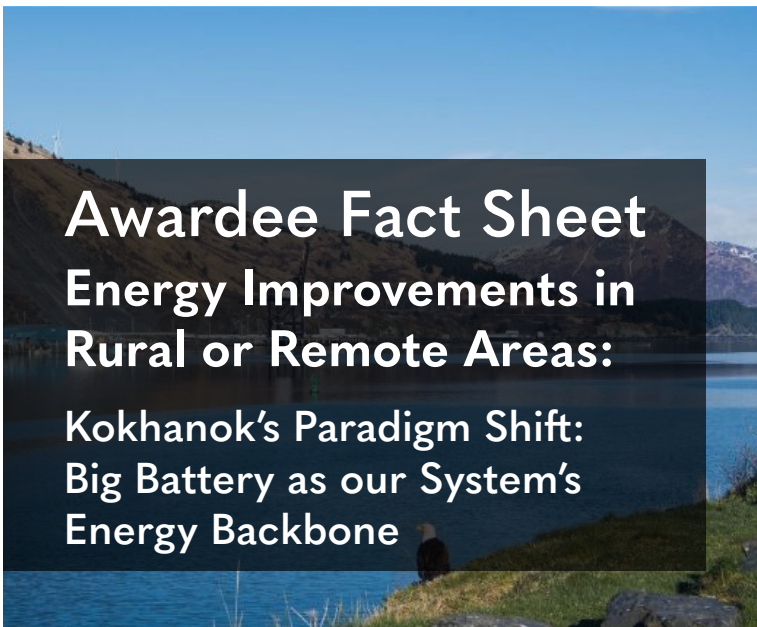




Energy Improvements in Rural or Remote Areas — Kokhanok’s Paradigm Shift: Big Battery as our System’s Energy Backbone

The Energy Improvements in Rural or Remote Areas (ERA) Program, managed by the U.S. Department of Energy’s (DOE) Office of Clean Energy Demonstrations (OCED), aims to fund community-driven energy projects that demonstrate clean energy systems, deliver measurable and sustained benefits to people who live in rural or remote areas, and build clean energy knowledge, capacity, and self-reliance throughout rural America. As part of the ERA Program’s grant funding opportunity, OCED sought applications with a range of different technologies aimed to improve the resilience, reliability, and affordability of energy systems in communities across the country with 10,000 or fewer people. OCED selected 19 projects across 12 states and 13 tribal nations for a total of up to \$78 million in federal grant funding. In August 2024, OCED issued a grant award committing up to nearly \$5 million to the Kokhanok Village Council for its Kokhanok’s Paradigm Shift – Big Battery as our System’s Energy Backbone project, located in Kokhanok, AK.



Project at a Glance

- » **Total OCED Award Amount:** \$4,969,257
- » **Anticipated Duration:** Up to 4 years
- » **Recipient:** Kokhanok Village Council, a federally recognized tribal government
- » **Project Locations:** Kokhanok, AK
- » **Start Date:** August 2024

About This Project

Kokhanok Village Council seeks to add a 1 MWh battery energy storage system—as well as 100 kW solar PV, a new 100 kW wind turbine, and electric thermal storage (ETS) heating units—to Kokhanok, AK’s microgrid. Though incredibly remote, the village expects its electricity needs to increase over time, due to population growth and electrification, and hopes to power the village with 100% clean energy.

The upgrades to Kokhanok’s microgrid would displace an anticipated 70% of the local power plant’s diesel use within the first two years of operation, improving the community’s air quality and reducing outages and electricity costs.

The ETS heating units—planned for installation in 10 elder residents’ homes—would also help reduce emissions and could lower diesel heating costs in each residence by as much as \$1,000 annually.

In addition to advancing clean energy, this project would demonstrate the replicability and scalability of an islanded microgrid anchored by a large capacity battery.

Kokhanok's Paradigm Shift – Big Battery as our System's Energy Backbone Project Fact Sheet

Project Site

The project would be located in the community of Kokhanok, in the Lake and Peninsula Borough southwest of Anchorage, AK. Only accessible by barge and plane, Kokhanok uses diesel fuel to supplement other power sources. The village of 170 residents, primarily Alutiiq, Dena'ina, and Yup'ik indigenous peoples, wants to transition to 100% renewable energy. This project could significantly increase the microgrid's reliability and resilience, while vastly reducing the community's dependence on diesel, leading to improved local air quality and cost savings.

Community Benefits Commitments

Community benefits commitments are a key component of the Kokhanok's Paradigm Shift – Big Battery as our System's Energy Backbone project. The commitments are informed and developed—in consultation with local communities—to mitigate any potential negative impacts of this project and maximize local community benefits. The project would implement these commitments through:

- Hosting community meetings with tribal members to share **project updates and employment opportunities**.
- Establishing a Renewable Energy/Remote Power System **training program** to develop the local workforce.
- Installing **ETS heating units in the homes of 10 elder residents' homes**, reducing their heating costs by \$850-\$1,000 annually.

