORPORATED JUNE 2, 1986

Technology Snapshot

- Upgrade Ambler power plant to make it **renewables-ready**
- Enable integration of **400 kW of solar PV and 500 kWh of battery energy storage**
- Timeline: 2024 – design, permitting and procurement; 2025 – installation and commissioning; 2026 – performance monitoring

Value and Impacts

- Decrease diesel fuel use by **more than 20,000 gallons annually**
- Generate **22% of community's electricity**
- Develop a Tribally-owned independent power plant capturing **more than $100,000 in annual revenue for the Ambler Tribe**
- Operate the Ambler **power system in diesels-off mode** to maximize displacement of diesel fuel

Location

- **Ambler, Alaska**
- *Located 45 miles north of the Arctic Circle*
- *27% of residents live below the poverty line in this traditional Iñupiaq village*

High Penetration Solar-Battery Project in Ambler, Alaska

Northwest Arctic Borough and Native Village of Ambler

Proposed Community Benefits

Investing in America's Workforce

- Develop a Tribally-owned independent power plant capturing **more than $100,000 in annual revenue for the Ambler Tribe**
- Create **0.75 FTE position in Ambler** for operation and maintenance of renewable system

Community & Labor Engagement

- NW Arctic Energy Steering Committee meeting, held semi-annually, to discuss regional and local energy issues with representation from each of the 10 city governments and all 11 Federally recognized Alaska Native Villages in the Borough
- Northwest Arctic Regional Energy Plan process involved multiple interviews in each community and identified energy priorities

DEIA

- Evaluation criteria included in request for proposals that allocate additional points to proposals with diverse/minority subcontractor participation
- The Borough and Alaska Village Electric Cooperative have **local hire preferences** in a region where most residents are Alaska Native

Justice40

- Development of a Tribal independent power plant captures all revenue from renewable energy projects for the Tribe
- Independent power plants foster **Tribal Energy Sovereignty** and enable the Tribe to choose how to spend revenue to enhance energy security and affordability

High Penetration Solar-Battery Project in Ambler, Alaska

Northwest Arctic Borough and Native Village of Ambler

Contact Information

ATAUTCHIKUN

NORTHWEST ARCTIC BOROUGH
INCORPORATED JUNE 2, 1986

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Kokhanok’s Paradigm Shift: Big Battery as our System’s Energy Backbone

Lysa Aguiar
Kokhanok Village Administrator

Kokhanok's Paradigm Shift: Big Battery As Our Energy Backbone

Kokhanok Village Council

Project Overview

Technology Snapshot

- Whole System Upgrade: MW containerized BESS, 100 kW wind turbine, 100 kW solar array, JD 6090 diesel genset + Electric Thermal Stove (ETS) to provide renewables to heat; EV Charge Station and EV Pickup Truck
- Operational within 2.5 - 3 years

Value and Impacts

- Energy Sovereignty is substantially increased: Reduce diesel use by 70% and 80% + 2 years from completion
- No loan needed to pay for diesel AND estimated $200,000 savings annually
- Electric Thermal Stoves reduce home heating costs by ~50%
- First EV in the Community + Charge Station Infrastructure
- Reduce repair costs for power plant
- Substantially reduce noise from diesel power plant

Location

Kokhanok, Alaska
(Lake Iliamna region in Lake & Peninsula Borough)

Kokhanok's Paradigm Shift: Big Battery As Our Energy Backbone

Kokhanok Village Council

Proposed Community Benefits

Investing in America's Workforce

- Maximize hiring local labor: 5+ local construction jobs, and at least 2 new part-time permanent jobs as wind and solar technicians.
- Trainings for all those working on the project. Anticipate $500,000 in salaries and wages.

Community & Labor Engagement

- Once complete, we will work with our local school and community to provide field trips to educate the youth and share updates with community members.
- We will also reach out to surrounding villages in our area to share our progress and keep working with the Borough (county), as well as continue working with the University of Alaska to tell our story on videos, websites, and presentations.

