OCED
Office of Clean Energy Demonstrations

THE OFFICE OF
CLEAN ENERGY DEMONSTRATIONS

Energy Improvements in Rural or Remote Areas Program (ERA) National Briefing

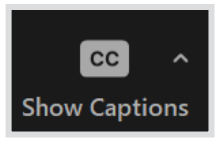
Office of Clean Energy Demonstrations

U.S. Department of Energy

February 29, 2024

Webinar Logistics

How do I turn on live captions?



Click on the **“Show Captions”** button in the control panel at the bottom of your screen.

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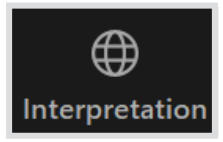


Click on the **“Interpretation”** button in the control panel at the bottom of your screen.

Is this webinar being recorded?

Yes, this webinar is being recorded and will be available on the DOE YouTube channel and the OCED website within the next week.

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.

Agenda

- Welcome
- OCED Overview
- ERA Program Overview
- Community Benefits and Engagement
- Project Overviews
- Next Steps & Resources
- Wrap-up & Close

Opening Remarks

OCED Overview

OCED Mission

Deliver clean energy technology **demonstration projects at scale** in partnership with the **private sector** to **accelerate deployment**, **market adoption**, and the **equitable transition** to a decarbonized energy system.

Energy Improvements in Rural or Remote Areas Program (ERA)

ERA Program Overview

The Bipartisan Infrastructure Law (BIL) authorizes DOE to invest **$1 billion in Energy Improvements in Rural or Remote Areas.** The DOE Energy Improvements in Rural or Remote Areas (ERA) Program is managed by the Office of Clean Energy Demonstrations.

Purpose

To provide financial assistance to improve, in rural or remote areas of the United States, the resilience, safety, reliability, and availability of energy and environmental protection from adverse impacts of energy generation.

Program Goals

1. **Deliver measurable benefits to energy customers in rural or remote areas** by funding replicable energy projects that lower energy costs, improve energy access and resilience, and/or reduce environmental harm;

2. **Support new rural or remote energy system models** using climate-resilient technologies, business structures that promote economic resilience, new financing mechanisms, and/or new community engagement practices; and

3. **Build clean energy knowledge, capacity, and self-reliance in rural America.**

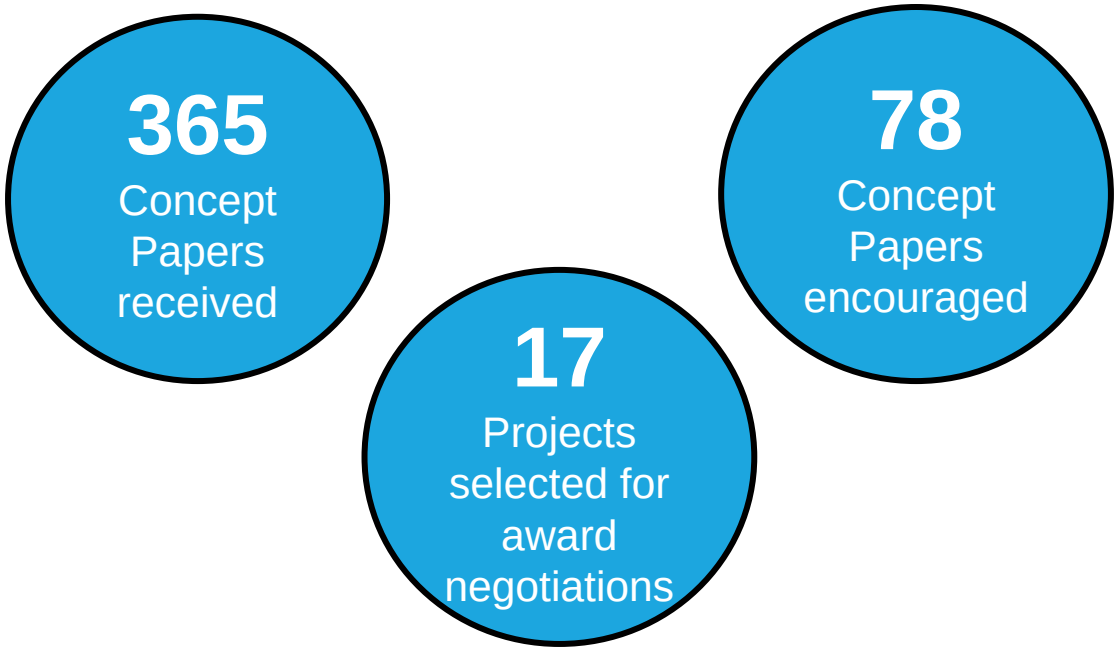
ERA $300M Funding Opportunity

In March 2023, DOE announced a **$300 million** funding opportunity to increase energy affordability and promote climate resilience with an anticipated federal cost share ranging from **$5 to $100** million per project for single or multi-site demonstration project(s).