More details on the Kokhanok's Paradigm Shift – Big Battery as Energy Backbone's project community benefits commitments can be found in the [Community Benefits Commitments Fact Sheet](#).

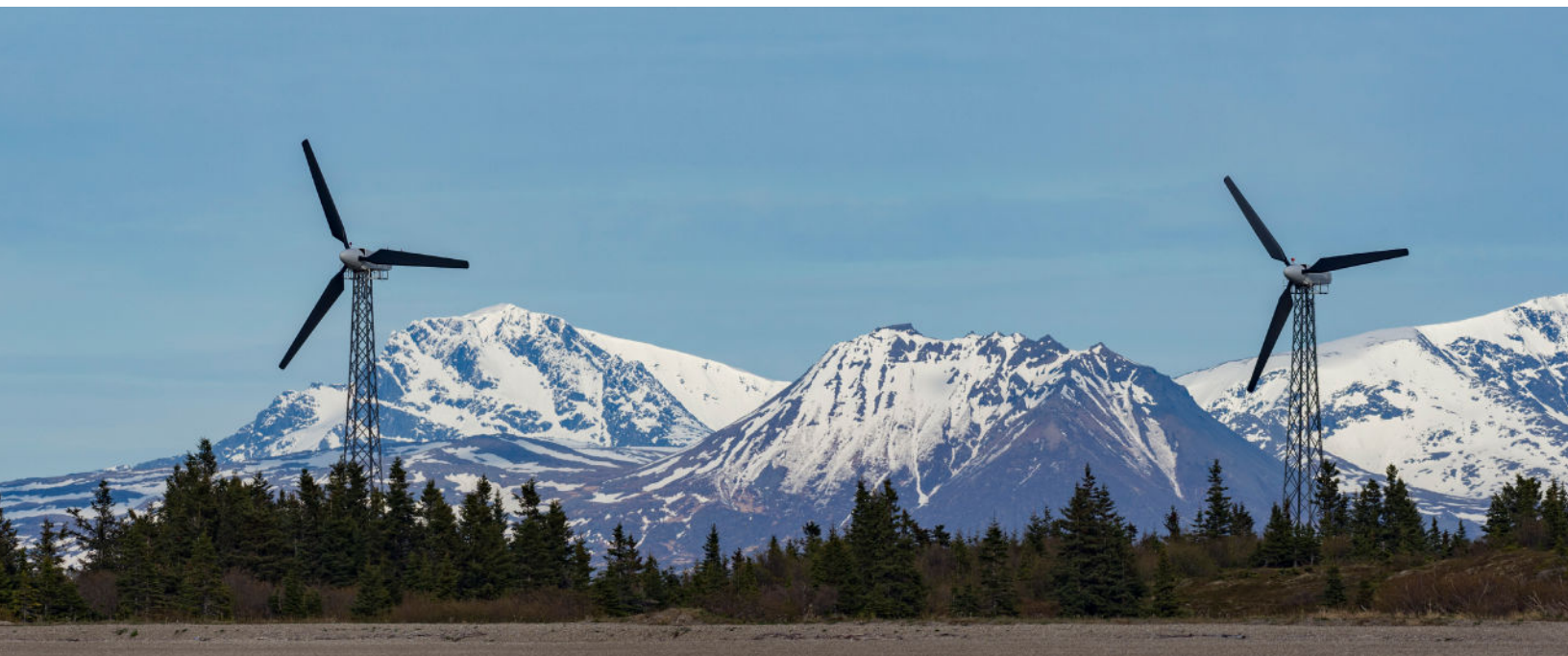


Subsistence berry picking and potential new wind turbine siting

Kokhanok's Paradigm Shift – Big Battery as our System's Energy Backbone Project Fact Sheet

Energy Improvements in Rural or Remote Areas Program Goals

Nearly one in six Americans live in rural or remote communities and face a unique set of energy challenges due to their smaller populations and isolation from larger electrical systems—including higher electric bills, unreliable energy supplies, and/or no access to electricity at all. The ERA Program aims to address these challenges by funding community-driven energy projects that demonstrate clean energy systems, deliver measurable and sustained benefits to people who live in rural or remote areas, and build clean energy knowledge, capacity, and self-reliance throughout rural America. This program will leverage DOE's expertise in resilient energy solutions while recognizing the unique environmental, cultural, and economic landscapes of rural and remote communities. The selected projects cover a range of clean energy technologies—from solar, battery storage systems and microgrids to hydropower, heat pumps, biomass, and electric vehicle charging infrastructure—to ensure new economic opportunities in every pocket of the nation.



Existing wind turbines in Kokhanok

Contact

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OCED Media Email: OCEDNewsroom@hq.doe.gov

More Resources

Website: energy.gov/oced/era

Office of Clean Energy Demonstrations: energy.gov/oced



The U.S. Department of Energy established OCED to help scale the emerging technologies needed to tackle our most pressing climate challenges and achieve net-zero emissions by 2050. OCED's mission is to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.