DEIA

- Over 90% of Kokhanok's population is Alaska Native.
- All employment on this project serves to advance DEIA goals.

Justice40

- Over 90% of Kokhanok's population is Alaska Native and is an underserved community.
- All benefits from this project serve to advance Justice40 goals.

Kokhanok's Paradigm Shift: Big Battery As Our Energy Backbone

Kokhanok Village Council

Contact Information

Point of Contact

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Method of Contact

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To contact OCED about this project, please email us at:

Alaska_ERA3045@hq.doe.gov

Nearby Community: Solar Array installed in 2024

Battery/BESS

Electric Thermal Stove

New Stuyahok Solar-Battery

Forest Button
Manager, Project Development & Key Accounts
Alaska Village Electric Cooperative, Inc.

New Stuyahok Solar-Battery

Alaska Village Electric Cooperative

Project Overview

Technology Snapshot

- Final design and construct a 500 kW solar photovoltaic (PV) array
- Final design and construct a 540 kWh battery energy storage system (BESS)
- Upgrade existing power plant with automated microgrid controller for integration and optimization

Value and Impacts

- Reduce power plant fuel consumption by 24% or about 30,058 gallons annually
- Fuel savings anticipated at approximately $180,000 per year based on 2022 fuel costs
- Reduce CO2 emissions by 357 metric tons per year
- The project will help stabilize electric rates

Location

New Stuyahok, Alaska

New Stuyahok Solar-Battery

Alaska Village Electric Cooperative

Proposed Community Benefits

Investing in America's Workforce

- AVEC requires a 20% local hire by contractors unless no local skilled workforce is available
- AVEC holds an operational agreement with both the Tribe and the City of New Stuyahok, encompassing the establishment of a Utility Board.

Community & Labor Engagement

- AVEC has a full-time Community Liaison who will serve as a direct link between the project team and Tribal and City leadership, facilitating ongoing dialogue and information exchange

DEIA

- AVEC will engage with the local community to identify potential diverse-owned businesses and provide information about project opportunities to local laborers and businesses

Justice40

- Shifting towards cleaner, renewable energy sources can lead to reduced air and noise pollution, ultimately improving air quality
- Creation of jobs in construction, operation, and maintenance can open up economic opportunities for community members
- Potential to stabilize or lower energy costs for residents

New Stuyahok Solar-Battery

Alaska Village Electric Cooperative

Contact Information

Points of Contact

Forest Button, Manager of Special Projects and Key Accounts
Arthur Stevens, Assistant Project Manager
Anna Sattler, Community Liaison

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Ouzinkie Independent Power Energy Improvement Project

Dustin Madden
Alaska Native Tribal Health Consortium

Ouzinkie Independent Power Energy Improvement Project

Native Village of Ouzinkie and the Alaska Native Tribal Health Consortium

Project Overview

Technology Snapshot

- Install 160 kW solar PV and 210 kWh battery on old airport runway
- Finish design in 2025 and construct in 2026
- This project will complement an existing variable hydro resource that is low in spring and summer

Value and Impacts

- The Native Village of Ouzinkie (Tribe) will own the system and sell power to the City
- Revenues will subsidize water and sewer bills in addition to creating a new job to maintain the system
- Reduce diesel & associated pollutants, provide diesel-off time (quiet), & lower power production costs

Location

Ouzinkie, Alaska

- This subsistence-based community of 125 people is located on Spruce Island, in the Kodiak Archipelago and consists mostly of Alutiiq tribal members
- The nearest services are a small plane ride or one-hour boat ride away across open ocean on Kodiak island

Ouzinkie Independent Power Energy Improvement Project

Native Village of Ouzinkie and the Alaska Native Tribal Health Consortium

Proposed Community Benefits

Investing in America's Workforce

- Approximately a dozen seasonal construction jobs and one permanent local position

