

**Polar Power Inc.** engineers and manufactures DC power systems for telecommunications, military, renewable energy, marine, automotive, and oilfield applications. Our solutions provide reliable and low-cost energy for applications that do not have access to the utility grid or for grid backup.

- Polar provides the largest selection of DC generator sizes available in all fuels.
- Polar DC generators are manufactured for high reliability, low maintenance, and high fuel efficiency.
- Fully autonomous operation with remote control and monitoring is available.

Polar has provided DC generators operating in the harshest climates from the arctic to the hottest deserts. Polar DC generators operate well in humid tropical jungles, marine salt fog, sand and clay, agricultural chemicals, and hurricanes.

### Telecommunications

Polar is the oldest and most experienced DC generator manufacturer for telecommunications. Our success is based on meeting our customers' goals.

Polar offers remote control and monitoring via 2G and 3G, SNMP via cloud server. System is web based cloud platform.

Polar's DC Hybrid Solutions are compact and lightweight, simplifying transportation to remote sites. Installation costs are reduced by allowing smaller helicopters, trucks, and SUVs to install and service.

### Hybrid Solar & Renewable Energy

The past 30 years have proven that non-hybrid PV solar systems have poor reliability. Solar Hybrid systems with DC generators have proven the most reliable due to reduced dependency on battery and eliminating the impact of errors in load sizing and poor weather.

Using a Polar DC generator is preferred over the AC generator because our generators are engineered for long run times with minimal or no maintenance. Long run times are necessary should problems arise from the battery bank or PV solar array, as well as long periods of bad weather. Polar DC generators and controls greatly simplify the Hybrid design and lower the cost of installation and operation. A DC generator prevents the batteries from being damaged from the low state of charge during poor weather conditions.



Remote site (New Mexico)

### Remote Locations

DC generators provide a more comfortable, reliable, and cost-effective alternative to AC generators. DC power units run for a few hours during the day powering loads and charging the battery bank. In addition to lowering generator maintenance, there are considerable fuel savings due to variable speed engine and smart charging algorithms with this application. Besides, utilizing a DC generator with battery/inverter provides a very convenient installation where solar and wind can be added at any time for further fuel reduction.

## Specifications

- All-in-one integrated power unit
- Aluminium light weight cabinet (IP 55)
- Small footprint (1,6m X 1,6m x 1,8m)
- DC Generator (Yanmar, Isuzu, Perkins, Doosan)
- Scalable system
- Integrated Fuel Tank (750 liters)
- Monitoring and Management of all major operating parameters: fuel consumption, battery, engine, alternator, loads, DC Metering.
- Integrated Supra Digital Controller and Solar Charge Controllers
- Optional 220VAC Output
- Battery Capacity 800A (Narada REX C) or up to 1692A Lithium-Ion
- Integrated free air cooling with optional air-conditioning system
- Metering System for multiple users
- Anti-theft locking system and Acsys Access control

## 24/7 Support

The NOC is based in Romania, each of our partners have local access to the NOC for there specified projects allowing them to have full 24/7 control and monitoring capabilities over their network. This helps our local partners with maintenance schedule planning, notification of alarms and fuel supply chain management, giving our partners the independence to manage their own networks with the support on a global scale.

## Monitoring System

Fuel consumption, load, battery voltage, low voltage disconnect, CDC graphical representation, tampering alarms, solar array tampering, water detection in fuel, maintenance tool, service registration, service schedules, environment conditions, site efficiencies, over usage, renewable energy management, battery cell status and management, invoicing and billing, security cameras for access control.

