Saudi Arabia Solar Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 95 pages | Mordor Intelligence

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Report description:

The Saudi Arabia Solar Energy Market is expected to register a CAGR of greater than 51% during the forecast period.

Although the COVID-19 pandemic affected the market studied in 2020, it has been recovering and reached pre-pandemic levels. Over the forecast period, factors such as supportive government policies, increasing efforts to meet power demand using solar energy, and decreased fossil-fuel dependency are expected to drive the market's growth. However, the increasing adoption of alternate clean power sources, such as wind, and the availability of fossil fuels are expected to restrain the growth of the solar energy market during the forecast period.

Saudi Arabia's National Renewable Energy Program aims to achieve 40 GW of solar energy installed capacity by 2030. This is expected to create significant opportunities for the market in the near future.

Saudi Arabia Solar Energy Market Trends

Solar Photovoltaic (PV) Type Expected to Dominate the Market

The distinct geographical and climatic location of Saudi Arabia makes utilizing renewable energy sources, especially solar energy sources, economically attractive, supporting Saudi efforts to diversify the domestic energy mix. The solar PV segment is expected to hold the largest market share during the forecast period, owing to the declining costs of solar modules and the versatility of these systems for various applications, like electricity generation and water heating.

In 2021, the Saudi Green Initiative reinforced the country's commitment to increase the share of renewable energy to 50% of its

primary energy mix while producing the other 50% from natural gas by 2030. Under Vision 2030, more than 40 GW of solar photovoltaic (PV) capacity and 2.7 GW of concentrated solar power (CSP) capacity are expected to be developed in the country by 2030. The Renewable Energy Project Development Office (REPDO) within the Ministry of Energy, established in 2017, is responsible for delivering on the goals of the National Renewable Energy Program (NREP) in line with Vision 2030. According to the International Renewable Energy Agency (IRENA), Saudi Arabia's total solar installed capacity stood at 14 MW in 2012, which rose to 439 MW at the end of 2021. Solar PV has been the most significant share in total solar energy capacity, with 389 MW in the country, accounting for more than 88% of the total solar energy.

In September 2022, Saudi Power Procurement Co. launched five projects to generate electricity as part of the fourth phase of the Ministry of Energy's National Renewable Energy Program. Three of these projects are wind, and two are solar energy-based projects. The two solar energy projects in Al Hinakiyahand Tabarjalwould have a capacity of about 1,100 MW and 400 MW, respectively. In March 2022, Saudi Arabia awarded solar power projects with a total capacity of 1 GW. Under this project, the Saudi Power Procurement Company signed a 25-year power purchase agreement for a 700 MW plant with Ar RassSolar Energy Company. The project is expected to be valued at about USD 450 million. The company also signed the second agreement for a 300 MW solar plant. The contract was awarded to Jinko Power, a Chinese solar company. The project is expected to be inbuilt in the Saad region in Riyadh at the cost of USD 213 million.

With such upcoming and large-scale projects and increasing government initiatives, the solar PV segment is expected to grow during the forecast period.

Upcoming and Ongoing Solar Projects Expected to Drive the Market

In Saudi Arabia, the solar energy installed capacity growth can be attributed to the National Renewable Energy Program, which had a target of installing 35 renewable projects with 58.7 GW of installed capacity by 2030.

The installed solar energy capacity for Saudi Arabia in 2021 was 439 MW, and it is expected to increase during the forecast period. The solar energy installed capacity in Saudi Arabia accounts for more than 98% of the total renewable energy mix.

In September 2022, a tender was launched by the Saudi Power Procurement Company (SPPC) for the deployment of 3.3 GW of renewable energy capacity. The Saudi authorities intend to build three wind power plants with a combined capacity of 1.8 GW and two solar parks with a combined capacity of 1.5 GW. One of the two solar plants is expected to have an installed capacity of 1.1 GW and be constructed in Al Hanakia, Medina province, in west-central Saudi Arabia. A 400 MW solar plant will be constructed in Tabarjal, a town in the northern part of the country. In line with the National Renewable Energy Program (NREP), the tender is the fourth in a series of renewable energy procurement schemes.

In August 2022, Clenergysecured an order to develop Solar PV and provided a 44 MW PV-ezRacksolar installation solution for ACWA Power's 3A Independent Seawater Desalination Project in Jubail, Saudi Arabia. This project utilizes PV-ezRack SolarTerraceMAC, a magnesium, aluminum, and zinc-coated steel ground mounting system. In August 2022, a joint venture between TotalEnergies, AltaaqaAlternative Solutions, and King Abdullah Economic City (KAEC) entered into an agreement to develop a hybrid solar farm at KAEC. A strategic plan for the city calls for the development of 25,000 solar panels (ground-mounted motorized systems) with a capacity of 12.5 megawatts peak (MWp).

Therefore, due to the above-mentioned factors, the upcoming and ongoing solar projects are expected to drive the solar energy market's growth during the forecast period.

Saudi Arabia Solar Energy Industry Overview

The Saudi Arabian solar energy market is moderately fragmented. Some of the major players in the market (in no particular order) are ACWA Power Company, Alfanar Group, Abu Dhabi Future Energy Company (Masdar), EDF Renewables, and Saudi Electricity Company.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

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