Community & Labor Engagement

- Biannual community wide public meetings on project benefits and progress including responding to community questions or concerns

DEIA

- Alaska Native Tribal Health Consortium has additional financial provisions for Native Alaskan/American Indian hiring preference both internal to the company and for the construction contractors who will be bidding on this work, once designed

Justice40

- 100% of project benefits will go to the disadvantaged Native Village of Ouzinkie to create a new job and decrease the cost of living for all members, most of which fall below the poverty line
- Solar power decreases reliance on volatile diesel fuel, which must currently be barged in from the contiguous US states

Ouzinkie Independent Power Energy Improvement Project

Native Village of Ouzinkie and the Alaska Native Tribal Health Consortium

Contact Information

Point of Contact

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To contact OCED about this project, please email us at:

Alaska_ERA3045@hq.doe.gov

Tanacross Solar PV and Tok Battery Energy Storage System

Tanacross Solar PV and Tok Battery Energy Storage System

Project Overview

Selectee:
Tanana Chiefs Conference

Location:
Native Villages of Tanacross and Tok, Alaska

Federal Cost Share:
$5 million*

Technology:
Solar PV, Battery Energy Storage System, and Microgrid

*Pending negotiations

Key Facts

- Tanana Chiefs Conference plans to install 1.5 MW of solar PV on the grid at the Alaska Power & Telephone power plant that provides electricity to federally recognized tribes in Tanacross, Tetlin, and Dot Lake
- Paired with a 1.5 MWh battery energy storage system in Tok, Alaska, the project is expected to displace more than 125,000 gallons of diesel fuel per year, improving air quality and reducing noise pollution in local communities

Community Benefits

- Generate more than $380,000 in annual revenue to cover operations and maintenance costs and establish a reserve and replacement fund

Feedback Session

Ground Rules for Discussion

- Submit questions using the Q&A feature
- Reserve judgement
- One idea at a time
- It is okay to build on the ideas of others- Clarifying questions are okay

