

Distributed Energy Resources Improve Member Service

Key Points

- Electric cooperatives are investing in sustainable, innovative distributed energy resources (DER).
- Co-ops are committed to deploying DER technologies and services that benefit their members and support reliable, resilient cost-effective systems.

Distributed Generation

The cooperative business model enables co-ops to offer greater access to sustainable distributed generation across a wide spectrum of their members. Co-ops are integrating their own and member-owned distributed generation technologies into their systems to reduce costs, improve reliability and offer new services to members.

Demand Response

Over sixty percent of distribution co-ops offer at least one program to help members shift their electricity use to lower-cost times to save money, increase reliability and improve the quality of service. These programs leverage the capabilities of a range of DER technologies such as electric vehicle chargers, water heaters and smart thermostats.

On-bill Financing

More than 100 co-ops currently offer their members access to financing for efficiency and solar investments, generally through on-bill financing programs, which allow members to pay for the upfront capital of a project on their utility bill with periodic payments. Many co-ops use on-bill financing to provide financing to low- and middle-income residents.

Storage, Batteries and Microgrids

Co-ops are deploying battery energy storage for a variety of applications, including frequency regulation, demand response, integration of renewable energy and in microgrids. Co-ops also actively employ community storage, dispatching tens of thousands of electric water heaters to store energy as heat when power costs are low.

Energy Efficiency

Almost ninety percent of distribution co-ops offer at least one energy efficiency program to their members to help them save energy and use energy more wisely. Partnering with their wholesale generation and transmission providers, co-ops are developing energy efficiency programs, such as air-source heat pumps, that reduce overall energy costs, increase comfort and resiliency and reduce carbon emissions.

Community Solar

With more than 400 cooperatives participating, co-ops lead the country in offering community solar options to their members. Community solar lowers the cost of projects, reduces the risk for homeowners and enables members to participate who wouldn't otherwise be able to install solar at their own homes.

Co-ops Deploying DER

Kaua'i Island Utility Cooperative is partnering with AES Distributed Energy on a 19.3-MW solar array and battery storage project that will reduce the co-op's diesel demand by about 2.8 million gallons a year.

South River EMC teamed up with a family hog farm to build a microgrid that combines biogas generation, an existing diesel generator and solar power, along with a battery system and a microgrid-control system. In an outage, the system can power the farm and about 28 neighboring homes for four hours or longer.

Poudre Valley REA is making it easier for low- and moderate-income members to participate in the co-op's third community solar array by waiving the up-front and monthly fees for eligible members – earning it the “2018 Electric Co-op of the Year” award from the Smart Electric Power Association.

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