Program Outcomes

1. Projects use clean energy technologies that improve **reliability and/or resilience of energy systems**
2. Projects **reduce energy poverty**
3. Projects improve environmental performance of **energy generation** in rural or remote communities

Status to Date



ERA Projects Address Unique Challenges by Deploying a Range of Technologies

EV Charging

Charging stations enable electric vehicles to recharge rapidly when away from home.

Biomass

Biomass is a form of renewable energy derived from recently living organic materials, which can be used to produce transportation fuels, heat, and electricity.

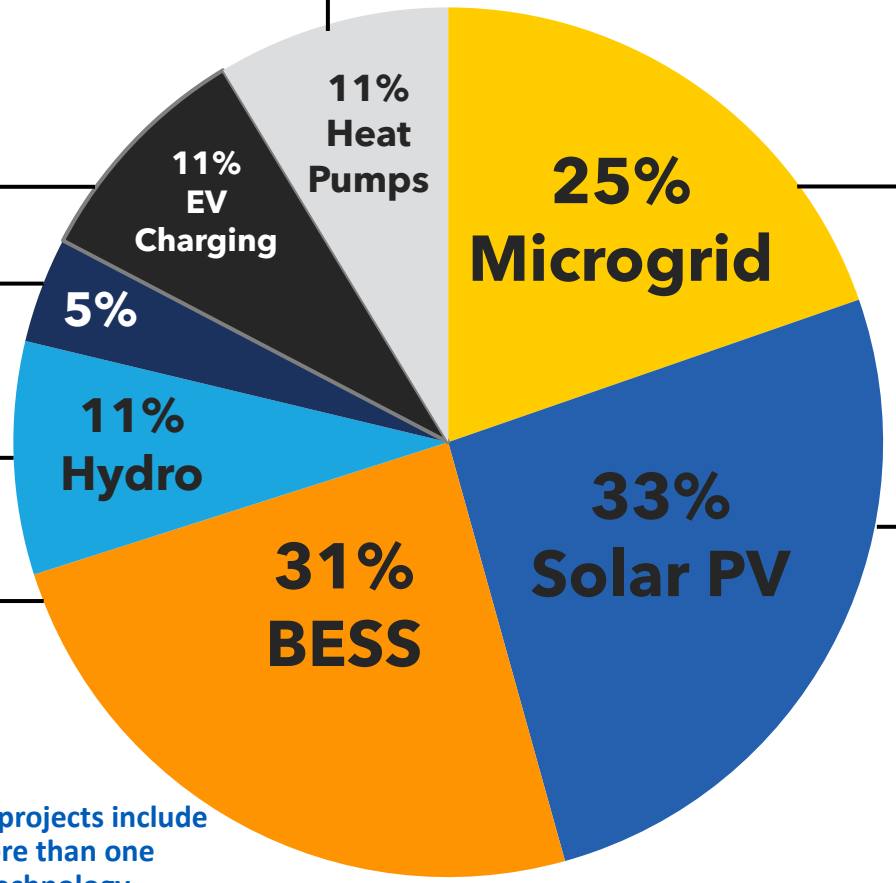
Hydropower

Hydropower is one of the oldest sources of renewable energy and currently accounts for 29% of total U.S. renewable electricity generation and about 6% of total U.S. electricity generation.

Battery Energy Storage System (BESS)

Battery Energy Storage Systems (BESS) store the electricity generated by intermittent sources like solar PV.

Percentage of Projects Using Technologies*



*Most projects include more than one technology

Heat Pumps

Heat pumps offer an energy-efficient alternative to furnaces and air conditioners for all climates to transfer heat from a cool space to a warm space, making the cool space cooler and the warm space warmer.