Community Benefits Plans

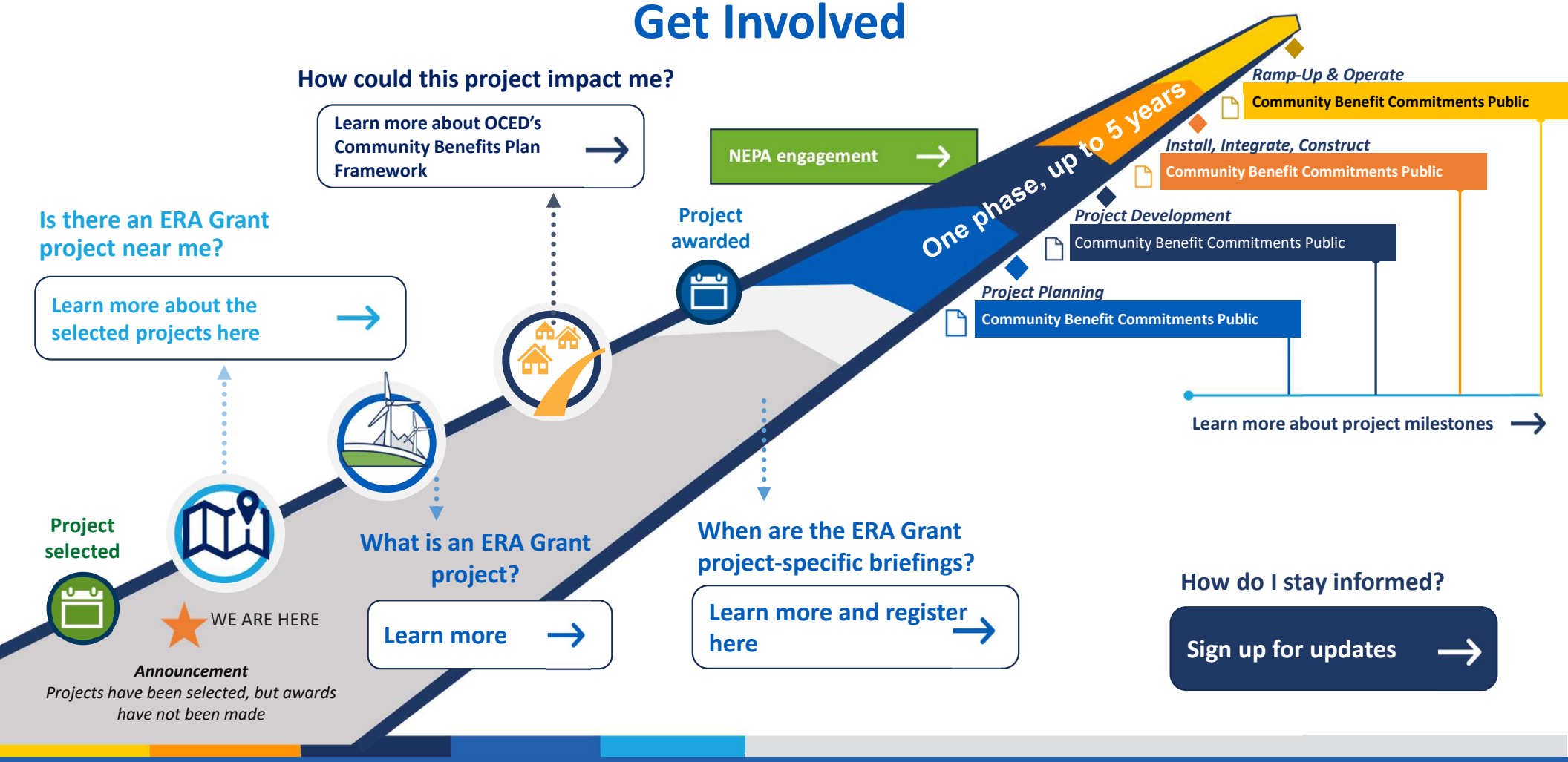
Prioritizing Community Benefits in OCED Projects

