

Expected ROI of wind solar storage project in Saudi Arabia 2025





Overview

Which solar energy system has the highest investment index in Saudi Arabia?

The MCDM analysis results show that the solar energy system has the highest investment index in the Saudi Arabian cities; the first place belongs to Abha with an investment index of 0.93, the second place belongs to Jeddah with an investment index of 0.85, and the third place belongs to Dammam with an investment index of 0.75.

Is solar power a viable renewable strength funding choice in Saudi Arabia?

Results and discussion The consequences of this study, using the AHP and TOPSIS methods, suggest that solar strength is the most viable renewable strength funding choice in Saudi Arabia, followed by wind and hydroelectric power.

Why is solar energy a good choice in Saudi Arabia?

Solar strength's excessive ranking is attributed to its financial performance, decreased environmental impact, and favorable regulatory guide, making it fantastically aligned with Saudi Arabia's Vision 2030 goals. Wind energy also emerges as a strong choice because of its balanced benefits through financial, environmental, and social criteria.

Where in Saudi Arabia does solar power come from?

Table 1 compares energy outputs from PV and Parabolic Trough sun technologies across three principal towns in Saudi Arabia: Abha, Jeddah, and Dammam.

How much energy does the KSA use?

Compared to different international locations worldwide, the KSA's use of oil and strength has grown alarmingly . By 2020, 2.32 million new homes will be claimed yearly, with almost 70 % of the populace under 30. It is likewise predicted that within the equal yr, the KSA's energy intake will hit 60 GW.



Why is the Kingdom of Saudi Arabia growing?

With a population of over 31 million, the Kingdom of Saudi Arabia is witnessing a five percent annual growth fee inside the manufacturing area to fulfil the country's increasing energy needs . Compared to different international locations worldwide, the KSA's use of oil and strength has grown alarmingly .



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[Saudi Arabia Targets 50% Renewable Energy by ...](#)

Saudi Arabia has set ambitious renewable energy targets under its Vision 2030 and Green Finance Framework, aiming for renewables to comprise 50% of total electricity output approximately 130GW by 2030. Around ...

[Solar & Storage Live KSA 2025 \(Riyadh\)](#)

Solar & Storage Live KSA is Saudi Arabia's largest renewable energy exhibition that celebrates the technologies at the forefront of the transition to a gr. Solar & Storage Live KSA 2025 is held in (Riyadh), Saudi Arabia, from 10/12/2025 to ...



[Harnessing the Sun: Saudi Arabia's solar revolution](#)

Saudi Arabia's National Renewable Energy Program sees the Kingdom aiming for a solar energy capacity of 40 gigawatts by 2030. Above, the solar plant in Uyayna, north of Riyadh on March 29, 2018

[Saudi Arabia's Vision 2030's Renewable Energy](#)

To advance these projects, the Kingdom has adopted an emerging energy storage technology, exploring large-scale battery storage solutions to



stabilize the grid and ensure a consistent energy supply and larger ...

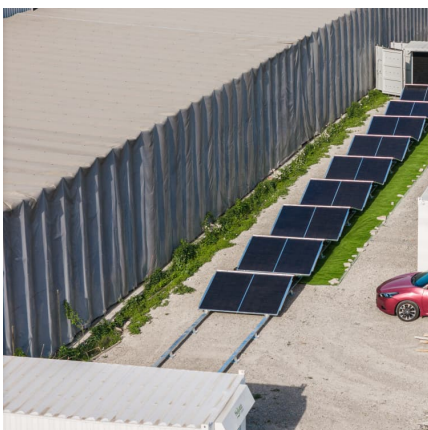


Distributed PV systems in Saudi Arabia: Current status, ...

Saudi Arabia is rapidly deploying PV systems, with initiatives like the Sakaka and Layla Al-Aflaj solar projects. These projects aim to harness the country's solar potential, reduce ...

[Top 10+ Futuristic Mega Projects of Saudi Arabia in ...](#)

Introduction Saudi Arabia's Vision 2030 has catalyzed an unprecedented wave of megaprojects designed to transform the kingdom into a global hub for innovation, tourism, and sustainable development. As of 2025, ...



