



Long-Duration Energy Storage Demonstrations Program – Communities Accessing Resilient Energy Storage

The Long-Duration Energy Storage (LDES) Demonstrations Program, managed by the U.S. Department of Energy's (DOE) Office of Clean Energy Demonstrations (OCED), aims to validate new energy storage technologies and enhance the capabilities of customers and communities to integrate grid storage more effectively. As part of this program, OCED sought applications for LDES projects from a range of different technologies intended to overcome technical and institutional barriers to full-scale deployment of LDES systems in diverse geographies. OCED selected nine projects to begin award negotiations for a total of up to \$286 million. Following negotiations, in July 2024, OCED awarded the Communities Accessing Resilient Energy Storage (CARES) project with \$1 million to begin activities in Phase 1. The CARES project will be located in Red Lake Nation, MN; Santa Fe, NM; and Petaluma, CA.

Awardee Fact Sheet

LDES Demonstrations Program: Communities Accessing Resilient Energy Storage

Project at a Glance

- » **Total OCED Cost Share:** Up to \$10 million
- » **Phase 1 Total Project Amount:** \$2,083,481*
- » **Phase 1 OCED Award Amount:** \$1,000,000**
- » **Phase 1 Scope of Work:** Planning activities related to budgeting, permitting, procurement, community and labor engagement, workforce and community agreements, workforce planning, and early development
- » **Phase 1 Timeline:** 12-16 months
- » **Recipient:** ReJoule, headquartered in Signal Hill, California, is a leader in battery diagnostics and the building and deployment of battery energy storage systems made from repurposed electric vehicle batteries
- » **Project Locations:** Red Lake Nation, MN; Santa Fe, NM; Petaluma, CA
- » **Start Date:** July 2024

*Represents the total project cost for Phase 1.

**Represents OCED's cost share for Phase 1. Additional funding for this project is subject to future award negotiations at the end of each project phase.

About This Project

ReJoule plans to build modular energy storage systems made from repurposed batteries for installation at three sites across the Midwest, Southwest, and Western regions of the United States. ReJoule plans to use second-life lithium-ion batteries from electric vehicles to assemble modular battery energy storage systems (BESS) for behind-the-meter microgrid installations. ReJoule aims to use BattScan, their patented rapid diagnostic testing platform, to measure the batteries' State of Health (SOH), to select batteries for repurposing and estimate their lifespan in the BESS.

The behind-the-meter BESS installations will vary in size and use case and have the potential to: demonstrate a diverse portfolio of repurposed lithium-ion batteries with 10+ hours of continuous discharge, support larger microgrids and grid storage, and offer a clean-energy alternative to fossil fuel-powered peaker plants.

In the tribal community of Red Lake Nation, MN, ReJoule plans to install a 100kW x 10 hours BESS to supply uninterrupted power in case of grid failure. The demonstration targets aim to reduce the tribal community's dependence on coal for grid power and would provide information about BESS performance in extreme winter environments and interoperation with wind and solar generation.

In Santa Fe, NM, ReJoule plans to install a 100kW x 10 hours BESS to deliver resilience for the community. The project would also provide the opportunity to gather information about the CARES project's resilience and ability to function in a four-season environment at an elevation of ~7,000 feet above sea level including the degradation rates of the second-life batteries, an essential data point for the second-life battery industry.

Communities Accessing Resilient Energy Storage Project Fact Sheet

About This Project, Continued

In Petaluma, CA, ReJoule plans to install a larger 100kW x 10-24 hours BESS at Meridian at Petaluma North Station, an affordable housing complex. The goal is to create the first major affordable housing development with continuous resilience and near-zero dependence on fossil fuels. The housing complex would be a new construction of seven apartment buildings powered by a microgrid using on-site solar and repurposed batteries. ReJoule's BESS demonstration would provide information about the ability to power a specific load combination continuously with on-site solar.

In July 2024, OCED awarded the CARES project \$1 million to conduct Phase 1, which is expected to last 12-16 months. During Phase 1, ReJoule will begin planning activities related to budgeting, permitting, procurement, and early development activities.

