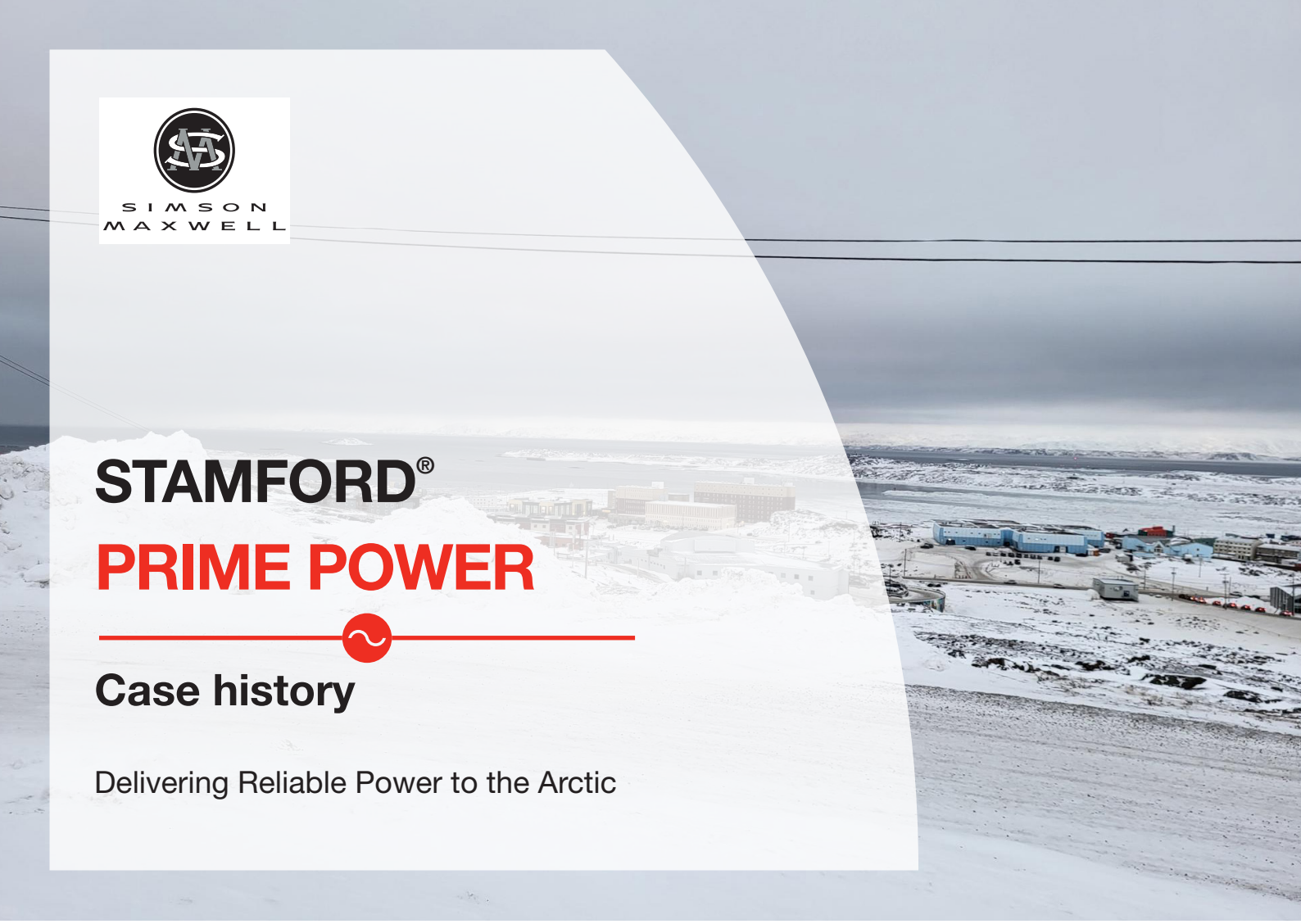


SIMSON MAXWELL

STAMFORD®

PRIME POWER

Case history

Delivering Reliable Power to the Arctic

Customer:
Simson-Maxwell Ltd

End User:
Qulliq Energy Corporation, Iqaluit, Nunavut

Where:
Canadian Arctic

Specified:
AvK DIG 150 Alternators

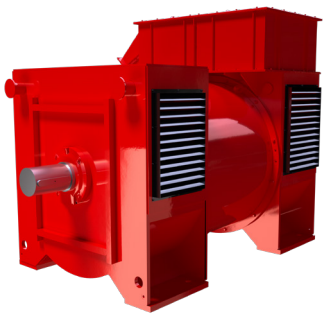
Prime Mover:
GE/Wabtec

Purpose:
Delivering reliable power in extreme Arctic conditions

STAMFORD | AvK™

POWERING TOMORROW, TOGETHER

Customer Profile
Simson-Maxwell Ltd. is a leading Canadian provider of energy management products and industrial power solutions. With over 80 years of experience, the company is renowned for its expertise in custom design, engineering, sales, and service of standby and prime power generator systems under the Simmax® brand. Since 2001, Simson-Maxwell has partnered with STAMFORD | AvK to deliver robust solutions across diverse applications, including mobile and residential energy, oil & gas, CHP, and large-scale power plants.



AvK DIG 150

“STAMFORD | AvK is as a trusted partner for critical infrastructures, where reliability matters most”

SIMSON MAXWELL

Project Background

The City of Iqaluit, capital of Nunavut, operates as a self-sustained microgrid, entirely disconnected from the national transmission network. In such isolated environments, power reliability is critical - especially during harsh Arctic winters when outages can quickly escalate into emergencies.

To address this challenge, STAMFORD | AvK supplied two DIG 150 o/8 alternators, each rated at 4,375 kVA, as part of a phased upgrade of seven generator sets totalling 22 MW. The first unit was installed in March 2023 at the Iqaluit Nunavut Power site for Quilliq Energy Corporation.

Technical Scope

The AvK DIG 150 o/8 supplied alternators are synchronous, 3-phase, brushless machines with built-in exciters, delivering 3,500 kWe of power at 900 rpm and operating at 4,160 VAC. They feature an 8-pole configuration, IP23 protection, and Class H insulation. Designed for over 92% uptime - equivalent to approximately 8,000 hours per year - these alternators are driven by GE/Wabtec 16V250SDA engines. Two full spare parts kits were also provided to ensure operational continuity. Engineered for durability and high performance in extreme environments, these alternators deliver the consistent power quality essential for critical microgrid operations