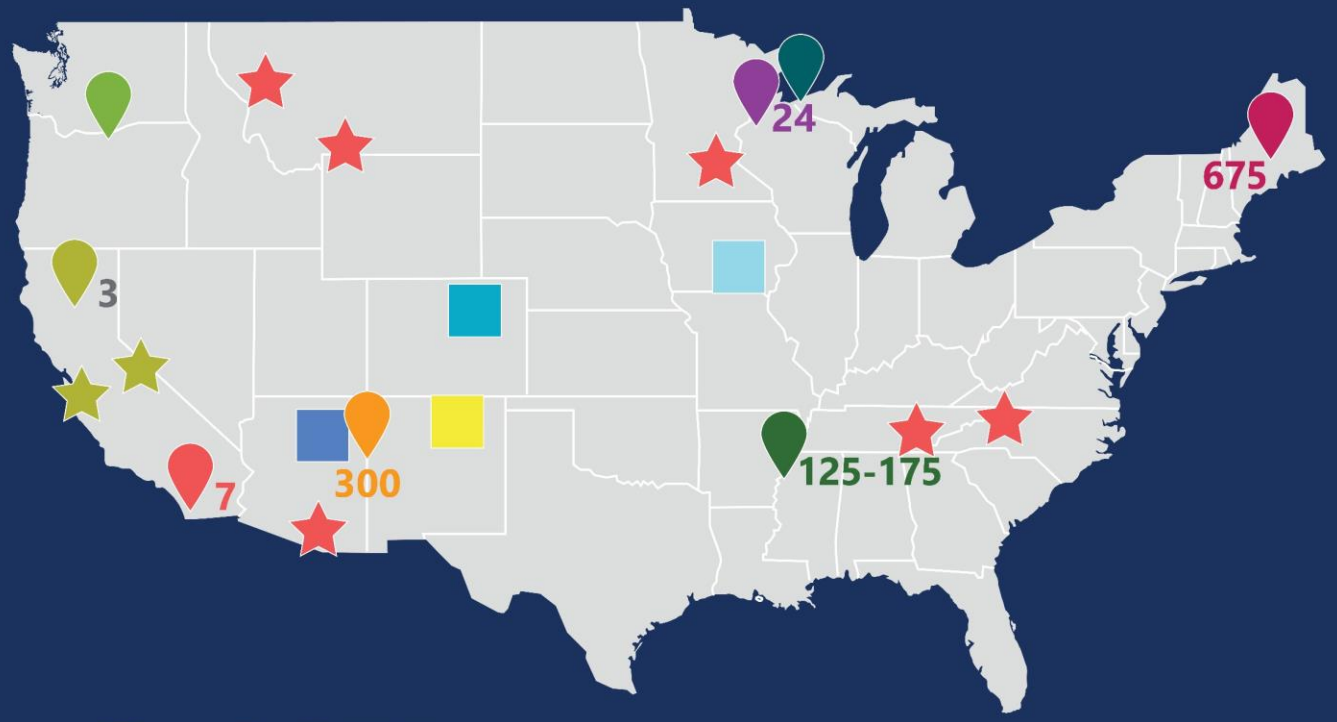
Microgrid

Microgrids are localized electric grids that can disconnect from the main grid to **operate autonomously.** Microgrids **strengthen grid resilience and** help **mitigate grid disturbances**.

Solar

Solar photovoltaics (PV) is one of fastest growing and most affordable source of new electricity in America. As the cost of solar PV dropped significantly, more American households and businesses have taken advantage of clean energy.

ERA PROJECT SELECTIONS – LOWER 48



	Yakama Indian Reservation, WA
	Burney, CA; Mariposa, CA; Mammoth Lakes, CA
	Anza, CA; Arivaca, AZ; Clinton, MT; Cooke City, MT; Shakopee Mdewakanton Sioux Community, MN; Decatur, TN; Cherry Lane, NC
	Hopi Nation, AZ
	300 homes across Hopi and Navajo Nations
	Fort Lupton, CO
	Taos Pueblo, NM
	Bad River Band of Lake Superior Tribe of Chippewa Indians, WI
	24 sites across Red Cliff Reservation and Bayfield County, WI
	Montezuma, IA
	Tunica, MS; 125-175 other Southeast community health centers
	675 ME mobile/manufactured homes

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Notes:
- **Square icons indicate Topic Area 1**
- **Rounded icons indicate Topic Area 2**
- **Subscripts and star icons indicate multi-site projects**

ERA PROJECT SELECTIONS – ALASKA

	Kotzebue, AK; 10 other Northwest Arctic Borough communities
	Nulato, AK; 7 other Interior Alaska communities
	Chignik Bay, AK
	Old Harbor, AK
	Angoon, AK

Notes:
- **Square icons indicate Topic Area 1**
- **Rounded icons indicate Topic Area 2**
- **Subscripts and star icons indicate multi-site projects**

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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.

