

## European Solar and Energy Storage Solutions

# Mauritania field of solar panels



## Overview

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Does Mauritania have solar?

TOUJOUNINE - Solar Averaging seven days of rain a year, Mauritania's climate is ideal for solar and the country's first major development in the sector did not disappoint in this regard with 54,000 panels supporting 50 MW production capacity at Toujounine, on the northern outskirts of the nation's capital.

How many solar panels does Mauritania produce a year?

The facility is responsible for 10% of Mauritania's grid capacity. It generates 25,409 megawatt-hours of renewable electricity per year and displaces approximately 21,225 tons of CO<sub>2</sub>. The plant's almost 30,000 solar panels, manufactured by Masdar PV, provide electricity to more than 10,000 houses in Nouakchott.

Is Mauritania suitable for solar PV and wind development?

The findings of this study indicate that a significant portion of Mauritania's land area is highly suitable for solar PV and wind development.

What is the land utilisation factor for solar projects in Mauritania?

The land utilisation factor for project development has been set to 1%, which translates into a drop in development potential to approximately 457.9 GW and 47 GW for solar PV and wind projects. Figure 9. Utility-scale solar PV: Most suitable prospecting areas in Mauritania Source: Base map (OpenStreetMap); suitability scoring and areas (IRENA).

Is Mauritania leading West Africa's green energy transition?

As Mauritania leads in west Africa's green energy transition, significant investment is being made in hydrogen, solar and wind energy developments.

Who owns Mauritania's electricity plant?

Completed in 2017, the \$53 million plant is run by the national electricity company, Société Mauritanienne d'Electricité (Somelec), and has seen ongoing works since its inauguration by (then) President Mohamed Ould Abdel Aziz, removing an estimated 57,000 tonnes of CO<sub>2</sub> per annum and supplying 10% of Mauritania's net energy production.

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### Development of Mauritania's high-quality renewable resources ...

The sustainable development of Mauritania's high-quality wind and solar resources could serve as a catalyst for the country to achieve its vision of strong and inclusive economic growth, according to a new IEA report published today.. Renewable Energy Opportunities for Mauritania finds that the country could deploy these resources at scale to ...

### Mauritania: Over \$289 million in financing to develop solar power

Mauritania's Minister of Economy and Sustainable Development, Abdessalam Mohamed Saleh, and the African Development Bank's Deputy Managing Director for North Africa, Malinne Blomberg, signed, on Thursday in Nouakchott, financing agreements for two energy sector projects in Mauritania worth a total of US\$289.5 million, covering solar power ...



### Solar Energy

Sheikh Zayed Solar Power Plant, a 15 MW facility in Nouakchott, is the first utility-scale one in Mauritania. It provides 10% of the country's grid capacity, producing 25,409 MWh of clean energy and reducing 21,225 tonnes of CO2 emissions ...

## Sheikh Zayed Solar Power Plant 15 MW

Sheikh Zayed Solar Power Plant, a 15 MW facility in Nouakchott, is the first utility-scale one in Mauritania. It provides 10% of the country's grid capacity, producing 25,409 MWh of clean energy and reducing 21,225 tonnes of CO2 emissions annually. Its 30,000 solar panels, manufactured by Masdar PV, supply power to over 10,000 homes in the capital.



### Performance analysis of the first large-scale (15

The performance analysis of Sheikh Zayed solar PV plant installed in Nouakchott (Mauritania) is presented in this study. The monitoring results of one PV array (array 1) are analyzed; comparison between two arrays (array 1 and 17) of the PV plant is made and our results are compared with PV systems installed in other locations.

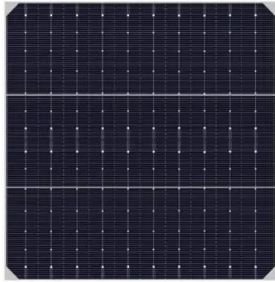
### Performance analysis of the first large-scale (15

This paper presents the performance evaluation and analysis of the first large-scale solar photovoltaic plant in Mauritania. The plant has a total capacity of 15 MW p and was installed in Nouakchott. The plant is composed of seventeen arrays connected to inverters and the energy delivered is supplied to the 33 kV electricity grid through nine transformers.



