

A photograph of a wind farm with several large white wind turbines in a field under a cloudy sky. A white pickup truck is parked in the foreground on the right side.

# Armow Wind Farm Testing and Commissioning of the 180 MW Wind Farm

## CLIENT

Armow EPC LP (Samsung Renewable Energy Inc., Pattern Development)

## LOCATION

Kincardine, Ontario

## PROJECT DESCRIPTION

The Armow Wind Farm was constructed in the Kincardine area, which is located along the shores of Lake Huron. The project included the installation of 91 Siemens wind turbines, making it one of the largest wind energy projects in Ontario. The Armow Wind Farm was designed to generate enough electricity to meet the average annual power needs for approximately 70,000 Ontario homes.

## 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
- 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, etc.
- Complete collector system commissioning including MV cables, pad mount transformers, switches, junctions boxes and all other electrical components.
- Commission completed to NETA & IEEE standards
- Protect element and logic testing of all relays (GE, SEL and Auxiliary)
- Teleprotection setup and verification
- Perform primary injection to verify phase angles and ratios