Community & Labor Engagement

Diversity, Equity, Inclusion, & Accessibility

Investing in the American Workforce

Justice40 Initiative

Project Overviews

Advancing Energy Sovereignty for Taos Pueblo

Project Overview

Lead Applicant:

International Center for Appropriate and Sustainable Technology (ICAST)

Location:

Taos Pueblo, NM

Federal Cost Share:

***$10,000,000**

Technology:

Solar PV and Battery Storage

*Pending negotiations

Key Facts

- **Solar PV + Battery Storage will provide approximately 33% energy cost savings** for 2,500 Taos Pueblo Tribal members
- **Reduction of over 275,000 metric tons of greenhouse gas emissions annually**

Community Benefits

- Taos Pueblo will co-own the solar PV and battery storage assets and receive project income over 25 years
- Project anticipates passing benefits to Taos Pueblo Tribal members through a direct consumer credit of up to **$700 per household annually**
- Partnership with Santa Fe Community College to aid in local workforce training

Alaskan Tribal Energy Sovereignty

Project Overview

Lead Applicant:
Tanana Chiefs Conference

Location:
Nulato, Huslia, Minto, Kaltag, Grayling, Anvik, Shageluk and Holy Cross, AK

Federal Cost Share:
***$26,070,000**

Technology:
Solar PV, Battery Storage, and Microgrids

*Pending negotiations

Key Facts

- Solar PV + Battery Storage + Microgrids will improve energy resilience for eight remote Alaskan communities that are inaccessible by road and only seasonally reachable by boat or small airplane, leading to **electricity costs that are four times the national average**
- Project could offset the region's **annual diesel consumption by 40%** and **reduce more than 1,550 metric tons per year of greenhouse gas emissions**

Community Benefits

- Tribal governments projected to receive approximately **$150,000 in net income annually**

Chignik Hydroelectric Dam and Water Source Project

Project Overview

Lead Applicant:
The Lake and Peninsula Borough

Location:
Chignik, AK

Federal Cost Share:
***$7,270,000**

Technology:
Run-of-the-River Hydroelectric Facility

*Pending negotiations

Key Facts

- Run-of-the-river hydroelectric facility would replace **100% of community's diesel consumption**
- **Reduction of electricity rates by approximately 7%**

Community Benefits

- Expected creation of **10 construction jobs** with a tribal hiring preference
- **$6 million** towards rehabilitation of the community's water supply

Clean Energy in the Northwest Arctic

Project Overview

Lead Applicant:
Northwest Arctic Borough

Location:
Northwest Arctic Borough, AK

Federal Cost Share:
***$54,810,000**

Technology:
Solar PV, Battery Storage, Heat Pumps, and AC/DC-Intertie

*Pending negotiations

Key Facts

- The project expected to save the region nearly **$2 million in electricity and heating costs annually**
- Displacement of more than **350,000 gallons** of diesel fuel per year

Community Benefits

- **11 federally recognized Alaska Villages** will own and maintain the solar PV and battery storage projects
- **50% local hiring preference** for Alaskan Natives and local job seekers
- Leveraging the University of Alaska's Native Science & Engineering Program to source candidates

Community Scale Rural Bioenergy Facilities

Project Overview

Lead Applicant:
West Biofuels

Location:
Burney, Mariposa and Mammoth Lakes, CA

Federal Cost Share:
***$30,000,000**

Technology:
Forest Biomass to Energy Conversion

*Pending negotiations

Key Facts

- Project aims to prevent local forest fires while providing low-carbon, stable energy for three rural communities in California.
- **The resulting biochar is anticipated to sequester approximately 12,000 tons of carbon equivalent emissions per year**

