

Is the electricity sector in Sudan in a crisis?

Do you want to stay informed? Over the last few years, the electricity sector in Sudan has been in a state of crisis: 60 per cent of the Sudanese population have been living without electricity. What is the path forward to an urgent, sustainable, and feasible solution?

How is electricity subsidized in Sudan?

The financial operation of Sudan's electric system is heavily subsidized. The retail tariff of electricity has not changed since 2004. This has led to an intensification of the level of subsidies as the revenue from customers does not cover the full cost of providing electricity service.

Who are the main electricity companies in Sudan?

These include the Sudanese Thermal Power Generation Company (STPC), the Merowe Dam Electricity Company (MDEC), the Sudanese Hydro Generation Company (SHGC), the Sudanese Electricity Transmission Company (SETCO), and the Sudanese Electricity Distribution Company (SEDC).

Are solar PV systems a cost-effective source of electricity in Sudan?

Solar PV systems have become a cost-effective source of electricity in Sudan, especially in regions where solar energy potential and grid extension costs are high. Concentrated solar power systems are also potential options for Sudan.

How many people in South Sudan have electricity?

Today, only about 1 percent of South Sudan's 12.5 million people can access the electric grid, according to the state-run utility. Many people use rooftop solar arrays or noisy, polluting diesel generators to keep the lights on; still many more are left in the dark.

How do solar power systems work in Sudan?

Concentrated solar power systems are also potential options for Sudan. These systems generate electricity when concentrated light is converted to heat which drives a steam turbine connected to an electrical power generator. There are several types of systems available, including parabolic troughs, solar towers, stirling dishes, among others.

Electric vehicles require fast, economical and reliable charging systems for efficient performance. Wireless charging systems remove the hassle to plug in the device to be charged when compared ...

The contract will be the first grid stabilisation of scale to be carried out in Sudan and will utilise Siemens Energy's STATCOM technology. Siemens Energy wins contract to ...

Transitioning from petrol or gas vehicles to electric vehicles (EVs) poses significant challenges in reducing

emissions, lowering operational costs, and improving energy storage. Wireless charging EVs offer promising solutions to wired charging limitations such as restricted travel range and lengthy charging times. This paper presents a comprehensive ...

The modernization of the current electric power grid into a smart grid requires the integration of advanced instrumentation, automation, and communication technologies to optimize efficiency, safety, and reliability. In traditional power grids, communication and control tasks are concentrated in substations, limiting their coverage to high-power equipment. As ...

State Grid Jiangsu is one of the largest provincial power grid companies of the State Grid Corporation of China (SGCC). It serves 46.2 million energy consumers. In 2018, State Grid Jiangsu's power communication networks mainly used optical fibers in offices, power supply stations, and 35 kV or higher-voltage substations.

In our previous blogs, we pointed out the deficits of legacy technology to connect power plant and substation ing wireless, however, in collaboration with the fiber backbone and its extensions brings flexibility in use cases. Wireless is therefore a viable, multipurpose solution to extension of the power grid.

The growing popularity of EVs is putting more strain on electrical networks system, which in turn presents new difficulties for their safe and dependable operation because of EV charging [[12], [13], [14], [15]].The main challenge for EVs is first and foremost figuring out a sustainable way to have a steady supply of electricity because, when charging, an EV may ...

Electrical Grid Fire and Security Solar Back Up System Construction Our Services. Quality services & Solutions. We are able to offer a complete range of services for all types of industrial and commercial projects. ... Green Power South Sudan is a specialist engineering, procurement and project management contractor within the solar and energy ...

Thus, they enable power exchange between countries in order to boost electricity, economic growth, promote sustainable power generation and reduce CO2 emissions. In 2019, Siemens Energy completed the energisation ...

In June, the researchers, led by professor of electrical engineering Shanhui Fan, published a study entitled Robust wireless power transfer using a nonlinear parity-time-symmetric circuit, explaining how they have effectively managed to transfer small amounts of power between moving objects. This is a significant breakthrough for the technology, bringing it closer to real ...

keen to upscale generation of on-grid electricity from wind. Omene Energy, an IPP, is currently developing 500 MW of wind power along the Red Sea coast (REEEP, 2012) (Omer, undated). ... 2016). In 2010, Sudan had an electricity access deficit of 30.9 million people (World Bank, 2013a). In 2012, only 27.9 per cent of the Sudanese people were ...

Wireless electric grid Sudan

Wireless EV charging is being integrated with smart grid technologies, enabling bidirectional power flow and vehicle-to-grid (V2G) capabilities. This integration allows EVs to not only receive power but also feed surplus energy back into the grid when needed, contributing to grid stability and energy management.

The utility is working to establish or extend interconnections with Sudan, Uganda, and Ethiopia to reach into South Sudan's interior. At the same time, the young country is adding its own ...

With only a handful of oil-fired power plants and crumbling poles and wires in place, the country is striving for a system that runs primarily on renewable energy and reaches more homes and businesses. Today, only about 1 percent of South Sudan's 12.5 million people can access the electric grid, according to the state-run utility.

Dynamic wireless charging can strengthen the connection between in-motion electric vehicles and microgrids. To ensure the coordination between electric vehicles with the dynamic wireless charging mode (DWCEVs) and hybrid power system in the microgrid, this paper proposes a collaborative strategy consisting of the two-layer control structure.

South Sudan Electricity Corporation plans to install a 33 kV distribution network to increase network capacity, allowing it to supply more customers, including those located far ...

The Ethiopian Electric Power Corporation (EEPCo) has announced it has completed construction of a 296km, 230kV power transmission line between Ethiopia and Sudan (AE 224/4). The line connects the Ethiopian towns of Bahir-Dar and Metemma with the Sudanese border town of Gedaref, and the power grid of Sudan. The line, constructed with \$41m of ...

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