



Long-Duration Energy Storage Demonstrations Program – Stored Rechargeable Energy Demonstration

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 Stored Rechargeable Energy Demonstration (STORED) project with more than \$675,000 to begin activities in Phase 1. The STORED project will be located in Oneonta and Valhalla, NY.

Awardee Fact Sheet

LDES Demonstrations Program: Stored Rechargeable Energy Demonstration

Project at a Glance

- » **Total OCED Cost Share:** Up to \$6.5 million
- » **Phase 1 Total Project Amount:** \$1,440,050*
- » **Phase 1 OCED Award Amount:** \$679,351**
- » **Phase 1 Scope of Work:** Initiate and develop system designs and site agreements, begin community and labor engagement, and develop community stakeholder working groups for both sites
- » **Phase 1 Timeline:** 12-16 months
- » **Recipient:** Urban Electric Power, Inc. is a developer and manufacturer of rechargeable zinc alkaline battery systems
- » **Project Locations:** Oneonta, NY; Valhalla, NY
- » **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

Urban Electric Power, Inc. (UEP) plans to develop and build two LDES systems that together provide up to 600 kW of power for up to 12 hours per discharge, using its own rechargeable zinc-manganese dioxide (ZnMnO₂) batteries. UEP plans to install LDES systems at two sites, State University of New York (SUNY) Oneonta in Oneonta, NY and Westchester County's Grassland Reservation in Valhalla, NY. The systems would provide power resilience to the campuses, increasing the utilization of renewable power at both locations. The batteries are expected to show comparable performance to and stronger safety than lithium-ion batteries. Additionally, they would utilize abundant, low-cost materials that can be readily provided through existing supply — and more than 75 percent of UEP's raw material vendors are based in the U.S.

The New York Power Authority will provide oversight and management of system design and installation and will play a key role in meeting community benefits commitments. EPRI will provide industry insight and guidance on system design and operational parameters.

In July 2024, OCED awarded the STORED project more than \$675,000 to conduct Phase 1 of the project, which is expected to last 12-16 months. During Phase 1, UEP and the project team will initiate and develop system designs and site agreements, begin community and labor engagement, and develop community stakeholder working groups for both sites.

Stored Rechargeable Energy Demonstration

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Project Site

The STORED project will be located at sites in Oneonta and Valhalla, NY. The exact site location on each campus will be determined as part of the Phase 1 scope of work. At the Oneonta site, the project would complement a planned project to replace and build infrastructure that would allow the campus to support greater energy capacity to meet growing power needs. The project would interface with a separate, forthcoming on-site solar photovoltaic (solar PV) project, helping to achieve SUNY Oneonta's long-term clean energy goals. At the Valhalla site, the project would seek to support critical electric loads with long duration power backup and provide Westchester County with added resilience while supporting on-site clean energy generation.

Community Benefits Commitments

Community benefits commitments are a key component of the STORED project. These commitments are informed by and developed in consultation with local communities to help maximize local benefits and mitigate any potential negative impacts. The STORED project will implement these commitments by:

- **Engaging local communities** through in-person and virtual meetings to solicit feedback on the project.
- Establishing **Community Stakeholder Working Groups** to provide ongoing feedback and input and to support community engagement and education.
- Pursuing **negotiated workforce and community agreements** at both project sites, based on input gathered through community and labor engagement.
- Promoting **local hiring and workforce development** to provide access to high-quality jobs.

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



Rendering of Urban Electric Power's Outdoor Pod, a Modular Design for Dense Urban Areas

Stored Rechargeable Energy Demonstration

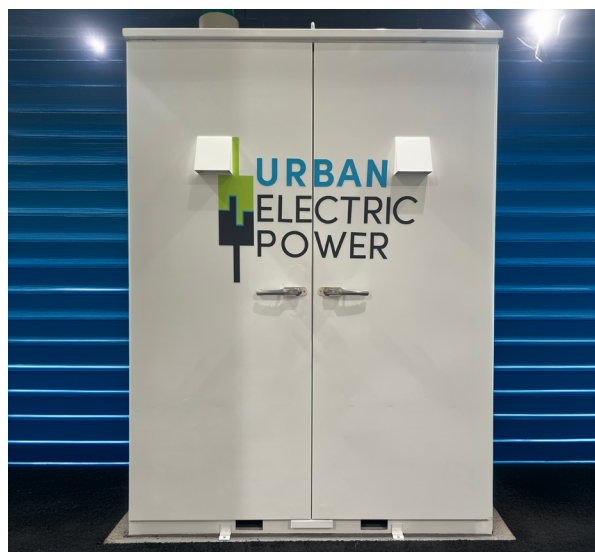
Project Fact Sheet

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.



Urban Electric Power's Outdoor Pod Showcased with Doors Open at a Tradeshow



Urban Electric Power's Outdoor Pod Showcased with Doors Closed at a Tradeshow

Contact

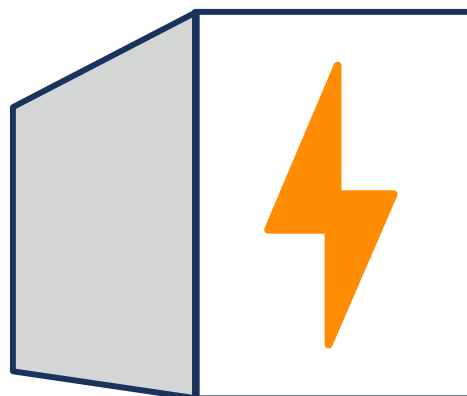
Program Email: OCED_LDES@hq.doe.gov

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

More Resources

Website: energy.gov/oced/lides

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.