Community Benefits

- Creation of **15 jobs per site**

Energizing Rural Hopi and Navajo with Solar Powered Battery-Based Systems

Project Overview

Lead Applicant:
Native Renewables

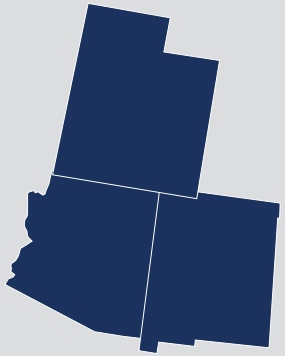
Location:
Hopi and Navajo Nations

Federal Cost Share:
***$8,000,000**

Technology:
Solar PV and Battery Storage

*Pending negotiations

Key Facts



- **Solar PV + Battery Storage project seeks to electrify 300 homes within the Navajo and Hopi Nations**
- Reduce greenhouse gas emissions from kerosene and propane lanterns and gasoline generators

Community Benefits

- In-person training on renewable energy systems for participating households
- Electrification could fulfill essential household needs, including powering lights, and refrigeration for food and medicine

Fort Lupton Microgrid Project

Project Overview

Lead Applicant:
United Power, Inc.

Location:
Fort Lupton, CO

Federal Cost Share:
***$6,120,000**

Technology:
Solar PV, Battery Storage, and Microgrid

*Pending negotiations

Key Facts

- Floating Solar PV + Battery Storage + Microgrid would reduce reliance on aging backup diesel generator at the water treatment plant that has become unreliable
- Ensure reliable clean drinking water
- Reduce annual **CO2 emissions**

Community Benefits

- **9% reduction in the city's monthly power bill**
- Anticipated project construction could create **6 full-time equivalent jobs**
- Partnership with Aims Community College and the BUENO Center for Multicultural Education to provide contracting outreach in the community

Heat Pump Solutions for Mobile/Manufactured Homes

Project Overview

Lead Applicant:
The Efficiency Maine Trust

Location:
Rural communities in ME

Federal Cost Share:
***$10,000,000**

Technology:
Whole-Home Ducted Heat Pumps

*Pending negotiations

Key Facts

- **675 whole-home ducted heat pumps** in mobile/manufactured homes in **rural Maine communities**
- Project aims to help meet Maine's ambitious heat pump goals, including 15,000 in low-income homes by 2025 and 115,000 homes with whole-home heat pump systems by 2030

Community Benefits

- Each heat pump conversion is estimated to **reduce household heating costs by 40%**
- Support local clean energy workforce by providing training and certificates for heat pump contractors

Hopi Nation Community Solar Project

Project Overview

Lead Applicant:
Arizona State University

Location:
Hopi Nation, AZ

Federal Cost Share:
***$9,110,000**

Technology:
Solar PV, Battery Storage, and Microgrid

*Pending negotiations

Key Facts

- Solar PV + Battery Storage + Microgrid will enable **24/7 power for critical community services, IT, waste management, and health and human services**
- Due to aging power infrastructure, building operations at the Turquoise Trail Municipal Complex on the Hopi Reservation have been **limited to 12 hours per day, 5 days a week, and leaving the Tribe vulnerable to emergencies and lacking critical services during off-hours**

Community Benefits

- Project plans to employ up to **19 local workers** for temporary construction jobs, up to **12 newly trained solar/microgrid construction workers, and one long-term microgrid manager**

Mashkiiziibii Minigrid

Project Overview

Lead Applicant:

Bad River Band of Lake Superior Tribe of Chippewa Indians

Location:

Bad River Reservation, WI

Federal Cost Share:

***$14,080,000**

Technology:

Solar PV, Battery Storage, Mini-Grid, and Distribution Line Upgrade

*Pending negotiations

Key Facts

- Hybrid mini-grid (solar PV, battery storage, and distribution line upgrades) would create islanding capability
- Project aims to help the Bad River Band reach its goal of **net zero carbon emissions with 100% renewable electricity generation by 2027**
- **Anticipated 10%** reduction of utility bills

Community Benefits

- Expected contribution of $200,000 to workforce development training for local tribal members
- Contract 50% of workers from the tribal community

Microgrids for Community Affordability, Resilience, and Energy Decarbonization (CARED)

Project Overview

Lead Applicant:
NRECA Research

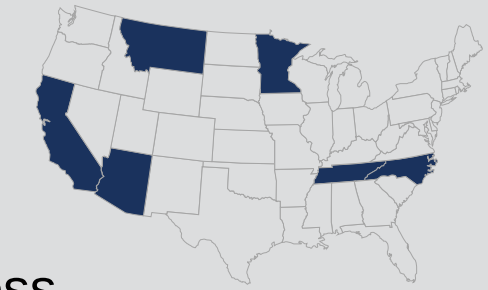
Location:
Anza, CA; Arivaca, AZ; Clinton, MT; Cooke City, MT; Shakopee Mdewakanton Sioux Community, MN; Decatur, TN; Cherry Lane, NC

