

## Case study

Battery energy storage system  
*Corsica Island*

### Project Summary

**Project:** Renewable power generation

**Application:** PV plant with battery energy storage

### Nidec's Role

An independent power producer selected Nidec Industrial Solutions to serve as Engineering Procurement Construction (EPC) contractor for the first of four photovoltaic projects with battery energy storage on the French island territory of Corsica.

### Scope of Supply

- EPC for battery energy storage
- GS1500i 1.5 kV inverter
- ARTICS Smart Energy power and energy management



### The challenge:

**To enhance renewable energy production and availability, while lowering energy costs on an island in the Mediterranean Sea.**

Like many geographically isolated islands, Corsica grapples with rising electricity costs and reliability issues associated, in part, with its dependence on imported fuel oil. In response, the island is adopting renewable energy sources, including photovoltaic (PV) power integrated with lithium battery energy storage.

An independent power producer charged with constructing four PV-plus battery storage projects on the island totaling 13 MWp sought an experienced Engineering Procurement Construction (EPC) partner to complete the first turnkey project. After considering the company's track record, project delivery flexibility and financial guarantees, the developer selected Nidec Industrial Solutions for the assignment. The two companies also signed a Memorandum of Understanding for the three remaining PV/BESS projects.

**The solution:**  
**Solar-plus-storage project**

Nidec was charged with the design, construction, installation and commissioning of a plant that matches 4.8 MWp of PV power production with 7.5 MW of battery energy storage. The company is also supplying 1.5 kV power conversion system and ARTICS Smart Energy, Nidec's control suite for power and energy management.

The battery energy storage system (BESS) is designed to store the excess energy produced by the sun and returns it back to the grid when needed. A grid output forecasting function enables the plant to forecast production a day in advance to within 5% accuracy.

In addition to EPC duties, Nidec is providing operation and maintenance services at the plant for its first two years of operation. With a guaranteed purchase price that is substantially below existing power prices on the island, the project has been hailed as a win-win, both economically and environmentally, by Corsica's ministry of ecology, sustainable development and energy. Following the first plant's completion, Nidec will play a comparable role on three additional turnkey plants on the island.