Raglan II: Hybrid Wind, Diesel and Storage Energy Generation

RAGLAN II – A Repeat Order

The success of RAGLAN I laid the foundation for RAGLAN II, a repeat order for a second 3 MW wind turbine and a large scale 3 MW/1MWh storage installation.

Project commissioning was completed at the end of 2018. The second installation increase total diesel displacement at the mine site to 4.2 M litres annually, leading to major fuel and transport cost reductions for the company as well as a colossal decrease in the mine's environmental footprint.

The increase penetration of renewable energy into the Mine's grid imposed the installation of a large-scale battery system as well as the development of complex control algorithms to ensure operation within the mine's constraints.

Installed solution

A second 3 MW wind turbine coupled with a bi-directional Li-Ion battery system of 3 MW / 1MWh. Renewable energy penetration reaches close to 40%, with storage energy and control systems playing a critical role in managing variations due to wind fluctuations as well as preventing grid failure in the event of turbine operational malfunction.

Client: Glencore Raglan Mine

Commissioning Date: 2018

Installation:
Wind Power: 3MW
Li-Ion Batteries: 3MW / 1 MWh

Location: Quebec, Canada

Reductions: 6,800 $TCO_{2eq.}$ / year

Diesel avoided: 2.1M L/year