

# Capstone Infrastructure Erie Shores Wind Farm

## CLIENT

Capstone Infrastructure

## LOCATION

Port Burwell, Ontario

## PROJECT DESCRIPTION

Erie Shores Wind Farm is a 99 megawatt (MW) wind farm developed by Erie Shores Wind Farm Limited Partnership. Over 5,260 hectares of farmland is optioned for wind power development in the townships of Bayham and Malahide in the Elgin County and the Old Houghton Township in Norfolk County.

The wind farm utilizes 66 GE wind turbines. Each turbine has a rated capacity of 1,500 kilowatts. The wind turbines are dispersed over 25 km of shoreline and extend up to approximately 2-3 km back from the shoreline.

As part of the project, 24 km of 34.5 kV underground cables and 28 km of 34.5 kV overhead collector lines system were built on the site to collect and transport the clean energy generated by the turbines.

It was estimated this wind farm would generate approximately 278,000 MW/hr of renewable energy per year.

## B&M SCOPE OF WORK

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

- Review design drawings including single lines, three lines AC/DC schematics and logic drawings
- Point to point verification of all control and secondary cabling and provide as built
- Commission the 115 kV to 34.5 kV substation including motorized & manual disconnects, CVTs, circuit breakers, lightning arrestors, power transformers, protection and control, AC/DC systems
- Protection element testing, logic testing of all GE & SEL relays
- Teleprotection setup and verification
- Perform primary injection to verify phase angles and ratios
- Perform overall functional tests on entire electrical system
- Telemetry testing with IESO
- SCADA points testing