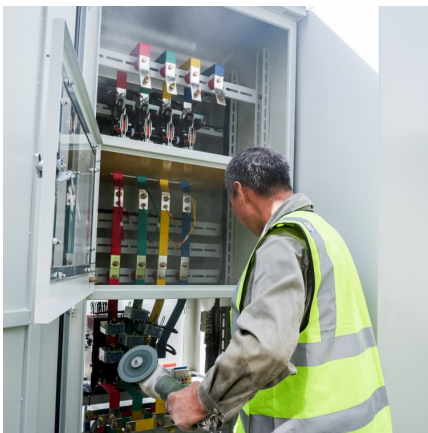
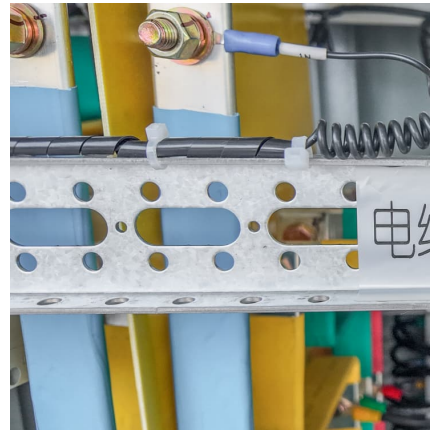
Saudi Arabia signs landmark \$8.3 billion renewable energy deals ...

The portfolio comprises five photovoltaic solar projects and two wind power plants, located across various regions of the country . Saudi Arabia signs landmark \$8.3 billion ...



[Using the sun: Solar revolution in Saudi Arabia](#)

Saudi Arabia leads the world in the extraction of energy from the Earth, but what is drawing attention is the Kingdom's determination to harness a power source in the sky. The Gulf major's solar business is being driven by ...



[MENA's Renewable Energy Boom: Solar Capacity to ...](#)

Source: MESIA's 2025 Solar Outlook Report Policy Push and Private Sector Action Strong policy backing is another major growth driver. The UAE aims to triple its renewable energy capacity by 2030 under its Energy ...

[Saudi Arabia ranks among top 10 in global energy ...](#)

(Photo Credit: SPA) Alignment with Saudi Vision 2030 This growth aligns with the objectives of Saudi Vision 2030, which aspires to increase electricity generation from renewable sources like solar and wind energy. The ...



Saudi Arabia, a leading powerhouse in renewable energy ...

This pragmatic and large-scale deployment of wind energy places Saudi Arabia at the forefront of clean power development in the region.



[Saudi Arabia commissions its largest battery energy ...](#)

From ESS News Saudi Arabia has officially connected its largest battery energy storage system (BESS) to the grid, marking a significant milestone in the country's renewable energy expansion.



[Major milestone in KSA renewables programme as 5,500 MW](#)

With this announcement, ACWA Power's overall portfolio of solar projects in Saudi Arabia now stands at 14, representing more than 17,800 MW of combined PV capacity.

[Saudi Giga Projects Report 2025: 24 Giga Projects](#)

The report provides an in-depth analysis of 24 transformative mega-projects driving Saudi Arabia's Vision 2030. Covering Neom, The Line, Oxagon, King



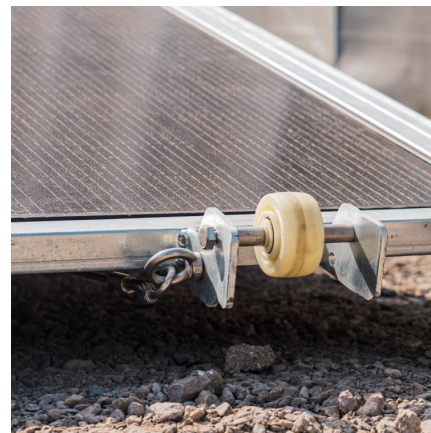


[The Top 10 clean energy projects in Saudi Arabia](#)

Saudi Arabia aims to add 20 gigawatts (GW) of renewable energy annually to reach 130 GW by 2030. The Top 10 clean energy projects in Saudi Arabia. clean energy, Exploration & Production, Gas, Industry Trends, ...

Saudi Arabia to Build \$8.3B Solar & Wind Projects by 2030

The involvement of large companies and international partners in these projects is also expected to help Saudi Arabia gain access to modern technology. Engineers and ...

