



**PV SYSTEM SUPPORTS DIESEL
GENERATOR IN CANADA'S
EXTREME NORTH
A SAVINGS OF \$115,000
OVER 20 YEARS**

Sachs Harbour, Northwest Territories, Canada: The inhabitants of Sachs Harbour source the diesel for their local power generators from over 500 km away. The fuel is delivered by air in the winter or sea in the summer and therefore is extremely expensive.

ANNUAL SAVINGS OF \$6,000

Up until a few years ago the entire supply of power for this off grid community of 130 people came from a single diesel generator. In autumn of 2015, the local energy supplier decided to install three Fronius Primo inverters with the aim of reducing the financial costs. Grid parity for the PV energy will be achieved faster than anticipated due to the high cost of diesel in Sachs Harbour. As a result, they will have a very low payback period of less than six years. After which, the system will be paid off, enabling the residents of Sachs Harbour to save more than \$115,000 in diesel costs in the first 20 years.

**DIESEL SAVING
COST SAVING**

**3,600 LITRES / YR
\$6,000 / YR**

**PAYBACK TIME
20 YR. COST SAVING**

**~ 6 YEARS
~ \$115,000**



TEMPERATURES IN SACHS HARBOUR CAN DROP TO -37°C:
BUT THE FRONIUS PRIMO TAKES IT ALL IN STRIDE.

OPTIMUM PERFORMANCE IN EXTREME CONDITIONS

During the winter, temperatures in Sachs Harbour normally range between -18°C and -37°C. Yet the Fronius Primo has once again shown that it thrives in these extreme conditions. The inverter is designed to withstand ambient temperatures between -40°C and +55°C, meaning that it can be used in extreme conditions ranging from the Canadian Arctic to the Kalahari in Namibia.

"We used a modular mounting system which is designed for permafrost locations, is perfectly scalable and works very well with the 5 kW Fronius inverters. We like the dual MPPT because it matches the system's dual row design."



/ Klaus Dohring
CEO
Green Sun Rising Ing.

| SYSTEM DATA | SACHS HARBOUR, CANADA |
|----------------------|---|
| Size of installation | 15 kWp |
| System type | Ground mount PV system connected to a microgrid with diesel generator |
| Inverters | 3 x Fronius Primo 5.0-1 |
| Commissioned | Fall 2015 |
| Special feature | Extreme temperatures up to -37°C |