## 15MW Sheikh Zayed Solar Power Plant

Masdar's 15 megawatt (MW) solar photovoltaic



(PV) power plant in Nouakchott was the largest solar power installation in Africa at the time of its completion in 2013. It was the first utility-scale solar power installation in the Islamic Republic of Mauritania, accounting for 10 per cent of Mauritania's grid capacity.

## Mauritania: Fertile Ground for Solar Energy Projects

The Mauritanian government and CWP Global signed a pact in May this year to build the 30GW wind and solar power-to-x hub in the northern part of Mauritania, which is expected to be the world's biggest renewable energy project.



## Top 5 Green Energy Projects to Watch in Mauritania

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## DOE Signs Clean Energy Cooperation MOU with Mauritania

"The rapid deployment of clean energy expertise internationally is essential for tackling the climate crisis and Mauritania has enormous potential for low-cost, zero-emissions electricity production with its world-class wind and solar resources," said Deputy Secretary Turk in his



- TELECOM CABINET
- BRAND NEW ORIGINAL
- HIGH-EFFICIENCY

remarks at the MOU signing at COP28.



## Sheikh Zayed Solar Power Plant

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## Renewable Energy: Mauritania's Winning Bet

On the outskirts of the city, within the large-scale solar park in Toujounine, Zaied Hamadi observes the vast field of 156,000 panels standing before him. These solar panels have the capacity to generate 50 megawatts of green electricity. By 2022, the largest solar power plant in the country already supplied over 12% of Nouakchott's energy



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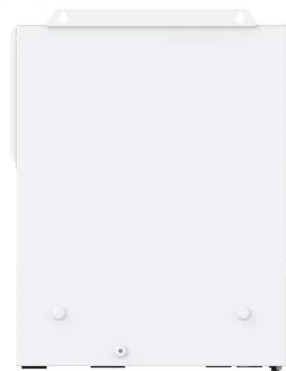


## Mauritania Secures \$289 Million for Solar Power and

The initiative aims to construct solar power plants and install a 1,373-kilometer high-voltage transmission line with a capacity of 600 MW, enhancing solar energy output and ensuring electricity access for all in both nations. "Today we are signing financing agreements that pave the way for Mauritania's energy transition. The two

## Performance analysis of 954,809 kWp PV array of Sheikh Zayed solar

Sheikh-Zayed power station is located in the north of Nouakchott in Mauritania at a latitude of 18° 15'N and longitude of 15° 98'W. Figure 1 shows a photo of this solar power plant. Sheikh Zayed Solar Power Plant was one of the largest solar power installations in ...



## ENERGY PROFILE Mauritania

Energy self-sufficiency (%) 53 25 Mauritania  
 COUNTRY INDICATORS AND SDGS TOTAL  
 ENERGY SUPPLY (TES) Total energy supply in  
 2021 Renewable energy supply in 2021 74% 1%  
 25% Oil Gas Solar PV: Solar resource potential

has been divided into seven classes, each representing a range of annual PV output per unit of capacity



## Development of Mauritania's high-quality renewable resources ...

Deploying solar PV and wind power plants could directly reduce the amount of diesel and heavy fuel oil that needs to be imported to power generators. A switch to renewables would therefore improve energy security and reduce ...



## Solar Energy

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## Solar Energy in Mauritania

The Toujounine project was the first major low-carbon-power project to use solar energy in Mauritania. Completed in 2017 and sponsored by Solemec, Mauritania's national electric company, the project is an impressive \$53 million solar farm boasting 53,000 solar panels.



## UTILITY-SCALE SOLAR AND WIND AREAS

This study seeks to map areas in Mauritania that are suitable for deploying utility-scale solar photovoltaic (PV) and wind power projects. It aims to i) provide insights into the country's potential to adopt solar PV and wind power; ii) inform national infrastructure

### Mauritania's Solar Revolution: How a \$289 Million Project Will Power ...

Mauritania is set to become a regional leader in renewable energy, thanks to a \$289.5 million financing package from the African Development Bank (AfDB) and the Green Climate Fund (GCF). The funds will support two major projects that aim to develop solar power generation, transnational electricity interconnection, and rural electrification in



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