



# South Sudan s new energy battery

Why is South Sudan facing a serious energy crisis?

South Sudan faces a serious energy crisis due to a number of factors, including devastating conflicts (e.g. 1955-172, 1983-2005 & 2013-present) and reliance on the fossil fuel source. The country has the lowest energy consumption rate in Africa and the highest cost of producing energy (World Bank, 2016).

Does South Sudan have electricity?

The war has destroyed South Sudan's limited infrastructure, triggering an economic implosion. What electricity it has--and it is the least electrified country in the world--depends entirely on imported diesel to run generators.

Does South Sudan need electricity to drive industrial development?

Electricity prices in South Sudan are twice the prices of electricity in Africa and are five times the prices in other developing countries (Ranganathan and Briceno-Garmendia,2011). As a resource rich country that needs to attract direct foreign investment, South Sudan definitely needs power to drive industrial development.

Can you buy electricity from neighbors in South Sudan?

Buying from the neighbors requires installing a grid infrastructure to transmit electricity to South Sudan. While it is easy to connect the border towns such as Nimule and Renk, it can be difficult to extend these grids to distant places such as Juba, Malakal, Wau, and any other major population and economic centers in the interior.

Could SSEC build a power grid in South Sudan?

In the context of South Sudan, SSEC could build the grid or upgrade and expand its current grid systems in towns through which it can purchase power from individual firms and households and in turn sell it to those who are in need.

How much solar energy does South Sudan have?

South Sudan receives about 8 hours of sunshine daily, providing an estimated solar energy capacity of 436W/M<sup>2</sup>/year (REEP, 2013). Similarly, wind energy density ranges between 285 and 380 W/M<sup>2</sup> (REEP, 2013). Both the solar sunshine duration and wind density meet the threshold required to produce high quality electricity.

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.

major source of electricity in South Sudan is thermal using diesel-fired generators. 83% of South Sudan is



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rural and uses, Kerosene, charcoal and fire wood. Another source of energy that is widely use in South Sudan cities are battery and solar arrays units for ...

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-kind containerized PV storage solution by ...

South Sudanese energy company Triple A Petroleum hosted a Women in Energy lunch during the sixth edition of the South Sudan Oil & Power summit this week, with the company's Founder and CEO Atong Amos Agook driving the conversation around advancing the participation of women, creating new opportunities for capacity building, and generating ...

The Juba Solar Power Station is a proposed 20 MW (27,000 hp) solar power plant in South Sudan. The solar farm is under development by a consortium comprising Elsewedy Electric Company of Egypt, Asunim Solar from the United Arab Emirates (UAE) and I-kWh Company, an energy consultancy firm also based in

Elsewedy Electric has signed a contract with South Sudan's Ministry of Energy and Dams to construct hybrid solar and storage system valued at approximately \$45 million. The project will be built on a 250,000 square meter site near Nesitu county, 20 kilometres from the capital city of Juba, and is expected to begin operations in 2020.

L'installation de stockage d'énergie nouvellement installée, d'une capacité de stockage de 1 MWh et d'une puissance de près de 400 kW, stocke l'énergie excédentaire provenant du photovoltaïque, de l'huile et du biogaz. Kaco new energy a fourni quatre blueplanet gridsave 92.0 TL3-S comme éléments importants du projet.

Trinity Energy plans a 40,000-b/d refinery in the oil hub of Paloich in the Upper Nile region. The project will cost \$250m-\$300m and produce 2m t/yr of petroleum products, Trinity co-founder and director Richard Raja told African Energy. South Sudan currently has no refinery, although several projects have come and gone since independence.

Egypt's Elsewedy Electric signed a turnkey contract worth \$45m with South Sudan's Ministry of Energy and Dams on 3 December 2019 to build a 20MW solar PV plant with a 35MWh battery system. The project will be located in Nesitu County around 20km from Juba on a 250,000m<sup>2</sup> site.

Another source of energy that is widely use in South Sudan cities are battery and solar arrays units for lighting and entertainment yet the country has enough water resources to generate long term electricity. Utilization of sustainable low-carbon energy scenarios for the new century emphasize the need to tap the yet to be utilized potential of ...

This article presents a case study of the struggles of South Sudan, the newest country to develop a new



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electricity grid, and the strategic choices it faces in a post-conflict ...

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Cattaneo further added in a statement issued by Zenith Energy that, "The team and I were pleased to recently attend the 2023 edition of the South Sudan Oil & Power event in Juba. South Sudan is endowed with a ...

Offices in Juba, South Sudan have had a 50.144kWp solar installation with a 218kwh battery energy storage system commissioned recently. The roof-mounted system works alongside the city grid and a generator to run connected loads, and in case of low generation from the photovoltaic solar, the battery bank or grid power can be fed to the loads ...

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South Sudan Electricity Corporation (SSEC) has an installed power capacity of 30 MW but most of it is not operational due to technical problems and fuel shortage. This paper updates ...

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