

## European Solar and Energy Storage Solutions

# Hybrid solar battery system South Sudan



## Overview

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How much electricity does South Sudan generate?

In 2019, conventional sources such as diesel generators represent more than 99% of electricity generation in South Sudan with a capacity estimated at 204 MW, whereas solar accounts for only an estimated 1 MW of capacity, which accounts for less than 1% of electricity generation in the country .

Are hybrid energy systems a viable option for remote locations in Africa?

Numerous studies on hybrid energy systems have been conducted using the HOMER tool for various remote locations in Africa. The majority of earlier studies on rural hybrid energy systems were primarily focused on technical, economic, and feasibility studies.

What are the main sources of energy in South Sudan?

In South Sudan's rural communities, kerosene lamps, firewood, crop wastes, charcoal, and animal dung are the most frequent sources of energy for lighting, heating, and cooking.

Can a standalone hybrid energy system address socio-economic development challenges?

The study will investigate the technical and economic parameters of several standalone hybrid energy system configurations to determine the most cost-effective and reliable standalone hybrid energy system for addressing socio-economic development challenges through affordable and reliable electricity.

Is a stand-alone PV/DG/battery hybrid energy system a viable option?

A feasibility study of a stand-alone PV/DG/battery hybrid energy system for isolated areas in northern Ghana revealed a system that is optimized, cost-effective, and environmentally benign .

Is a stand-alone PV/wind/generator hybrid system a viable alternative?

A feasibility analysis of a stand-alone PV/wind/generator hybrid system for a rural location in Comoros to identify the most optimal solution revealed that combining wind and diesel is the most viable and cost-effective alternative .

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### SEVEN SOLAR PV HYBRID SYSTEMS INSTALLED FOR HEALTH CENTERS IN SOUTH SUDAN

Aptech Africa installed a total solar system of 726.62kWp with a total battery bank storage of 1.677MWH. All systems are hybrid with more than two sources of energy incorporated in the system operation logic. With the PV generation dedicated as the first priority, Batteries as the second and genset as the third.

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### 180KW Solar Power System - South Sudan

**Brief Project Description** The project involves engineering, supply and installation of 180KW solar power system to power a factory and other facilities. **Location:** South Sudan **Technical:** 180KW ground mounted (fixed) solar panels, hybrid inverters, battery energy storage system, monitoring, and other balance of system equipment. **Year:** 2023-2024 **Scope of Work/Role** Project ...

## 15kw hybrid grid solar system with batteries in South ...

15kw hybrid grid solar system with batteries in South Sudan In the heart of South Sudan, nestled between lush forests and serene lakes, stood a beautiful villa that belonged to a wealthy businessman named Mr. Ahmed.



## Top Solar Equipment Distributors in South Sudan

Solar Products Distributors Distributors are those companies working as big warehouses that served as the middlemen between the consumer/customer and the manufacturer. Typically, in distribution, a company is handling the sourcing, stocking and logistics but nowadays they are also helping manufacturers in product designing and solving other business conflicts. Aside ...

## Aptech Africa Enhances Energy Access In South Sudan With Solar Hybrid

Aptech Africa has improved energy access in South Sudan by installing solar hybrid systems in key health facilities across seven regions. These systems provide reliable electricity, reduce reliance on fossil fuels, and support essential health services, marking a significant step towards sustainable development and energy security.



## A Bright Future for Renewable Energy in South Sudan



In 2020, Rainmaker finished installing their first solar-powered irrigation system in Thiet, South Sudan, serving more than 3,000 people. Their holistic approach broadened regenerative agriculture over a 12-acre plot, co-designing projects with communities, installing solar-powered drip irrigation pumps, training and employing farmers and

## Aptech Africa enhances energy access in South Sudan with solar hybrid

The total installed solar capacity is 726.62 kWp, with a battery bank storage of 1.677 MWh. The hybrid systems prioritize PV generation, followed by batteries and diesel generators. In areas with grid availability, the system integrates grid power with client consent.



