

BATTERY STORAGE IN FLORIDA

Just another way we're building a smarter, cleaner energy future



The benefits of battery storage

As Duke Energy advances to a cleaner energy future, we continue to pursue distributed and renewable resources that will benefit our customers. In fact, we are committed to providing customers with innovative grid solutions that utilize battery energy storage technology.

Right now, we have an opportunity to take advantage of energy storage's declining costs while providing a transparent and reasonable cost structure for our customers. Applying our years of engineering and operating experience, we are able to leverage the versatility of battery storage systems to become a natural extension of the energy grid. Also, as we invest in energy storage, we will seek compliance with regulations and standards related to reliability, national security and cybersecurity.

Duke Energy has plans for approximately 375 megawatts (MW) of energy storage across our regulated businesses, representing approximately \$600 million of new investment. While there are various types of storage technologies out there, in the near term, we plan to invest in larger, megawatt-scale electrochemical batteries to modernize the electric system.

Duke Energy's plans in Florida

We are investing in 50 MW of batteries as part of the settlement approved by the Florida Public Service Commission, providing significant value to customers while enabling a more reliable grid. There are several uses for batteries, including but not limited to:

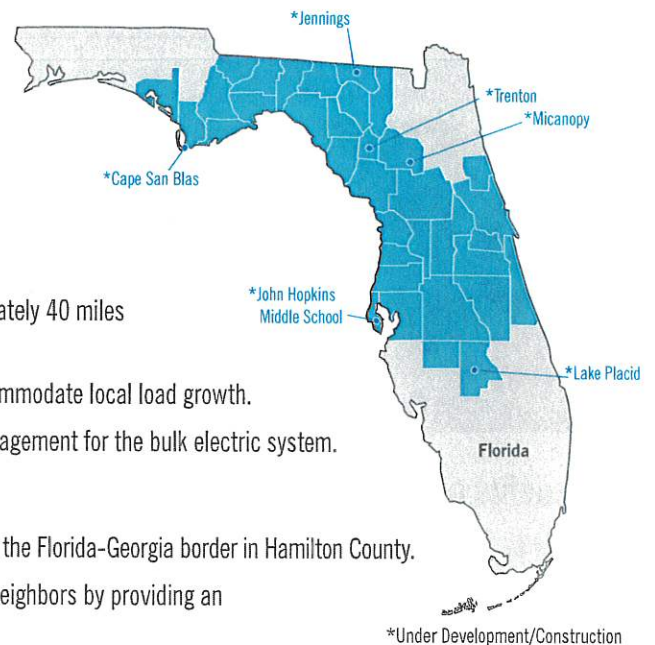
- Power quality management to control voltage and regulate frequency to help avoid damaging sensitive equipment.
- Renewable integration to help mitigate quickly changing, intermittent renewable generation onto the grid.
- Capturing renewable energy during periods of peak output and releasing it at a later time to avoid running expensive peaker plants.
- Backup power during grid outages to help ensure there is little to no break in service, helping ensure operation of emergency shelters, hospitals, other critical facilities or more remote customers. When used for this application, batteries will be configured in a "microgrid," which is a local energy grid with control capability to disconnect from the traditional grid and operate autonomously. In this case, the battery storage system may also be used in conjunction with renewables or other backup generation.
- An economical alternative solution to expensive grid investments. For example, if a substation expansion project is needed to mitigate local peak load growth, batteries may provide an economical alternative solution.



BUILDING A SMARTER ENERGY FUTURE®

Battery storage locations

We are strategically placing energy storage on our system in areas where it can deliver maximum benefit for our customers and the communities we serve. Ideal locations are where battery technology combined with advanced controls can help improve power quality and electric reliability, and support the safety of the power grid. We have announced six battery energy storage sites totaling 50 MW within our Florida service area.



Cape San Blas

- 5.5-MW Cape San Blas lithium-based battery facility will be located approximately 40 miles southeast of Panama City in Gulf County.
- Project is an alternative to replacing distribution equipment necessary to accommodate local load growth.
- Project will also be able to provide energy time shifting and power quality management for the bulk electric system.

Jennings

- 5.5-MW Jennings lithium-based battery facility will be located 1.5 miles south of the Florida–Georgia border in Hamilton County.
- Project will help improve power reliability to the town of Jennings and nearby neighbors by providing an alternative solution to installing new and more costly distribution equipment.
- Project will also be able to provide energy time shifting and power quality management for the bulk electric system.

Trenton

- 11-MW lithium-based battery facility will be located 30 miles west of Gainesville in Gilchrist County.
- Project will help improve power reliability to the town of Trenton and nearby neighbors by providing an alternative solution to installing new and more costly distribution equipment.
- Project will also be able to provide energy time shifting and power quality management for the bulk electric system.

Micanopy

- 8.25-MW Micanopy lithium-based battery facility will be located approximately 15 miles southwest of Gainesville in Alachua County.
- Project will help improve power reliability to the town of Micanopy and nearby neighbors by providing an alternative solution to installing new and more costly distribution equipment.
- Project will also be able to provide energy time shifting and power quality management for the bulk electric system.

Lake Placid

- 18-MW Lake Placid lithium-based battery facility will be paired with the company's 45-MW Lake Placid Solar Power plant in Highlands County.
- The project will allow solar energy to be dispatchable for Duke Energy Florida grid operators and improve overall plant efficiency.

John Hopkins Middle School

- 3.5-MW John Hopkins Middle School solar plus storage microgrid will be added to Pinellas County's John Hopkins Middle School.
 - The microgrid consists of a 1-MW solar parking canopy array and a 2.5-MW battery system.
 - The project will enhance electric service, support grid operations and provide backup electric power to the school during outages and when it must operate as a special needs hurricane evacuation shelter.
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Project scope

We are deploying 50 MW of battery energy storage sites that we will construct, own, operate and maintain. Projects are currently expected to be strategically scaled in size from 5.5 MW to 18 MW.

Project timeline

The construction process is estimated to take three to six months from site preparation to placed in-service, depending on project characteristics such as size, complexity and topography of the site.

Questions? Next steps?

We look forward to meeting your needs through an ever-increasing commitment to innovation. Should you have additional questions about battery storage in Florida, feel free to email us at FloridaRenewables@Duke-Energy.com or contact us at **800.395.3853**.