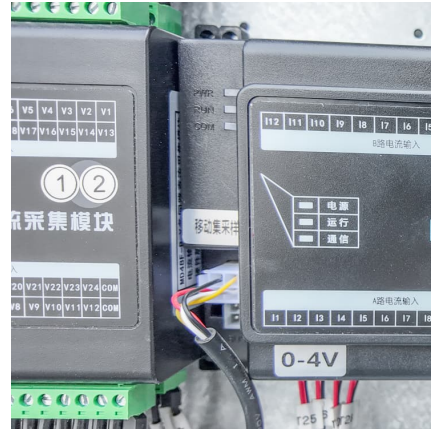


Trends and opportunities in renewable energy investment in ...

The results are expected to enhance investment awareness among local and international stakeholders, support the strategic goals of Vision 2030, and contribute to a more ...

[Major milestone in KSA renewables programme as ...](#)

With this announcement, ACWA Power's overall portfolio of solar projects in Saudi Arabia now stands at 14, representing more than 17,800 MW of combined PV capacity.



The latest on the 2 GW Sadawi Solar Project one of the worlds ...

The plant is expected to begin initial power generation before entering full commercial operation in 2027. April 2025 - China's Shanghai Electric has signed partnership ...



ACWA Power wind and battery storage plant to power Middle ...

Signing of the agreement between the International Finance Corporation and ACWA Power. Image: Future Investment Initiative. ACWA Power has agreed to deploy wind ...



Saudi Arabia Ranks Among World's Top 10 Energy Storage ...

This rapid expansion aligns with Saudi Vision 2030, identifying energy storage as a key enabler for increasing power generation from solar and wind sources. Saudi Arabia ...





PROJECTS: Saudi budget for 2025 outlines key energy sector projects

In renewable energy, Saudi Arabia has allocated 1,862 square kilometres (sq.km.) for a solar power project and 260 sq. km. for a wind farm project to increase the ...



Trends and opportunities in renewable energy investment in Saudi Arabia

By 2030, the Vision 2030 plan wants to see 50 % of the country's power coming from renewable assets, focusing on solar, wind, and hydrogen electricity projects. Even with ...

WFES 2025

CLEAN ENERGY TRANSFORMATION Across the Middle East, multi-billion-dollars investments are making an unprecedented pipeline of major upcoming solar, wind and hydrogen production ...



Decision-making model for wind, solar projects in Saudi Arabia

A group of researchers led by Saudi Arabia's King Fahd University of Petroleum & Minerals (KFUPM) has developed a novel spatio-temporal decision-making model for the ...



The rise of Saudi Arabia's solar power -- RatedPower

If Saudi Arabia can keep up its current pace, it will largely be due to the many solar projects that are either already underway or planned for the future. One of those key projects is Shuaibah IPP, a 600 MW plant about 80 ...



Saudi Arabia Targets 50% Renewable Energy by 2030, Expands ...

Saudi Arabia has set ambitious renewable energy targets under its Vision 2030 and Green Finance Framework, aiming for renewables to comprise 50% of total electricity ...

Saudi Arabia: PV + Storage's next destination for overseas ...

The Saudi government actively promotes the development of renewable energy, and through the implementation of policies and measures such as the National Renewable ...





[Renewable Energy Projects in Saudi Arabia](#)

Sudair Solar PV will be one of the world's largest single-contracted solar plants and the biggest in Saudi Arabia, boasting a capacity of 1.5 gigawatts. This project is a major step for the Public Investment Fund's renewable energy program, ...

[Top Renewable Energy Projects in Saudi Arabia You ...](#)

The project is developed by a consortium led by EDF Renewables and Masdar, and its expansion in 2025 is expected to set new benchmarks in wind power efficiency in the KSA. The Sakaka PV Solar Power ...



Saudi Renewables Capacity Set To Double To 12.7GW In 2025

The next twelve months are set to be transformational for Saudi Arabia's renewables sector, with capacity on track to nearly double to 12.7GW by year-end. Meanwhile, battery energy storage ...

[Rising Solar Stars: Top 5 Sub 10 GW Solar Markets ...](#)

Discover the top 5 new and emerging solar markets to boom in 2025. Countries like Saudi Arabia, Poland, and Hungary are driving the growth.



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