

Short reference



REFERENCE

Sabi Sand Game Reserve, South Africa

PARTNER COMPANY

DHYBRID, Gauting (Germany)

ENERGY MANAGEMENT FOR A SAFARI LODGE

Off-grid stand-alone solution with PV system and battery storage



260 kWp roof systems are installed on the carports and employee accommodations



With a capacity of 1,027 kWh, the lithium-ion memory units bridge the nights and days with little sunshine

OFF-GRID STAND-ALONE SOLUTION WITH PV SYSTEM AND BATTERY STORAGE

CUSTOMER REQUIREMENT

The Cheetah Plains Lodge in South Africa offers its discerning guests a stay far away from civilization. This includes unique safaris with electric-powered Land Cruisers. Guests and management also place great value on minimal noise pollution, low environmental impact, and sustainability.

The previous energy supply was no longer able to meet these requirements. It consisted almost exclusively of diesel generators. Their performance, environmental impact, fuel costs, and power quality no longer met the requirements of a modern facility. The previous stand-alone system was supplemented by a single-phase connection from the local energy supplier, but its capacity was limited and it exhibited considerable voltage variations.

THE SOLUTION

The operators commissioned South African solar expert Blockpower and German microgrid integrator DHYBRID Power Systems GmbH. Both companies were tasked with installing a three-phase energy system with a PV system and an island-forming energy storage system based on lithium-ion batteries.

DHYBRID used Janitza energy measurement technology for the necessary monitoring and optimization of the grid supply quality. DHYBRID relied on UMG 509-PRO and UMG 512-PRO power quality analyzers in the lodge.

The team supplemented the energy supply with active filters from Janitza to eliminate any disturbances. A 150 kVA diesel generator continues to serve as an emergency power supply.

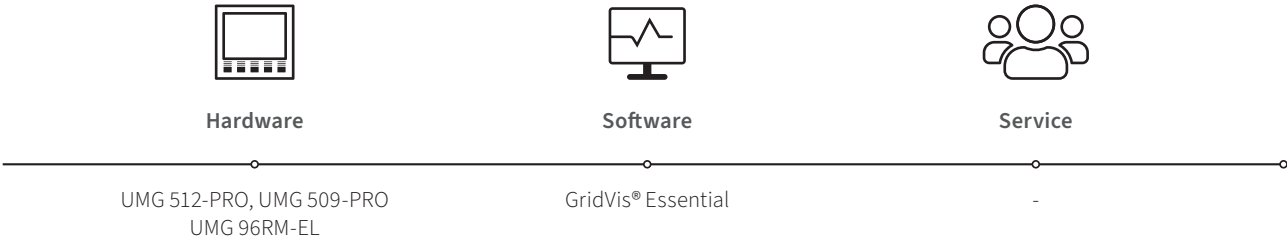
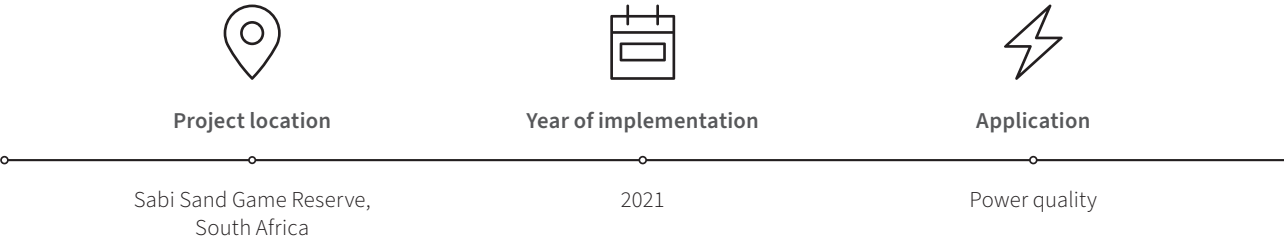
In addition, the single-phase line from the regional energy supplier can be connected.

CUSTOMER BENEFIT

The lodge's new PV system has a capacity of 300 kWp. It feeds the lithium-ion memory with a capacity of 1,027 kWh, which in turn supplies the grid-forming, bidirectional battery inverter. With a peak output of 250 kW at a stable voltage output and frequency, it offers sufficient reserves for a three-phase power supply.

safari lodge covers almost 100 percent of its energy demand from the PV system. Grid independence does not come at the expense of nature or comfort – something that guests and operators of the lodge appreciate. They can be sure that the power supply for their first-class stay comes primarily from one source: the energy of the sun.

Even larger consumers such as cooling systems, motors, and the charging stations for the Land Cruisers can be operated reliably. With the new complete solution, the



COMPANY PORTRAIT

Janitza develops complete solutions for energy measurement technology that ensure transparent energy flows and monitor the quality of the energy supply. The globally active company, headquartered in Germany, offers individual solutions for customers from various industries, such as data centers, the manufacturing industry, buildings and infrastructure as well as energy supply companies and renewable energies.

ABOUT DHYBRID

DHYBRID develops solutions for industrial battery storage and renewable hybrid systems that are used worldwide. The DHYBRID UPP energy management system intelligently and efficiently combines battery storage solutions and renewable energies – both in grid-connected operation and in stand-alone networks. Ideal for microgrid applications. Customers worldwide rely on DHYBRID to lower their energy costs while sustainably reducing emissions in power generation.

HEADQUARTER

Janitza | Location Germany

Vor dem Polstück 6
35633 Lahnau
Phone: +49 6441 9642-0
Email: anfragen@janitza.de

SOLUTIONPARTNER

DHYBRID Power Systems GmbH

Perchtinger Straße 1a
82131 Gauting
Phone: +49 89 899 481 0
Email: contact@dhybrid.de
<https://www.dhybrid.de/en/home>

GLOBAL

Janitza | Location USA

Phone: +1 888 526 4892
Email: sales-us@janitza.com

Janitza | Location Austria

Phone: +43 7942 214 966 194
Email: anfragen-at@janitza.com

Janitza | Location Australia

Phone: +61 441 544 114
Email: sales-au@janitza.com

Janitza | Location UK

Phone: +44 7939 697 434
Email: sales-uk@janitza.com

Janitza | Location India

Phone: +91 900 386 6980
Email: sales-in@janitza.com

Janitza | Location Middle East

Phone: +971 54 404 8001
Email: sales-in@janitza.com