

GDF Suez – Eriean Wind Farm Commissioning and Preventative Maintenance

CLIENT

GDF Suez Canada

LOCATION

Blenheim, Ontario

PROJECT DESCRIPTION

The Eriean Wind Farm is located in the County of Chatham along Lake Erie, south of the town of Chatham and surrounding the village of Blenheim.

The project area consisted of 6,400 acres in 39 parcels. The project topography was primarily flat open land with very few trees. The wind farm was designed to be a 99 megawatt (MW) wind power generation facility utilizing 55 Vestas model V90 1.8 MW wind turbine generators (WTGs) at a hub height of 80 m.

B&M SCOPE OF WORK

Black & McDonald's (B&M) Field Service Division was contracted to perform the following services:

- Review design drawings including single lines, three lines, AC/DC schematics, logic drawings
- Point to point verification of all control and secondary cabling and provide as built
- Commission the 230 kV to 34.5 kV substation including motorized and manual disconnects, CVTs, circuit breakers, lightning arrestors, power transformers, protection and control, AC/DC systems
- Protection element testing, logic testing of all GE and SEL relays
- Teleprotection setup and verification
- Primary injection to verify phase angles and ratios
- Overall functional tests on entire electrical system
- Telemetry testing with IESO
- SCADA points testing
- Map all DNP3 points in relays for SCADA
- VAR control testing with Vestas
- Transfer trip testing with HONI TS
- Three terminal line differential testing with HONI
- Made improvements to initial relay design settings, and protection schemes