



ORCAS POWER & LIGHT COOPERATIVE



OPALCO's Battery Storage Project

The microgrid that OPALCO built on Decatur Island includes a battery storage project paired with a Community Solar Array. The project can operate independently from the electrical grid. This is the first of many microgrids OPALCO envisions to build greater local energy resilience for our remote island communities.

The project provides valuable cost-saving and efficiency benefits including:

- demand charge reduction
- load shaping charge reduction
- transmission charge reduction
- submarine cable replacement deferral
- energy cost reduction
- voltage regulation
- outage mitigation





The battery storage project on Decatur is located in the center of the island on 3.6 acres within our main transmission substation and in proximity to our community solar project. The community solar project is a 504 kW DC array that produces approximately 570,000 kWh per year and began producing energy in 2018.

The goals of the energy storage project are to enhance safety, reduce operating costs (through efficiencies and peak shaving), and improve reliability of the current infrastructure while speeding the transition to locally produced renewable energy.

OPALCO's storage system improves the output of the Decatur Island Community Solar project. As energy costs rise with

carbon legislation and fees, OPALCO plans to decrease our reliance on mainland resources through a system of microgrids. This investment today will help manage energy costs for members into the future.

OPALCO received a grant from the Department of Commerce under the CEF2 Grid Modernization program that allocates funds to Washington consumers that advance clean, renewable energy technologies and transmission and distribution control systems; support integration of renewable energy sources, deployment of distributed energy resources, and sustainable microgrids; or increase utility customer choice in energy sources, efficiency, equipment and utility services.

Project Facts

- The project is a one-megawatt, 2.6 MWh large scale battery storage
- It can power ~500 homes for 4 hours
- OPALCO was awarded a \$1M grant under the CEF2 Grid Modernization Program
- Pacific Northwest National Laboratory has been a key player in aiding in project management, research and analysis