Federal Cost Share:
***$45,280,000**

Technology:
Solar PV, Battery Storage, Microgrids, and Distribution Upgrades

*Pending negotiations

Key Facts



- National Rural Electric Cooperative Association (NRECA) Research plans to create a consortium of rural electric cooperatives and deploy microgrids across **7 rural communities**
- The consortium could enable communities to collectively pursue federal funding, addressing capacity constraints and financial barriers

Community Benefits

- Projects anticipate creating an estimated **85 full-time temporary jobs**

Montezuma Microgrid

Project Overview

Lead Applicant:

Iowa State University Electric Power Research Center

Location:
Montezuma, IA

Federal Cost Share:

***$9,480,000**

Technology:

Solar PV, Battery Storage, Microgrid, Advanced Metering, and EV Chargers

*Pending negotiations

Key Facts

- **Solar PV + Battery Storage + First-utility scale microgrid in the state of Iowa**
- Project would serve **706 residential homes**, **201 commercial buildings, and two industries**

Community Benefits

- **Project would be owned by a community-owned utility with workforce development opportunities**
- Project seeks to develop a renewable microgrid curriculum for community colleges and the Meskwaki Nation to provide training and apprenticeship programs for the local workforce

Old Harbor Hydroelectric Project

Project Overview

Lead Applicant:
Alutiiq Tribe of Old Harbor

Location:
Old Harbor, AK

Federal Cost Share:
***$10,000,000**

Technology:
Run-of-the-River Hydroelectric Facility and Electric Transmission Line

*Pending negotiations

Key Facts

- Hydropower + transmission line upgrade project would generate an estimated **3,470 MWh of clean energy annually**
- Offset diesel fuel use at the local power plant by **95%**

Community Benefits

- The project seeks to demonstrate a tribal ownership business model that may be replicable in **209 similar rural villages within the region**
- Project seeks to ensure stable sources to clean water and energy while reducing negative health impacts of using diesel fuel

Resilience and Prosperity in Rural Northern Wisconsin

Project Overview

Lead Applicant:

Wisconsin Office of Sustainability and Clean Energy

Location:

24 sites across Red Cliff Band Tribal Lands and Bayfield County, WI

Federal Cost Share:

***$9,780,000**

Technology:

Solar PV, Battery Storage, EV Chargers, and Microgrids

*Pending negotiations

Key Facts

- Solar PV, Battery Storage, and Microgrids would increase regional energy reliability with the deployment of 23 microgrid systems.
- The project would help improve resiliency against power outages by deploying solar PV, battery storage, smart controls enabling islanding, and EV charging stations

Community Benefits

- Anticipate to hire **one full-time position for Bayfield County** and **one full-time position for Red Cliff Band** to manage the energy installations
- Creation of a Community Advisory Board

Solar + Storage Microgrids for Rural Community Health Centers

Project Overview

Lead Applicant:

National Association of Community Health Centers

Location:

Tunica, MS and 175 sites across the Southeast

Federal Cost Share:

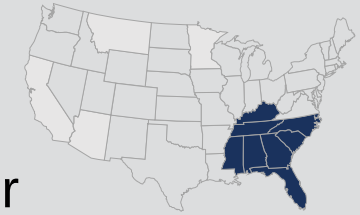
***$57,010,000**

Technology:

Solar PV and Battery Storage

*Pending negotiations

Key Facts



- Solar PV + Battery Storage project would equip up to 175 rural community health center sites with resilient, clean energy
- **$45 million in estimated energy cost savings**
- Provide energy reliability for critical medical equipment, refrigeration of insulin and vaccines, and continuity of care during emergencies and power outages

Community Benefits

- Project team plans to host listening sessions with local community leaders and labor organizations to provide an opportunity for two-way engagement and community input

Thayer Creek Hydroelectric Project

Project Overview

Lead Applicant:
Kootznoowoo, Inc.

