

Igluligaarjuk Midnight Sun

Solar + Storage microGrid Demonstration Project



Chesterfield Inlet consumes 2,123 MWh per year in electricity supplied entirely by diesel generators. This costs the hamlet over \$1.5 million every year and emits 1,307 tonnes of direct greenhouse gas emissions. This does not include the fuel associated with transporting diesel to Chesterfield Inlet.

Chesterfield Inlet is located along the Hudson Bay coast in the Kivalliq region and receives the highest amount of solar energy in Nunavut. This is comparable to the same solar energy much of Ontario receives which has had a booming solar industry over the last decade.

The Igluligaarjuk Midnight Sun, solar and storage microGrid demonstration project aims to tap into this free solar resource to reduce the hamlet's reliance on diesel for electricity. This project will utilize 609 kW of solar modules on iSolara's patented dual position QuickTrack system (above) paired with a 636 kWh lithium ion energy storage system to act as an independent power system on the hamlet's existing grid. This project is expected to create 15-20 local jobs during construction and 1 job for operation & maintenance over the 10 year operational lifetime of the project.

Solar energy will be fed directly into the grid to provide clean energy to all residents in the community. If the solar array is producing more than the grid can handle, excess energy will be stored in the energy storage system. During the winter months when there is limited solar energy the energy storage system will remain charged and can act as a back-up in the event of a generator failure or maintenance.

This demonstration project aims to prove that simple solar with storage systems can easily integrate into the existing northern electrical infrastructure and work hand-in-hand with diesel generators. The ultimate goal is to deploy these systems in all remote communities to eliminate the need for vast fuel storage systems and diesel generators.

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