

Perryville Black Start Battery Storage

Scope: Engineering, construction, and installation support services

Location: Entergy Power Station, Perryville, LA

Overview

Gas-fired power plants require an external source of energy to start-up. Normally, the grid is used however, during a blackout or natural disaster, that may not be an option. To ensure their critical infrastructure can operate when needed, Entergy installed a first-of-its-kind, 7.4 MW / 7.4 MWh GE black-start battery energy storage system (BESS) at the Perryville Power Station, Louisiana.

The BESS is comprised of three 40-ft containers (~320 battery modules each), six GE Brilliance Inverters, six isolation transformers, a harmonic filter, medium voltage (MV) switchgear, and controls.

Challenge

Located near the Gulf of Mexico and within one mile of a river, the site is susceptible to hurricanes and flooding. The entire system had to be elevated 5-ft so that all equipment is above the high-water level. This drove complexity into things like foundation design, platform layout, cable routing, enclosure sealing, and handling/loading of approximately one-thousand 125-lb battery modules.

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Solution

IPD's experienced battery storage professionals augmented the Client's team and led specific system engineering, EPC, and Installation & Commissioning (I&C) activities including:

- Foundation interface and enclosure installation definition and standardization.
- Electrical equipment integration, interconnection, conduit/cable routing, and sealing.
- Enclosure HVAC system design support.
- Owner's Engineer support at supplier design review meetings.
- Custom battery loading tool design, fabrication, test, and deployment.
- Battery loading methods and training material development.
- On-site battery loading support/consultation.

Result

IPD applied our entire portfolio of product engineering, site design and field support solutions to help drive this cutting edge installation to commercial operation. A results-oriented company, born in a world of tight deadlines, IPD is poised to roll-up our sleeves, take the difficult challenges, and deliver results for our clients.

