



# North Kent Windfarm

Piling

Chatham, ON

## + Project Snapshot

- \$4.7 Million Project
- 100MW generation capability
- 30,393 linear feet of 16" piles
- 1:10 batters
- 34 Wind Turbines

## + Project Background

Samsung Renewable Energy and Pattern Energy announced that they would be constructing a 100MW Wind farm in the Chatham area of North Kent, ON. The 34 turbines will generate enough electricity to power 35,000 homes annually while providing an annual tax base of \$250,000. The project is estimated to reduce carbon dioxide emissions by 300,000 tonnes/year which is the equivalent of 60,000 cars.

## + Project Description

Soletanche Bachy Canada (SB Canada) was contracted to complete the piling and anchoring for the North Kent Wind Farm and began work in July 2017. The general contractor for the project was RES Canada making this their 10th wind farm project in Canada for a total of almost 940MW. Each of the 34 turbines required 18x 16" piles with anchors at alternating batters of vertical and 1:10. Depths ranged between 9m and 26m until they were seated on bedrock. SB Canada then drilled 3.5m into the bedrock for the dywidag anchoring system.

## + Innovative Solutions

During the early stages of this project, it was discovered that the geotechnical conditions didn't allow for adequate skin friction of the piles to satisfy the requirements of the design. This was not known until after all the piling material had been acquired. With the help of SB Canada's designers, the existing material was utilized while introducing a dywidag anchoring system to provide the necessary tension. These



**Owner**  
Samsung Renewable Energy  
**General Contractor**  
RES Canada

**SB Canada Personnel**  
Andrew Morrissey  
**Period of Work**  
July to November 2017



anchors were centered into each pile, drilled into the bedrock, and grouted in place to provide a stronger outcome than what was originally required.