## Feasibility study of a standalone hybrid energy system to supply

One of the major projects accomplished in 2020 was the installation of a hybrid solar PV-diesel system at the United Nations House compound in Juba, the capital city of South Sudan [5]. As a result, the main goal of this research is to explore the possibility of using a hybrid power system to deliver electricity to a rural area in South Sudan

## Solar Power Resilience: Juba Offices In South Sudan

Explore the recent commissioning of a 50.144 kWp solar installation with a 218 kWh battery

system in Juba, South Sudan. This resilient hybrid power solution, benefiting over 50 employees, enhances energy reliability, reduces emissions, and marks a significant stride towards a sustainable and efficient renewable energy future for the city.



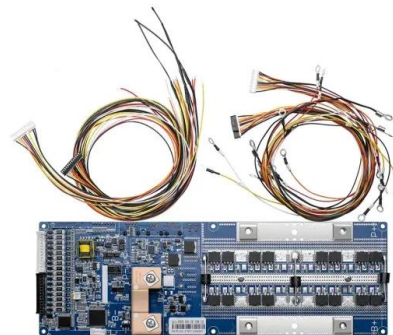
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## Kweli 2.2kWpv-10kWh-3kVA24 Hybrid Solar System & Power

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Kweli 2.2kWpv-10kWh-3kVA24 Hybrid Solar System The Kweli 2.2kWpv-10kWh-3kVA24 Hybrid Solar System & Power Backup Solution with WiFi Remote Monitoring is a comprehensive energy solution designed to power all your home or office appliances. Equipped with a 2.2kW solar panel setup, a 10kWh battery capacity, and a 3kVA hybrid inverter, this system ensures reliable, eco ...



## SUPPLY AND INSTALLATION OF SOLAR AND HYBRID SOLAR WATER SYSTEM

Samaritan's Purse wishes to contract a legally



recognized service provider (company) to Supply and Install Solar and Hybrid Solar Water System: Details below RFQ-Supply and Installation Of Solars and Hybrid Solar Water System.pdf (313.8 KB)

## South Sudan gets first off-grid solar battery hybrid ...

Aptech Africa recently successfully designed, built and installed the first off-grid solar battery hybrid power system in South Sudan. This USAID-funded project, developed by AECOM International, incorporated a one-of-a ...



## Scatec Solar completes solar hybrid plant for IOM in Malakal, South Sudan

Oslo 5 June 2020: Scatec Solar has commissioned a combined solar and battery storage plant in Malakal, South Sudan. The plant will power the Humanitarian Hub in Malakal, which is managed by the International Organization for Migration (IOM). The project will reduce the diesel consumption at the Hub by at least 80%.

## SustainSolar: first of its kind off-grid system installed in South Sudan

SustainSolar delivered their off-grid system in a 20-foot container equipped with SMA solar and

battery inverters and BYD batteries. This is the first solar-battery-hybrid power system in South Sudan. In record time, Aptech Africa planned, installed and commissioned the 79kWp ground mounted solar power system which feeds the 125kWh lithium-ion



## Feasibility analysis and techno-economic design of grid-isolated hybrid ...

Furthermore, a study from Sudan [27] compared different hybrid systems and found that a solar-wind-diesel-battery-converter system had the best performance with a LCOE of 0.387 \$/kWh, a total NPC

## Kweli 1.1kWpv-3kVA-5kWh LiFePo4 (Lithium) Hybrid ...

Kweli 1.1kWpv-3kVA-5kWh LiFePo4 (Lithium) Hybrid Solar System The Kweli 1.1kW hybrid solar system features a 5kWh LiFePo4 (Lithium) battery and a 3kVA inverter, delivering reliable solar energy and backup power for your home or

...



## Elsewedy Electric wins \$45mn hybrid solar PV park contract in South Sudan

The deal will see the construction of a hybrid solar photovoltaic project with a battery storage system near Nesitu County, which is 20km from the capital of the Republic of South Sudan. The project will occupy some 250,000sqm and will



feature a 20MW-peak solar photovoltaic park, a 35MW-hour battery storage system, and an in-house training

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## Aptech Africa Installs 2.4MW Solar PV Systems in South Sudan

Under Finnfund's Africa Connected program, at least 413 hybrid energy solutions will be installed at telecoms sites across South Sudan. These investments are expected to increase solar energy production and reduce diesel use at network sites.

## Kweli 900Wp-5kWh-2kVA LiFePo4 (Lithium) Hybrid Solar System ...

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solar energy and backup power for your home or office. This complete system provides an efficient energy supply, minimising reliance on the grid while effectively powering essential devices and

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