

Grid Connection Impact Assessments



Project Objective

Kinectrics was selected as the vendor of record for a multi-year program to provide expert analysis on the impact of specific plants being proposed to be brought online and connected to the grid in Ontario, Canada.

This was to aid distribution utilities in supporting the shift to green, renewable generation and help achieve carbon-neutral goals.

The plants were typically solar (photovoltaic), wind, battery energy storage systems (BESS) or natural gas (load displacement) generators.



Client: 

Location: Windsor, ON

Year: 2016 to present

Project Scope:

- Several connection impact assessments (CIAs) were conducted to evaluate the impact of proposed DG facilities on the distribution system.
- Cases where the DG size exceeded 10MW would involve requirements from the IESO.
- These CIAs evaluated the impact of proposed DG facilities on the steady state voltage profile, feeder voltage regulation, equipment thermal limits, power quality, fault current contributions, temporary overvoltage of the distribution system as well as protection and islanding.
- These individual assessments were performed using criteria from applicable codes and standards, such as Distribution System Code, IEEE 1547, CSA C22.3, etc

Value Added Results

- The final reports contained all the required concerns, including PQ, fault current, grounding or short circuit considerations to be mindful of or modified, to permit the safe and compliant integration with the grid.
- The clients in these cases were pleased with the technical detail and aptitude.
- Kinectrics offers courses to help utilities and DG owners across North America understand these issues to build their internal expertise.

For more information, contact:

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