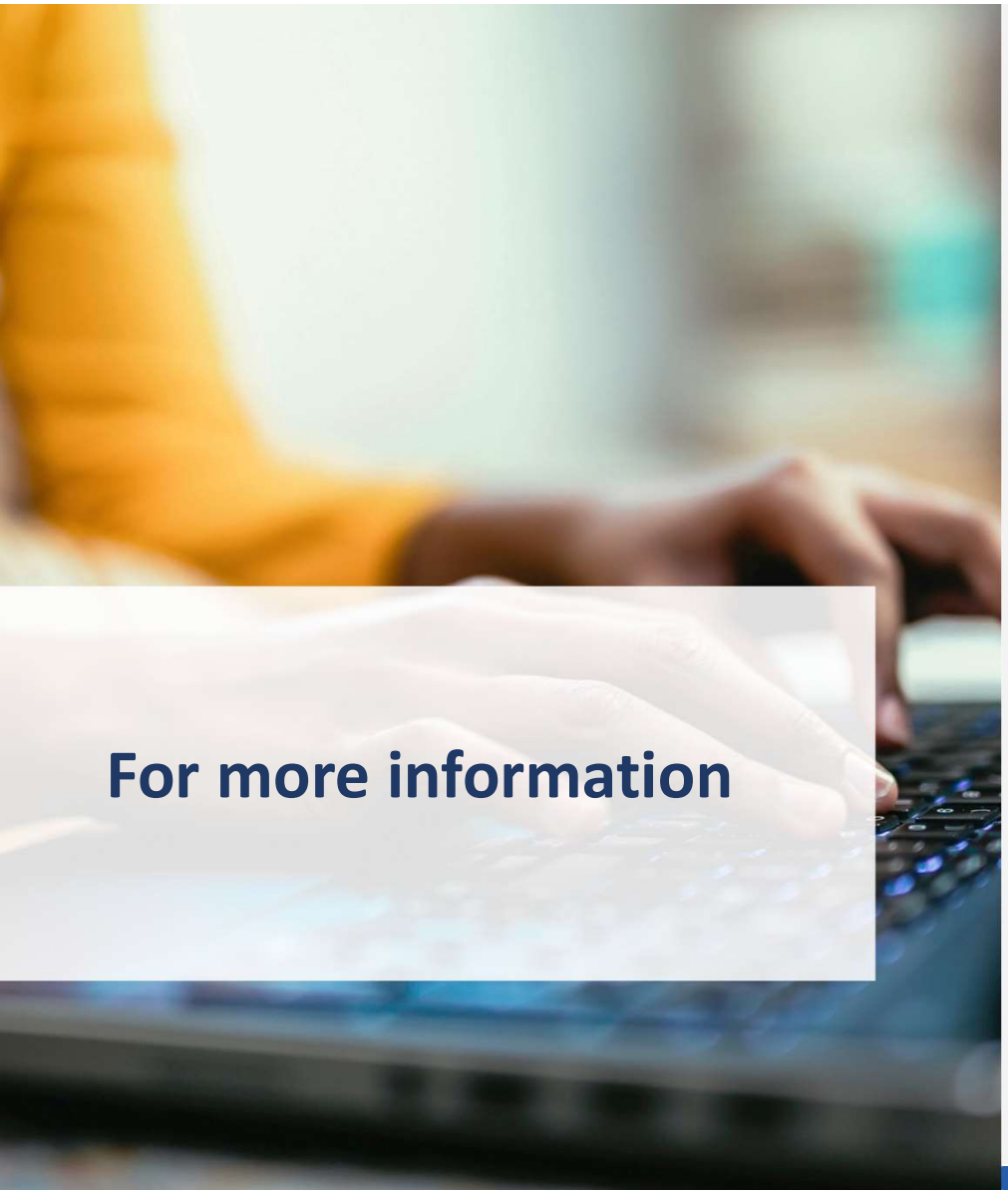
OCED **requires** applicants to include a Community Benefits Plan (CBP) to help ensure broadly shared prosperity in the clean energy transition.

By **prioritizing community benefits**, we can ensure the next chapter in America's energy story is marked by greater justice, equity, security, and resilience.

Next Steps & Resources

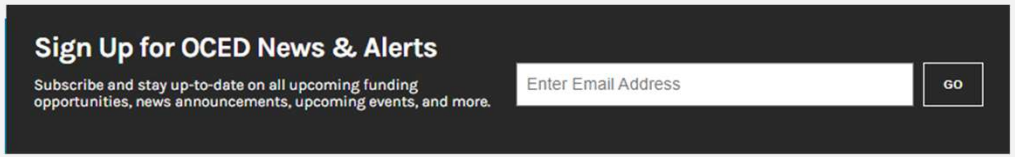
Get Involved





For more information

- **For questions regarding ERA projects in Alaska**
  Alaska_ERA3045@hq.doe.gov
- **OCED Website & Newsletter Sign-up**
  energy.gov/oced
  Scroll to bottom to sign up here:



- **OCED Exchange (RFIs, NOIs, and FOAs)**
  oced-exchange.energy.gov
- **Follow us on LinkedIn**
  linkedin.com/company/doe-oced/

Resources

- **ERA Program**
  - OCED ERA Program Webpage
  - ERA Grant Selections for Award Negotiations | Department of Energy
  - Federal Energy Funding for Rural and Remote Areas: A Guide for Communities
  - Rural or Remote Areas Geospatial Dashboard
- **Justice40 Initiative**
  - https://www.energy.gov/diversity/justice40-initiative
- **Energy Justice Dashboard (BETA)**
  - https://energyjustice.egs.anl.gov/
- **Climate and Economic Justice Screening Tool**
  - https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

Thank you!

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For more information, please visit energy.gov/OCED