Location:
Angoon, AK

Federal Cost Share:
***$26,920,000**

Technology:
Run-of-the-River Hydroelectric Facility and Transmission Line

*Pending negotiations

Key Facts

- Hydropower project would **displace 12.9 million gallons of diesel** and reduce carbon emissions
- The Tlingit people are entirely reliant on imported diesel, which leads to energy costs more than **4.5 times the national average**
- Expected to **reduce energy rates across 5 Alaskan communities**

Community Benefits

- Project will create **30 construction jobs and one full-time operation and maintenance position**

Yakama Tribal Solar Canal & Hydro Project

Project Overview

Lead Applicant:

The Confederated Tribes and Bands of the Yakama Nation

Location:

Yakama Indian Reservation, WA

Federal Cost Share:

***$32,000,000**

Technology:

Solar PV and Hydropower Irrigation System

*Pending negotiations

Key Facts

- **Solar PV would reduce electricity costs by up to 15%**
- **Hydropower** irrigation system would **conserve up to 20% of water**

Community Benefits

- Creation of **10 full-time positions** with a tribal hiring preference
- **Workforce development and training for local tribal members to ensure project dollars are reinvested and continue to circulate within the community**

Next Steps & Resources

Get Involved

How could this project impact me?

Learn more about OCED's Community Benefits Plan Framework →

Is there an ERA project near me?

Learn more about the selected projects here →

Project selected

WE ARE HERE

Announcement and Negotiations
Projects have been selected, but awards have not been made

What is an ERA project?

Learn more →

Project awarded

NEPA engagement during phase 2 →

1 ~5 years

2 ~5 years

3 ~2-4 years

4 ~2-4 years

Anticipated phases

Phase 4: Ramp-Up & Operate
Community Benefit Commitments Public

Phase 3: Install, Integrate, Construct
Community Benefit Commitments Public

Phase 2: Project Development
Community Benefit Commitments Public

Phase 1: Project Planning
Community Benefit Commitments Public

Ongoing community engagement throughout each phase

Learn more about project phases →

When are the ERA project-specific briefings?

Learn more and register here →

How do I stay informed?

Sign up for updates →

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Community Benefit Commitments Public
Go/No-Go Decisions

Next Steps – Virtual ERA Community Briefings

OCED will hold four regional community briefings to share information with the communities hosting ERA projects.

Information and to register: Energy Improvements in Rural or Remote Areas Local Engagement Opportunities | Department of Energy

Eastern Regional Briefing
Thursday, March 21, 2024
6:00-7:30 p.m. ET

Midwest Regional Briefing
Tuesday, March 26, 2024
6:00-7:30 p.m. ET

Alaska Regional Briefing
Thursday, March 28, 2024
9:00-10:30 p.m. ET

Western Regional Briefing
Monday, April 1, 2024
8:00-9:30 p.m. ET

National Environmental Policy Act

- **What is NEPA?** NEPA is a federal law that requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.
- **Does NEPA Apply?** All projects, including any potential connected actions (40 CFR 1501.9(e)(1)), receiving financial assistance from DOE must be reviewed under NEPA. There are three levels of NEPA reviews:

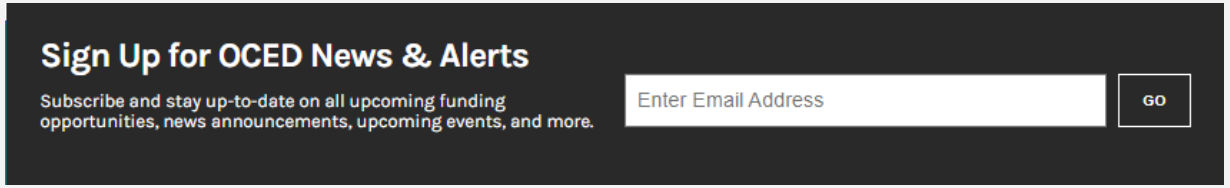
Categorical Exclusion (CX)	Environmental Assessment (EA)	Environmental Impact Statement (EIS)

• Categories of actions that DOE has determined, by regulation, do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an EA nor an EIS normally is required
 	
• **Categorical exclusions do not typically involve public review/comment, but are posted for public review once they are complete**
	• A brief analysis to determine whether an EIS is required
	
	• **Two (optional) public review/comment periods:**
	  • **Public scoping comment period and meeting**
	  • **Comment period and public meeting after the draft EA is released**
		• A detailed statement for major federal actions significantly affecting the human environment
		
		• **Two (required) public review/comment periods:**
		  • **Comment period and public scoping meeting after the notice of intent to prepare an EIS is released**
		  • **Comment period and public hearing after the draft EIS release**

NEPA Resources: https://www.energy.gov/oced/oceds-guide-nepa

For more information

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



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Thank you!

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