

CASE STUDY

FENCE POST BESS PROJECT

BACKGROUND

Enel North America (ENEL) is electrifying the economy and advancing a just transition to 100% renewable electricity. In April 2024, ERCOT implemented a requirement for all Inverter-Based Resource (IBR) entities to submit As-Built PSSE and PSCAD models before achieving commercial operation date (COD). With construction and commissioning complete, the Fence Post BESS project is prioritizing the development of these models to meet this requirement and ensure timely COD.

CHALLENGE

Developing As-Built PSSE and PSCAD models is a complex and critical process. Beyond updating steady-state parameters (e.g. equipment ratings and impedance), the dynamic models must be carefully parameterized with the as-commissioned ratings. The primary challenges lie in two key areas: Ensuring the models precisely reflect the final As-built site configuration and even more critically, meeting ERCOT's stringent model quality test (MQT) requirements.

SOLUTION

EPE collaborated closely with ENEL to gather field settings from each Original Equipment Manufacturer (OEM), ensuring the PSCAD model was accurately parameterized with as-commissioned data. EPE then conducted the required ERCOT MQT, proactively identifying and recommending necessary field setting adjustments to ENEL to optimize ride-through performance and secure successful MQT results. To finalize the process, EPE developed the As-Built WECC generic PSSE model and benchmarked it against the PSCAD model, verifying consistency across both platforms.

CLIENT



TYPE

Independent Power Producer (IPP)

SECTOR

Energy Storage

ISO

ERCOT

LINE OF BUSINESS

NERC Technical

SERVICES PROVIDED

- As-Built
- PSSE Model Development
- PSCAD Model Development

LOCATION

Navarro County, Texas

COMPLETED DATES

October 2024



Delivering Energy Intelligence