Challenges and Delivery

Given Iqaluit’s remote location, all equipment had to be shipped by sea and installed under challenging conditions. Despite logistical complexities, Simson-Maxwell delivered the solution within a 40-week window, including custom testing and transportation. The alternators were manufactured to meet IEEE-115, NEMA MG-1, and MIL-STD 705 standards and finished in a custom Olive Grey (RAL 7002 / Pantone 416C) as requested.

Why STAMFORD | AvK?

Qulliq Energy Corporation selected STAMFORD | AvK to replace their existing alternators based on several key factors: the proven reliability of STAMFORD | AvK products in extreme environments, the availability of comprehensive technical data and engineering support, a strong and long-standing partnership with Simson-Maxwell, and early-stage technical collaboration that was instrumental in securing the project.

Sustainability Considerations

While this installation is diesel-powered, it supports Nunavut’s broader energy transition. Initiatives such as the Iqaluit Hydroelectric Project and expanded district heating—developed in partnership with the City of Iqaluit and the Government of Canada—are underway. Reliable base-load systems like those from STAMFORD | AvK remain essential to enabling future clean energy solutions.

Outcome

In a region where power cannot be rerouted and outages have immediate consequences, STAMFORD | AvK delivered high-performance alternators built for continuous duty. This project reinforces our role as a trusted partner for critical infrastructure—ensuring that the people of Iqaluit receive stable, uninterrupted power, even in the world’s most demanding environments.

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STAMFORD | AvK™

POWERING TOMORROW, TOGETHER

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