

FLORIDA BESS PORTFOLIO

Capacity

100MW / 200MWh

Location

Florida

PROJECT CASE STUDY

A Landmark Portfolio for Florida's Clean Energy Future

About the Client

One of Florida's largest investor-owned electric utilities has partnered with Doosan GridTech to modernize its power system with grid-scale storage. Serving nearly one million customers across West Central Florida, the utility is committed to delivering safe, reliable, and affordable electricity while advancing its long-term sustainability goal of net-zero carbon emissions by 2050.

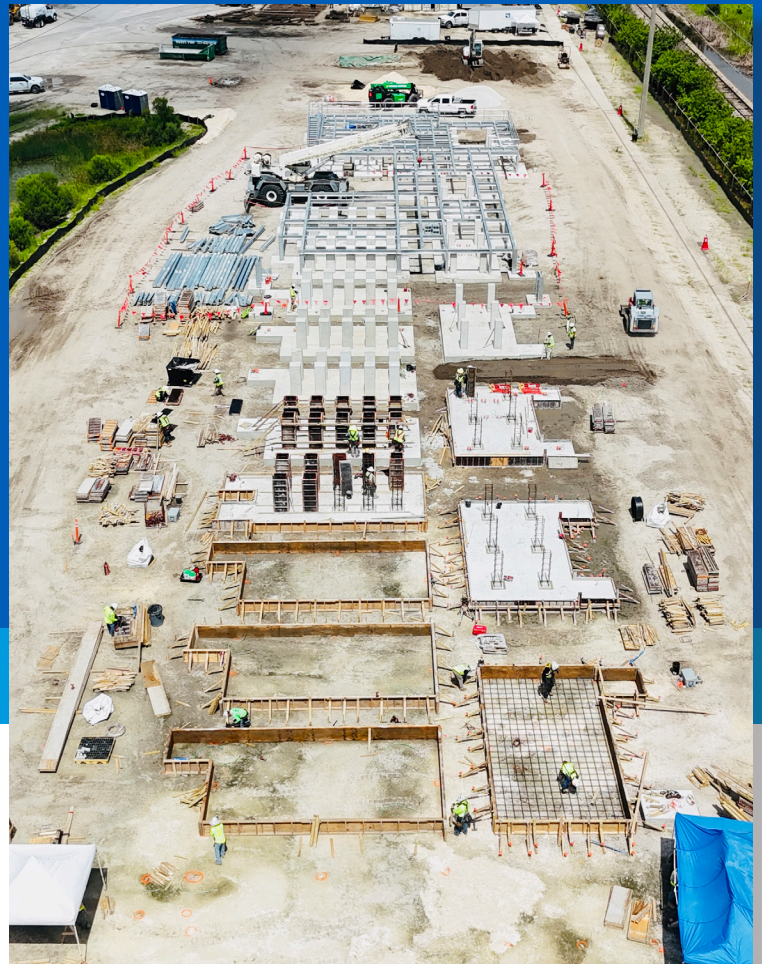
Investments in large-scale battery energy storage are central to this transition, enabling greater renewable integration, reducing reliance on fossil-fueled peakers, and strengthening resilience against extreme weather.

The Challenge: Balancing Reliability, Cost, and Sustainability

Florida's growing demand for electricity and the state's clean energy goals have created a need for flexible, dispatchable storage solutions that complement renewable resources while ensuring reliability. Traditional peaking plants are expensive to operate, carbon-intensive, and less responsive to modern grid requirements.

The Florida BESS Portfolio addresses these challenges by:

- Delivering peaking capacity without new fossil-fueled peakers.
- Enhancing operational flexibility for renewable integration.
- Provide resiliency benefits during outages and extreme weather events.
- Reducing fuel costs while supporting the utility's long-term net-zero carbon emissions target by 2050.



Client

Confidential

Role

Supplier & System Integrator

Commissioned

2025

Market

Southeast

Doosan GridTech's Solution

Doosan GridTech was selected to design, procure, and integrate a turnkey lithium-ion BESS portfolio across several Florida sites.

Each site is managed by the Doosan GridTech Intelligent Controller® (DG-IC®), a vendor-agnostic, open-standard platform that enables precise dispatch, grid support, and compliance with operational standards. The systems can respond in real time to grid events through the DG-IC, optimize storage utilization, and support renewable integration.

Core Solution Elements

- **Open-standard integration** with existing grid infrastructure.
- **Real-time adaptability** to dynamic operating conditions and market signals.
- **High-fidelity hardware-in-the-loop (HIL)** simulation to validate performance before deployment.
- **Containerized, liquid-cooled lithium-ion batteries** for efficiency and durability in Florida's climate.
- **Advanced power conversion system (PCS)** for efficient, reliable performance.

By shifting stored energy to meet peak demand, the portfolio will provide peaking capacity, fuel savings, and operational flexibility, reducing reliance on fossil-based generation while enhancing grid reliability.





Outcomes and Impact

When operational in 2025, the Florida BESS Portfolio will deliver far-reaching benefits at both the utility and community level:

- **Grid Reliability:** Provides instantaneous response to grid events, stabilizes voltage and frequency, and delivers backup during outages, which is critical in hurricane-prone regions.
- **Cost Savings:** Cuts dependence on expensive peaker plants and optimizes fuel use, resulting in lower operating costs that can ultimately benefit ratepayers.
- **Operational Flexibility:** Allows the utility to shift energy in real-time, support renewable dispatch, and balance demand during Florida's extreme weather-driven load fluctuations.
- **Sustainability:** A major step toward net-zero carbon by 2050, reducing reliance on fossil fuel plants and supporting statewide clean energy mandates.
- **Future-Ready Platform:** Designed for scalability and augmentation, the portfolio can be expanded as demand grows or new technologies become available.
- **Community Benefits:** Improves reliability for nearly a million customers and sets the stage for broader renewable adoption across Florida.

Why This Project Matters

The Florida BESS Portfolio is among the state's most ambitious energy storage initiatives and serves as a blueprint for utilities nationwide. It underscores how large-scale storage can:

- Increase reliability and resilience in extreme weather conditions.
- Lower costs while cutting carbon emissions.
- Enable a cleaner, more resilient grid for future generations.

By partnering with Doosan GridTech, the utility is deploying one of Florida's most significant distributed storage portfolios, demonstrating how vendor-agnostic integration, intelligent controls, and turnkey delivery can accelerate the clean energy transition.