Project Sites

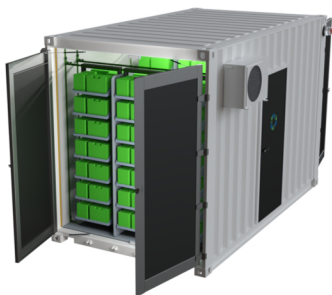
The CARES project will be located in underserved communities in Minnesota, New Mexico, and California. In the tribal community of Red Lake Nation, MN, ReJoule plans to install a BESS at the Oshkiimaajitahdah Workforce Development Campus. In Santa Fe, NM, ReJoule plans to build a BESS for the community at the Siler Yards Arts + Creativity Center affordable housing complex and maker space. In Petaluma, CA, ReJoule plans to install a BESS at Meridian at Petaluma North Station, an affordable housing complex.

Community Benefits Commitments

Community benefits commitments are a key component of the CARES project, informed and developed in consultation with local communities, which aim to mitigate potential adverse impacts of this project and maximize local community benefits. The CARES project will implement these commitments through:

- Creating **community advisory bodies** for each project site that will be engaged to co-develop appropriate mechanisms and strategies for community engagement and accountability, create LDES educational materials, identify individual or community impacts, and support impact mitigation plans.
- Developing a **site labor and workforce development plan** and job training opportunities to ensure appropriate transfer of skills, job creation, and sustainable employment and internship opportunities, especially for underrepresented groups and members of disadvantaged communities.
- Pursuing **Collective Bargaining Agreements, Good Neighbor Agreements, Project Labor Agreements, and Community Workforce Agreements** for all project sites. Identifying project impacts to maximize community and worker benefits, impartially assess potential hazards, and mitigate project risks for host communities, labor, and first responders.

More details on the CARES project's community benefits commitments can be found in the [Community Benefits Commitments Fact Sheet](#).



BESS rendering



One of ReJoule's Rapid battery grading devices

Communities Accessing Resilient Energy Storage Project Fact Sheet

LDES Demonstrations Program Goals

More than 335 million residents in the United States depend on our energy grid to reliably generate an average of 4 trillion kilowatt hours of power annually. During times of high demand, especially during inclement weather when it's more difficult to generate power, it's essential to have energy stored that can be deployed to meet demand, keep prices down, and ensure the lights stay on. Long-duration energy storage is one key option, storing energy that can be discharged over long periods of time that's ready for dispatch when needed. DOE defines LDES as systems capable of delivering electricity for 10 or more hours. The LDES Demonstrations Program features projects with a range of intraday (10 to 36 hours) and multiday (36 to 160+ hours) storage solutions, which can minimize the frequency and length of power interruptions caused by events such as severe weather or cyberattacks on the grid. These projects will help effectively demonstrate the commercial viability of innovative LDES technologies and facilitate wider commercial adoption. Through these projects, OCED envisions the technology eventually being replicated all over the country, providing flexibility and reliability to the power system without creating emissions, supporting a more renewable-heavy future.



Batteries that once powered electric delivery trucks being prepared for a 2LBESS

Contact

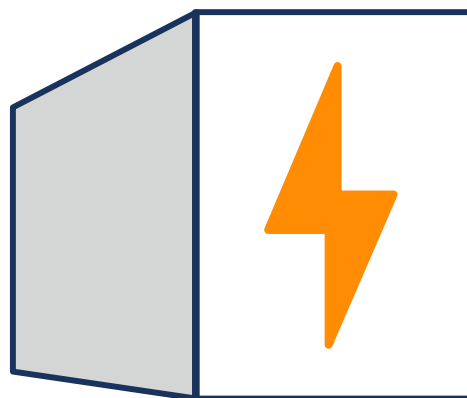
Program Email: OCED_LDES@hq.doe.gov

Site-Specific Email: CARES_LDES@hq.doe.gov

More Resources

Website: energy.gov/oced/ldes

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.